

City of Bellevue - Budget One

2013-2014 Operating Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Environmental Stewardship Initiative
Outcome: Healthy and Sustainable Environment

Proposal Number: 040.06NA
Proposal Type: Enhance Existing Service
Proposal Status: Proposed

Primary Department: City Manager

Attachments: Yes
Primary Staff Contact: Sheida Sahandy

List Parent/Dependent Proposals: N/A

Previous Proposal Number(s): 040.06NN

Version Tracking: N/A

Section 2: Executive Summary

This proposal continues the Environmental Stewardship Initiative (ESI), a cross-departmental CM effort to lead the City's internal and external environmental actions. ESI is managed by CM staff and one part time administrator whose activities include seeking opportunities for funding, grant compliance, program implementation, and tracking, analyzing and reporting key sustainability data. Community expectation for intelligent stewardship of environmental resources has grown exponentially. Through the work of ESI, Bellevue has become a nationally-recognized leader in municipal programs for sustainability. Internally, ESI is a model of "One City"—leveraging resources across departments to achieve measurable outcomes that benefit the entire organization and community.

Section 3: Requested Resources

Fund: 00100
 Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------------|----------------|
| Personnel | \$ 96,822 | 100,258 |
| Other | 2,500 | 2,500 |
| Capital | 0 | 0 |
| | <u>\$ 99,322</u> | <u>102,758</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------|------|
| | \$ 0 | 0 |

Rev-Exp Balance \$ -99,322 -102,758

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 0.90 | 0.90 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>0.90</u> | <u>0.90</u> |

Please briefly describe:

A. "Other" Expenditures: Website licensing, hosting, and support fees.

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: Addition of 0.3 FTE.

Section 4: Budget Proposal Description

ESI conceives, implements, manages and measures progress towards the environmental goals stated in the Comp. Plan. The ESI Strategic Plan guides programming toward measurable goals. Innovative reporting tools are currently being built to easily share results with the organization and the community. This proposal provides:

1. Strategic leadership, innovation and performance management for city-wide environmental goals: Continued implementation and performance management of the City Wide ESI Strategic Plan, the Municipal and Community Greenhouse Gas ("GHG") Emissions Action Plans, and Municipal Resource

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Conservation Plan. 2013-14 activities will include:

- a. Implementing the 2013-2018 ESI Strategic Plan
 - b. Installing software that allows real-time communication, as well as easy measurement and analysis of all City environmental KPI's and associated costs/savings from related mitigation projects
 - c. Implementing a "Revolving Loan Fund" to enable departmental energy efficiency projects promising a high internal rate of return.
2. Direct support to Residents and Businesses. ESI engages residents and businesses, who are increasingly expecting these services from their community, with actionable steps for improving their environmental footprint and achieving cost savings. 2013-14 activities will include:
- a. Completion of the community based "Eastside Sustainability Web Portal," which identifies sustainability "assets" on a community map, encouraging residents to educate themselves and engage with parks and a suite of other resource-efficient and sustainable ways of living.
 - b. Comprehensive programming and technical assistance for businesses through the Eastside Sustainable Business Alliance (www.SustainableEastside.org) . This program delivers quantifiable sustainability programs to businesses that help save money, resources, and emissions.
 - c. A second phase to the successful Home Energy Reports program, which was instituted in partnership with PSE and resulted in more than \$1M in residential energy bill savings in 7 cities.
3. Representation in Local and National Sustainability Efforts. ESI is a single point-of-contact and liaison to the community and state and federal entities with regard to efficiency, sustainability, and clean technology. Current efforts include expanding regional electric vehicle ("EV") infrastructure and facilitating the Green Business Challenge- a local seven-city effort to save 10,000 metric tons of CO2 and \$2 million collectively among businesses. 2013-14 activities will include:
- a. Grow local and regional EV infrastructure usage.
 - b. Work with the US Department of Energy to become a community partner in the Federal Better Buildings Challenge- an effort to reduce emissions associated with large commercial facilities by 20% by 2020 and 35% by 2025.
4. Work with the Office of Economic Development on building Bellevue as a "Green Business" hub. ESI creates programs that promote "clean energy" and green business practices. 2013-14 activities will include :
- a. Developing a strategy for Clean Tech Economic Development in the updated ESI Strategic Plan
 - b. Improving business participation & education programs geared toward even higher energy performance standards and cost savings (Green Business Challenge, Better Buildings Challenge)
 - c. Drawing EV- related businesses to the community by continuing expansion of the infrastructure
 - d. Increasing marketing of the "clean and green" image of the city, drawing to Bellevue today's brightest workers, most successful businesses, and fastest-growing industries, all of which are known to seek these attributes.

ESI provides programs, services and support to City Council Members, City employees, local businesses, local residents, and national and regional program partners. ESI's direct benefit to the community has grown significantly over the past two years in relation to the modest dedication of staff time. The community is now reaping direct, measurable and highly valued benefits from the program. We are now in a position in which a modest increase in dedicated staff time would directly leverage those foundational investments. Maintaining the status quo would enable ongoing programs to progress, but as we reach the end of grant funds acquired to date, an inability to aggressively pursue future funding and partnerships will endanger the existence of the program. It has been the leveraging of grants and partnerships that has allow such significant returns on investment. At this point, the .7 FTE time is entirely dedicated to running those programs and complying with grant requirements, with no time left over to pursue the means to continue the program. Additionally, ESI related support and resources are increasingly being directly requested by City Council members, to which existing staffing levels cannot be fully responsive.

Failure to continue this program would result in: (1) higher operating costs (saved over \$500,000 in '10-12); (2) inability to obtain grants (\$1.5m received in '10-12), leading to an inability to continue providing programs and services, (3) cessation of the effort to build system-wide and data-driven mechanisms for protecting valued and valuable environmental assets.

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Section 5: Responsiveness to Request for Results

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

ESI programs improve the performance of HSE's Clean Air, Clean Green City, and Natural Environment Factors primarily. ESI itself operates in tight alignment with the HSE-specific Purchasing Strategies and supports policy action to ensure the rest of the City is doing so as well. ESI contributes to the HSE Factors with the following programs and resource metrics:

Conserve Resources: Support City's Internal Resource Conservation Manager Program (RCM)
Savings of 1,500 metric tons of CO₂ equivalent (mtCO₂e) and \$335,000 between 2009-2011 through the Resource Conservation Manager Program (RCM) – achieved by reducing energy use by 3 million kWh and 63,000 therms since 2009. RCM programs provide cost savings to the city through proactive actions that conserve energy and water while fostering collaboration with a wide variety of stakeholders. The RCM program (in Civic Services) receives substantial funding from, and operates under, the ESI umbrella.

Promote Energy Efficient Transportation Options: Green Fleet and Community EV Charging Networks

Savings of 266 mtCO₂e, over \$100,000, and 30,000 gallons of gasoline annually through hybrid fleet and electric vehicle programs. Programs are largely funded and managed by ESI (\$634,600 from 2010-2011), developing a greener vehicle fleet for City operations and supporting the electrification of transportation throughout the community (in alignment with SHB 1481- Support for electric vehicle infrastructure). Transportation is the single largest source of CO₂ in the region—these investments are a hedge against rising fuel prices, reduce GHG emissions from City operations, and have positive impacts on clean air, clean water, and public health. From 2010-2011, ESI led public-private partnerships and outreach, increasing EV charging stations around Bellevue from zero to 50 public use stations across the City.

Reduce Greenhouse Gas Emissions, Increase Energy Efficiency: Engage the Community in Efficiency Programs

Savings of 780 mtCO₂e, 3,000 MWh, 125,000 Therms, and over \$500,000 to Bellevue residents Q1 and Q2 results of the Home Energy Reports program, a city partnership with Puget Sound Energy. ESI plans to begin broader communication and education campaigns to the residential sector, inspiring the use of resource-efficient “assets” throughout the community with a new map-based web-platform in 2012.

ESI leads community outreach programs by example, leveraging programs to showcase best practices, with significant economic and environmental benefits, to the community at large.

Preserve, Maintain, and Restore Tree Canopies: Monitor Trends and Identify Effective Strategies

Bellevue's Tree Canopy has declined by over 20% since 1985 at an estimated cost of over \$12 million in the value of clean air and storm water. ESI programs are under development, in partnership with Parks & Community Services, in order to find policy or practices that will permanently reverse this negative trend line (if unchecked, Bellevue will not be a “City in a Park” by 2050).

Discourage Excessive Consumption: Promote Green Purchasing
ESI implements organization-wide adoption of HSE Purchasing Strategies through policy (e.g. double-sided printing policy) and the pending Environmentally Preferable Purchasing Policy (under development for '13-14)

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

As detailed in Attachment A, this proposal supports Responsive Government: Strategic Leadership, High Performing Workforce, Stewards of Public Trust; Safe Community: Volunteerism, Neighborhood & Business Involvement; Improved Mobility: Existing and Future Infrastructure, Built Environment, Travel Options; Quality Neighborhoods: Sense of Community, Public Health and Safety, Mobility, Schools; Innovative, Vibrant and Caring Community: Support Services, Involved Citizens, Opportunities for Interaction, Built Environment Economic Growth and Competitiveness:

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City Brand, Land, Infrastructure & Planning, Quality of Community, Workforce

C. Partnerships and Collaboration proposed:

- Puget Sound Clean Air Agency -Electric Vehicle Infrastructure implementation
- Puget Sound Energy – RCM Program, commercial outreach, efficiency incentives, residential outreach
- US Department of Energy - Better Buildings Challenge, Energy Efficiency and Conservation Block Grants
- Bellevue and Eastside businesses- Partnerships with the commercial sector engage local businesses in pollution prevention and efficiency measures, and include the Eastside Sustainable Business Alliance (ESBA) and the Eastside Green Business Challenge
- Bellevue residents- Sustainable Eastside web portal providing infrastructure for new communications and outreach to residents about ways to live more resource-efficiently.
- All internal City departments

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

- Resource Conservation Manager Program works across departments to save the City money through resource efficiency and conservation—has saved \$335,000 – savings which will compound annually.
- Revolving Energy Fund that will provide capital to other departments to invest in innovative and cost saving resource conservation/efficiency projects - \$90,000 in grant-funded seed funding proposed.
- ESI obtains grants which are provided to other departments for clean transportation, energy efficiency (e.g. Parks and Civic Services electric vehicle infrastructure), and tree canopy work.
- SustainableEastside.org web portal promotes all city programs relative to Social, Economic, and Environmental Sustainability, complementing resources, services, and information provided by other departments including Utilities, Parks & Community Services, and Police.
- Eastside Sustainable Business Alliance promotes businesses in efforts to recycle, reduce single occupancy vehicle transit, reduce water consumption, and increase energy efficiency, complimenting the work of many city departments by being a liaison between programs and business customers.

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Section 1: Proposal Descriptors

Proposal Title: Nature Parks, Rangers & Visitor Centers

Outcome: Healthy and Sustainable Environment

Primary Department: Parks & Community Services

List Parent/Dependent Proposals: None

Previous Proposal Number(s): 100.36NN

Proposal Number: 100.36NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: Yes

Primary Staff Contact: Dan Dewald

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides funding for the ongoing management, operation and programming for four (4) park visitor centers and associated landscapes: Mercer Slough Environmental Education Center, Lake Hills Greenbelt Ranger Station, Lewis Creek Visitor Center, and the F.W. Winters House. These sustainably designed and operated facilities promote natural and cultural resource conservation and stewardship by providing access and interaction with the natural environment through hands-on environmental education programs, interpretive displays and exhibits, community special events, and a diverse range of volunteer opportunities.

Section 3: Requested Resources

Fund: 00100

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 395,859 | 410,021 |
| Other | 394,130 | 402,728 |
| Capital | 0 | 0 |
| | \$ 789,989 | 812,749 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 147,731 | 150,129 |

Rev-Exp Balance \$ -642,258 -662,620

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 4.00 | 4.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 4.00 | 4.00 |

Please briefly describe:

A. "Other" Expenditures:

B. "Capital" Expenditures:

C. Supporting Revenue:

D. Dedicated Revenue:

E. FTE/LTE:

Section 4: Budget Proposal Description

The Nature Parks, Rangers, and Visitor Center program (NPRVC) is a holistic community outreach program that incorporates environmental education, interpretation, and citizen involvement in the management of Parks Department lands. Ecosystems are dependent, interconnected webs of land, water and life (including people) that cannot be managed in isolation of each other. Bellevue's natural resources are a finite commodity. Since 90% of Bellevue's land base is privately owned and the negative cumulative actions of unknowledgeable citizens upon these lands results in universal degradation of our shared natural resources, increasing citizen appreciation, understanding, and knowledge regarding natural systems value and function is imperative. By instilling positive

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community attitudes that lead to and changes in behaviors towards resource conservation and stewardship we achieve a healthy, sustainable environment for current and future generations (Attachment 2). NPRVC delivers services through 1.0 FTE Program Supervisor and 3.0 FTE Park Rangers and operates primarily out of visitors centers located within the Mercer Slough Nature Park, Lewis Creek Park and the Lake Hills Greenbelt. The program promotes resource conservation and stewardship by providing meaningful, memorable visitor experiences through hands-on education and community stewardship activities. These programs are an important component of an overall natural resource management program that has been nationally-recognized for over 20 years (Attachment 1). The program enhances visitor experiences with nature, reduces user conflicts, increases citizen safety, protects water and air quality, provides recreational opportunities, preserves wildlife habitat, and positively influences citizen attitudes and behaviors regarding natural resource preservation, conservation and restoration. The program provides the following services to the community:

- **PARK VISITOR CENTERS MANAGEMENT:** Oversees staffing and operation of four (4) Park visitor centers including the Mercer Slough Environmental Education Center (MSEEC), F.W. Winters House, Lake Hills Greenbelt Ranger Station and Lewis Creek Visitor Center (LCVC). Visitor centers and surrounding grounds offer examples of green building and low impact development and provide tours, citizen information, environmental programs, interpretive exhibits, public gathering space, and community rentals. They are often the first stop for citizens seeking information regarding parks and open space. In 2011 park visitor centers welcomed 37,152 visitors.
- **NATURE PARK LANDSCAPE MAINTENANCE:** Provides landscape maintenance associated with the visitor centers. Visitor centers utilize and promote sustainable landscaping techniques including use of natives, water conservation, wildlife habitat features, and incorporates an Integrated Pest Management (IPM) maintenance approach to reduce pesticide use.
- **PARK RANGER PROGRAM:** Park Rangers provide visitor center staffing, administration, program development, and site management activities. They are the front line community ambassadors who help ensure safe and enjoyable experiences for Park users. Rangers answer questions, inform users of Park codes, deliver education programs, develop interpretive materials, walk/inspect parks and trails, perform minor maintenance tasks, lock park gates and restrooms, and coordinate with other enforcement agencies regarding Park Code violations. In addition to three FTE Park Rangers and three 1040 part-time Rangers, six seasonal Rangers are on duty seven days per week, 16 hours per day, May – September, during the busiest summer Park season. Since many Park codes exist for resource protection (disturbance of wildlife, animals running at large, removal of pet feces, clearing vegetation, etc.) Park Rangers are an essential asset in promoting resource protection, public stewardship, and conservation. In 2011, Park Rangers performed 3,502 patrol visits and made 29,226 citizen contacts.
- **ENVIRONMENTAL EDUCATION/INTERPRETIVE PROGRAM:** This program designs and delivers a plethora of hands-on environmental programs promoting resource conservation and stewardship including Adult Enrichment and Family Discovery series public environmental education programs. A partnership with the Pacific Science Center (PSC) operates the Mercer Slough Environmental Education Center. These types of dynamic interactions with nature help to support the overall health of the community (Attachment 3). In 2011, the Parks Department and its partners delivered 677 programs reaching 13,747 citizens. The interpretive programming includes visitor center interior exhibits and displays as well as an interconnected system of 13 interpretive kiosks, 33 wayside signs and numerous pamphlets, guides, and brochures to provide additional outreach regarding environmental stewardship.
- **WELL K.E.P.T. (KIDS ENVIRONMENTAL PROJECT TRAINING) PROGRAM:** This program provides youth employment and service learning opportunities for 10 Bellevue youth to be involved in park stewardship activities. The program brings in natural resource professionals from local, state and federal agencies to augment natural resource enhancement activities. By combining on-the-job work experience with hands-on environmental education training the Well K.E.P.T. program promotes innovative thinking, leadership, and critical thinking skills that are important for stewardship and conservation of resources (Attachment 4).

- **VOLUNTEER PROGRAM:** This program administers a comprehensive community involvement program targeted at a diverse range of citizens and business to promote the stewardship of the City's natural and cultural resources. Creating opportunities for citizen stewardship activities instills strong environmental stewardship ethics. The program includes long-term Park Stewards, Stewardship Saturday and Eco Friday volunteer events, Master Naturalists training program, and volunteers associated with formal partnerships agreements with Eastside Heritage Center (EHC), Pacific Science Center, and King County Master Gardeners. In 2011, the volunteer program involved 1,331 volunteers who contributed 12,651 in natural resource stewardship activities.
- **COMMUNITY EVENTS:** This program develops and implements community special events including Arbor Day/Earth Day, Natural Resource Week, Lake to Lake Walk, and the Strawberry Festival. These events help provide an interaction with nature, promote resource conservation, and celebrate community stewardship of our natural environment. In 2011, natural resource community events reached over 40,000 participants.
- **BACKYARD WILDLIFE HABITAT GARDENS:** The Backyard Wildlife Habitat Gardens is an urban demonstration garden surrounding the Lake Hills Greenbelt Ranger Station that promotes that the use of native vegetation in urban residential landscapes to help improve wildlife habitat, promote water conservation, and decrease the use of pesticides (Attachment 5).
- **P-PATCH PROGRAM:** The P-Patch program provides 89 community garden plots at the Lake Hills Greenbelt and Crossroads Park. Garden plots provide community gathering spots and opportunities for citizens to till the soil and grow their own fresh produce. The program promotes resource conservation and sustainability by providing a personal connection to the land.
- **DEMONSTRATION GARDENS:** A partnership with the Master Gardeners (MG) of King County operates a ½ acre demonstration garden in the Lake Hills Greenbelt. The program provides workshops and clinics on sustainable urban gardening and landscaping. Classes focus on sustainable gardening with topics such as organic cultivation, composting, and water conservation (Attachment 6).
- **COMMUNITY FARMS:** The farms provide organic management of the City's last remaining agricultural lands including thirty- six (36) acres of blueberry fields and twelve (12) acres of truck farms. The program operates three farmers markets to provide local farm fresh produce and promote sustainable community agriculture.

Section 5: Responsiveness to Request for Results

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

CLEAN AIR

- Limited parking, bikes racks, and programs at Visitor Centers encourage carpooling and alternative modes of transportation to help reduce vehicle miles traveled and greenhouse emissions.
- Stewardship Saturday and Eco Friday volunteer planting projects provide opportunities for citizens to install trees and native vegetation to restore tree canopy.

CLEAN RELIABLE WATER

- Visitor Centers incorporate bio-swales, rain gardens, and other low-impact development (LID) technologies that help manage storm and surface water to control erosion, protect water quality, and assist with ground water recharge.
- The Environmental Education Program offers numerous education classes that provide information on water quality and conservation. Canoe tours teach the importance of watershed management. Cisterns at the MSEEC capture rain water for irrigation.

CLEAN GREEN CITY

- Through Stewardship Saturdays and Eco Fridays the Volunteer Program fosters community collaboration with a broad diversity of the residents and businesses to provide opportunities for a wide range of community clean-ups and stewardship activities.
- Visitor centers all offer environmental interpretation and programming on green building and LID practices. The MSEEC is a Leadership in Energy and Environmental Design (LEED) gold rated facility. Specific interpretive signage and classes at the MSEEC discuss sustainable development practices including using energy conservation, sustainable building materials, and water conservation (Attachment 7).
- The Environmental Education Program partners with resource professionals and community partners to deliver environmental programs that encourage resource conservation.

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- Master Gardener Demonstration Gardens offers programs on sustainable gardening including workshops on yard waste composting, rain water irrigation and landscaping with native plants. Over 3,500 citizens visit the Demonstration Garden each year.

NATURAL ENVIRONMENT

- The purpose of all the programs that make up the Nature Parks, Rangers and Visitor Center proposal are to provide opportunities for citizens to come in contact with nature. In total these program had over 120,000 citizen contacts in 2011. These programs and events use Bellevue's natural areas like living laboratories to immerse citizens within the natural ecosystems that they are a part of with the goal of managing, maintaining, and restoring the health and well-being of citizens, wildlife, and our finite natural resources.

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

SAFE COMMUNITY

- Proactive landscape maintenance increases safety and reduces latent environmental risks.
- Geographically positioned facilities allow for quick response to non-threatening citizen concerns.
- Park Rangers patrol parks and enforce rules and regulations to help make parks safe.

INNOVATIVE, VIBRANT, and CARING COMMUNITY

- Visitors Centers act as shelters in emergencies and staff is trained in emergency management protocols.
- Programs connect citizens to the land, building bonds between citizens, nature and community.
- Most programs are free to reduce economic barriers of entry.
- Visitor Center design and layout help reflect Bellevue's "City in a Park" character.

QUALITY NEIGHBORHOODS

- Community stewardship activities help strengthen community bonds.

C. Partnerships and Collaboration proposed:

- The partnership with PSC at the MSEEC delivers 300+ programs reaching nearly 9,000 citizens each year. PSC operation includes a staff of 13 full and part time employees.
- The partnership with the MG delivers 50+programs and reaches over 3,500 citizens each year. MG utilizes a core group of 60 volunteers to deliver programs and maintain the demonstration garden.
- The partnership with Eastside Heritage Center (EHC) delivers historical programs, performs research, and hosts community outreach events including the Strawberry Festival. EHC delivers services with 3 employees and 59 volunteers.
- The program collaborates with Bellevue Utilities and numerous local, state and federal agencies and businesses to deliver environmental education programs and special events including Arborday/Earthday and Natural Resource Week each year.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

The NPRVC program is synergistic component of the Parks Department's Natural Resources Management Division that works in concert other programs areas to educate and involve the community.

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Section 1: Proposal Descriptors

Proposal Title: Greenways, Trails & Walkways Program

Outcome: Healthy and Sustainable Environment

Primary Department: Parks & Community Services

List Parent/Dependent Proposals: None

Previous Proposal Number(s): 100.37NN, 130.37A2

Proposal Number 100.37NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: Yes

Primary Staff Contact: Dan Dewald

Version Tracking: N/A

Section 2: Executive Summary

This proposal funds the maintenance and management of over 96 miles of community greenways, trails and walkways that provide access to natural areas, non-motorized transportation alternatives and opportunities to explore Bellevue's natural environment. Greenways and trails weave through wetlands, forests, streams, and lakes connecting people with parks, neighborhoods, schools and businesses. This program will: ensure a safe trail and walkways system for the community, provide access to nature while preserving fish and wildlife habitat, maintain way-finding and informational signage, provide outdoor recreation for physical and mental health, and provide community mobility options. Bellevue's greenways, trails and walkway system protects the natural environment, sustains the health and well-being of citizens, and ensures the quality of life for today and for future generations.

Section 3: Requested Resources

Fund: 00100

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 527,532 | 547,240 |
| Other | 254,817 | 260,120 |
| Capital | 0 | 0 |
| | \$ 782,349 | 807,360 |

| Supporting Revenue | 2013 | 2014 |
|------------------------|-------------|----------|
| | \$ 0 | 0 |
| Rev-Exp Balance | \$ -782,349 | -807,360 |

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 6.00 | 6.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 6.00 | 6.00 |

Please briefly describe:

A. "Other" Expenditures:

B. "Capital" Expenditures:

C. Supporting Revenue:

D. Dedicated Revenue:

E. FTE/LTE:

Section 4: Budget Proposal Description

This proposal responds to the Council endorsed outcome of a Healthy and Sustainable Environment by maintaining current service levels; providing comprehensive management and maintenance of Bellevue's Greenways, Trails and Walkways (GT&W) to standards and practices identified in the City's Environmental Best Management Practices and Design Manual and Americans with Disabilities Act

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(ADA). This proposal consolidates the Parks and Transportation trail programs to more efficiently provide planning, management, and maintenance of community trails and walkways located on City park and open Space property and transportation trails, located on City right-of-way, easements and tracts. Trail maintenance is for over 96 miles (159 sites) of City-owned hard and soft surface trails, located throughout the community, with an improved value of over \$21,120,000.

In addition to localized trails, this program manages and maintains trails of significant regional importance, including the Lake to Lake Greenway and the Mountains to Sound Greenway. The Lake to Lake Trail system connects Lake Washington and the Mercer Slough to Lake Sammamish via Wilburton Hill, Kelsey Creek, Lake Hills Greenbelt, Phantom Lake Loop, and Weowna Park. Other significant trails include the South Bellevue Greenway system, Bellevue's segment of the Mountains to Sound Greenway/I-90 trail, 520 Bicycle Trail, Coal Creek Natural Area, Bridle Trails pathways on 134th and 140th, Ardmore Park, Tam O'Shanter Park, and walkway connections that link neighborhoods, businesses and schools. See Attachment 1.

The proactive year-round management and maintenance of Bellevue's GT&W are necessary to ensure a safe and enjoyable system. City surveys indicate that Bellevue's GT&W garnered a 94% safety rating among citizens in 2011. GT&W are used throughout the year by pedestrians, bicyclists and non-motorized users. This community-wide service is achieved through the work of one Operations Supervisor, two Lead Workers, three 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 and abatement, erosion control, noxious weed identification and control, environmental and volunteer stewardship projects, landscape construction, project management, and contract management and administration.

Maintenance activities include safety inspections, trailhead and trail surface maintenance, noxious weed removal, litter and debris removal, kiosk and way finding sign maintenance, trail structure inspection and repair, fence repair, vegetation maintenance, tree and shrub pruning, mowing, graffiti removal, site hazard abatement and response to weather events such as snow and ice removal, windstorms and flood response. This proposal works in concert with Parks P-R-11 and Transportation CIP PW-M-19. This proposal funds management and maintenance at a level that meets citizen expectations (2011 citizen satisfaction rating of 93% and an appearance rating of 95%), protects public health and safety, and sustains trail system integrity while demonstrating stewardship of tax-payer dollars. Reducing management and maintenance levels would reduce public safety (surface and trip hazards, downed trees, damaged boardwalks, bridges and stairs), decrease property values, degrade the environment and eliminate opportunities for year-round public access and non-motorized transportation alternatives. See Attachment 10.

Short term benefits of GT&W program include a safe and accessible inter-connected system of natural areas and open spaces for pedestrians and bicyclists that increase opportunities for healthy living for citizens of all ages. Long term benefits of the GT&W program include safety, accessibility, affordable recreation and mobility alternatives, opportunities to experience nature, and improve the quality of life for Bellevue residents of all ages and backgrounds. These short term and long term benefits are particularly important since 73% of residents live within 1/3 mile of a park or trail facility.

This proposal responds to policies for Bellevue Parks & Open Space System Plan, the Pedestrian and Bicycle Non-Motorized Plan and the Environmental Elements of the City Comprehensive Plan. See Attachment 2.

Section 5: Responsiveness to Request for Results

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

This proposal responds to the following factors of the Healthy and Sustainable Environment outcome.

1. CLEAN AIR – By providing non-motorized transportation alternatives and maintaining natural areas and open space land uses, GT&W are essential to the long term environmental health of our community, including the air we breathe. Studies completed by American Forests in 2008 show Bellevue's natural areas, greenways and right-of-way vegetation encompass over 3,500 acres, and remove over 218,000 pounds of air pollutants including carbon monoxide, ozone, nitrogen dioxide

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and sulfur dioxide valued at \$492,000 per/year. In addition, these public land use assets store over 105,000 tons of carbon and sequester over 820 tons of carbon each year, playing a significant role in greenhouse gas reduction and global warming. See Attachments 3 & 4

2. **TREE CANOPY** –The GT&W system is located within canopy covered sites and contributes to making Bellevue known as a “City in a Park”. Tree canopy along our trails provides an environmental value but also provides aesthetic value to our citizens, buffers neighborhoods and differing land uses and have significant social and economic value. See Attachment 5

3. **SURFACE & STORMWATER MANAGEMENT** – GT&W implements low impact trail planning, construction and maintenance practices that protect natural areas, wetlands and open space properties and streams that carry surface water to either Lake Washington or Lake Sammamish. These streams include Kelsey Creek, the West Tributary, Valley Creek, Coal Creek, Richards Creek, Vasa Creek, Lewis Creek and the Mercer Slough. Site sensitive best management practices provides public access to trails that buffer shorelines and stream corridors where citizens can experience nature, learn about the stewardship of our natural environment, and importance to the community in which they live, work and play without having a detrimental impact on the water resource. See Attachment 6.

GT&W provides access to an outdoor classroom for people of all ages to learn about the environment and the benefits of the natural areas where they live. Trails and interpretive signage located at the Mercer Slough, the Lake Hills Greenbelt and Lewis Creek Park focus attention on the benefits of fresh water wetlands, peat bogs, and head-water streams and the importance they play in protecting Bellevue’s water resources. These sites also provide trail users information and opportunity to see green roofs, pervious sidewalks and pavement, bioswale design and rain gardens, and they learn about importance of low impact development (LID) for storm water management. See Attachment 7.

4. **CLEAN GREEN CITY** - GT&W system is an integral component of a Clean Green City and a “City in a Park”. Trails make Bellevue a walk-friendly city with non-motorized recreation and transportation alternatives such as canoeing and kayaking the Mercer Slough water trail; walking or bicycling the Lake to Lake trail through fresh water peat bogs, operating blueberry farms, the Bellevue Botanical Garden, Kelsey Creek Animal Farm, the Lake Hills Greenbelt vegetable farms and Weowna Park with views of Lake Sammamish and the Cascade Mountains.

5. **NATURAL ENVIRONMENT** - GT&W are primarily located within natural areas and open space properties where Bellevue has preserved a significant amount of the City’s lakes, streams and wetlands for multiple benefits including: healthy forest and wetland habitats that provide tree canopy and vegetation that filters our air; linking habitat for wildlife and providing food, water, cover and space; lake shore and stream protection, stormwater detention and erosion control; provide land use buffering and noise abatement; and to provide outdoor recreational access for people. Greenways and trails physically connect our community and provide people an opportunity to enjoy the natural environment which results in physical and mental rejuvenation.

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

This proposal also responds to the following Outcomes and Factors.

1. RESPONSIVE GOVERNMENT

- Deliver the Services that customers want - The City’s 2009 Gilmore survey indicated that trails through forests, wetlands and natural areas are Bellevue residents’ highest park priority with 74% of Bellevue’s citizens using trails at an estimated 400,000 visitor use days per year.
- Well Designed and Maintained Assets – Bellevue has a history of acquiring park and open space property and proactively maintaining these resources for the purpose they were acquired.
- Customer Focused Service – The City proactively manages and maintains the GT&W in response to customer needs and values.

2. SAFE COMMUNITY

- The GT&W program has worked cooperatively with Bellevue police and fire to provide a safe trail system and designed a “911 Locater” trail signage program that assists emergency and non-emergency responders with a GPS location for trail users. See Attachment 8

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3. IMPROVED MOBILITY

- Built Environment and Travel Options – The GT&W program responds to community expectations of a mobility system that not only has roads but sidewalks, bike paths and trails and ensures that a full range of travel options are integrated into local and regional planning.

4. QUALITY NEIGHBORHOODS

- The GT&W responds to QN including: Sense of Community – GT&W provide public spaces where neighbors can come together and share ownership. Facilities and Amenities – GT&W provide facilities that improve mental and physical health, promote a sense of place and improve neighborhood livability. Public Health and Safety - proactive maintenance of the GT&W system ensures public health and safety and attractive well maintained public facilities promotes being a good neighbor and improves property values. See Attachment 9.

5. INNOVATIVE, VIBRANT AND CARING COMMUNITY

- Involved Citizens and Opportunities for Interaction – The GT&W program routinely engages with community volunteers undertaking trail maintenance activities scheduled through the monthly Stewardship Saturday, Eco-Friday volunteer program and at the annual Arbor Day-Earth Day special events where staff and the community work cooperatively.
- Built Environment – The GT&W program implements and maintains non-motorized mobility alternatives for transportation and recreation that are identified in the parks plan and the non-motorized Transportation Plan. In addition, GT&W create safe and well maintained places for people to interact and enjoy the outdoors.

C. Partnerships and Collaboration proposed:

This proposal combines the Bellevue Parks & Community Services, Bellevue Utilities and Bellevue Transportation trails program into one proposal and program with the intent of transferring service delivery responsibility to the Parks Department through a cooperative and coordinated work effort. Other partnerships and collaboration efforts include:

- Partnership with Northwest Striders to sponsor annual “Lake to Lake Walk and Run”
- Partnership with Mountains to Sound Greenway Trust (MTSG) for annual “Greenway Days” event
- Partnership with MTSG on Federal Scenic Byways grant for I-90 Greenway Trail Design
- Partnership with WA State Dept. of Ecology to sponsor Washington Conservation Corps crew

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

This GT&W program is an integral component of the Parks Department’s Natural Resource Mgmt. Division working directly with other programs including Natural Area & Forest Management, Nature Parks and Visitor Centers and Street Trees, Landscaping and Vegetation Management.

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Section 1: Proposal Descriptors

Proposal Title: Natural Areas & Forest Management

Outcome: Healthy and Sustainable Environment

Primary Department: Parks & Community Services

List Parent/Dependent Proposals: None

Previous Proposal Number(s): 100.38NN

Proposal Number 100.38NA

Proposal Type: Enhance Existing Service

Proposal Status: Proposed

Attachments: Yes

Primary Staff Contact: Dan Dewald

Version Tracking: N/A

Section 2: Executive Summary

This proposal funds the management and maintenance of 1,900 acres of City natural area and open space property comprised of lakes, streams, wetlands and forests that provide native tree 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 opportunities. Citizens and businesses with people of all ages actively participate in environmental stewardship and education programs that preserve and restore this resource. Urban natural areas must be maintained with the same commitment as other vital community resources in order to ensure the preservation of their environmental values and benefits. Stewardship of the natural environment has significant economic, social and environmental benefits and is a key element in 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: Requested Resources

Fund: 00100

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 533,228 | 552,310 |
| Other | 176,676 | 183,365 |
| Capital | 51,000 | 0 |
| | \$ 760,904 | 735,675 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|-----------|--------|
| | \$ 47,788 | 45,000 |

Rev-Exp Balance \$ -713,116 -690,675

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 5.00 | 5.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 5.00 | 5.00 |

Please briefly describe:

A. "Other" Expenditures:

B. "Capital" Expenditures: One-time expenditure for purchase of two F-550 trucks offset by sale of surplus equipment and rental

C. Supporting Revenue:

D. Dedicated Revenue:

E. FTE/LTE:

Section 4: Budget Proposal Description

The Natural Areas & Forest Management Program (NA&FM) provides for the ongoing proactive management and maintenance of the City's natural area sites, ranging from sensitive riparian corridors, wetlands and lake shores to native forest sites located on over 1,900 acres of City property with a King County Assessed value of over \$157 million. A United States Forest Service (USFS) report completed in cooperation with NA&FM staff provides a 2011 structural value of Bellevue's natural area

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trees at \$438 million. This value is based on the cost to replace of our existing trees and the functions they perform. See Attachment 1.

NA&FM program maintenance and service delivery is achieved through the efforts of one Natural Resource Manager, one Program Supervisor, one Senior Forest Technician, and two Skilled Workers combined with seasonal and temporary help, and community and business volunteers. Park natural areas are managed and maintained through a comprehensive land stewardship program that has been nationally recognized by the National Arbor Day Foundation for 21 years (See Attachment 9) and involves individual site-specific analysis and evaluation of natural area property including the legal property boundary, tree and vegetation habitat type, existing tree and forest health condition, soil types, degree of slope, site aspect, recreational opportunities, adjacent land uses, and fish and wildlife habitat connectivity.

This information is analyzed to develop site-specific plans and actions that ensure public safety, improve the forest condition for healthy trees and plants (2011 performance measurement of 71%), improve the quality of fish and wildlife habitat, implement best management practices to reduce erosion and improve water quality and enhance the buffering of land uses. All of these actions improves the environmental health and appearance of the City's greenway and park system that connects neighborhoods to neighborhoods, parks and businesses. This is evidenced in the City's 2011 survey wherein 95% rated the appearance of Bellevue parks as good or excellent. 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. See Attachment 2.

Management and service delivery functions include:

- Physical inspection and communication with over 3,000 residents who live adjacent to over 100 miles of public-private natural area property boundary to assess tree and site conditions, and identify and address potential liability issues. Inspection work includes updating existing mapping and classification of trees, vegetation, forest condition, identifying/resolving noxious weed issues, and identifying new opportunities for site-appropriate plantings of native trees and shrubs.
- The development, permitting and implementation of annual vegetation and habitat management plans that improve the health and condition of 10-20 acres of the City's natural areas including upland forest, stream corridors, lake shorelines and wetlands. In the last 20 years, the City's Forest Management program has planted hundreds of thousands of trees and routinely plants over 10,000 native trees and plants each year to restore and enhance the natural environment while meeting annual performance targets.
- Inter- and intra-departmental coordination including critical areas code compliance, environmental stewardship initiative strategies, Utilities Stream Team, Stewardship Saturday and Eco-Friday volunteer projects. Natural Resource staff routinely work with thousands of citizen and business volunteers restoring damaged natural habitat for present and future generations.
- Hazardous tree identification and mitigation protecting the health, safety and welfare of Bellevue's citizens (2011 citizen survey rating the safety of Bellevue parks and facilities at 94%).
- Proactive enforcement of illegal dumping, encroachment issues, and illegal tree cutting on City property keeping our ecological processes intact and our City clean and healthy.
- The inspection of contractor maintained sites to ensure contract compliance and to monitor site conditions, plant health, soil moisture and weed control to ensure enhanced survival rates for new tree and native landscape enhancement plantings.
- Respond to citizen requests for assistance with tree pruning, property line identification, storm damage, surface water problems and nuisance wildlife issues.
- Proactively working with homeowners, homeowner's associations, community groups and businesses on tree planting special events designed to improve and enhance natural areas and tree canopy.
- Work cooperatively inter-departmentally on education and outreach program events including partnering with the Bellevue School District, Pacific Science Center and local, state and federal

agencies on the annual Natural Resource Week, Arbor Day-Earth Day and program activities that are integral to Bellevue being recognized as a "Tree City USA" for 21 years.

This proposal responds to policies for Parks & Open Space System Plan, the Pedestrian & Bicycle Non-Motorized Plan, and the Environmental & Urban Design Elements of the City Comprehensive Plan (See Attachment 3). Urban natural areas need to be managed and maintained to remain healthy and have their ecological functions appreciate over time. Reduced management and maintenance funding would result in ecological degradation, invasion by non-native species, hazardous tree conditions, property encroachments, illegal cutting and illegal dumping which results in increased liability exposure to adjacent neighbors, park users and the City. In 2011, the Bellevue Parks and Community Services Department only had 1 claim due to personal injury. According to the Washington Cities Insurance Authority, a typical parks maintenance agency receives an average of 13.5 injury claims over a five year period.

Proactive management and maintenance based on ecological principles results in forested natural areas that continue to increase in value to the community by cleansing our air, detaining rainwater and reducing erosion, buffering noise, and countering the heat island effect of buildings and pavement, and provide an attribute that new industries and savvy home buyers look for when selecting a community reside in or relocate to.

See Attachments 6 (Bellevue is referenced on page 7) and 10.

Section 5: Responsiveness to Request for Results

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

This proposal responds to the following factors of the Healthy & Sustainable Environment outcome.

- **CLEAN AIR** - Bellevue's natural areas and open spaces preserve important ecological services which are essential to the social, economic and environmental health of our community. The City has acquired 1,900 acres of natural area for the primary purpose of preserving the natural ecological processes that healthy native plant and wildlife habitats provide to the community. Studies done in 2008 by American Forests show Bellevue's forested open spaces removed over 218,000 pounds of air pollutants valued at \$492,000. The 2011 USFS report calculates that Bellevue's forested open space removes air pollutants valued at \$961,000 annually. This reflects a 95% increased value over 4 years. In addition, public lands store over 105,000 tons of carbon and sequester over 820 tons annually. Our urban forests not only clean the air we breathe, but provide cooling to the urban environment, lower greenhouse gases, moderating cooling and heating costs, reduce health issues related to dirty air, and provide a better quality of life. One large tree in the Pacific Northwest will provide \$2,820 in environmental and other benefits over its lifetime – a 300% return on investment. See Attachment 4 & 5.

- **SURFACE & STORMWATER MANAGEMENT** – NA&FM uses low impact best management practices (BMPs) to implement natural area enhancement plans by enlarging buffers along lake shores and streams through the addition of native trees and plants and by adding large woody debris and root wads along shorelines and stream corridors for added erosion control, water quality and improved fish and wildlife habitat. These BMPS are proactively practiced in natural area, wetlands and open space properties with streams that carry surface water to either Lake Washington or Lake Sammamish including Kelsey Creek, the West Tributary, Valley Creek, Coal Creek, Richards Creek, Vasa Creek, Lewis Creek and the Mercer Slough. Site sensitive BMPS provide public access to shorelines and stream corridors where citizens can experience nature, learn about the stewardship of our natural environment and its importance to the community in which they live, work and play without having a detrimental impact on the water resource.

The USFS report determined that Bellevue's natural areas contain over 257,000 trees. It has been estimated that a tree can store up to 100 gallons of water. An American Forests Ecosystem Analysis done 4 years ago indicated that this water holding capacity of Bellevue's urban forests saves the City \$20,650,005 in storm water retention. The planting and care of trees in our community is of critical importance to help mitigate storm water runoff. Preserving open spaces sets aside large tracts of land to help store, filter, and slow the release of storm water into our lakes and reservoirs.

- **NATURAL ENVIRONMENT** –1,900 acres of public natural areas provide over 74% canopy cover which is a significantly higher tree cover than any other land use in the City. The City's natural areas are the environmental workhorse of the community by filtering pollutants from the air we breathe and detaining rain water and moderating stormwater runoff. Only through the proactive

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management, maintenance, and enhancement of this resource can we continue to improve upon the environmental values and benefits for which they were preserved. Forest and natural area health has a direct relationship to the value of benefits provided to the community. Without ongoing maintenance and stewardship, the health of the urban forest environment will decline rapidly and provide diminishing environmental, economic, and social services to the community. Several recent studies (See Attachments 7 & 8) point out that Bellevue's forests and open spaces are improving in health. Only through ongoing stewardship and restoration activities implemented by the NA&FM program will this positive trend continue.

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

RESPONSIVE GOVERNMENT

- Forest Management staff are a high performing workforce, with all staff members certified by the International Society of Arboriculture or Society of American Foresters. In addition, staff are also ISA Certified Tree Risk Assessors. Staff routinely identify, assess, and manage risk trees within the City's open spaces and support other departments with related tree risk issues.
- The NA&FM program works in collaboration with Code Compliance in mitigating dumping and encroachment issues. Enforcement is coordinated through programming designed by officers in the City's Police, Environmental Services and the Parks & Community Services departments.

QUALITY NEIGHBORHOODS

- According to a United States Department of Agriculture study of the value of trees in an urban environment, large trees can add up to 10% to the value of a home. The same study states that tree-filled neighborhoods report lower levels of domestic violence, are safer and more sociable, and reduce stress of body and mind. See Attachment 5.

ECONOMIC GROWTH & COMPETITIVENESS

- Stands of trees benefit commercial areas, and are associated with more frequent and longer shopping trips and a willingness to pay additional costs for goods. Attachment 5.

C. Partnerships and Collaboration proposed:

As noted in Section 5, the NA&FM works cooperatively with neighborhoods, Home Owner Associations, and business partners to provide stewardship and community involvement in forest enhancement and restoration.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

The NA&FM program is an integral component of the Parks Department's Natural Resources Management Division and works in concert with the Division's other programs including Greenways and Trails, Nature Parks and Visitor Centers, and Street Trees, Landscaping, and Vegetation Management.

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Section 1: Proposal Descriptors

Proposal Title: Street Cleaning (Sweeping)

Proposal Number 130.26NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Transportation

Attachments: Yes

Primary Staff Contact: Judy Johnson

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 130.26NN

Version Tracking: N/A

Section 2: Executive Summary

Gravel, debris, silts, automotive fluids, leaves, and glass in roadway and bicycle lanes contribute to accidents, injuries, street flooding, and pollutant discharge into the drainage system that flows to Bellevue's streams and lakes. Street Cleaning (Sweeping) cleans bicycle lanes, arterial roadways, neighborhood streets, responds to pick up traffic accident debris and removes traction sand applied during snow and ice response. This work assists in the prevention of urban flooding during rain events by removing leaves from the roadway and catch basins. Street sweeping protects fish and animal habitat especially following snow and ice events; it is critical to the health and beauty of Bellevue's natural waterways such as Phantom Lake, Lewis Creek, and Coal Creek. This work is required by the National Pollutant Discharge Elimination System Phase II Municipal Stormwater Permit issued by the State Department of Ecology in January 2007.

Section 3: Requested Resources

Fund: 00100

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 275,882 | 286,230 |
| Other | 67,156 | 77,421 |
| Capital | 0 | 0 |
| | \$ 343,038 | 363,651 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 174,213 | 184,986 |

Rev-Exp Balance \$ -168,825 -178,665

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 3.10 | 3.10 |
| LTE | 0.00 | 0.00 |
| Total Count | 3.10 | 3.10 |

Please briefly describe:

A. "Other" Expenditures: Primary operating costs are sweeper brooms, disposal fees, & added infrastructure; \$1k 2013, \$6.5k 2014.

B. "Capital" Expenditures: N/A

C. Supporting Revenue: COB Surface Water Utility reimburses the General Fund for their share of program costs.

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: Budget Proposal Description

This proposal provides resources for Street Sweeping activities which remove gravel, dirt, broken glass, litter, sediments and other debris from the surface of the roadway and bicycle lanes. One objective of this work is to capture and dispose of organic and non-organic materials before they can enter the drainage system and the City's water courses. Street cleaning also reduces flooding caused by blocked or clogged drainage structures designed to drain runoff from street surfaces. This is

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especially critical in the fall when leaves often plug storm 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, neighborhoods two to three 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, causing safety problems for bicyclists.

REDUCED POLLUTANTS - To protect water quality, Bellevue manages stormwater runoff in a number of ways; street sweeping is the first step in a chain of "best management" practices. The City operates under a National Pollutant Discharge Elimination System (NPDES) 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.

INNOVATION – During the 2011-12 budget process, staff implemented 2 (two) time and cost saving ideas. The first consisted of shifting from an every-day cleaning of both pieces of equipment to alternating cleanout schedules to clean them three times a week. The idea was reviewed and approved in advance by the equipment manufacturer. The second was the leveraging of NPDES grant funds to install kits on the sweepers that allow faster and easier cleanout by mechanically lowering the screens. Each of these improvements increased the time the equipment is providing service while decreasing hours per unit spent on cleanout, decreasing water use at the maintenance yard, and decreasing amount of vault cleaning required at the yard.

EVIDENCE AND LOGIC SUPPORTING THIS PROPOSAL – The 2012 Budget Survey ranked maintaining existing streets and sidewalks as the #7 service, and keeping streets clean as #17 out of 38 total services. 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 separate frequencies of service to arterial roadways, bike lanes and neighborhoods based on the type of use and impact to environment and traffic.

CONSIDERATION OF "RIGHT-SIZE" LEVEL OF SERVICE AND SCALABILITY – Street Maintenance staff occasionally compares the COB service level to nearby cities, compares in-house costs to contracted services, and tracks the customer calls. COB sweeping costs per unit remain below local contracted sweeping services. The City has been running two street sweepers for many years, and through many increases in motorist and bicycle lanes, traffic, annexations, weather events, and population. Over time, the addition of many miles of bicycle lane which requires more frequent service – the neighborhood sweeping task has been gradually scaled down to two-three visits per year rather than the three-four provided 10 years ago. Since this change, the customer satisfaction rating has gone down from a consistent 97-98% to 86-94% overall and 82-86% in neighborhoods. The resource is particularly squeezed during the leaf pickup season in the fall and after a snow or ice event; during those times customer calls increase and staff shifts to four-ten hour days to add an extra day per week of available hours for each sweeper. All section staff members are trained to operate the equipment, so an extra 16 hours of equipment time can be provided by diverting on-duty staff. Agency comparison calls were done this spring; the COB sweeping resources are low per mile swept compared to the surrounding area. A table is available in the Budget One attachments Sharepoint site as are excerpts from the Citywide customer survey. During the last budget cycle, the results team recommended cutting this program in half, but the City Manager reinstated the program knowing how important this service is to our citizens, including environmental and safety impacts. The Utilities, Surface Water fund is now funding half of this service. Scaling down the service could be accomplished by further reducing the frequency of service to neighborhood routes as less customers would be impacted in those areas. From the Citywide customer survey - While overall satisfaction with

street sweeping (82%) remained fairly similar to 2011 (86%), there has been a notable shift from residents who claim to be “very” satisfied—42 percent in 2011 vs. 34 percent in 2012—to satisfied—44 percent vs. 48 percent, respectively. They are lowest in these four areas: Somerset, Woodridge, Newport, and Wilburton. Somerset and Newport were also below average in 2011. Because of these trends, scaling back this service is not recommended.

Section 5: Responsiveness to Request for Results

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

“HEALTHY AND SUSTAINABLE ENVIRONMENT” –

By removing the sand and gravel from the roadway and bike lanes, and picking up the pollutants and sediments before they can enter the waterways, the following Healthy and Sustainable Environment values and factors are supported by the Street Cleaning proposal:

- [COMMUNITY VALUES] - “Services and Infrastructure that reliably ensure public health and safety, as well as protect the environment.”
- [CLEAN AIR] – “Expanding and maintaining safe and convenient walking and biking facilities/infrastructure.”
- [CLEAN RELIABLE WATER] – “Surface and Storm Water Management” – “Ground and surface waters may be degraded by both natural and human-made pollutants such as sediment... and organics.”
- [CLEAN GREEN CITY] – “Clean Streets” – “Streets free of waste and debris are important to the environment because they help facilitate safe biking, prevent flooding, and reduce dust particles in the air.”

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

Several of the citywide purchasing strategies are stewardship-oriented; “BEST VALUE”, “RIGHT-SIZED”, AND “CONSIDERING ALTERNATIVE SOURCES”. Knowing that stewardship is an ongoing City Core Value, the Street Maintenance staff occasionally compares the COB service level to nearby cities, compares in-house costs to contracted services, and tracks the customer calls; all in an effort to make certain the service is right-size and customers are getting best value.

SAFE COMMUNITY AND IMPROVED MOBILITY [FLOOD PREVENTION]

Bellevue's drainage system has been designed to hold and carry water during storms to prevent flooding. Removal of excess materials prior to entry into these systems, and removal of blockages such as leaves from the storm drain grates improves safety because it reduces the possibility of flooding for businesses and residences. It also improves mobility because a properly maintained drainage system reduces roadway flooding and the resulting impacts on mobility.

QUALITY NEIGHBORHOODS [PUBLIC HEALTH AND SAFETY] –

Bellevue values neighborhoods that are attractive, well-maintained, and safe and seeking proposals that result in clean streets, sidewalks, and other public spaces. Neighborhood Mobility Factor – providing “healthy choices” for travel on foot or by bike.

RESPONSIVE GOVERNMENT [STEWARDS OF THE PUBLIC TRUST] (MINIMIZING RISK AND LIABILITY)

Sweeping is a required component of compliance with regulatory requirements (National Pollutant Discharge Elimination System and Endangered Species Act). This also reduces the likelihood of claims due to runoff that has overflowed the roadway and entered private properties.

INNOVATIVE, VIBRANT AND CARING COMMUNITY [BUILT ENVIRONMENT] AND ECONOMIC GROWTH AND COMPETITIVENESS [BUILT ENVIRONMENT]

People want to be in a clean, well-maintained “place”. Maximizing the effectiveness of the drainage infrastructure aids in the City's economic competitiveness and advances the standard of living in the community.

C. Partnerships and Collaboration proposed:

Transportation and Utilities (Storm and Surface Water) share in the cost of this proposal as it benefits both Departments. Police is a partner when they need an intersection cleaned after a

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traffic accident and Neighborhood Services sends requests for street sweeping assistance when coordinating neighborhood fitness events. Sweepers are also used to assist Utilities for clean-up after emergencies such as water main breaks. Sweeping requests are also considered to remove debris after city-community events or when a passing truck spills gravel into the roadway.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

This work prevents additional catch basin cleaning that would otherwise have to be done after the materials washed into the catch basins. Removing sediment and debris once they have entered the drainage system is far more expensive.

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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

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Regan Sidie, x6857

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.01NA

Version Tracking: N/A

Section 2: Executive Summary

Capital Project Delivery develops and implements cost-effective capital investment projects necessary to accomplish the City's \$192 million 2013-2019 Utility Capital Investment Program (CIP) and is necessary to continue to provide utility services to Bellevue's citizens including providing drinking water, removing wastewater, managing surface water runoff, and eliminating impacts on the health of Bellevue's streams, lakes, wetlands, plants, and wildlife.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|---------------------|------------------|
| Personnel | \$ 2,452,903 | 2,639,363 |
| Other | 182,891 | 189,878 |
| Capital | 0 | 30,000 |
| | <u>\$ 2,635,794</u> | <u>2,859,241</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 2,502,999 | 2,729,276 |
| Rev-Exp Balance | \$ -132,795 | -129,965 |
| FTE/LTE | 2013 | 2014 |
| FTE | 20.11 | 21.11 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>20.11</u> | <u>21.11</u> |

Please briefly describe:

- A. "Other" Expenditures:** Temp help 2013: \$113K, 2014: \$120K; office supplies and equip. 2013/2014: \$18K; filing fees, non-CIP consulting, cell phones, and other op.
- B. "Capital" Expenditures:** Vehicle for new inspector 2014: \$30K.
- C. Supporting Revenue:** Proposal costs are entirely supported by utility rates
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** Add 2.00 FTE for increased service level.

Section 4: Budget Proposal Description

This proposal includes staff and resources needed to develop, manage, design, and construct projects that accomplish the \$192 million 2013-2019 CIP (average \$27 million per year).

CIP Management (2.42 FTE & 0.83 Temp. Staff): CIP management develops the CIP for Council adoption. The process includes stakeholder review of CIP project criteria; capital program & project recommendations; opportunity for public input & Environmental Services Commission evaluation; monitoring CIP status as it is implemented; and assessment of the program's cost effectiveness.

CIP Design (8.25 FTE & 0.50 Temp. Staff): 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

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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 by over \$30 million to address replacement of aging infrastructure, capacity for growth, and mandates, an additional design FTE in 2013 is identified in this budget to meet the increasing level of service.

CIP Inspection (7.45 FTE/2013 – 8.45 FTE/2014): 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 2014 to meet the increasing level of service.

Design/Construction Support (2.00 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.

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.

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 wastewater overflows and flooding
- Financial costs from property damage claims associated with water main breaks and other system failures

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 5.A below, these outcomes all support a healthy and sustainable environment for Bellevue's citizens.
- Long-term benefits: The existing utility infrastructure is valued at over \$3.5 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.

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 140.11NA) recommendations to minimize the life cycle cost of ownership/operation of the

water, wastewater, and stormwater 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 life cycle 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. Capital Project Delivery is only scalable if there is a corresponding reduction in the Utilities CIP. Scaling back the CIP will result in a lower level of service, which requires that Capacity for Growth projects be deferred and progress on replacing aging infrastructure and advancing environmental preservation be slowed.

Section 5: Responsiveness to Request for Results

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

- Factor 1: Clean Air and Factor 3: Clean Green City. Enhanced landscaping and restored tree canopies 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 greenhouse gas emissions. Seismic retrofit of our water reservoirs and pump stations is a proactive means of preserving and protecting our resources from damage by earthquake hazards.
- Factor 2: Clean Reliable Water: CIP programs and projects ensure a continued reliable supply of clean drinking water; reliable, safe wastewater removal; and that surface water run-off from rain and storms is controlled to minimize negative impacts such as erosion and flooding.
- Factor 4: Natural Environment. Implementation of the CIP ensures that lakes, streams, and wetlands will be protected from wastewater overflows. Improved native landscaping provided by stream restoration projects helps manage water runoff and provides habitat for fish and wildlife. The enhanced natural environment provided by stream projects works hand in hand with parks and trails to promote healthy living.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Natural Environment & Clean Air: Many CIP projects manage, maintain, preserve, and restore natural environments and the habitats they provide. These projects conserve natural resources through restoration of streams & adjacent green spaces, and prevent/remove release of pollutants that degrade the natural environment; stream restoration projects reduce air pollution through clean air practices such as planting landscaping that enhance air quality by filtering pollutants.
- Clean Reliable Water: 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 wastewater removal. Natural water resources are protected by programs that prevent pollution of surface water. 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 Green City: Construction site sweeping and other erosion control and pollution prevention measures keep the our city clean and free of waste, debris, and toxic materials.

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

- Safe Communities require clean reliable water, wastewater, and stormwater 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. Stormwater 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

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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 lower value-added activities: Biennial review of CIP projects gives the opportunity to prioritize expenditures. By determining where capital investment is needed most, lower value-added activities are identified and removed from the CIP.
- 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 & business practices: Optimum management of resources is ensured through use of the triple bottom line decision model and asset management program.

C. Partnerships and Collaboration proposed:

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. a new culvert under Coal Creek Parkway will include a park trail. 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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Cost Savings: Since the economic recession that began in late 2008, contractor bid prices for Bellevue Utilities projects had fallen dramatically due to the lack of competing construction projects. Projects were awarded at 25% to 50% below Utilities engineer's estimates and continued to remain low in 2010 and 2011. Utilities accelerated project delivery as much as possible to take advantage of the favorable bidding climate.

Consequence of not funding the proposal:

- Growth: Insufficient water and sewer system capacity (storage, supply, and conveyance) can result in development moratoriums imposed by the Washington State Departments of Health or Ecology. There would be cost consequences to Bellevue (lost revenue) if development was halted awaiting utility capacity projects.
- Lawsuits, state/federal fines, and penalties due to failure to meet mandated levels of service
- 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
- Increased maintenance costs to repair and operate equipment in utility facilities (such as pump stations).
- 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.

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Section 1: Proposal Descriptors

Proposal Title: Utility Comprehensive Planning

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.09NN

Proposal Number: 140.09NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: Yes

Primary Staff Contact: Pamela Maloney, x4625

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides Utility Comprehensive Planning: holistic evaluation for a 20-year planning horizon to forecast required changes in water, sewer, and stormwater system infrastructure, 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|-------------------|----------------|
| Personnel | \$ 506,678 | 501,341 |
| Other | 144,780 | 125,080 |
| Capital | 0 | 0 |
| | <u>\$ 651,458</u> | <u>626,421</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 631,758 | 626,421 |
| Rev-Exp Balance | \$ -19,700 | 0 |
| FTE/LTE | 2013 | 2014 |
| FTE | 3.75 | 3.75 |
| LTE | 0.50 | 0.00 |
| Total Count | <u>4.25</u> | <u>3.75</u> |

Please briefly describe:

- A. "Other" Expenditures:** Consultant (Water System Plan), one time: \$50K; Storm Basin Study, ongoing: \$50K per year; student intern 2013/2014: \$20K/yr; office supplies
- B. "Capital" Expenditures:** None
- C. Supporting Revenue:** Proposal costs are entirely supported by utility rates
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** LTE position expires during the biennium.

Section 4: 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 that 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. Adaptive, data-driven planning is vital to responsible stewardship of fiscal and natural resources, and sustainable management of infrastructure to deliver reliable municipal utility services for today's and tomorrow's customers.

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 utility System Plan updates are completed when needed to analyze changing conditions, regulations, anticipated system demand,

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and to meet state requirements. Updating each System Plan for adoption by Council and submittal to state resource agencies for approval, involves:

- Reviewing and updating utility system operational policies;
- Analyzing current and anticipated regulatory requirements (especially for drinking and surface water quality) and developing strategies to assure continued compliance;
- Identifying improved operational or maintenance practices to optimize system performance;
- Determining future system capacity requirements based on land use (using computer models);
- Incorporating system renewal and replacement (R&R) recommendations from the Utilities Asset Management Program;
- Identifying capital projects to meet growth, regulations, or system R&R so they can be programmed into the CIP for construction in a timely, cost effective, and environmentally sensitive manner; and
- Documenting utility financial viability into the future, considering resources that will be needed.

This holistic, system-wide evaluation every few years also involves updating the computer models that are used to perform day-to-day system analysis.

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

This proposal also includes (1) Management of Bellevue's floodplains to meet the minimum requirements of the National Flood Insurance Program (NFIP) and to promote the responsible use of floodplains to 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.

This proposal generates utility-specific information needed for City-wide planning initiatives, such as updates to the City's Comprehensive Plan, Shoreline Regulations, Land Use and Utility Codes, annexations, and Environmental Initiatives. Utility Planning is particularly critical when utility service area boundaries or land uses change.

This proposal is implemented by 1.66 engineers who specialize in the evaluation of piped utility systems and streams; 1.00 environmental biologist; 0.50 of an engineering technician (LTE), plus administrative and management support. FTEs are supported by a student intern (temp) and professional services.

Efficiencies/Innovations: Technical staff have specialized expertise skills specific to each utility, but are also cross-trained to understand all utility systems so they can support each other. This allows us to maintain lean core staffing levels while providing ongoing inter-departmental support even during major System Plan updates. Each System Plan takes about two years to update, ideally they are scheduled for different years. When major efforts overlap, LTE are hired to supplement in-house and consulting resources. Engineering/ environmental student interns provide cost-effective supplemental staffing. Comprehensive Planning positions the Utility to take advantage of opportunities for joint projects with adjacent agencies, reducing cost and customer impact.

Cost Avoidance: Without Comp. Planning, development projects would be delayed awaiting system capacity upgrades (the state can impose development moratoriums). Planning avoids the financial and environmental costs associated with sewage overflows (the state can mandate capital projects to address recurring overflows) and flooding. Bellevue's Community Rating Classification of 5 for excellence in flood program management results in up to 25% premium savings for Bellevue customers who purchase federally-backed flood insurance.

Long- and Short-term benefits: Comprehensive planning is focused on long term benefits: It identifies what will be needed to provide customers with safe, sufficient, and clean drinking water; to remove sewage safely from homes and businesses and deliver it to regional conveyance and treatment facilities; to achieve surface water quality and quantity that provide wildlife habitat and to meet recreational needs; and to control runoff in a way that minimizes flooding and erosion. Comprehensive plans and targeted studies identify, quantify, and recommend solutions to current and anticipated problems. The 20+ year planning allows development of proactive strategies for reliably and sustainably meeting the community's water resource needs. Recommendations from these analyses are incorporated into rate forecasts, the Utilities Capital Investment Program, and advise system operations.

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

This proposal maintains the current level of service, which is at the minimum viable level:

- 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 forecasted demands on utility systems.
- The proposed budget funds completion of targeted stormwater basin studies every 1-3 years, depending on their scope. The need for the studies is identified through comprehensive system planning, operational experience, or city initiatives. Targeted studies analyze flooding, water quality, erosion, and/or habitat issues and may recommend capital projects, operational adjustments, or customer outreach.

Section 5: Responsiveness to Request for Results

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

Factor 2, Clean Reliable Water, Factor 4, Natural Environment. 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 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 Natural Environment. 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 managed to meet environmental needs now and sustainable into the future. Holistic, system-wide analysis considers operational, capital, regulatory changes and management strategies before recommending best solutions. The direct outcome is a safe, reliable supply of drinking water; surface water quality and quantity that can sustain quality wildlife habitat and meet the community's recreational needs; and stormwater runoff that 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; vital to a healthy and sustainable environment, is integral to stormwater basin planning.

B. Citywide Purchasing Strategies and 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.

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Citywide purchasing strategies:

- 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 (e.g. capacity, erosion, etc.) rather than just treating the symptom (e.g. localized flooding). In the long run, this is much more cost effective. Comprehensive Planning is considered a best practice for utilities management, promoting a proactive rather than reactive approach to identifying and resolving issues.
- 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 (more expensive), or too small, resulting in a need for replacement before the reservoir, pipe, or pump station is worn out.
- Leverage collaboration or partnerships with others. Utility comprehensive planning relies on input from PCD about population and jobs growth forecasts. This allows us to accurately forecast the need for added capacity and timing. When the City considers land use changes that increase density or annexing areas to Bellevue, Utility Planning provides the utility impacts and costs of those changes for PCD.

C. Partnerships and Collaboration proposed:

Utility Planning staff work closely with urban planners in Planning & Community Development (PCD) to incorporate their latest population growth and timing projections, and to identify the utility impacts of proposed land use or zoning changes, and annexations. Floodplain Management involves working with Development Services (DSD) whenever projects are proposed in or near floodplains, to prepare for CRS program audits, and to evaluate proposed NFIP Program changes. External coordination with Issaquah, Newcastle, Kirkland, Redmond & King Co. is important for successful stormwater basin planning. Water & sewer services are provided to other jurisdictions, requiring cross-agency collaboration to plan for system needs. Forecasts for water and sewer needs are developed cooperatively with regional service providers: Cascade Water Alliance & King Co. Metro.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Attachment 140.09NA_Attach1_CompPlan_SysAnal_AssetMgmt illustrates how Comprehensive Planning is related to Asset Management and Systems Analysis proposals. Utility System Plans identify CIP needs that are incorporated into Utility capital proposals.

If this proposal is not funded, there would be severe consequences (listed below); lower level funding would have similar impacts, but to a lesser degree:

- Legal: Bellevue would not comply with state regulations for water and wastewater system plan updates, eventually resulting in state-imposed development moratoriums. Unanticipated regulatory changes would result in environmental damage, fines, state-mandated projects, and mandated operational changes.
- Customer Impact: Customers would experience unanticipated rate spikes; unexpected utility service interruptions and flooding would increase. Bellevue would be ineligible to participate in the NFIP, meaning Bellevue citizens could not purchase federally-backed, low-cost flood insurance.
- Investment/Costs already incurred: Wastewater System Plan update will be 95% complete at the beginning of 2013; Water System Plan scope/strategy development for the 2013-14 Plan update will be complete.
- Other: Flooding, water quality, or aquatic habitat problems could not be addressed proactively without basin studies. Opportunities for environmental improvement would be reduced with a resulting site-specific rather than holistic approach. (For example, CIP resources might be used to build larger culverts to alleviate flooding, when a better solution would be controlling sedimentation from upstream unstable stream banks that clogs existing culverts and chokes stream habitat.)
- Other: Evaluation of required changes to utility systems as a result of proposed land use changes (such as the need for more drinking water storage reservoirs, larger water or sewer pipes, opportunities for regional stormwater facilities)

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Section 1: Proposal Descriptors

Proposal Title: Utility Asset Management Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.11NN

Proposal Number: 140.11NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: Yes

Primary Staff Contact: Bill Heubach, x2067

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides for the Utility Asset Management Program (AMP), which ensures that utility infrastructure are managed such that service levels expected by customers and required by state and federal regulations are provided at the lowest possible cost. Most of Bellevue's \$3.5+ billion of utility assets are more than halfway through their useful life. Failures, maintenance, and repair costs are increasing. The comprehensive AMP ensures the resources needed to operate, maintain, repair, and eventually replace utility systems will be available and used cost effectively.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|-------------------|----------------|
| Personnel | \$ 618,387 | 639,949 |
| Other | 56,010 | 56,010 |
| Capital | 0 | 0 |
| | <u>\$ 674,397</u> | <u>695,959</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 669,793 | 691,190 |
| Rev-Exp Balance | \$ -4,604 | -4,769 |
| FTE/LTE | 2013 | 2014 |
| FTE | 5.34 | 5.34 |
| LTE | 0.00 | 0.00 |
| Total Count | 5.34 | 5.34 |

Please briefly describe:

A. "Other" Expenditures: Interns & temp help
2013/2014: \$41K; office supplies and other operating expenses

B. "Capital" Expenditures: None

C. Supporting Revenue: This proposal is entirely supported by utility rates

D. Dedicated Revenue: None

E. FTE/LTE: LTE position expires during the biennium.

Section 4: Budget Proposal Description

Asset management involves managing \$3.5+ billion of city-owned 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, 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.

Bellevue uses the United States Environmental Protection Agency (EPA)-adopted program framework for asset management, a utility-provider best management practice.

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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, so maintenance, repair costs, and failures are increasing. We've reached the 'tipping point' where extensive (and expensive) asset rehabilitation and/or replacement is needed to maintain utility reliability. AMP helps ensure that the resources needed to operate, maintain, repair, renew, and eventually replace aging assets are available and used cost-effectively. Without AMP, significantly higher capital funding would be needed to maintain service levels. AMP is cost-effective and more than pays for itself.

Utility staff, developers, and customers need accurate, easy-to-read and accessible maps of city utilities, and the state mandates record drawing archival requirements. Therefore, records drawing management is a critical and significant component of this investment. System maps and system attribute information (e.g. size, pipe material, date installed) is organized into databases so it can be 'pushed' to various enterprise computer systems (e.g. Maximo for asset inventory data; Mapster for electronic map and data access). Continuous updates are made to incorporate new facilities and accurate attribute information, correct drawings based on field information from Utilities' maintenance staff, and to archive drawings and records per state requirements.

This proposal includes 1.67 engineers responsible for AMP program management, development, and implementation; 0.20 O&M technicians who coordinate AMP field work; 2.67 engineering technicians who manage record drawings and asset inventory; and 0.80 systems analyst for software support. The proposal also includes engineering student interns (part-time temps) who support data analysis of asset information.

Mandates and Contractual Agreements include Bellevue's Municipal Stormwater (NPDES) Permit requiring mapping certain stormwater assets; and Washington State requires accurate system drawings and record archival, documented per Local Government General Records Retention Schedule.

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 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. Examples:

- AMP provides the data to right-size Utility Renewal and Replacement (R&R) 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). Independent consultant review of AM strategies and forecast future funding needs in 2012 validated reducing future Water R&R fund balance requirements, with resulting reduced utility rate increases in 2013-14 and beyond.
- In 2011-12, alternative record drawing practices were evaluated. Current processes would require more staff as the utility CIP grows (due to increasing system R&R). The outcome was to move to a GIS-based system that will streamline data entry, align with best industry practices and city enterprise software, and support future needs such as mobile access to utility maps and data. Recommended process improvements will be implemented in 2013-14 via utility CIP programs.
- Improved procedures for reporting water asset defects and failures in 2012 led to improved identification of water pipe replacement needs and priorities.
- In 2012, a risk-based procedure was developed to prioritize asbestos cement water mains for replacement (the most significant investment in utility asset renewal, at \$5+Million/year). The resulting 5-year plan for pipe replacement facilitates identifying wastewater or stormwater assets (in the same streets) for concurrent condition assessment and repair. Utility improvements are mapped against transportation overlays and street projects, so schedules are coordinated- saving money and

minimizing disruption. The plan will evolve as improved data about risk conditions such as geologic movement become available .

- The utility has a significant backlog of sewer repair work. The AMP prioritized sewer repair work orders based on risk. Enhanced use of MAXIMO identifies which repairs should be done by O&M vs. contracted through the CIP. Further analysis will refine criteria for which repairs can be done in-house at reduced cost.
- In 2013-14, software and implementation strategies for improved asset data management will be evaluated. Resource requirements will be estimated and an implementation plan developed. This is the next step toward making all utility asset data (e.g. condition, attribute, age, location) easily available to any user, so that optimal decisions can be made quickly and consistently. 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.

Cost Avoidance and proposed service level: 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. 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. This proposal is not scalable: it is funded at the minimum possible staffing level to implement and advance an Asset Management Program.

Near-Term Benefits: AMP assures that Bellevue provides utility services cost effectively by providing quality 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 can be identified, and priorities established. Longer term: AMP is essential to providing municipal utility services as cost-effectively as possible by minimizing the total life cost of utility components while maintaining service target levels and minimizing business risk. Long-term resource needs can be more accurately forecast. The utility system replacement value is well over \$25,000 for each of Bellevue's 117,000 residents; smart management is imperative.

Section 5: Responsiveness to Request for Results

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

Factor 2: Clean Reliable Water; Factor 3: Clean Green City; Factor 4: Natural Environment. Utilities AMP supports a reliable supply of safe drinking water and safe, efficient removal of sewage. Minimizing system failures means reduced environmental damage from structure & property flooding, sewage backups that pollute and erode lakes, streams & wetlands. Efficient asset management conserves resources.

Purchasing Strategies in the Healthy & Sustainable Environment outcome: AMP supports continued delivery of water, sewer, and stormwater services in an environmentally sensitive & 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-yr 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. Safe, reliable utility systems mean less damage to the natural environment from flooding and erosion. Maximizing asset component life means efficient system replacement conserves resources and avoids wasting materials.

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

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

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Citywide purchasing strategies:

- Best Value; Sound resource management; Best 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 that considers 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. AM is a best business practice for Utility providers, defined by the US EPA.
- 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.
- AMP focuses on right-sizing investments, yielding efficiency gains and cost savings. A key component is defining target customer service levels. Once defined, the most cost-effective AM strategies are selected to meet them. This iterative process assures service levels commensurate with available resources.
- Collaboration with external organizations. In addition to partnerships highlighted below, 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 Bellevue's 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 and industry technologies for asset assessment, maintenance, and replacement.
- Short and long-term financial impacts. AMP forecasts resource needs decades into the future to minimize rate increases and assure intergenerational cost equity.
- Evidence-based approach to HSE: Utility failures can seriously damage the environment. AM reduces the likelihood of high-consequence asset failures. AM decisions are data-driven (e.g. asset life forecasts based on install date, soil, & material; criticality based on risk and consequence; condition observation)

C. Partnerships and Collaboration proposed:

Internal: Condition assessment of water, wastewater, and stormwater pipes is coordinated with the Transportation overlay program, so defects in critical pipes can be resolved prior to street resurfacing, reducing neighborhood disruption and street restoration costs. Transportation and Parks also use enterprise software to manage assets such as trails, sidewalks, and roads; any improvements to software tools will include collaboration with those departments.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

The AMP is foundational to many other Utility proposals, including utility operations & maintenance requirements; R&R account funding; utility comprehensive planning; and development of the CIP programs that fund asset replacement. See attachment 140.09NA_Attach1_CompPlan_SysAnal_AssetMgmt.

If this proposal is not funded, consequences would be significant. Reduced funding would have similar consequences, to a lesser degree:

- Increased failures and the associated environmental impacts could result in state-mandated system improvements; damage claims would increase. Become out of compliance with archival mandates. State-issued consent decrees result in loss of public confidence and rate increases to meet decree requirements.
- Service will decline as system failures and service interruptions increase. Costs of utility system ownership would increase; resulting in sporadic sharp rate increases to repair system failures, and overall higher rates over time. Reduced response to staff, developers, and citizens about utility facilities.
- The quality of data available to prioritize work on system deficiencies and long term capital planning will decline. Reactive rather than proactive system work is less cost-effective. Trend data on system performance, failures and claims could not be produced or analyzed.

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Section 1: Proposal Descriptors

Proposal Title: Utility Systems Analysis

Proposal Number: 140.12NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: Yes

Primary Staff Contact: Pamela Maloney, x4625

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.12NN

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides for analysis of the water, sewer, and stormwater systems. It assures they are operated efficiently, allows rapid response to developer questions about system capacity, and identifies potential system deficiencies. Computer models of each utility system are developed and used daily to predict the amount of water available to fight fires, to map and predict flooding, and to forecast or investigate sewer overflows. Systems Analysis includes collection of physical and biological information about streams for trend analysis of fish usage and environmental health, which can then be used to improve Utility programs and projects.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 276,936 | 263,574 |
| Other | 127,180 | 127,180 |
| Capital | 0 | 0 |
| | <u>\$ 404,116</u> | <u>390,754</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 404,116 | 390,754 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 2.00 | 2.00 |
| LTE | 0.50 | 0.00 |
| Total Count | <u>2.50</u> | <u>2.00</u> |

Please briefly describe:

- A. **"Other" Expenditures:** \$10,000/yr/utility: consulting support; \$40,000/yr: collection of salmon/insect data; \$27,100/yr: stream gages including USGS. \$15,000/yr: LID training. No
- B. **"Capital" Expenditures:** None
- C. **Supporting Revenue:** Proposal costs are entirely supported by rates.
- D. **Dedicated Revenue:** None
- E. **FTE/LTE:** None

Section 4: Budget Proposal Description

Systems Analysis is a mission-critical body of work to collect and analyze information about water, sewer, and stormwater system performance that informs continued efficient operations, quantifies system capabilities, and identifies system problems or deficiencies. Computer models of each utility system are developed, maintained, and operated to predict the amount the water system can deliver to fight fires (water), to map and predict flooding (storm), and to forecast potential sewer overflows (sewer). Computer analyses coupled with field verification allow accurate assessment of each system's ability to accommodate population growth or changed land uses. This information is required for long-term Utility Comprehensive Planning (see Attachment 140.09NA_Attach1). A limited amount of drinking water quality modeling is also done. Storm Systems Analysis includes analysis of trends in

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stream health based on fish usage and other biological indicators that respond to changing stream conditions.

Computer models and trend analysis rely on up-to-date, accurate information. Facility data is provided by the Asset Management Program (Proposal 140.11NA). Field data, including collecting physical and biological information about streams, is integral to Systems Analysis. This proposal includes:

- FTEs in this proposal include 1.00 systems engineer expert in analysis of piped utility systems, 1.00 engineer/hydrologist who specializes in stormwater runoff and stream behavior, and 0.50 engineering technician who supports stormwater analysis. FTE staff is supplemented by a student intern.
- 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 to pay Bellevue's share of the cost of USGS gages on Kelsey Creek and Lake Sammamish.

Mandates and Contractual Agreements:

This proposal calculates the volume of drinking water lost to system leakage that is required annually by the Washington State Department of Health (DOH) to satisfy the Water Use Efficiency Rule. It also provides annual water use and water consumption forecasts, as required by Bellevue's contract with the Cascade Water Alliance.

Efficiencies/Innovations: This proposal includes:

- REDUCTION of \$25,000/yr for salmon spawner observation. This activity is not mandated. The reduced budget will maintain the integrity of trend assessment by funding continued weekly fish surveys and data entry into a basic spreadsheet. However, this reduction means we will no longer fund full coho pre-spawn mortality assessments (twice-weekly surveys), compare Bellevue data with regional data for indications of outside influences on salmon abundance (such as ocean conditions or harvest), nor prepare formal reports with analyses, maps and trend comparisons with previous years.
- REDUCTION of \$12,500/yr (38%) for consultant modeling support, based on historical need.
- Computer modeling that identifies system efficiencies. For example, when Bellevue assumed the Coal Creek Utility District (CCUD), one water pump station required expensive rehabilitation. Modeling discovered that installing a pressure reducing valve would provide improved water flow and allow permanent abandonment of the pump station. This alternative increased flow capacity, eliminated pump station rehabilitation (\$500,000-\$1,000,000), and eliminated the cost of ongoing operations and maintenance.
- City-managed computer models allow rapid response to developer requests quantifying system capacity, for emergency response, and provide in-house ability to quantify the impact of City initiatives such as rezones.
- System data is collected cost-effectively using a mix of City staff, volunteers, and consultants.
- Providing Bellevue's stream health data with other entities provides regional trend data cost effectively.

Cost Avoidance:

- Computer models ensure capital projects are 'right sized' to provide sufficient capacity to meet regulatory requirements without over-building facilities, which would add to costs.
- Biological indicators monitoring helps Bellevue avoid costly water chemistry monitoring. Chemical monitoring for just metals, suspended sediments, pH, and nutrients would cost \$2700/site/year for 10 sites, vs the \$15,000/yr currently spent for biological indicators monitoring.
- Salmon and biological monitoring provides information that improves stream capital projects, increases the potential for salmon recovery grants, and informs stormwater management operations.

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 improve stormwater management activities and help understand whether aquatic conditions are healthy. Long Term: 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 needed 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.

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

- 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.
- Reduced Salmon Spawner surveys will maintain protocol-compliant data for salmon streams of primary interest regionally and locally, and qualitative information for other streams from volunteer observations.
- Biological indicators provide status and trend information about stream health and assess improvements from stream CIP projects, consistent with the U.S. EPA standard for Puget Sound lowland streams. Stream sites visits are rotated each year to meet resource limitations.

Section 5: Responsiveness to Request for Results

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

- Factor 2: Clean, Reliable Water. 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 allow proactive identification of constraints to continued delivery of these services, and development of solutions.
- Factor 3: Clean and Green City. Using volunteers for insect sampling and fish observation engages citizens in meaningful aquatic management while educating them about stream health and sustainable environmental practices. Computer modeling of constructed utility systems identifies opportunities for improved energy efficiency at water and sewer pump stations and between water pressure zones.
- Factor 4: Natural Environment. Systems Analysis facilitates design and improvements to manage, maintain, preserve, and restore stream environments and the habitat they support. Changed behavior (from volunteers and those they interact with) improves streams, wetlands, lakes, and overall environmental health. Predicting capacity constraints that could lead to sewer overflows or flooding leads to system improvements that reduce the potential to pollute the environment.

Purchasing Strategies in the Healthy and Sustainable Environment outcome:

- Environmentally sensitive, equitable and sustainable results; emphasize proactive 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.
- Has a direct relationship to creating a Healthy and Sustainable Environment: Volunteers have an opportunity to work in Bellevue's streams—an experience and lessons they share with family, neighbors and friends.
- Incorporates multiple strategies: Systems Analysis results in the responsible investment of capital resources, efficient system operation, and provides opportunities for community education, outreach, and training.

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

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Innovative, Vibrant & Caring Community: Engaging volunteers heightens awareness of and care for the environment, and strengthens the sense of community. Safe Community, Quality Neighborhoods: Flood prediction allows improved response to flooding emergencies. Economic Growth & Competitiveness: System Analysis results in a robust utility network that accommodates new homes and businesses.

Citywide purchasing strategies addressed by this proposal:

Best value; cost savings; leverage collaboration with external organizations; sound management of resources and business practices; catalyst for increasing citizen participation; evidence-based approach to achieve HSE:

- 164 volunteers provide 700+ hours and 760+ field visits annually, cost-effectively collecting data and changing personal behavior that impacts the environment. Volunteers save ~ \$15,135/year in staff costs.
- 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; staff analyze the results to calibrate stream computer models.
- 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 software models provided by the U.S. EPA, rather than expensive proprietary software.
- Resource 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.
- 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. Partnerships and Collaboration proposed:

Internal: Fire, Planning and Community, and Development Services rely on Utility system analysis for building and planning permits. O&M use Systems Analysis to optimize 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. & 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, & Sammamish collaboratively support USGS gages.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

If this proposal is not funded, there would be severe consequences (listed below); lower level funding would have similar impacts, but to a lesser degree.

- Developers would not have accurate system capacity, information that is critical for their design work. If Bellevue were excluded from participation in FEMA's National Flood Insurance Program, Bellevue citizens could not purchase low-cost, federally-backed flood insurance.
- Bellevue could not analyze trends in stream & ecosystem health; could not observe whether fish passage projects are functioning as anticipated; reduced volunteer participation in our streams, resulting in reduced behavioral changes for environmental benefit; and would be unable to predict & 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 (and often reduce the cost) of capital projects
- Reduced system operational efficiencies
- Reactive rather than proactive management of critical public utility lifelines

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Section 1: Proposal Descriptors

Proposal Title: Water Mains and Service Lines Repair Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.13NA

Proposal Number: 140.13NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Kipp Fockler, x2923

Version Tracking: N/A

Section 2: Executive Summary

The water repair program's primary objective is to fix system breaks and stop leaks 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. 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. Service examples include repairs to broken, leaking or malfunctioning water mains and service lines, fire hydrants, and control valves.

Section 3: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------------|------------------|
| Personnel | \$ 795,693 | 825,365 |
| Other | 449,247 | 445,010 |
| Capital | 0 | 0 |
| | <u>\$ 1,244,940</u> | <u>1,270,375</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|--------------|-----------|
| | \$ 1,239,112 | 1,264,310 |

| | | |
|------------------------|-----------|--------|
| Rev-Exp Balance | \$ -5,828 | -6,065 |
|------------------------|-----------|--------|

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 8.90 | 8.90 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>8.90</u> | <u>8.90</u> |

Please briefly describe:

A. "Other" Expenditures: OT & Standby 2013/2014: \$39K; prof field svcs (asphalt restore, debris, etc.) 2013/2014: \$251K; op. supplies (asphalt, chemicals, etc.) 2013

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Utility Service Fees

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; reallocation of existing FTEs based on 10-11 data

Section 4: 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 616 miles of water mains, 10,000 valves, 40,810 water service connections, and 6000 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 increasing costs. This proposal requests the resources necessary to quickly respond to and repair drinking water pipeline

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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.

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.
- Washington State Municipal Water Law 2003 (MWL) and WAC 246-290 Water Use Efficiency Rule (WUE)/Distribution System Leakage Standard require water systems to manage water loss.

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.

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:** Repairs help extend the life of the infrastructure and save replacement costs. 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.

Describe why the level of service being proposed is the appropriate level/scalability:

Water main breaks and service line leaks are performed as reactive maintenance which limits the

scalability of the proposal unless we defer repairing water main breaks and service line leaks. 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 – 2009, Utilities averaged four (4) water claims paid per year at an average total annual cost of \$96,400. Bellevue Utilities relies on several performance measures to assess program effectiveness related to system reliability to ensure high quality service. Minimizing water loss (leakage), fully function hydrants for firefighting and keeping unplanned water service interruptions to a minimum are measures monitored to ensure high quality water service.

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.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water/ Clean Drinking Water. Repair services in this proposal are critical to the delivery of reliable, safe, and sufficient clean drinking water.
- Factor 3: Clean Green City/Conservation of 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 safe, reliable supply of drinking water to our customers.
- Program emphasizes proactive repairs where possible and provides response services when necessary (water main and service line breaks).
- Activities under this proposal conserve natural resources by minimizing the amount of water loss from leaks through proactive repair programs.

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

- Safe Community, Factor 2: Response. Firefighting 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.
- Safe Community, Factor 2: Response/Mitigation & Recovery. Provides resources to investigate find and repair leaks as well as restoring private property and areas in the R.O.W. to quickly recover after catastrophic water main breaks.
- Economic Growth and Competitiveness, Factor 3: Land, Infrastructure and Planning, Communication and Utility 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 R.O.W. 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 2: High Performing Workforce. The repair program ensures that Utilities has the equipment resources and well trained FTEs required to respond and mitigate leaks promptly with minimal service interruptions.

Citywide purchasing strategies:

- Provide the best value in meeting community needs. 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.
- Provide the best value in meeting community needs. The repair program coordinates workload

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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.

- Ensure sound management of resources and business practices. 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. Partnerships and Collaboration proposed:

Through franchise agreements Bellevue Utilities provides water service to Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Minimizing water loss saves wholesale water costs for unmetered water.

Consequence of not funding the proposal at all

- Legal: Property damage claims against the City would increase.
- 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.
- 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.

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
Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.14NN

Proposal Number 140.14NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No

Primary Staff Contact: Kipp Fockler, x2923

Version Tracking: N/A

Section 2: Executive Summary

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. 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.

Section 3: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|-------------------|----------------|
| Personnel | \$ 580,871 | 602,526 |
| Other | 156,575 | 154,575 |
| Capital | 0 | 0 |
| | <u>\$ 737,446</u> | <u>757,101</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 729,547 | 748,941 |
| Rev-Exp Balance | \$ -7,899 | -8,160 |
| FTE/LTE | 2013 | 2014 |
| FTE | 6.45 | 6.45 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>6.45</u> | <u>6.45</u> |

Please briefly describe:

- A. "Other" Expenditures:** OT/Standby 2013/2014: \$51K; operating and repair supplies 2013 \$93K, 2014 \$91K; other operating expenses
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** N/A
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** No add of FTE; reallocation of existing FTEs based on 10-11 data

Section 4: 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 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:

- Drinking Water System Flushing. Cleaning the water distribution system on a 6-year cycle by

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cleaning approximately 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.

- Fire Hydrant Maintenance: Inspect, exercise, and maintain all 6000 fire hydrants every two years to ensure that hydrants perform reliably when needed. Through an aggressive and proactive inspection program the Utilities O&M mission objective is to ensure that all City-owned fire hydrants function as intended when needed to protect life and property.

- 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 10,000 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.

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.

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.

Short- and long-term benefits of this proposal:

Short-term benefits: 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 benefits: 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.

Describe why the level of service being proposed is the appropriate level/scalability:

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. As indicated by the performance measures, an adequate level of preventive maintenance services is required to provide dependable, safe water service while minimizing costs associated with failures. Due to the high consequences of failure when preventive maintenance services are not provided, these service levels support the goals for reliability and performance. 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 5: Responsiveness to Request for Results

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

- Factor 2: Clean Reliable Water/ Clean Drinking Water; Reliable Water Supply. Services under this proposal are critical to the delivery of reliable, safe, and sufficient clean drinking water for domestic and commercial use and firefighting.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Continued delivery of a clean, safe, reliable supply of drinking water to homes and businesses. Zone Flushing is a proactive measure that 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 to minimize service interruptions, maximize reliability and attain the longest service life possible for City owned water infrastructure.

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

- Safe Community, Factor 1&2: Prevention/Response. This proposal provides safe drinking water to the community through the flushing program. Public safety and firefighting response capabilities are supported by inspection, maintenance, and repair of all City-owned fire hydrants.
- Economic Growth and Competitiveness, Factor 3: Land, Infrastructure and Planning. 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:

- Provide the best value in meeting community needs. 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.
- Ensure that services are "right sized." Inspection and maintenance schedules for valves are based on (AWWA) recommendations. Fire hydrant inspections are based on (NFPA) recommendations. Unidirectional flushing is conducted per AWWA industry standards and

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recommendations from a 1995 study by Economic Engineering Services specific to Bellevue's system.

C. Partnerships and Collaboration proposed:

Hydrant inspection and maintenance is coordinated with the Fire Department. Through franchise agreements Bellevue Utilities provides water service to Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area). It is also important to note that water delivered to parts of Kirkland, Redmond and Issaquah move through Bellevue's system first, so we help our neighbors by ensuring the delivery of safe clean reliable drinking water.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Cost Savings:

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 that performs distribution system preventive maintenance are cross-trained to perform other reactive activities to address both preventive and reactive maintenance needs.

Consequence of not funding the proposal at all

- **Legal:** Violations of state and federal drinking water legal requirements
- **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 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.
- **Other:** Decreased public confidence in the City's ability to provide safe and reliable drinking water and protect life and property; negative media attention.

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

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Section 1: Proposal Descriptors

Proposal Title: Water Pump Station, Reservoir and PRV Maintenance Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: N/A

Previous Proposal Number(s): 140.15NA

Proposal Number 140.15NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Kipp Fockler, x2923

Version Tracking: 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 6,000 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: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|--------------|-----------|
| Personnel | \$ 389,797 | 404,229 |
| Other | 701,020 | 699,020 |
| Capital | 0 | 0 |
| | \$ 1,090,817 | 1,103,249 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|--------------|-----------|
| | \$ 1,090,817 | 1,103,249 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 4.00 | 4.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 4.00 | 4.00 |

Please briefly describe:

A. "Other" Expenditures: OT/Standby 2013/2014: \$37K; prof. svcs including reservoir inspect., coating & repair 2013/2014: \$266K; power, water, sewer & drainage bills

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; reallocation of existing FTEs based on 10-11 data

Section 4: 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 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

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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 pump 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. Utilities O&M uses industry accepted performance measures and strives for zero pump failures annually.

Reservoir Maintenance and Repair

Water reservoirs maintain uniform water pressure by storing water for high water use incidents such as firefighting, 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. The intent of the program is to have zero reservoirs taken out of service as a result of drinking water concerns. 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 63 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 firefighting 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.

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.

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.

Short- and long-term benefits of this proposal:

Short-term benefits: This proposal helps create a healthy environment by providing safe clean 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 social) costs and benefits are considered. This proactive approach to maintain components prolongs the useful life of assets and decreases operating costs to customers.

Describe why the level of service being proposed is the appropriate level/scalability:

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. As indicated by the performance measures, an adequate level of preventive maintenance services is required to provide dependable, safe water service while minimizing costs associated with failures. Due to the high consequences of failure when preventive maintenance services are not provided, these service levels support the goals for reliability and performance.

Section 5: Responsiveness to Request for Results

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

- Factor 2: Clean Reliable water: Clean Drinking Water; Reliable Water Supply. 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 3: Clean Green City: Conservation of Natural Resources. A well-maintained water system is efficient saving energy and water. A properly maintained system minimizes failures and helps protect our waterways from environmental hazards
- Factor 4: Natural Environment: 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.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

Ensure the 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.

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

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- Economic Growth and Competitiveness, Factor 3: Land, Infrastructure and Planning. 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. Firefighting response capabilities are supported by adequate water supply, flow and pressure.

Citywide Purchasing Strategies:

- Provide best value in meeting community needs: Cost effective maintenance strategies are provided by evaluating component condition, performing proactive maintenance and developing just in time replacement strategies.

- Provide for gains in efficiency and cost savings: 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.

C. Partnerships and Collaboration proposed:

Through franchise agreements Bellevue Utilities provides water service to, Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

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.

Consequence of not funding the proposal at all:

- Legal: Increased violations/fines levied from environmental regulations agencies

- 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.

- 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.

- Other: Increased failures, claims, and water loss due to main breaks as a result of high pressures.

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

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Section 1: Proposal Descriptors

Proposal Title: Water Meter Repair and Replacement Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.16NN

Proposal Number: 140.16NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Kipp Fockler, x2923

Version Tracking: N/A

Section 2: Executive Summary

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. 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. 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: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 168,418 | 174,799 |
| Other | 270,375 | 270,375 |
| Capital | 0 | 0 |
| | <u>\$ 438,793</u> | <u>445,174</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 438,793 | 445,174 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 2.00 | 2.00 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>2.00</u> | <u>2.00</u> |

Please briefly describe:

A. "Other" Expenditures: Temp help/OT 2013/2014: \$49K; inventory and repair & maintenance supplies 2013/2014: \$210K; other operating expenses and supplies

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: 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.

Test, Calibrate and Repair Large Meters: Internal components of water meters deteriorate with age. This leads to inaccurate readings and under registering of water consumption. Inaccurate readings provide incorrect information regarding usage, make leak detection more difficult, and result in lost revenue for the utility. All meters should be tested for accuracy on a regular basis. The primary objective of the program is to test, calibrate and repair 70 large water meters annually on a 5-year

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test/calibration cycle for 280 large meters over 3" in size to ensure their continued accuracy. Testing and calibration is a best practice in water supply management because it provides accurate accounting and billing of water produced and delivered; supports leak detection; identification of high water users who may need assistance in reducing overall water use; supports the goal to minimize unaccounted for water. In addition, identifying failed commercial meters early minimizes the need to retroactively bill customers and supports customer service.

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 15-20 years based on manufacturer's recommendations and industry standards. Over 40% of City-owned water meters are over 20 years old. 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 the City and the customer access to their meter to monitor usage and 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 adjusting meter boxes to eliminate tripping hazards which 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.

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.

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.

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.

Describe why the level of service being proposed is the appropriate level/scalability:

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 5: Responsiveness to Request for Results

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.

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 3: Clean Green City: Conservation of Resources. 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. 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Quality Neighborhoods Factor: Facilities and Amenities. Well maintained meter boxes support safe and clean, well-maintained commercial and residential properties as well as efficient meter reading.

Responsive Government Factor 4: Stewards of the Public Trust. Well-designed and maintained assets with accurate water meters ensure equity among the ratepayers and builds trust between the customer and the City.

Citywide Purchasing Strategies addressed by this proposal:

- Consider short and long-term financial impacts: 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 that alert staff to meters which are

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potentially reading low or malfunctioning. This allows for more effective maintenance program through targeted follow-ups.

- Ensure services are “right sized”: 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.
- Provide the best value in meeting community needs 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. Partnerships and Collaboration proposed:

Through franchise agreements Bellevue Utilities provides water and sewer service to Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Cost Savings:

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

Consequence of not funding the proposal at all

- 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.
- 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.
- 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Water Service Installation and Upgrade Program
Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.17NN

Proposal Number: 140.17NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No

Primary Staff Contact: Kipp Fockler, x2923

Version Tracking: 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: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|------------------|---------------|
| Personnel | \$ 74,191 | 77,057 |
| Other | 8,750 | 8,750 |
| Capital | 0 | 0 |
| | <u>\$ 82,941</u> | <u>85,807</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 82,941 | 85,807 |
| Rev-Exp Balance | \$ 0 | 0 |
| FTE/LTE | 2013 | 2014 |
| FTE | 1.00 | 1.00 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>1.00</u> | <u>1.00</u> |

Please briefly describe:

- A. "Other" Expenditures:** Personal Protection Equipment and other operating expenses and supplies 2013/2014: \$8,750
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Proposal costs are entirely supported by utility rates
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** N/A

Section 4: 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.

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- **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. In an effort to minimize construction delays Utilities O&M has a performance measure goal to complete 95% of all water service installs within 4 weeks of the customer's request to do so. Based on 2010-2011 workload projected new water service installations are 40-50 per year for 2013-2014.
- **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 2010-2011 workload projected meter installs are 60-75 per year for 2013-2014.
- **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 2011-2012 workload projected upgrades/relocations of water services are 40 per year for 2013-2014.

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.

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.

Efficiencies/Innovations:

Utilities adopted recommendations from a 2008 process improvement analysis 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 2011, 100% of the new service installations were completed within 4 weeks.

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.

Describe why the level of service being proposed is the appropriate level/scalability:

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. These are demand-driven service levels driven by development activity and the associated water service and meter requests.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water/Clean Drinking Water; 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.
- Factor 3: Clean Green City/ 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 services are "right sized" while being innovative and creative. The combination of Utilities O&M working directly with the developers strikes a balance between available resources to perform the work with a high level of quality control to protect and preserve drinking water quality and infrastructure integrity.
- Ensure sound management of resources and business practices. 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed in this proposal:

- Economic Growth and Competitiveness, Factor 3: Land, Infrastructure and Planning. 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.
- Safe Community, Factor 1: Prevention. The role Utilities O&M plays in the process provides an opportunity to perform condition assessment on our infrastructure as well maintain a high level of quality control to protect the drinking water and its components.

Citywide purchasing strategies addressed:

- Leverage Collaboration (with development community), 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 2008 business process improvement analysis effort.

C. Partnerships and Collaboration proposed:

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Through franchise agreements Bellevue Utilities provides water service to Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

- 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.
- 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Sewer Mains, Laterals and Manhole Repair Program
Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.18NN

Proposal Number: 140.18NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No

Primary Staff Contact: Dave Dickson, x4889

Version Tracking: N/A

Section 2: Executive Summary

The City of Bellevue's Sewer section is responsible for operation, maintenance, and repair of 654 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.

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.

Section 3: Requested Resources

Fund: 04450

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 605,317 | 628,071 |
| Other | 230,359 | 229,352 |
| Capital | 0 | 0 |
| | <u>\$ 835,676</u> | <u>857,423</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 810,160 | 830,900 |

Rev-Exp Balance \$ -25,516 -26,523

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 7.00 | 7.00 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>7.00</u> | <u>7.00</u> |

Please briefly describe:

- A. "Other" Expenditures:** Temp help
2013/2014: \$36K; prof. svcs
(asphalt/concrete, debris, etc.) 2013/2014:
\$150K; operating & repair/maint supplies
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Utility Service Fees
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** N/A

Section 4: Budget Proposal Description

The City of Bellevue's Sewer section is responsible for operation, maintenance, and repair of 654 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

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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 Wastewater section currently has a backlog of over 900 defects needing repair and the backlog is projected to reach 1,000 by the end of 2012. In response to the growing number of needed repairs, Council approved three additional FTE's for sewer repairs in the 09-10 budget. In 2009, the Wastewater section launched a full-time repair crew dedicated to wastewater system repairs with a performance measure target 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.

Mandates and Contractual Agreements:

- WAC 173-240-060, WAC 246-271-020: DOE require sewer system operators to minimize overflows to surface water bodies, repeated overflows can lead to enforcement action or state-mandated capital projects. Prohibited methods of sewage disposal: No sewage or industrial waste, or components thereof shall be permitted to flow onto the surface of the ground, or into any waters of the state.
- 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.

Efficiencies/Innovations:

Experience has shown that performing repairs in-house saves \$10,000 per repair on average compared to outsourcing. We continue to look to reduce the cost of repairs. One example is the successful testing and implementation of 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 completed 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.

Short- and long-term benefits of this proposal:

Short-term: 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 : 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.

Describe why the level of service being proposed is the appropriate level/scalability:

The service levels proposed balances the need to ensure the safe and reliable removal of sewage from homes and businesses. This minimizes the impacts of sewer blockages and overflows against the costs to provide wastewater system repairs and relative risks associated with service failures from identified defects and claims paid. Due to the high consequences of failure when repair needs are not addressed, these service levels support the goals for reliability and performance; scaling back current service levels will result in increased risk of sewer blockage/overflows; and increased risk of customer claims and impacts to the natural environment.

An average of fifteen deficiencies are identified each month which has led to a significant backlog of repairs needing repair and/or monitoring. These activities prolong the infrastructure life and are vital in providing sewer services to the homes and businesses of Bellevue and the neighboring franchise areas. Funding at this level does not address all of the known defects, but has slowed the upward trend of the backlogged repairs.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 2: Clean Reliable Water/ Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods.
- Factor 4: Natural Environment/Lakes, streams, and Wetlands through containment of sewage and the reduction of wastewater overflows to the environment.

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:

- Effective Wastewater management by ensuring removal of sewage from homes and businesses using ongoing sewer main/lateral/manhole repair activities.
- Ensure that sewer system is adequately maintained to minimize negative impacts from sewage backups and overflows.
- Provide services for keeping our natural environment clean and free of waste, debris and toxic materials. A properly functioning sewer system collects and conveys sewage.

B. Citywide Purchasing Strategies and 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: Stewards of public trust. 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 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 proactive preventive maintenance schedules and prioritizing repairs
- Ensure sound management of resources and business practices through effective asset management.
- Leverage collaboration or partnership with other departments and/or external organizations by minimizing pipe failures after Transportation overlays streets.

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C. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Sewer spillage can be expensive. In January 2010, 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.

Consequence of not funding the proposal at all:

- 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).
- 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.
- Investment/Costs already incurred: Council approved three additional FTE's for sewer repairs in the 09-10 budget.

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.

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Section 1: Proposal Descriptors

Proposal Title: Sewer Condition Assessment Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.19NN

Proposal Number: 140.19NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Dave Dickson, x4889

Version Tracking: N/A

Section 2: Executive Summary

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: Requested Resources

Fund: 04450

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 516,689 | 535,794 |
| Other | 123,775 | 123,775 |
| Capital | 0 | 0 |
| | \$ 640,464 | 659,569 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 632,565 | 651,409 |

Rev-Exp Balance \$ -7,899 -8,160

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 5.45 | 5.45 |
| LTE | 0.00 | 0.00 |
| Total Count | 5.45 | 5.45 |

Please briefly describe:

A. "Other" Expenditures: Temp help 2013/2014: \$37K; operating & repair/maint supplies 2013/2014: \$37K; condition assessment 2013/2014: \$30K; other operating

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Utility Service Fees

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: 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 identify and 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 and/or preventive maintenance 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

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identify and prioritize repairs and determine which pipe 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.

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 through the creation of follow-up work orders. The sewer system experiences more failures as it ages. Crews have identified over 900 sewer defects that currently need repair. In the past few months, the number of defects identified (both needing repair and for monitoring) has averaged 15/month. By the end of 2012, the total number of identified defects may exceed 1000.

A 2004 study performed by Black & Veatch recommended Bellevue Utilities video assess 10% of the sewer service area annually. This represents video inspection and review of 65 miles (345,000 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 pipe failure in order to minimize reoccurring failures, and determine who is responsible for failure.

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.

Mandates and Contractual Agreements:

- WAC 173-240-060, WAC 246-271-020: DOE require sewer system operators to minimize overflows to surface water bodies, repeated overflows can lead to enforcement action or state-mandated capital projects. Prohibited methods of sewage disposal: No sewage or industrial waste, or components thereof shall be permitted to flow onto the surface of the ground, or into any waters of the state.
- 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.

Efficiencies/Innovations:

CCTV is essential to the process improvement of the Preventive Maintenance program. By evaluating pipe with known maintenance problems we are able to determine appropriate level of maintenance needed for 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.

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.

Describe why the level of service being proposed is the appropriate level/Scalability:

A study by Black & Veatch in 2004 recommended that the City inspect 10% of the sewer collection pipes annually. The proposed service level addresses the need for reliable and effective wastewater removal to minimize blockages, overflows and claims while minimizing life cycle costs. There were 0.42 overflows per 1000 customers in 2011. 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 5: Responsiveness to Request for Results

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 repair and maintenance 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 2: Clean Reliable Water/ Wastewater Management provide the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods.
- Factor 4: Natural Environment/Lakes, Streams, and Wetlands through containment of sewage and the reduction wastewater overflows to the environment.

Healthy and Sustainable Environment purchasing strategies:

- Effective Wastewater management 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 natural environment clean and free of waste, debris and toxic materials. A properly functioning sewer system collects and conveys sewage.

B. Citywide Purchasing Strategies and 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.
- 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

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would cause emergency road closures and impact traffic flow, increasing traffic congestion even further.

- Responsive Government, Factor 4: Stewards of the public trust by well-designed and maintain assets.

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 proactive preventive maintenance schedules and prioritizing repairs
- Ensure sound management of resources and business practices through effective asset management.
- Leverage collaboration or partnership with other departments and/or external organizations by minimizing pipe failures after Transportation overlays streets.

C. Partnerships and Collaboration proposed:

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. In addition, Wastewater O&M works with Surface Water O&M to video storm mains as part of a pilot program to develop potential efficiencies on new pavement overlays and emergency response activities.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

- 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.

• 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;

- Investment/Costs already incurred: Two condition assessment vehicles estimated at \$300,000 each

• 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Sewer Mainline Preventive Maintenance Program
Outcome: Healthy and Sustainable Environment

Proposal Number: 140.20NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Dave Dickson, x4889

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.20NN

Version Tracking: N/A

Section 2: Executive Summary

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 of the sewer system for the least long-term cost.

Section 3: Requested Resources

Fund: 04450

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 493,526 | 511,862 |
| Other | 182,325 | 182,325 |
| Capital | 0 | 0 |
| | <u>\$ 675,851</u> | <u>694,187</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 675,851 | 694,187 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 5.40 | 5.40 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>5.40</u> | <u>5.40</u> |

Please briefly describe:

A. "Other" Expenditures: Temp help, OT, standby 2013/2014: \$73K; supplies, tools, and equipment 2013/2014: \$45K; prof. svcs (root saw, etc.) 2013/2014 \$63K, other

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: Budget Proposal Description

This proposal provides necessary preventive maintenance services for dependable sewage collection service for 36,999 residential and commercial customer accounts. These services include root sawing to remove tree root intrusion, pipe cleaning using high pressure jetting, and other mechanical means, 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, flat pipes/low flow, and kitchen grease from residences and businesses. Some pipes have higher maintenance needs than others. Condition assessment inspections and past experience are used to establish appropriate maintenance levels for high maintenance pipes.

Other services under this proposal include emergency response to clear blockages and overflows, manhole inspection, and treatment of fats, oil, and grease. These services minimize the potential for

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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.

Mandates and Contractual Agreements:

- WAC 173-240-060, WAC 246-271-020: DOE require sewer system operators to minimize overflows to surface water bodies, repeated overflows can lead to enforcement action or state-mandated capital projects. Prohibited methods of sewage disposal: No sewage or industrial waste, or components thereof shall not be permitted to flow onto the surface of the ground, or into any waters of the state.
- 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.

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.

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.

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.

Describe why the level of service being proposed is the appropriate level/Scalable:

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 5: Responsiveness to Request for Results

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 7.9 sewer backup claims per year which average \$121,000 per year in claims paid. Targeted preventive maintenance services keep known problem areas conveying flow and returns 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.

Factors in the Healthy and Sustainable Environment Outcomes:

- Factor 2: Clean Reliable Water/Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods.
- Factor 4: Natural Environment/Lakes, Streams, and Wetlands through the containment of sewage and the reduction of wastewater overflows to the environment

Healthy and sustainable Environment purchasing strategies:

- Effective Wastewater Management by ensuring the removal of sewage from homes and businesses using proactive preventive maintenance practices
- Ensure that sewer system is adequately maintained to minimize negative impacts from sewage back-ups and overflows. Preventive Maintenance of the sewer system proactively maintains the pipes before problems cause blockages, back-ups, and overflows
- Provide services for keeping our natural environment clean and free of waste, debris and toxic materials. A properly functioning sewer system collects and conveys sewage

B. Citywide Purchasing Strategies and 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: Stewards of Public Trust. Preventive maintenance activities reduce the need for reactive maintenance and cleanup as the result of blockages and overflows.

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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.
- Ensure sound management of resources and business through effective asset management
- Leverage collaboration or partnership with other departments and/or external organization by minimizing sewer overflows onto city streets causing traffic congestion and detours

C. Partnerships and Collaboration proposed:

External: Via franchise agreements Bellevue Utilities provides sewer service to the following communities: 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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

- 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).
- 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Sewer Pump Station
Maintenance, Operations, and Repair Program
Outcome: Healthy and Sustainable Environment

Proposal Number: 140.21NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Dave Dickson, x4889

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.21NN

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides sewer pump station maintenance and repairs to help minimize failures that cause sewer backups and overflows to the environment that can result in beach closures and surface water quality concerns. In addition, sewer backups can require a homeowner to move out or a business to close until cleanup is completed. 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 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: Requested Resources

Fund: 04450

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 441,400 | 457,847 |
| Other | 329,075 | 329,075 |
| Capital | 0 | 0 |
| | \$ 770,475 | 786,922 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 770,475 | 786,922 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 4.75 | 4.75 |
| LTE | 0.00 | 0.00 |
| Total Count | 4.75 | 4.75 |

Please briefly describe:

- A. "Other" Expenditures:** OT/Standby
2013/2014: \$54K; prof. svcs 2013/2014:
\$80K; ops. supplies 2013/2014: \$67K; power,
water, sewer & drainage bills 2013/2014:
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Utility Service Fees
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** N/A

Section 4: 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, wet well cleaning, grounds and building maintenance. 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

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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 \$85,000 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 ensures 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.

Mandates and Contractual Agreements:

- WAC 173-240-060, WAC 246-271-020: DOE require sewer system operators to minimize overflows to surface water bodies, repeated overflows can lead to enforcement action or state-mandated capital projects. Prohibited methods of sewage disposal: No sewage or industrial waste, or components thereof shall not be permitted to flow onto the surface of the ground, or into any waters of the state.
- 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.

Efficiencies/Innovations:

Utilities use 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.

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

Describe why the level of service being proposed is the appropriate level/Scalable:

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. The performance measures for this proposal have a target of zero for both weather and non-weather related pump station overflows. This zero tolerance for pump station overflows is based on the high consequences to the environment and customers who are negatively impacted through backups into homes; or public parks and shoreline properties which are negatively impacted when sewage overflows into lakes and/or streams.

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.

Section 5: Responsiveness to Request for Results

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 2: Clean Reliable Water/Wastewater Management. Reliable sewage system operation provides the infrastructure and services to reliably remove sewage from homes, businesses, and neighborhoods.
- Factor 4: Natural Environment/Lakes, Stream, And Wetlands through containment of sewage and the reduction of wastewater overflows to the environment.

Healthy and Sustainable Environment purchasing strategies:

- Effective Wastewater Management by ensuring removal of sewage from homes and businesses using proactive preventive maintenance practices
- Ensure that sewer system is adequately maintained to minimize negative impacts from sewage back-ups and overflows by maintaining wastewater conveyance pipes and pumps
- Provide services for keeping our Natural environment clean and free of waste, debris, and toxic materials. A properly functioning sewer system collects and conveys sewage.

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 Count's system. Many of these stations are located along Lake Washington and Lake Sammamish.

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

- Safe community, Factor 1: Prevention. Containment of sewage and the reduction of overflows protect the environment from pollutants, protecting our lakes, streams, and wetlands.
- Economic Growth and Competiveness, Factor 3: Infrastructure. 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: Stewards of Public Trust. Proactive preventive maintenance identifies defects prior to failure and lowers the need for emergency repairs.

Citywide Purchasing Strategies:

- Provide the best value in meeting community needs by minimizing life cycle cost through effective maintenance services and minimizing claims and or fine due to sewage overflows; 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

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blockages, backups and overflows.

- Ensure sound management of resources and business through effective asset management
- Leverage collaboration or partnership with other departments and/or external organization by minimizing sewer overflows onto city streets causing traffic congestion and detours.

C. Partnerships and Collaboration proposed:

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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

- 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.
- 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.
- 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Storm and Surface Water System Repairs and Installation Program
Outcome: Healthy and Sustainable Environment

Proposal Number: 140.22NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Don McQuilliams, x7865

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.22NN

Version Tracking: N/A

Section 2: Executive Summary

The Storm and Surface Water System within the City of Bellevue is comprised of a network of public and privately owned pipes, open channels, catch basins, manholes, streams and detention facilities both above and below ground. This proposal provides repair and installation services for publicly owned drainage system components to ensure that the municipal storm drainage system functions as designed. This aids to protect life, property, and the environment during major storm and flooding events, and to reduce pollution entering streams and lakes. Much of the repair work surrounding the storm & surface water system is mandated under the National Pollution Discharge and Elimination System permit (NPDES).

Section 3: Requested Resources

Fund: 04200

Project Number: N/A

OPERATING

| Expenditures | | 2013 | 2014 |
|--------------|----|---------|---------|
| Personnel | \$ | 516,807 | 536,075 |
| Other | | 324,327 | 274,327 |
| Capital | | 0 | 0 |
| | \$ | 841,134 | 810,402 |

| Supporting Revenue | | 2013 | 2014 |
|--------------------|----|---------|---------|
| | \$ | 740,273 | 757,657 |

Rev-Exp Balance \$ -100,861 -52,745

| FTE/LTE | | 2013 | 2014 |
|--------------------|--|------|------|
| FTE | | 5.70 | 5.70 |
| LTE | | 0.00 | 0.00 |
| Total Count | | 5.70 | 5.70 |

Please briefly describe:

- A. "Other" Expenditures:** OT 2013/2014: \$25K; operating & office supplies 2013/2014: \$64K; prof. svcs. (asphalt/concrete, equip & repairs, etc.) 2013/2014 \$146K; other
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Utility Service Fees
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** No add of FTE; minor reallocation of existing FTEs based on 10-11 data.

Section 4: Budget Proposal Description

The public portion of the storm and surface water system includes over 20,000 storm drains and manholes, 365 water quality and detention 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.

On average, the Surface Water System Repair and Installation Program repairs over 150 structures

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(catch basins, manholes, vaults, tanks, and WQ facilities) and approximately 500 feet of pipe annually, and works within sections of City owned stream segments to stabilize areas of erosion and repair constructed stream improvements that are damaged during heavy flows. Many of these repaired deficiencies are identified through the Preventive Maintenance inspection process, as well as the condition assessment program, and are required to be completed within a specific timeframe under the City's NPDES permit conditions. When a repair is identified through the inspection process; the NPDES permit specifies that the City will conduct repair of the facility within 6 months for catch basins, one year for all other facilities besides catch basins and up to two years for larger repairs that cost \$25,000 or less; repairs that exceed this amount can be scheduled farther into the future through either CIP work or a scheduled timeline.

This program also provides installation of new drainage structures in response to public drainage and/or flooding problems. Examples include lot connections (connecting downspout lines and footing drains to the City's piped system), and installing catch basins and segments of pipe to problem areas and improve system performance. On average, the installation portion of the program provides up to 10 lot connections, 10 new structures and over 400 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. Preventative maintenance and repair activities prolong the life of the aging infrastructure. Typical staff duties within this program consist of operating heavy equipment for excavation, removal and installation of drainage infrastructure, conducting traffic control, providing system research to diagnose problems, performing construction activities within critical areas and working with customers to find solutions to drainage problems.

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.

Short term benefits of funding this proposal lessen the risk of flooding, property damage, customer claims and economic losses to the City. Long term benefits include 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.

To measure the success of this program, two key performance measures are used:

- Claims greater than \$20,000 is used as indicator of flooding damage caused by defects within the public drainage system.
- The second measure reflects the percentage of NPDES related repairs that are conducted within the specified timeframe that the permit allows as indicated above in the opening paragraph of this section. The target for this measure is 100% of repairs completed within the specified timeframe.
- Percentage of repair requests (both internal and external) reviewed and responded to within one month. This measure provides feedback to the performance of the repair program by evaluating a repair request and providing a timely and planned solution to a repair so the customer has a good idea of when and how the problem can be addressed.

Scalability

Repairs are performed as reactive maintenance which limits the scalability of the proposal unless we defer repairs. These are demand-driven service levels dictated by the number of defects that are detected, and timely repairs are completed to mitigate environmental damage, and minimize claims damages and traffic impacts. In addition this program has mandated NPDES permit obligations to complete repairs found during routine inspections in a specified timeframe.

Section 5: Responsiveness to Request for Results

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

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Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water:

Surface and Stormwater Management: Ensuring compliance with state and federal Stormwater regulations: The following mandates direct the work related to this proposal:

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

Factor 4: Natural Environment: Ongoing repairs to the storm and surface water system aid in improving the ability for the system to capture sediment and pollutants before they reach our lakes, streams and wetlands.

The Storm and Surface Water Repair and Installation Program provide ongoing repairs and new installations that ensure the Stormwater system is functioning as designed. 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 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.
- 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Factors for other outcomes:

- 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 5: Stewards of the Public Trust, Well Designed and Maintained 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 concerns.

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- Economic Growth and Competitiveness: Factor 3: Land, Infrastructure, and Planning. 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.

Citywide Purchasing Strategies:

- Provide for the best value in meeting community needs. The repair and installation program ensures that the drainage system is kept in good working order to protect the public's investment and reduce flooding during heavy rains. Repairs also help to reduce road hazards such as potholes surrounding manholes and loose covers.
- Ensure that services are "right sized". Resources within this program are sized to meet the repair and installation demands for short turn around, in-house work. If a repair job is large and complex, it will most likely be referred to the Engineering division to be included in upcoming CIP work. This allows in-house crews to concentrate on repair and installation projects that provide the best value to our customers.
- Consider alternative sourcing. Contractors are used to perform repairs that can be time consuming in nature or where specialty resources are needed. They may be used for an entire job, a series of similar jobs around town or only for a portion of a job for which in-house crews do not either have the resources or expertise to complete.

C. Partnerships and Collaboration proposed:

Other program areas within the Storm & Surface Water section, Utilities Engineering, the Transportation Department and Development Services (permitting).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Repairs to the Storm and Surface water system are reliant on the Inspections conducted under the Preventive Maintenance proposal (140.24NA). In addition, maintaining the system properly extends the useful life of an aging infrastructure.

Consequence of not funding the proposal:

- 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.
- Customer Impact: More flooding of homes and businesses resulting in property losses and impaired traffic circulation.
- Investment/Costs already incurred: Related equipment for this program including construction vehicles, trailers, pickups, and an assortment of tools.
- 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

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Section 1: Proposal Descriptors

Proposal Title: Storm and Surface Water
Infrastructure Condition Assessment Program
Outcome: Healthy and Sustainable Environment

Proposal Number 140.23NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Don McQuilliams, x7865

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.23NN

Version Tracking: N/A

Section 2: Executive Summary

The Storm and Surface Water Infrastructure Condition Assessment Program uses Closed Circuit TV (CCTV) equipment to provide digital images of the inside of drainage pipes. These images are used to evaluate and identify defects that need repair. Undetected defects can lead to catastrophic failures that have the potential to result in flooding, damage to roadways and down-slope properties, and potential liability claims. The overall goal of this program is to locate and repair defects within pipes before failures occur and to also assess the system for long-term repair and replacement needs.

Condition assessment provides valuable asset management information for the Utilities repair and replacement program by identifying and documenting overall trends in pipe condition. This is essential information when developing long-term replacement funding strategies for aging infrastructure.

Section 3: Requested Resources

Fund: 04200

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 79,473 | 82,318 |
| Other | 90,265 | 90,265 |
| Capital | 0 | 0 |
| | \$ 169,738 | 172,583 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 169,738 | 172,583 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.75 | 0.75 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.75 | 0.75 |

Please briefly describe:

A. "Other" Expenditures: Professional services (video inspect/clean, etc.) 2013/2014: \$86K; office and operating supplies, other operating expenses

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Proposal costs are entirely supported by rates.

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: 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 incur costly grind and overlay expenses to repair failures that occur

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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 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.

This proposal will conduct video assessment of storm drainage pipes at the rate of about 2% of the underground piped drainage system per year. Video assessment is used to inspect pipes prior to overlay and critical pipes/ 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 flexibility and minimizes ongoing in-house staffing and equipment 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 be adjusted upwards in the future should damage claims begin to increase as a result of failures.

Typical staff duties associated with this program coordinate the work between the Utility and the contractor, review the video once it is complete to look for deficiencies within the system and identify repairs that are brought forward either as repairs to be completed by Operations and Maintenance or Utility’s Engineering Division via the CIP Program.

Information collected through condition assessment identifies ongoing trends in differing pipe materials to help with planning for future repair and replacement funding. For example, over time it has been found that corrugated metal pipe is already experiencing higher failure rates due to rust and decay. Trending patterns aid in the decision making of where the condition assessment program as well as the repair and replacement program will focus resources now and in the future.

Utilities Engineering has many performance measures related to condition assessment of the piped utility systems but as this work relates to the Storm & Surface Water Operations and Maintenance staff, two key performance measures are used:

- Tracking the number of significant defects detected annually
- Tracking the percentage of pipe that is inspected annually

Efficiencies/Innovations:

Beginning last year, a pilot study was implemented to look at the cost and feasibility of having a portion of this work conducted by the in-house Sewer crews that do similar work on Bellevue’s Sanitary Sewer system. This analysis will continue and be expanded over the next two years.

Describe why the level of service being proposed is the appropriate level/scalability:

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 inspecting 10% annually would require a very large investment with significant rate impacts. However, based on failure rates and claims experience, the target of assessing 2% of the system annually was established. This proposal is scalable by reducing the amount of pipe inspected annually but is not recommended. The number and severity of the defects identified under this program have been significant over the years. Reducing the funding level of service would increase the risk of paving over storm system components that are on the verge of failure resulting in higher costs of repair if a failure does occur. Scaling back this program would also have negative long-term effects on the overall asset management of the drainage system.

Section 5: Responsiveness to Request for Results

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

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Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water.

Surface and Stormwater management: 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 4: Natural Environment.

Lakes, streams and wetlands. Proactive 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.

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.
- Keep 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

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. 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: Land, Infrastructure and Planning. 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 unforeseen failures of the system.

Citywide Purchasing Strategies

- Provide for gains in efficiency and/or cost savings. Synchronizing surface water condition assessment activities 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. Proactively identifying and completing necessary repairs also lessens the city's liability related to potential flooding and damage claims.
- 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 inspecting 10% annually would require a very large investment with significant rate impacts. As a result, the target of assessing 2% of the system annually was established. This percentage will likely need to be adjusted upwards in the future as the system ages and failure rates increase.
- Ensure sound management of resources and business practices. Proactively assessing the

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drainage system and repairing deficiencies prior to failure decreases flooding and erosion. Necessary repairs are proactively scheduled rather than reacting to a failure in the system. Additionally, contracting out the majority of the condition assessment work allows in-house staff to concentrate on preventive maintenance and repairs.

C. Partnerships and Collaboration proposed:

Utilities works closely with the Transportation Department to coordinate repairs and pavement overlay.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Identification of problems and deficiencies through condition assessment allows for proactive repair and maintenance activities to be completed before a potential failure that could put the City in a liability situation and/or a much more costly reactive repair. Evaluation of long-term trending patterns identified through this program allows the Utility to proactively plan for large scale repair and replacement costs well into the future. This in turn helps to smooth rates over time and provides generational equity.

Consequence of not funding the proposal at all:

- 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.
- If this proposal is not funded, there would be a lack of reliable data on the condition of critical underground drainage pipes for the Utilities Department's Asset Management Program.

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Section 1: Proposal Descriptors

Proposal Title: Storm & Surface Water
Preventive Maintenance Program

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.24NA

Proposal Number 140.24NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Don McQuilliams, x7865

Version Tracking: N/A

Section 2: Executive Summary

The resources in this proposal fund preventative maintenance activities related to the City's Storm & Surface Water system. For the drainage system to function correctly and provide adequate flood control, it must be kept free of excessive debris and sediment. These 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. The drainage system contains a variety of water quality facilities that trap oils and other pollutants from roadways and allow for their removal during maintenance. Because the final discharge for all drainage in Bellevue is the City's streams and lakes, system maintenance is essential to keep them free of the sediment and pollutants generated from roadways and other impervious surfaces.

The majority of maintenance activities funded by this proposal are mandated under the Federal National Pollutant Discharge Elimination System Permit (NPDES).

Section 3: Requested Resources

Fund: 04200

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|---------------------|---------------------|------------------|
| Personnel | \$ 783,963 | 813,112 |
| Other | 646,413 | 646,413 |
| Capital | 0 | 0 |
| | <u>\$ 1,430,376</u> | <u>1,459,525</u> |

| Supporting Revenue | 2013 | 2014 |
|---------------------------|--------------|-------------|
| | \$ 1,430,376 | 1,459,525 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 8.60 | 8.60 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>8.60</u> | <u>8.60</u> |

Please briefly describe:

A. "Other" Expenditures: Temp help, OT, standby 2013/2014: \$114K; prof. svcs (detent. pond cleaning & repairs, etc.) 2013/2014 \$388K; Innovation fund 2013/2014: \$75K;

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Utility Service Fees

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: Budget Proposal Description

The Storm & Surface water system maintained under this proposal 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

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basin and manhole structures, approximately 400 miles of underground drainage pipe, 86 miles of open ditch, 365 water quality facilities, and 10 large regional detention facilities, most of which are in-stream 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 measuring the amount of accumulated sediment, then scheduling and completing structure cleaning based on inspection results. Cleaning of structures is typically conducted through the use of two high powered vacuum trucks that remove the sediment from the system and transport it to an approved disposal facility. During inspections, structures are examined for cracks, loose joints, broken or missing parts, and other deficiencies dependent on the type of structure being inspected. Deficiencies that are found during inspections are written up for future repair.

Typical staff duties within this program consist of operation of Eductor trucks, performing inspections of catch basins ahead of cleaning, making corrections to drainage maps, conducting confined space entries into tanks and vaults, operation of heavy machinery to excavate sediment from ponds, and performing stream work clearing debris and stabilizing slopes.

Natural systems such as 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 in this proposal also responds to pollutant spills and flooding events, investigates drainage issues reported by citizens, and performs a myriad of other operational and maintenance activities necessary for performance of the City's surface water system. In addition, staff included in this proposal 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.

Success of this program relies on many different factors but can be summarized into three distinct performance measures:

- The ability to meet the City's obligations under the terms of the NPDES permit
- The percentage of annual routine scheduled maintenance completed as scheduled.

In addition, this high level performance measure speaks to this and other surface water proposals.

- Number of catch basins inspected annually.

Further detail of these performance measures is in the attached performance measures spreadsheet.

Efficiencies/Innovations:

Current pilot studies under way are a comparison of contracted vs. in-house cleaning operations and a comparison of contracted vs. in-house video work.

This proposal reflects an increase in temporary employee help to supplement tasks previously contracted where labor rates for contractors have more than doubled that of temporary employees. Current prevailing wage rates for contracted labor are \$40.03/hour and temporary employees can perform the same work for nearly half the cost. This is particularly important in the upcoming years with new NPDES requirements being placed on removing "legacy loading" (sediment that has built up over the years) from our detention ponds.

Describe why the level of service being proposed is the appropriate level/scalability:

The preventive maintenance proposal is scalable to the extent that maintenance operations can be reduced down to the level that is mandated by permits and legal obligations associated with this program. However, further reduction of this proposal would result in a direct decrease to customer service requests and maintenance operations not associated with mandated activities.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 2: Clean Reliable Water

Surface and Stormwater management

o Ensuring compliance with state and federal Stormwater regulations: The following Mandates and Contractual Agreements direct the work related to this proposal:

- Federal Clean Water Act (aka Federal Water Pollution Control Act)
- 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 three existing sedimentation ponds within the Coal Creek basin.

- Factor 4: Natural Environment

- o Lakes, streams and wetlands
- o Open space, natural areas and greenbelts
- o Wildlife habitat

The Storm and Surface Water Utility manages many tracts of open space, wetlands and stream corridors around the City for the purposes of minimizing sediment and pollutants from entering our lakes, streams, and wetlands.

Purchasing strategies in the Healthy and Sustainable Environment Outcome:

- Ensure that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding.
- 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.
- Keep our City clean and free of waste, debris, and toxic materials.
- Manage, maintain, preserve, and restore natural environments and the habitats they provide.

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. Active management of City owned critical area properties aids in maintaining, preserving and enhancing the natural environment and associated habitats.

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

Factors in other outcomes:

- Improved Mobility

Factor 1: Existing and Future Infrastructure. This proposal reflects maintenance of existing and future drainage infrastructure located within the right of way along our streets.

Factor 2: Traffic Flow. This proposal helps to minimize these disruptions through ongoing maintenance to minimize blockages within the storm and surface water system.

- Economic Growth and Competitiveness

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Factor 3: Land, Infrastructure, and Planning. A properly functioning drainage system adds value to land by allowing higher productive uses of that land.

- Safe Community

Factor 1: Prevention. Proactive inspection and maintenance aids in providing a safe environment that minimizes the risk of flooding during widespread, heavy periods of rain.

Citywide purchasing strategies:

- Ensure sound management of resources and business practices: The majority of the preventive maintenance program work conducted by the preventive maintenance program is mandated through the City's NPDES permit or other legal obligations. Beyond the mandated accomplishments, customer service needs to alleviate drainage problems, out of cycle maintenance such as environmental cleanup after snow events and working to keep known problem locations clear and free of debris creates a challenging environment requiring the preventive maintenance program staff to be creative in the use of in-house vs. contracted resources and the prioritization of each need.
- Use an evidence based approach to determine how to achieve outcomes: By proactively inspecting and identifying cleaning and sediment removal needs prior to sending out crews to perform the work, the preventive maintenance program has the flexibility to focus workload efforts to those areas that have the highest needs providing the most effective use of resources and associated costs.

C. Partnerships and Collaboration proposed:

Many Utility-owned open space areas are managed by the Parks Department to aid in recreational and habitat opportunities, and several large Stormwater detention facilities are located within Parks property and managed through a cooperative effort.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Inspection and maintenance activities within this proposal provide direction for the Storm & Surface Water Repairs and Installation Program (proposal 140.22PA)

Consequence of not funding the proposal at all:

- Legal: Lack of maintenance of the Bellevue drainage system would violate NPDES phase II permit requirements and result in potential fines, imprisonment and/or 3rd party lawsuits
- 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.
- Investment/Costs already incurred: Costs for a fleet of equipment purchased over the years to maintain the system including two large Eductor trucks as an example that, under today's costs, have a replacement value of nearly \$500,000 each.

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Section 1: Proposal Descriptors

Proposal Title: Utilities Telemetry and Security Systems

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.25NN

Proposal Number 140.25NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Dennis Fugier, x7940

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides for maintenance, operation, and repair of utilities telemetry (sensing and measurement of information such as reservoir levels, water pressure and flows, sewage pump station levels, and storm retention pond levels 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 383,224 | 396,873 |
| Other | 46,950 | 46,950 |
| Capital | 0 | 0 |
| | \$ 430,174 | 443,823 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 430,174 | 443,823 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 3.60 | 3.60 |
| LTE | 0.00 | 0.00 |
| Total Count | 3.60 | 3.60 |

Please briefly describe:

A. "Other" Expenditures: Repair services and supplies 2013/2014: \$36K; other supplies, equipment, and operating expenses

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; minor reallocation of existing FTEs based on 10-11 data

Section 4: Budget Proposal Description

Imagine operating 25 water reservoirs, 23 water pump stations, 13 water inlet stations, 47 sewer pump/flush stations, 11 rain gauge stations and 12 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;

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to control sewage pump stations; and to regulate the stormwater flows at the Regional 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 13 water inlet stations, 23 water pump stations, 25 water reservoirs, 37 sewer pump stations, 10 sewer flush stations, 12 storm water 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 Multiple 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.

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.

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.

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 FTEs for ongoing operations of these facilities.

Describe why the level of service being proposed is the appropriate level/Scalability:

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. The effectiveness performance measures for this proposal all emphasize the criticality and zero-tolerance for SCADA and Security equipment failures and reinforce that 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 and are not readily scalable without substantial risk and liability. For example, if preventive maintenance activities were scaled back and the SCADA equipment experienced deferred maintenance, the piped systems would experience increased risks to the drinking water supply; increased sewer overflows and potential compromised fire flows affecting hydrant operations.

Section 5: Responsiveness to Request for Results

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

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.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water. 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 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 3: Clean Green City/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. In addition these systems can provide for early warning of catastrophic failures. Pump run times in sewer systems operate in the same manner saving energy and costs.
- Factor 4: Natural Environment. Telemetry and security systems support “waste management” by controlling the infrastructure and services to reliably remove waste from homes and businesses which protects lakes, streams and wetlands from sewage overflows.

Healthy and Sustainable Environment purchasing strategy:

- Ensure clean reliable water meeting the needs of the environment and our community by ensuring the safe, reliable supply of drinking water to and removal of wastewater from homes and businesses; ensure that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding.
- Maintain a clean and green city by keeping our city clean and free of waste, debris, and toxic materials and conserving resources and minimizing excessive consumption of electricity for pumping.
- Natural environment: 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Safe Community, Factor 2: Response. Telemetry systems support firefighting response by

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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: Stewards of the Public Trust/Sound Business Practices and Processes. 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+ FTEs.

C. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

- Legal: Increased risk of violations/fines levied from environmental regulatory agencies due to system failures and slower response times.

- Customer Impact: Increased risks to the drinking water supply; increased sewer overflows; compromised fire flows affecting hydrant operations.

- 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.

- 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.

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

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Section 1: Proposal Descriptors

Proposal Title: Water Quality Regulatory Compliance and Monitoring Programs

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: D 140.27DA; D 140.31DA

Previous Proposal Number(s): 140.26PN

Proposal Number 140.26PA

Proposal Type: Enhance Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Mike Graves, x2030

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides Water Quality Regulatory Compliance and Monitoring Programs necessary to:

- 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.

These programs are the primary means of managing citywide compliance with the 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 requirements and contractual agreements. The programs encompass a wide range of activities including field work, citywide coordination of NPDES Permit implementation, and City Council communication/policy support.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | | 2013 | 2014 |
|--------------|----|---------|---------|
| Personnel | \$ | 542,353 | 561,407 |
| Other | | 198,068 | 347,928 |
| Capital | | 0 | 0 |
| | \$ | 740,421 | 909,335 |

| Supporting Revenue | | 2013 | 2014 |
|--------------------|----|---------|---------|
| | \$ | 740,421 | 909,335 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | | 2013 | 2014 |
|--------------------|--|------|------|
| FTE | | 4.70 | 4.70 |
| LTE | | 0.00 | 0.00 |
| Total Count | | 4.70 | 4.70 |

Please briefly describe:

A. "Other" Expenditures: OT, temp help 2013/2014: \$24K; Prof svcs (lab svcs, DWQ report, etc.) 2013/\$102K, 2014/\$152K; Operating permit & NPDES permit & gov. fees

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Utility Service Fees

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; minor reallocation of existing FTEs based on 10-11 data

Section 4: Budget Proposal Description

This proposal fulfills the City's water quality monitoring and compliance requirements.

- Water Quality Specialists manage the quality of the City's drinking water through mandated monitoring and analysis of the drinking water system, including source water, storage (reservoirs), the distribution system, and emergency wells. Programs include maintaining awareness of upcoming regulations, monitoring water quality, protecting against terrorism or intentional contamination,

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coordinating water system operations and maintenance practices to ensure optimal operation of the water system, inspecting water infrastructure for hazards, and reporting required by federal and state laws. As a critical public health measure, Bellevue has never had a violation of state or federal drinking water regulations, and manages programs to reduce the incidents of drinking water aesthetic complaints to a target level of less than one per thousand customers (less than 41 annually).

- The NPDES Permit Manager coordinates city-wide implementation of the federal NPDES Municipal Stormwater Permit to protect water quality of our streams, lakes and wetlands and ensure compliance with over 100 permit requirements, while containing costs. The NPDES Permit applies to all city departments. Annual reports, adopted by Council, document City's compliance status.

- Water Quality Specialists implement surface water quality field programs including:

Illicit Discharge Detection and Elimination Program (IDDE): (1) response, containment and clean-up of illicit discharges (pollutant spills), and; (2) field assessment of discharges from drainage pipes into waterways to detect, trace and eliminate illicit discharges (such as paint, oil, sediment, etc.). Program includes mapping, reporting to Ecology, and using codes and enforcement, education, documentation, and citywide training. Due to increased citizen awareness and citywide staff training, the number of illicit discharges detected and corrected annually has grown from 60 in 2009 to nearly 200 in 2011, furthering stewardship of our natural resources.

Surface Water Monitoring: Sampling and analysis of lakes and streams to support water resource management decisions and resolution of water quality issues. Program includes response to customer water quality concerns and oversight of response planning activities for West Nile Virus.

- A Policy Advisor provides 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. This includes analysis of on-going legislation; coordination with local and regional partners; and providing Council with options and recommendations directly impacting stormwater rates paid by Bellevue citizens.

The activities of these water quality programs are mandated by multiple state and federal requirements:

1. Drinking water quality mandates include the Federal Safe Drinking Water Act, State Administrative Code (WAC) 246, Drinking Water Regulations, and Homeland Security Presidential Directive 10.

2. Storm and surface water mandates include the Federal Clean Water Act and the federal National Pollutant Discharge Elimination System (NPDES) Permit in addition to requirements in the State Code, RCW 90.48.

Scalability: Existing services in this proposal are scaled to provide the minimum resources necessary to meet mandates and provide adequate services to protect the quality of the community's drinking water and surface water resources. Program efficiencies have been implemented so that current resources can continue to provide water quality services critical to the community and to meet current federal and state mandates. Overall program reductions of \$77,000 are being proposed for 2013. Fewer resources would gravely affect citizen values of a healthy and sustainable environment; services and infrastructure that reliably ensure public health and safety (clean reliable drinking water), stewardship that sustains a healthy environment, and increase the City's liability exposure and potential impacts (fines, lawsuits, jail) under state and federal mandates.

The new NPDES Municipal Stormwater Permit will take effect August 1, 2013 and will require additional resources in 2014 to prepare for and implement the new Permit requirements. The additional \$140K in 2014 budget is for a regional monitoring fee (\$90K) and consulting services to conduct a gap analysis and assess impacts to citywide programs (\$50K).

Section 5: Responsiveness to Request for Results

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

activities to ensure Bellevue's drinking water is safe, free from contaminants, and aesthetically pleasing. Drinking water laws mandate increasingly stringent water quality standards. Monitoring, testing and sampling identifies if standards are being achieved. The NPDES Permit's Stormwater Management Program implements city-wide programs to reduce pollutants discharged to streams, lakes, and wetlands and meet the recreational needs of our community. The NPDES Program also implements stormwater flow control development regulations that ensure stormwater impacts such

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as flooding and erosion are minimized. The IDDE Program reduces the negative impacts of pollutants through programmatic investigation activities. 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 in addition to providing ongoing education on the proper storage and removal of waste from homes and businesses.

Factor 3: Clean Green City: Programs in this proposal encourage low impact development (LID) practices. The NPDES Permit requires the use of LID be encouraged where feasible for development and redevelopment projects. City codes and standards were amended to do this. The annual drinking water quality report delivered to all water customers provides additional education on drinking water conservation efforts and practices.

Factor 4: Natural Environment: Programs in this proposal manage, maintain, preserve, and restores lakes, streams and wetlands and the habitats they provide through ongoing surface water quality monitoring and management including policy decisions support, citywide compliance and field services.

This proposal meets the following HSE outcome specific purchasing strategies:

- Deliver results in an environmentally sensitive, equitable and sustainable way, foster community collaboration and partnership, create synergy to achieve multiple benefits, emphasize proactive actions, consider a broad range of strategies – capital investments, operations, services, regulations, incentives, education, training and other programs, have a direct relationship between the proposal and the outcome.

Environmental stewardship through the reduction and elimination of pollutant sources is the primary intent of surface water programs. Drinking water quality programs emphasize a broad range of ongoing operations and services directly impacting clean drinking water. This proposal fosters a collaborative approach and champions “One City” service delivery: implementation of the NPDES mandate requires a citywide and citizen partnership for all programs in order to protect water resources and public health. This proposal places more emphasis on proactive versus reactive actions. Proactive monitoring, sampling, cleaning, and operation of the drinking water system help to ensure a safe, reliable supply of drinking water. Citywide NPDES oversight is a proactive approach to ensuring compliance with federal mandate. Drinking water regulations require educating the public and, funded through this proposal, Bellevue provides customers with an annual drinking water quality report. NPDES Permit implementation activities also promote modification of behaviors to protect water resources through various outreach and on-site educational opportunities. This proposal helps to preserve and restore the natural environment through effective management of resources that have a direct impact on clean drinking water and surface and stormwater management.

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

- Safe Community: Prevention – inspection and education programs protect public health via safe drinking and surface waters. Response-provide response to drinking water and environmental emergencies.
- Quality Neighborhoods: Protect the public health and safety of community’s drinking and surface waters.
- 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 citizen’s voice in surface water issues at a regional and federal level and delivers a service model that maximizes resource efficiency and meets mandates’ legal requirements.

Citywide Purchasing Strategies:

- Provide the best value in meeting community’s 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, consider short and long term financial impacts, and ensure sound management of resources and business practice.

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This proposal provides sound management, an appropriate level of resources and the best value in meeting community needs by centralizing administration of the citywide NPDES Municipal Stormwater Permit. Centralized Permit administration for 12 City departments provides significant efficiencies and cost savings consistent with the One City philosophy; also helps the City maintain compliance with the over 100 Permit requirements. The surface water quality programs in this proposal are NPDES Permit requirements and provide sound management of Bellevue's water resources. Drinking water quality programs meet federal and state mandates and protect public health. Local & regional partnerships ensure that Bellevue interests are promoted at the regional, state, and federal level to minimize surface water taxes and fees and maximize their use.

C. Partnerships and Collaboration proposed:

- Drinking water quality programs. Key external agency partnerships and collaborations include Cascade Water Alliance, Seattle Public Utilities, State Department of Health, and King County Public Health (although compliance with many regulatory requirements remains Bellevue's ultimate responsibility).
- Storm and surface water quality programs (including NPDES): NPDES permit manager works collaboratively with 12 City departments to ensure compliance with requirements. Utilities staff collaborates 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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

- Centralized NPDES permit management provides citywide resource savings to 12 departments, reducing the need for funding requests. This proposal also supports the work of Water, Stormwater, and Wastewater Maintenance Programs, providing resources that would otherwise have to be requested.
- Not funding or reducing the service level of this proposal would defeat the HSE community values and result in increased risk to community of (1) water borne disease outbreaks ("boil water" or "do not use" orders) (2) public health problems from polluted surface waters (beach closures). Legal impacts include increased risk of violating drinking water mandates (result in fines and loss of water system operating permit) and NPDES Permit (result in fines, imprisonment, 3rd party lawsuits costing millions of dollars). City has settled one NPDES 3rd party lawsuit.

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Section 1: Proposal Descriptors

Proposal Title: Private Utility Systems Maintenance Programs

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: P 140.26PA

Previous Proposal Number(s): 140.27DN

Proposal Number 140.27DA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Mike Graves, x2030

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides Private Utility Systems Maintenance Programs (PSMP) inspection and compliance for private drinking water, stormwater, and wastewater systems to minimize the risk of illnesses and/or deaths from drinking water contamination; protect streams, ponds, and lakes from pollutants, minimize flooding threats to property; and minimize sewage overflows that affect health, homes, businesses, and the environment. These mandated programs include Cross Connection Control (CCC), Private Drainage Inspection (PDI), Industrial Waste/Fats, Oils, and Grease Abatement (FOG). PSMP provides oversight of private utility systems through codes, compliance, and education to ensure protection of public health and the environment and to protect the public infrastructure from premature failure or degradation.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|------------|---------|
| Personnel | \$ 361,468 | 374,270 |
| Other | 25,700 | 25,700 |
| Capital | 33,000 | 0 |
| | \$ 420,168 | 399,970 |
| Supporting Revenue | 2013 | 2014 |
| | \$ 413,133 | 392,675 |
| Rev-Exp Balance | \$ -7,035 | -7,295 |
| FTE/LTE | 2013 | 2014 |
| FTE | 3.35 | 3.35 |
| LTE | 0.00 | 0.00 |
| Total Count | 3.35 | 3.35 |

Please briefly describe:

- A. "Other" Expenditures:** Printing expenses 2013/2014: \$13K; other supplies, equipment, and operating expenses
- B. "Capital" Expenditures:** Replacement of unfunded vehicle to maintain core inspection programs; will be funded from asset
- C. Supporting Revenue:** Proposal costs are entirely supported by rates.
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** No add of FTE; minor reallocation of existing FTEs based on 10-11 data

Section 4: Budget Proposal Description

Water Quality Specialists implement PSMP programs required by federal, state and county mandates for private drinking water, stormwater, and wastewater systems that ensure appropriate testing and maintenance is performed. These programs cover utility systems located at over 90% of Bellevue's businesses and 4,000 residential properties. They have a direct impact on clean reliable water and the natural environment. In addition to the community, these programs' serve business owners, contractors, and residents. PSMP activities include customer notification, inspection, enforcement,

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database management, and regulatory compliance reporting.

- **Cross-Connection Control:** A privatized state mandated testing and certification program of over 11,000 backflow assemblies connected to the drinking water system. Backflow assemblies protect the water supply by preventing the 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. Since 2010 there have been two reported backflow incidents in Bellevue's service area, fortunately no one was sickened. Even with a 96% certification compliance rate these instances do occur. 400-500 backflows go un-checked every year leaving the drinking water system vulnerable to cross contamination. In addition, over 500 new assemblies are installed in Bellevue every year.
- **Private Drainage Inspection:** A federally mandated inspection program to protect lakes, streams, and wetlands. Utilities staff meet their goal of conducting field inspections of over 1500 privately-owned storm drainage systems for compliance with maintenance standards to ensure proper management for water quality and water quantity control. Private drainage systems are inter-connected with the public system and represent over half of the total drainage in Bellevue. Ensuring they are maintained and functioning as designed is an important aspect of Bellevue's stormwater management program. Compliance rates for enforcement of maintenance of these systems remains around 85%.
- **Industrial Waste/Fats, Oils, and Grease (FOG):** The FOG program ensures that discharges to the public wastewater system do not contain prohibited substances that create FOG-related blockages or sewage overflows, prematurely degrade pipes, endanger personnel, or cause disruption of regional treatment systems. FOG system owners report maintenance activities by private vendors to PSMP to ensure compliance with regulations. In addition to site inspections, the FOG Program provides public education and training. Compliance with FOG maintenance requirements has increased from 38% in 2009 to 70% in 2011. This program also provides targeted education for blockage prone areas, proper food service disposal, and grease trap/interceptor maintenance.
- **Emergency Response:** Emergency response to pollutant discharges, sewage overflows, or potential backflow incidents that threaten public health or the environment. Since 2009, staff has responded to an escalating number of potential pollutant spills and sewage overflows into lakes and streams threatening water resources. In 2009, over 60 pollutant responses and 2 sewage overflows; in 2010, 207 and 10; and in 2011, 206 and 4. This includes education and enforcement of stormwater/wastewater discharge regulations.

These programs are mandated in multiple regulatory arenas and through Contractual Agreements:

- **CCC Program:** Federal Safe Drinking Water Act; Homeland Security Presidential Directive 10; WAC 246, Drinking Water Regulations; 2006 Uniform Plumbing Code; Contractual Agreement, Cascade Water Alliance & Seattle Public Utilities.
- **PDI Program:** Federal Water Pollution Control Act (Clean Water Act), [PDI Program is a NPDES Permit requirement]; State of Wash. Water Pollution Control Law.
- **FOG Program:** State of Wash. Water Pollution Control Law, Water & Sewer Systems, Discharge Limitations; Contractual Agreement, King County Wastewater Treatment Division; KC prohibits FOG and certain industrial facilities & construction discharges.

Scalability: The existing services proposal is scaled to provide the minimum resources necessary to meet mandates and provide adequate services to protect the quality of the community's drinking water and surface water resources as well as reduce sewage backups. Continual process improvement allows PSMP to maintain minimum service levels in this proposal without the need for additional resources. The new NPDES Municipal Stormwater Permit will take affect August 1, 2013 and will have an impact on programs in this proposal. Funding to address those changes is discussed in parent proposal 140.26PA.

Section 5: Responsiveness to Request for Results

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

Factor 2 Clean Reliable Water- This proposal meets the following Factor 2 strategies:

- Ensure the safe, reliable supply of drinking water and removal of wastewater from homes and businesses; 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; and

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ensure that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding.

Funding these programs helps ensure clean reliable drinking water, the proper disposal of wastewater, and proper storm and surface water management of over one half of the total drainage system in Bellevue through ongoing inspection, education, enforcement and certification of private utility systems.

Safe, Reliable Supply of Drinking Water: The EPA lists cross connections as the #1 public health risk to drinking water systems. There are many examples of incidents of illness or death from cross connections in the U.S. The CCC Program protects drinking water by reducing the risk of backflow contamination from over 11,000 connections to the water supply. The PDI and FOG Programs help to prevent pollutant spills and sewage overflows and educate customers on best management practices, helping to protect water resources.

Factor 3 Clean Green City. The CCC program inspects water reuse facilities such as grey water and rain collection systems to ensure that they do not cross contaminate drinking water systems. The PDI Program inspects low impact stormwater facilities to ensure ongoing functionality and flood prevention.

Factor 4 Natural Environment. Ongoing proper maintenance of private utility systems ensures that they prevent pollution and properly treat, or dispose of, harmful byproducts. The programs protect our water resources by minimizing discharges that introduce pollutants into our lakes, streams and wetlands.

HSE Outcome Specific Purchasing Strategies- This proposal meets the following HSE strategies.

- Deliver results in an environmentally sensitive, equitable and sustainable way, foster community collaboration and partnership, create synergy to achieve multiple benefits, emphasize proactive actions, consider a broad range of strategies – capital investments, operations, services, regulations, incentives, education, training and other programs, have a direct relationship between the proposal and the outcome.

Program goals deliver results in an environmentally sensitive way that balances inspection costs equitably by fostering changes in the method of service delivery through community collaboration and partnership. We continue to partner with others to develop future privatization of drainage inspections via a professional certification program being developed in collaboration with other agencies and the private sector. The goal is to change the surface water to a more equitable and sustainable service model.

This proposal places more emphasis on proactive verses reactive actions: PSMP promotes proactive inspection and maintenance for the protection of public health and the environment, instead of reactive response to public health and environmental emergencies. Education, information and training are provided during field visits for proper operations and maintenance, their legal obligations (regulation and enforcement) and the impacts that system failure can have on people, property, and water natural resources.

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

- **Safe Community:** Prevention, Enforcement, Response. Proactive prevention and enforcement for public health, and preparedness to respond to emergency events (to protect and mitigate) when they occur.
- **Quality Neighborhoods:** Facilities and Amenities are safe, clean, and maintained. Keeps neighborhood lakes, streams, and wetlands safe for contact by families and children.
- **Economic Growth and Competitiveness:** Quality of Community. A community with clean, safe natural areas and safe, reliable drinking water is a more attractive place to live, promotes business, and has higher property values. Local partnerships create job growth for inspection services in Bellevue.
- **Responsive Government:** Customer-Focused Service. Through innovated service delivery and reduction in “over-burdensome” government. Stewards of the Public Trust. Offering innovative service delivery improvements contributes resource savings and provides 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; and ensure sound management of resources and business practice.

PDI Privatization: By leveraging partnerships with other agencies and community colleges (BC) an industry-standard stormwater certification program is currently being developed. Certified “private” drainage inspectors will reduce the burden on utilities, ensure more equitable business practices, create new employment opportunities in the industry, and align this program with other previously privatized inspection programs (CCC and FOG).

Inspection Staff Integration: Synergizing inspection processes to include multiple “types” of inspections (inspecting private water, storm, and sewer systems in one site visit) is creating more agile and flexible staff, improving efficiencies, and a more holistic approach to protecting all water resources.

C. Partnerships and Collaboration proposed:

PSMP partners with Development Services to inspect new private Utilities in a cooperative relationship to ensure proper installation of private utility components.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

These programs support the work of public water, sewer, and storm systems programs by ensuring private utility systems are maintained and operate as designed. Properly maintained and operated private systems are essential to insure the public systems operate as designed and also reducing their long-term maintenance and replacement costs. The partnership to inspect new installations supports general fund proposals, helping to save costs in direct field inspections completed by Development Services.

These programs operate with minimal resource Reducing resources to these programs would have customer Impacts and increased the likelihood of:

- (1) Water contamination as a result of backflow, (2) stormwater flooding and property damage, (3) sewage overflows into homes, businesses, public lands and lakes, (4) environmental degradation, fish kills, and beach closures
- Legal: The City risks violation of (1) 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.

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Section 1: Proposal Descriptors

Proposal Title: Solid Waste, Waste Prevention and Recycling
Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.30PN

Proposal Number: 140.30NA

Proposal Type: Reduce Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Susan Fife-Ferris, x5216

Version Tracking: N/A

Section 2: Executive Summary

City customers generate approximately 120,000 tons of solid waste annually, 75,000 tons of which is garbage that must be hauled to the local landfill. Efficient and effective management of solid waste (i.e., 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 (AKA Republic), the development and procurement of a new solid waste collection contract that will go into place in 2014, and the continuation of the City's successful waste prevention and recycling programs.

Section 3: Requested Resources

Fund: 01230

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 354,945 | 367,326 |
| Other | 582,468 | 585,236 |
| Capital | 0 | 0 |
| | \$ 937,413 | 952,562 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 937,413 | 952,562 |

| | | |
|-----------------|------|---|
| Rev-Exp Balance | \$ 0 | 0 |
|-----------------|------|---|

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 2.83 | 2.83 |
| LTE | 0.00 | 0.00 |
| Total Count | 2.83 | 2.83 |

Please briefly describe:

- A. "Other" Expenditures:** Intern & 1040
2013/2014: \$15K; S.W. contract funds 2013: \$205K/2014: \$210K; grant program-assoc. expenses 2013: \$298K/2014: \$293K; other
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** S.W. Collect. Contract Rev. 2013 \$587K/2014 \$602K; Anticipated Grant funds 2013 \$298K/2014 \$294K; Anticipated reserve interest 2013 \$9K/2014
- D. Dedicated Revenue:** See information above for Grant Funding.
- E. FTE/LTE:** Decrease of 0.55 FTE for decreased service levels.

Section 4: 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. The Contract, which is worth approximately \$20M annually, 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 2012, staff began the multi-year process to

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develop a new solid waste collection contract with implementation scheduled for June 2014.

Waste Prevention and Recycling Program Delivery: Programs effect every resident and business employee in the City, and include outreach, education and technical assistance to single-family, multifamily, and commercial customers, residential special recycling collection events, emergency debris management, school programs in partnership with the Bellevue School District, 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 funded from taxes and fees collected from City customers by the various granting agencies that are then 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 Department of Ecology Coordinated Prevention Grant (terms vary), and the 1-year Local Hazardous Waste Management Program Grant issued by the Seattle-King County Department of Public Health. Failure to expend the allocated grant funds would result in the grant funds reverting back to the granting agency, the funds being allocated to other jurisdictions, and the funds collected from City customers not being spent in the City.

Drivers: There are a number of State mandates and other requirements that the City must comply with. Two drivers to delivering effective and efficient solid waste services and increasing waste prevention and recycling include:

- Solid Waste Collection Contract with Allied: The current Contract runs through June 2014, and 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.

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. 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 the local landfill is the cheapest method of garbage 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 120,000 tons of solid waste annually, 75,000 tons of which is garbage hauled to the local landfill. Future growth in the area's population will increase the amount of solid waste. To prepare for that eventuality, solid waste management remains a top priority and requires leadership by the City.

Describe why the level of service being proposed is the appropriate level: The current proposal includes a decrease in personnel of .55 FTE, which represents bringing service levels in-line with revenues. Some efforts, such as development of the new solid waste collection contract, will be out-sourced in order to save on personnel costs. The level of effort included in this proposal for current contract management and waste prevention and recycling programs represents the service levels required to comply with contract, interlocal agreement, and state statutory mandates requirements. This proposal includes a recognition that continued compliance and success of these programs depends on keeping awareness levels high and customers engaged through constant and consistent messaging and information.

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Section 5: Responsiveness to Request for Results

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

Factor 3 and Outcome Specific Purchasing Strategy: Clean Green City: Waste prevention, recycling, efficient and effective solid waste collection, and education to influence people's behaviors all support a clean living environment and the conservation of natural resources. Litter is regularly removed from City streets. The natural yard care program and demonstration garden educate homeowners on how to pick the right plants and how to 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 4 and Outcome Specific Purchasing Strategy: Natural Environment: Natural yard care programs teach the value and importance of and techniques to maintain natural spaces. Programs enhance the community's awareness of the value of natural 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. 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 and protection of the natural environment is the foundation of the education and programs that are provided under this proposal.

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

Economic Growth and Competiveness: City Brand, and Quality of Community; Innovative, Vibrant and Caring Community: Involved Citizens, and Built Environment; Quality Neighborhoods: Sense of Community, Facilities and Amenities, Public Health and Safety, and Schools; and, Responsive Government: Strategic Leadership.

Citywide purchasing strategies addressed by this proposal:

- Best Value. The current Solid Waste Collection Contract provides customers excellent value for their rate dollars. In recent comparisons, 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.
- Ensure Sound Management of Resources. 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.
- Emphasize Proactive Action. 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.

C. Partnerships and Collaboration proposed:

Internal: Civic Services and other departments that operate City facilities (solid waste collection); Development Services (commercial solid waste space requirements); Finance (green purchasing); Environmental Stewardship Initiative (assistance).

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); and, Point Cities (grant cooperation).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

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- 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 \$20 million/year contract, conduct the annual customer service survey and contract performance audit, or spend funds collected in accordance with contract requirements.
- The City would not be able to regulate the solid waste collection contractor for the customer, respond to customer requests, or provide extremely popular programs, such as the residential 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).
- 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.

Consequence of funding at a lower level: This proposal already represents a reduction in service levels, and costs cannot be adjusted downward without reducing the quality of solid waste services currently provided, which would disrupt the City's compliance with the terms of the current Contract. 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 reverting back 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: Storm and Surface Water Pollution Prevention

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: P 140.26PN

Previous Proposal Number(s): 140.31DN

Proposal Number 140.31DA

Proposal Type: Reduce Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Susan Fife-Ferris, x5216

Version Tracking: N/A

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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 318,123 | 329,251 |
| Other | 192,250 | 196,469 |
| Capital | 0 | 0 |
| | \$ 510,373 | 525,720 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 510,373 | 525,720 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 2.63 | 2.63 |
| LTE | 0.00 | 0.00 |
| Total Count | 2.63 | 2.63 |

Please briefly describe:

- A. "Other" Expenditures:** Interns/1040 2013: \$26K/2014: \$27K; program-associated outreach & education prof. svc fees, supplies, & other expenses 2013: \$149K/2014: \$151K;
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Anticipated Grant funding: 2013 - \$30,000; 2014 - \$30,000.
- D. Dedicated Revenue:** See information above for Grant Funding
- E. FTE/LTE:** Decrease of 0.40 FTE for decreased service levels.

Section 4: 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

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technical assistance programs. Some activities and programs covered under this proposal include Stream Team salmon monitoring, restorations, riparian field investigations, 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 (a regional partnership); and, "Puget Sound Starts Here." While most elements of this proposal are rate funded, some funding comes from grants.

Drivers: There are a number of State/Federal mandates and other requirements that the City must comply with. Some of the drivers to delivering effective and efficient storm and surface water pollution prevention include:

- NPDES Permit, issued January 2007 (update scheduled for 2012 or 2013): 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.

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 nationally recognized and replicated state-wide by the Department of Ecology and other organizations, and the volunteer Stream Team model, which is widely adopted across the region.

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.
- 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.
- 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. 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.

Describe why the level of service being proposed is the appropriate level: The current proposal includes a decrease in personnel of 0.40 FTE, which represents realignment of programs and service levels. Programs anticipated by this proposal 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, and recognize that continued compliance and success depends on keeping customers engaged and aware through constant and consistent messaging and information.

Section 5: Responsiveness to Request for Results

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

Factor 2 and Outcome Specific Purchasing Strategy: Clean Reliable Water: 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 3 and Outcome-Specific Purchasing Strategy: Clean Green City: 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 4 and Outcome-Specific Purchasing Strategy: Natural Environment: Programs and materials are developed to enhance the community's awareness of the importance and value of the City's natural 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.

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

Economic Growth and Competiveness: City Brand, and Quality of Community; Innovative, Vibrant and Caring Community: Involved Citizens, and Opportunities for Interaction; Quality Neighborhoods: Sense of Community, Facilities and Amenities, Public Health and Safety, and Schools; and, Responsive Government: Strategic Leadership, and Stewards of the Public Trust.

Citywide purchasing strategies:

- 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.
- Ensure Sound Management of Resources. 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.
- Emphasize Proactive Action. Public volunteer opportunities include Salmon Watchers and stream restoration, and educational programs focus on increasing public awareness and participation in prevention efforts.

C. Partnerships and Collaboration proposed:

Internal: Parks (stream restorations and education); Development Services (NPDES education, outreach coordination, and critical areas and stream-side property owner assistance); Environmental Stewardship Initiative (assistance)

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External: Department of Ecology (NPDES Permit oversight; granting agency); Local Hazardous Waste Management Program (granting agency); Bellevue School District (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).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

This proposal supports the work of 140.26PA Water Quality Regulatory Compliance & Monitoring Programs – promoting the prevention of water pollution.

Consequence of not funding the proposal at all:

- 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.
- The City would not invest grant funds received, allowing funds collected from City customers to revert to the granting agency, and 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.
- 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.
- 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.

Consequence of funding at a lower level: This proposal already represents a reduction in service levels, and costs cannot be adjusted downward without reducing the quality of services provided. 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 reverting back 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: Water Systems and Conservation

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.32NN

Proposal Number 140.32NA

Proposal Type: Reduce Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Susan Fife-Ferris, x5216

Version Tracking: 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 looking to Cascade Water Alliance for primary water conservation program delivery, and supplementing Cascade's programs through the management of the Waterwise Garden, the delivery of natural yard care programs, and provision of the Powerful Choices for the Environment program to 6th graders, all of which promote the wise use of water and elimination of waste in order meet the City's adopted water conservation goal.

Section 3: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 77,352 | 80,041 |
| Other | 70,500 | 72,333 |
| Capital | 0 | 0 |
| | <u>\$ 147,852</u> | <u>152,374</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 147,852 | 152,374 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 0.60 | 0.60 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>0.60</u> | <u>0.60</u> |

Please briefly describe:

- A. "Other" Expenditures:** Interns & 1040 2013/2014: \$15K; program-associated professional svcs and other expenses 2013: \$53K/2014: \$54K; other supplies and
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** N/A
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** Decrease of 1.40 FTEs for decreased service levels.

Section 4: 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 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 2013. The City will look to Cascade for water conservation program deliver during the next budget cycle, with the City focusing on three primary programs: 1) The Waterwise Demonstration Garden, situated in the heart of the Bellevue Botanical Garden, educates the community about landscape water conservation; 2) Natural yard care program, including displays, and how-to resources promoting the wise use of

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water; and, 3) Powerful Choices for the Environment, a 2-day cooperative effort with the Bellevue School District that is integrated into the 6th grade science curriculum, and promotes a better understanding of where the City's water comes from, the value of it as a resource, and why it is important to use it wisely.

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. Reducing water use can also lower wastewater and energy costs. In the long-term, regional water supplies experience pressure due to population growth, climate change and other factors. 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.

Describe why the level of service being proposed is the appropriate level: The current proposal includes a significant decrease in personnel of 1.40 FTEs, which represents the City looking to the Cascade Water Alliance for the delivery of most water conservation programs locally, and the reduced emphasis on general conservation due to the achievement of the City's 2013 water conservation goal. 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.

Section 5: Responsiveness to Request for Results

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

Factor 2 and Outcome Specific Purchasing Strategy: Clean Reliable Water: 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 4 and Outcome Specific Purchasing Strategy: Natural Environment: The nationally-recognized Waterwise Garden provides visitor a demonstration of 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 natural spaces around the City and how these spaces are all part of an integrated ecosystem.

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

Innovative, Vibrant and Caring Community: Involved Citizens, Opportunities for Interaction, and Built Environment; Quality Neighborhoods: Sense of Community, Facilities and Amenities, and Schools; Responsive Government: Strategic Leadership, and Stewards of the Public Trust.

Citywide purchasing strategies

- Best Value. City customers receive excellent value for their water rate dollars. Through conservation, customers can reduce their water use, often allowing them to save money. Reducing overall water usage by the community can mean delaying regional supply development, reducing operational costs, and keeping overall water rates down.

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- 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.
- Ensure Sound Management of Resources. All programs are rate-funded, and are subject to review by the Council and the Environmental Services Commission. The City pays no additional money to participate in the highly successful Cascade conservation programs.
- Catalyst for increasing citizen participation and support. Public outreach programs increase participation in water conservation activities. Customers learn how conservation can reduce their water bill. The Waterwise Garden increases support of the conservation effort, and builds community enthusiasm.

C. Partnerships and Collaboration proposed:

Internal: Parks (water conservation via the Waterwise Garden); Environmental Stewardship Initiative (assistance)

External: Cascade Water Alliance (Interlocal Agreement); Washington Dept. of Health (Water Use Efficiency Rule oversight); Seattle Public Utility (water supply agency); Bellevue School District (program partner); Bellevue Botanical Garden Society (program partner).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

- The City would not meet ongoing obligations with program partners, including the Bellevue School District, Parks Department, and Bellevue Botanical Garden Society.
- The progress the City has made towards meeting its Council-adopted water conservation goal might be compromised, and the City would be out of compliance with state law, and fail to comply with the goals adopted by Cascade via resolution that the City is a party to.
- The City would fail to comply with the City's Environmental Stewardship Initiative Strategic Plan calling for the conservation of drinking water resources.

Consequence of funding at a lower level: This proposal represents a significant reduction in City programmatic efforts. 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. 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.

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Section 1: Proposal Descriptors

Proposal Title: Utilities Customer Service and Billing
Outcome: Healthy and Sustainable Environment

Proposal Number: 140.33PA
Proposal Type: Reduce Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Virginia Barrett, x5368

Primary Department: Utilities

List Parent/Dependent Proposals: D 140.46DA; D 140.45DA

Previous Proposal Number(s): 140.33PA

Version Tracking: N/A

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; services which are necessary to foster a healthy and sustainable environment. Utility billings account for rate revenue of over \$94 million for Utilities and utility taxes of over \$5.5 million for the General Fund.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------------|------------------|
| Personnel | \$ 731,210 | 757,750 |
| Other | 339,326 | 346,055 |
| Capital | 0 | 0 |
| | <u>\$ 1,070,536</u> | <u>1,103,805</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|--------------|-----------|
| | \$ 1,070,536 | 1,103,805 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 8.11 | 8.11 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>8.11</u> | <u>8.11</u> |

Please briefly describe:

A. "Other" Expenditures: Temp help
2013/2014: \$5K; postage 2013: \$115K/2014: \$117K; utility bills prof. svcs -Kaye Smith
2013: \$141K/2014: \$145K UTIL CC merchant

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: Decrease of 2.00 FTE in 2012.; 0.70 FTE of this is redeployed to another division; remaining 1.30 FTE is absorbed.

Section 4: 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. The 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 care/account management, and collections.

Billing – Accounts are grouped into 8 billing cycles based on water meter reading routes. Each week, the Customer Information System (CIS) produces approximately 5,000 bills based on meter reads. Accuracy is essential, the 5,000 bills are allocated among 5.6 Customer Service Representatives (CSRs) who manually review the bills for exceptions and meter mis-reads prior to releasing them. Commercial and Multi-Family accounts typically have large, and/or multiple meters and consequently

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much higher volumes. These bills require extra scrutiny before release to the customer. The performance measure for back bills and credits measures how well reps are doing in their pre-billing activities.

Customer Service/Account Management - Customer Service is more than a call center. While CSRs are the first point of contact for our 38,000 customers who reach out to us over the phone, they are responsible for many more areas of customer and account care. Other responsibilities include:

- Documenting customer accounts with a recap of each customer call
- Researching and documenting account adjustments
- Creating new accounts, taking move in/out information, calculating final bills for outgoing customers
- Providing technical support for customers who need assistance with online or phone payment systems
- Coordinating with field staff regarding meter reads, service disconnects and other customer issues
- Assisting delinquent customers with payments arrangements or referrals to social service agencies
- Processing delinquent accounts for collections and following up on customer who have left the area

CSRs receive 150 (total number) calls per day, process up to 50 moves per day, make up to 50 reminder (late payers) calls per week, produce an average of 150 notices of pending disconnect per week, and coordinate an average of 25 service disconnect/reconnects per week. CSRs must also work with distraught customers while still acting in the City's best interest to collect money owed for services provided. The customer survey performance measure captures the customer perception of how well CSRs are performing these tasks.

Collections – Collections are critical to maintaining cash flow. CSRs must follow very specific procedures in order to meet legal requirements for collections. Failure to adhere to the prescribed collections process means the utility loses the legal 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. The recent economic downturn has resulted in an increase in delinquencies, shut-offs and arrangements which has increased historic levels of exception processing for CSRs.

This proposal reflects a 2.0 reduction of FTE from the 2011-2012 proposal for Utilities Customer Service and Billing. Given the overall financial needs of the department, we have reduced staff in Customer Service to redeploy positions where there are greater needs. 0.70 FTE has been redeployed to another division, but 1.30 FTE of work will have to be absorbed by the remaining CSRs. This is serving to increase demands on their time and will likely impact current service levels. Customers will be spending more time on hold while CSRs serve other customers. The South Bellevue Annexation will add to this problem as we are adding customers and services and they will have questions. Bills may go out the door incorrectly for lack of scrutiny in pre-billing. It takes longer to correct a mistake after the fact than it does to catch it before hand and fix it proactively. It erodes customer trust when there are errors in billing. Any further scaling is not recommended.

Section 5: Responsiveness to Request for Results

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

Factors 2 and 4: Clean Reliable Water and Natural Environment

- 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.
- Revenue generated by billing also pay for safe, efficient removal and treatment of wastewater and the maintenance of the City wide storm drainage system to preserve and restore natural habitat (Natural Environment).
- 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

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take for water conservation. Utilities also advises/educates managers of accounts for City facilities on the efficient use of water resources and alerts them if consumption looks high so they can investigate possible leaks as quickly as possible in order to be the best possible stewards of those resources.

Purchasing Strategies

- 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. We encourage customers to use ebills and have seen an increase in the number of customers who choose this option. This “green” alternative is also a cost savings for the City- we are currently realizing savings of \$12,000 per year by sending ebills rather than printed bills.
- Services are also 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, pending bills are proactively checked carefully for possible errors prior to sending them to customers. Commercial accounts are regularly scrutinized for accurate metering and consumption. The performance measure for proactive, regular monitoring of meters 3” and greater in size emphasizes the importance of these commercial meters and accounts.
- High consumption notices are left at single-family residences if metered usage looks abnormally high. Customer bill inserts encourage residents to be proactive in monitoring and conserving their resources. Inserts also educate customers about the importance of the City-wide storm drainage system in the preservation and creation of natural habitats within Bellevue.

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

Other Outcomes : Responsive Government – Two of the factors under Responsive Government are Customer Focused Service and Stewards of the Public Trust.

- Utility billing and Customer Service are very customer focused, we are often the only direct contact a citizen will have with the City, we have to be very customer considerate and represent City customer philosophy faithfully.
- That we are stewards of the public trust is demonstrated by the careful way that we spend ratepayer money in delivering services to the public in the most fiscally responsible manner, both in the short term and the long term. We have outsourced bill print/mailing and payment processing because it is the most efficient, value added way to accomplish these two important functions. In 2011, the contract with the bill print vendor was re-negotiated for a 3% reduction in pricing.

Citywide Purchasing Strategies

- Gains in efficiency were realized when Utility billing changed the way in which we bill City-owned utility accounts. Previously, these accounts were billed individually, separate statements were mailed and processed individually by AP. We streamlined the process so all City accounts are billed at the same time and payment is applied electronically, all accounts are paid at once. This virtually eliminates any Accounts Payable activity, resulting in a real savings to the General Fund of over \$40,000.
- Cost savings are resulting from a partnership with Bank of America for Business to Business payments from a company that manages utilities expense for a number of large organizations. This company was paying bills using their corporate credit card and the merchant fees charged to the City were staggering. The partnership with Bank of America will save Utilities approximately \$40,000 in merchant fees starting in 2012.
- A further partnership with Bank of America has been implemented to expedite the payment posting of customers who use their bank bill payer service. This improves cash flow for Utilities

C. Partnerships and Collaboration proposed:

- 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

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water waste.

- External: We work with social service agencies such as LifeSpring, Hopelink, St. Vincent de Paul, and the Salvation Army who provide assistance to customers who have difficulty paying their utility bill.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

The billing activities in this proposal generate the revenue for operating and CIP expense in all utility proposals. It is important that we monitor billing and collections so this revenue is available and coming in predictably according to forecast targets.

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Section 1: Proposal Descriptors

Proposal Title: Utility Taxes and Franchise Fees

Proposal Number: 140.34NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Bob Brooks, x7199

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.34NN

Version Tracking: 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 Utility tax or a franchise fee to the local jurisdiction.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------|------------|
| Personnel | \$ 0 | 0 |
| Other | 10,567,645 | 11,268,077 |
| Capital | 0 | 0 |
| | \$ 10,567,645 | 11,268,077 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|---------------|------------|
| | \$ 10,567,645 | 11,268,077 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

A. "Other" Expenditures: 2013 2014
 State tax \$ 3,040k \$ 3,305k
 City tax \$ 6,783k \$ 7,267k
 Franchise fees \$ 448k \$ 471k

B. "Capital" Expenditures: N/A

C. Supporting Revenue: Utility rates.

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: Budget Proposal Description

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 except that, starting in 2012, the City tax on water service has been extended to all customers as part of an agreement with other jurisdictions to collect monies to pay for fireflow capacity costs from water customers via the city tax (see also Proposal #140.59NA). Money to pay for franchise fees is collected from customers in the pertinent jurisdictions.

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 Sewer and Storm Drainage utilities based on

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service revenues from all water system customers within City limits and on the Water utility based on service revenues from all water system customers. 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.

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.

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. The Water utility tax provides revenues to the City's General Fund that it uses to pay its Fireflow Capacity Cost obligation (see Proposal #140.59NA).

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

State tax rates and deadlines for filing are established by the State and are not subject to negotiation. Franchise fee terms and conditions were set at the time the franchise agreements were negotiated and allow the franchising agency to set the rate; if changed, Utilities obtains approval from Council to adjust the factor applied to rates for customers in that jurisdiction to offset the increase or decrease in cost to the City. If payments were not made to these jurisdictions, the possibility also exists for interruption of utility services for ratepayers in those areas, which would endanger the City's healthy and sustainable environment. Again, these terms are not negotiable. Utilities is also obligated to pay City tax in its entirety.

Scalability:

This proposal is not scalable. If tax payments are not made to the State in a full and timely manner, the City would be in violation of its obligations and potentially subject to legal action. If franchise fee payments are not made to the applicable jurisdictions in a full and timely manner, the City would be in violation of its franchise fee agreements and potentially subject to legal action. If payments are not made to the City in a full and timely manner, Utilities would be in violation of City code and the City could potentially have cash flow issues relating to the default. Any of these circumstances could also adversely affect the City's bond ratings.

Section 5: Responsiveness to Request for Results

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

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 2: Clean Reliable Water. This proposal addresses necessary costs associated with the provision of drinking water, storm and surface water, and wastewater services to customers.

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

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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.
- **Sound Management of Resources/Business Practices.** This proposal allows for the payment of state taxes and franchise fees as established by state law and/or contractual arrangement.

C. Partnerships and Collaboration proposed:

Providing utilities services to the Points (franchise) communities eliminates the need for duplicate utilities systems.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

N/A

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Section 1: Proposal Descriptors

Proposal Title: Purchase of Water Supply

Proposal Number: 140.35NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Scott Pickard, x4587

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.35NN

Version Tracking: 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 40,000 customers in the Bellevue Utilities service area, which includes Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area). In 2011, about 4.8 billion gallons of water were used by customers of Bellevue Utilities.

Section 3: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------|------------|
| Personnel | \$ 76,260 | 78,898 |
| Other | 17,189,504 | 18,389,504 |
| Capital | 0 | 0 |
| | \$ 17,265,764 | 18,468,402 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|---------------|------------|
| | \$ 17,265,764 | 18,468,402 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.50 | 0.50 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.50 | 0.50 |

Please briefly describe:

A. "Other" Expenditures: 2013
2014
Water Purchase \$ 17,478K \$ 18,060K
Outside Legal Services \$ 5K \$ 6K

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: Budget Proposal Description

This activity is entirely supported by utility rates.

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 9% per year in 2013 and 2014.

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.

Cascade, a non-profit corporation, was formed through an interlocal agreement by eight public water

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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. Bellevue is the majority member of Cascade, representing over 50% of the organization. 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. As Bellevue is the majority member, Bellevue pays the majority of investments made by the Cascade Board. Decisions made today will impact utility investments, utility rates, and Bellevue residents' quality of life for the next 50 to 100 years.

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.

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).

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.

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.

Scalability:

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.

Section 5: Responsiveness to Request for Results

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

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 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.

Factors in the Healthy and Sustainable Environment outcome:

- Clean Reliable Water. 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.
- Clean Green City. 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Responsive Government: 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: Stewards of the Public Trust. Utilities ensures that the City complies with contract and regulatory requirements (the interlocal contract).
- Economic Growth and Competitiveness: Land, Infrastructure and Planning. 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:

- Leverage collaboration or partnerships with other departments and/or external organizations. 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.
- Provide for gains in efficiency and/or cost savings. Membership in Cascade gives the City a role in promoting water conservation and efficient use of limited resources. 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

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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.

C. Partnerships and Collaboration proposed:

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

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

- Legal: Under the interlocal agreement, the City is obligated to purchase its water supply from Cascade.
- 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.

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.

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Section 1: Proposal Descriptors

Proposal Title: Sewage Treatment and Disposal

Proposal Number: 140.36NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Eric Lee, x6963

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.36NN

Version Tracking: 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 37,000 customers in the City of Bellevue and surrounding jurisdictions. In 2011, over 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: Requested Resources

Fund: 04450

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|----------------------|-------------------|
| Personnel | \$ 67,019 | 69,331 |
| Other | 30,239,847 | 30,086,584 |
| Capital | 0 | 0 |
| | <u>\$ 30,306,866</u> | <u>30,155,915</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|---------------|------------|
| | \$ 30,306,866 | 30,155,915 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 0.50 | 0.50 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>0.50</u> | <u>0.50</u> |

Please briefly describe:

A. "Other" Expenditures: Payment to King County Metro.

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: Budget Proposal Description

This activity is entirely supported by utility rates.

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 10.5% in 2013. King County Metro is not currently planning any rate increase for 2014.

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

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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.

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

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.

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.

Scalability:

This proposal is not scalable since Utilities is contractually obligated to pay King County Metro for

services through 2036.

Consequence if this proposal is not funded:

- The City would be out of compliance with the contractual obligation to pay King Country Metro for sewage treatment and disposal services through 2036.
- 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.

Section 5: Responsiveness to Request for Results

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

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 2 – Clean Reliable Water: 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.
- Factor 4 – Natural Environment: 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Responsive Government Factor 1: 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 4: Stewards of the Public Trust – Balancing Benefit and Risk. Utilities ensures the City complies with contractual and regulatory requirements (the Agreement for Sewage Disposal) thereby ensuring the Public’s expectations are adhered to.
- Economic Growth and Competitiveness Factor 3: Infrastructure. A robust and strategic utilities infrastructure ensures capacity meets future demands, helping form the foundation for the City’s economic competitiveness and advances the standard of living in the community.

Citywide purchasing strategies:

- Efficiency Gains/Cost Savings. Our continuing contract with King County 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. Partnerships and Collaboration proposed:

External: King Country Metro, Metropolitan Water Pollution Abatement Advisory Committee

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(MWPAAC)

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence if this proposal is not funded:

- The City would be out of compliance with the contractual obligation to pay King Country Metro for sewage treatment and disposal services through 2036.
- 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.

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Section 1: Proposal Descriptors

Proposal Title: Cascade Regional Capital Facility Charges

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.37NN

Proposal Number: 140.37NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Scott Pickard, x4587

Version Tracking: 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: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|--------------|-----------|
| Personnel | \$ 0 | 0 |
| Other | 1,011,885 | 1,038,194 |
| Capital | 0 | 0 |
| | \$ 1,011,885 | 1,038,194 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|--------------|-----------|
| | \$ 1,011,885 | 1,038,194 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

A. "Other" Expenditures:

| 2013 | 2014 | |
|------|------|-----------|
| | | \$ 1,012K |
| | | \$ 1,038K |

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: No changes

Section 4: Budget Proposal Description

This activity is 100% supported by direct charges assessed to new connections and redevelopments/upgrades to water services.

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.

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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.

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").

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.

Scalability:

This proposal is not scalable. Neither the price nor the quantity are under Bellevue Utilities' direct control.

Section 5: Responsiveness to Request for Results

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

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").

Factors in the Healthy and Sustainable Environment outcome:

- Clean Reliable Water. This proposal provides funding that enables Cascade to continue providing a reliable water supply.

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

Other factors addressed by this proposal:

- Economic Growth & Competitiveness: Land, Infrastructure and Planning. 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: Customer-Focused 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: Stewards of the Public Trust. Utilities ensures that the City complies with contract and regulatory requirements (the interlocal contract).

Citywide purchasing strategies addressed by this proposal:

- Provide the best value in meeting community needs. 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.

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- Provide for gains in efficiency and/or 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.
- Ensure sound management of resources and business 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”).

C. Partnerships and Collaboration proposed:

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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

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.

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.

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Section 1: Proposal Descriptors

Proposal Title: Debt Service

Proposal Number: 140.38NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Bob Brooks, x7199

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.38NN

Version Tracking: N/A

Section 2: Executive Summary

Utilities debt service represents repayment of principal and interest on outstanding, low-interest Public Work Trust Fund loans, which 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-----------|--------|
| Personnel | \$ 0 | 0 |
| Other | 37,241 | 29,795 |
| Capital | 0 | 0 |
| | \$ 37,241 | 29,795 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|-----------|--------|
| | \$ 37,241 | 29,795 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

A. "Other" Expenditures: 2013 2014

| | | |
|-----------|--------|--------|
| Principal | \$ 36k | \$ 30k |
| Interest | \$ 1k | \$ 0k |

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: Budget Proposal Description

These activities are entirely supported by utility rates.

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 (PWTF) from the State Department of Community Development. PWTFs 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 PWTF principal and interest payments would also be made from these accounts.

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. These are loans with the State of Washington, and Utilities is contractually and legally obligated to their repayment according to the loan terms.

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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.

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

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. 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.

Scalability:

This proposal is not scalable. Loan terms and conditions were set at the time the loan was taken out and include a repayment schedule. These terms are not negotiable. Utilities is legally obligated to pay its debt service in its entirety to avoid defaulting.

Section 5: Responsiveness to Request for Results

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

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 2: Clean Reliable Water. This proposal provides funding for infrastructure needed to deliver reliable, clean water supply to the community, protect surface water quality, remove wastewater/sewage from homes and businesses, and provide flood control.
- Factor 4: Natural Environment. This proposal provides funding for infrastructure related to resource habitat management.

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

Citywide purchasing strategies:

- Best Value, Cost Savings, and Sound Management of Resources. 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.
- Economic Growth and Competitiveness: Infrastructure; Responsive Government: Stewards of the Public Trust. 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.

C. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

This proposal reflects decisions made in the past in which it was determined that there would be a net savings to ratepayers to take advantage of low-interest loans in lieu of using ratepayer funds to finance capital improvements.

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Section 1: Proposal Descriptors

| | |
|--|--|
| <p>Proposal Title: Operating Transfer to CIP</p> <p>Outcome: Healthy and Sustainable Environment</p> <p>Primary Department: Utilities</p> <p>List Parent/Dependent Proposals: P 140.41PA; and Utilities' CIP proposals</p> <p>Previous Proposal Number(s): 140.39DN</p> | <p>Proposal Number: 140.39DA</p> <p>Proposal Type: Existing Service</p> <p>Proposal Status: Proposed</p> <p>Attachments: No</p> <p>Primary Staff Contact: Bob Brooks, x7199</p> <p>Version Tracking: N/A</p> |
|--|--|

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.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------|------------|
| Personnel | \$ 0 | 0 |
| Other | 20,595,600 | 27,887,518 |
| Capital | 0 | 0 |
| | \$ 20,595,600 | 27,887,518 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|---------------|------------|
| | \$ 20,595,600 | 27,887,518 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

- A. "Other" Expenditures:** Transfer from operations to CIP.

- B. "Capital" Expenditures:** None

- C. Supporting Revenue:** Utility rates

- D. Dedicated Revenue:** None

- E. FTE/LTE:** None

Section 4: Budget Proposal Description

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.

This proposal represents the transfer of monies from rates to fund current and future CIP projects, as graphically illustrated in Figure 1. (See attachment 140.39DA_Attach1.)

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.

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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.

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."

Short- and long-term benefits 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.

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 #140.48DA).

Scalability:

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. To the extent CIP projects are not funded, or funded at reduced levels, the costs shown in this proposal may be adjusted.

Section 5: Responsiveness to Request for Results

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

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 2: Clean Reliable Water. 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 4: Natural Environment. This proposal provides funding for capital projects needed to provide resource habitat management and provide environmental restoration such as removing

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barriers to fish passage, restoring degraded stream corridors, and controlling sediment sources to streams.

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

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. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

1. 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.

2. 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.

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.

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Section 1: Proposal Descriptors

Proposal Title: Utilities Department
Management and Support

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.42NN

Proposal Number 140.42NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Mike Jackman, x6012

Version Tracking: N/A

Section 2: Executive Summary

Utilities is a self-supporting enterprise operating within the City of Bellevue, 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 \$135M and 187 FTEs/LTEs engaged in five distinct business lines: drinking water, wastewater, storm and surface water systems, street maintenance, and solid waste collection. 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 Consultant to the Director, and Senior Administrative Assistant. This proposal includes funds for 0.5 FTE for a Training Coordinator position in Development Services that was one of the 2012 LT Mid-Bi actions.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | | 2013 | 2014 |
|--------------|----|---------|---------|
| Personnel | \$ | 574,652 | 594,391 |
| Other | | 94,700 | 95,900 |
| Capital | | 0 | 0 |
| | \$ | 669,352 | 690,291 |

| Supporting Revenue | | 2013 | 2014 |
|--------------------|----|---------|---------|
| | \$ | 669,352 | 690,291 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | | 2013 | 2014 |
|--------------------|--|------|------|
| FTE | | 4.00 | 4.00 |
| LTE | | 0.00 | 0.00 |
| Total Count | | 4.00 | 4.00 |

Please briefly describe:

A. "Other" Expenditures: Travel and training 2013: \$49K/2014: \$51K; Internal Leadership and Employee Development 2013/2014: \$29K; other operating expenses and

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: 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

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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 Utilities 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 Consultant to the Director works closely with the Director, Deputy Director, and department divisions to:

- Lead a variety of special projects and oversee Utilities performance management, strategic planning, and business process improvement initiatives with a department-wide focus; work also includes 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.

A Senior Administrative Assistant provides clerical support, scheduling, and coordination of department meetings, and coordinates materials for the Environmental Services Commission.

This proposal includes funding for one-half FTE for the Development Services Department Training Coordinator as a result of the LT 2012 Mid-Bi actions.

State law and Bellevue City Code and policies govern management of utilities operations. BCC 3.41.010 establishes the functions of the Utilities department, including operations and maintenance of the water, sanitary sewer, and storm and surface water utilities, utilities administration and regulations, and the city's solid waste and recycling collection.

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.

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.

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

Scalability for this proposal could possibly involve reducing FTEs in some fashion, but doing so would downgrade the level of service customers currently receive. Competitive utilities rates, high customer

satisfaction ratings, and a strong financial position 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 5: Responsiveness to Request for Results

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

- Factor 1 and Outcome Specific Purchasing Strategy: Clean Air. The Director's Office works with internal and external stakeholders to develop the policies and vision necessary to promote reduction of greenhouse gas emissions through energy efficiencies.
- Factor 2 and Outcome Specific Purchasing Strategy: Clean Reliable Water. 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 3 and Outcome Specific Purchasing Strategy: Clean Green City. 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. The Director's Office works with internal and external stakeholders to develop the policies and vision necessary to promote waste prevention and recycling programs
- Factor 4 and Outcome Specific Purchasing Strategy: Natural Environment. 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. The Director's Office works with internal and external stakeholders to develop the policies and vision necessary to promote nature space.

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

Economic Growth and Competiveness: Land, Infrastructure and Planning; Quality Neighborhoods: Public Health and Safety; Safe Community: Planning and Preparation; Responsive Government: Strategic Leadership, High-Performing Workforce, Customer-Focused 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.

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.
- Leverage collaboration/partnerships. The Director's Office maintains professional contacts with organizations throughout the nation, sharing ideas and strategies to ensure that Utilities implements

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best management practices department-wide.

- Sound Resource Management. Careful oversight of operations and capital projects, and consistent application of Utilities' financial policies contribute to maintaining competitive utility rates.

C. Partnerships and Collaboration proposed:

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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

- Utilities would not comply with the City code or policies and state and federal laws governing water resource management.
- 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.
- Utilities would fail to engage internal and external stakeholders in the development and implementation of its vision and strategic plan.

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: 140.44NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Kathryn Lew, x4893

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.44NN

Version Tracking: N/A

Section 2: Executive Summary

The City utility systems include 654 miles of sewer pipeline, 399 miles of storm drain pipeline, 616 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 315,275 | 327,023 |
| Other | 34,700 | 33,800 |
| Capital | 6,500 | 0 |
| | <u>\$ 356,475</u> | <u>360,823</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 347,341 | 351,381 |

Rev-Exp Balance \$ -9,134 -9,442

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 3.50 | 3.50 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>3.50</u> | <u>3.50</u> |

Please briefly describe:

A. "Other" Expenditures: locate paint, flags, cones, phone & radio fees, metrotech.

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: N/A

Section 4: 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.

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- 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.

Mandates and Contractual Agreements:

- 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.

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 reduction in overtime, greater depth/breadth of knowledge in the organization, and quicker response times.

Potential automation efficiencies were also examined during the Six Sigma project. The 2011/2012 proposal included funding for laptops and a web software subscription that will allow locators to access utility system information from the field. Since early 2012, with the implementation of the Irthnet Software system, the locators are using computers to retrieve ticket requests. This has resulted in additional time savings and efficiencies by allowing the tickets to be delivered to each locator by area which eliminates manual sorting. Tickets are not only managed geographically but by priority, too. Other benefits include paperless filing, a permanent electronic log history, a customer call back system, and the ability to retrieve tickets out in the field instead of coming back to the office.

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.

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 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 an operator and backhoe falling through a vault lid while he was putting down soil for the property owner. The failure involved a lot of lawyers and money. Water and Sewer contract locate fees are high due to consequences of mis-locates and insurance requirements.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water. 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 3: Clean Green City . 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.
- Factor 4: Natural Environment. 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 be known until a storm occurs.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Outcome Strategy 2: Ensure the safe and reliable supply of water and removal of wastewater from homes and businesses.
- Outcome Strategy 3: Keep properties, streets and open spaces clean and free of waste, debris, and toxins.
- Outcome Strategy 4: 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 sewer backup and contamination of lakes/beaches.

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

Other factors addressed in this proposal:

- Economic Growth & Competiveness, Factor 2: Cost & Capital. 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, PSE, cable companies, telecommunications 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

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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) also have provided additional efficiencies by allowing the locators remotely access utility system data from the field.

C. Partnerships and Collaboration proposed:

One Call/Underground Utilities (a regional locates clearinghouse); Development Services Department (inspectors); and private contractors.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

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. 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.

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.

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Section 1: Proposal Descriptors

Proposal Title: Utility Water Meter Reading

Proposal Number: 140.45DA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Kathryn Lew, x4893

List Parent/Dependent Proposals: P 140.33PA

Previous Proposal Number(s): 140.45DN

Version Tracking: N/A

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: Requested Resources

Fund: 04440

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 483,528 | 501,726 |
| Other | 13,370 | 13,370 |
| Capital | 0 | 0 |
| | \$ 496,898 | 515,096 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 487,764 | 505,654 |

| | | |
|------------------------|-----------|--------|
| Rev-Exp Balance | \$ -9,134 | -9,442 |
|------------------------|-----------|--------|

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 5.75 | 5.75 |
| LTE | 0.00 | 0.00 |
| Total Count | 5.75 | 5.75 |

Please briefly describe:

A. "Other" Expenditures: Supplies and other operating expenses

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; minor reallocation of existing FTEs based on 10-11 data

Section 4: 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 & residential water meters. Meter readers read 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 4,385 in 2011) verify the accuracy of initial reads, often when a customer questions an unusually high bill.

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- Shut off and turn on meters due to delinquent accounts. The number of shut-off/turn-ons average 36 per week. This represents an increase over the 2009 average of 25/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 2011, approximately 6,900 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.

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.
- 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.

Efficiencies/Innovations:

Radix handheld reader devices are currently used to provide 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:

- 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 14.

As a follow up, in 2011 AMR technologies were re-evaluated using current practices, technology types, and updated implementation costs. Findings assumed labor reductions in FTEs, reduction in non-producing water by 1% at full AMR deployment, and the elimination of non-AMR meter replacements. Due to budget constraints, it was necessary to put implementation on hold. Estimated

implementation costs approached \$18M.

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.

Describe why the level of service being proposed is the appropriate level/Scalability:

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. Related to scalability, quarterly and semi-annual meter reading intervals have been evaluated and are not advised based on a) impact to revenue collection; b) water loss not discovered.

Section 5: Responsiveness to Request for Results

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

Factors in the Healthy and Sustainable Environment outcome:

- Factor 2: Clean Reliable Water. 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. 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.
- Factor 3: Clean Green City. 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 4: Natural Environment. 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. On-site leak identification minimizes property damage as well as unaccounted water loss. Unreported leaks can cause damage to streams and fish.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Factor 2: 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.
- Factor 3 & Factor 4: The meter readers have many opportunities to interact with customers to promote water stewardship by giving advice and handing out informational brochures.

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

Other factors addressed:

- Quality Neighborhoods, Factor 2: Facility & Amenities. Regular cleaning of meter box sites provides a clean and safe environment to citizens and contributes to well maintained and attractive neighborhoods.
- Responsive Government, Factor 3: Customer-focused Services. 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 qualify for low-income discounts or need 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.

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Citywide purchasing strategies addressed:

- Best Value in meeting community needs; Ensures sound management of resources and business practices. Provides customer equity by accurate and regular reading of meters and conservation benefits for the environment.

C. Partnerships and Collaboration proposed:

Internal: Utility Billing Customer Service Representatives (report information from customers to meter readers, shutoff/turn on service requests, etc.), Water Maintenance Section (schedule/repair problem meters, unscheduled shut downs, emergency repairs, and respond to customer concerns), Customer Information Systems Support.

External: Radix Company (supplier of meter reading software/handheld equipment). Puget Sound Energy (PSE) was contacted in 2011 to revisit the possibility of partnering with Bellevue to read meters. PSE currently performs their AMR reads for power and gas using a third party who owns the network, which is 25 year technology based on 1-way radio. PSE hopes to get funding to convert to a 2-way network sometime before 2023.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

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.

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

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Section 1: Proposal Descriptors

Proposal Title: Customer Service and Billing User Support
Outcome: Healthy and Sustainable Environment

Proposal Number: 140.46DA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No
Primary Staff Contact: Margaret Nolen, x6131

Primary Department: Utilities

List Parent/Dependent Proposals: P 140.33PA

Previous Proposal Number(s): 140.46DN

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides user support for systems functions. Utilities Customer Service and Billing and manage the accounts of 38,000 customers, with \$5.5 million contributing to the business-specific support for the 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.

users performing utility 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 \$94 million for Utilities with \$5.5 million contributing to the General Fund from Utility tax. Staff provides business-specific support for the 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|---------------------|----------------|
| Personnel | \$ 150,369 | 155,678 |
| Other | 120,900 | 123,600 |
| Capital | 991,968 | 0 |
| | <u>\$ 1,263,237</u> | <u>279,278</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 271,269 | 279,278 |

Rev-Exp Balance \$ -991,968 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 1.30 | 1.30 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>1.30</u> | <u>1.30</u> |

Please briefly describe:

A. "Other" Expenditures: Expenditures including one-time expenditures: CIS vendor software maintenance and professional services for enhancements.

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; -0.50 reallocation of existing FTEs to 140.33P based on 10-11 data and 13-14 plans

Section 4: Budget Proposal Description

Technology services represented in this proposal are different from those provided by the IT Department, and do not duplicate their services. Utilities funds the Customer Information System (CIS) vendor support directly from this proposal.

Support staff provides business-specific support for the users of systems, services, and interfaces that make up the CIS (this includes customer self-service web and IVR products):

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

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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 (BoFA) – expedites electronic payments from third parties
11. Global Advice Services from BoFA – Business to Business (B2B) electronic payments from commercial customers

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 provides data mining expertise, transforming data into actionable information. Examples include data sampling for internal/ external auditors, statistics 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 staff and customer. Automated interfaces to outsourced vendors and enterprise systems reduce error and increase efficiency. These 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 used to avoid introduction of errors during changes. Vendor-initiated updates can arrive monthly, and testing is required for enhancements, regulatory changes, and bug fixes.

Efficiencies/Innovations/Process Improvements: (a) Implement Global Advice services through BoFA in order to reduce credit card fees by conducting business to business (B2B) direct electronic payments with a savings of \$40K/year. (b) Streamline billing and payment processes for City accounts, avoiding costly bill printing, mailing, and check processing for City utility customers with a savings of \$42.5K/year. (c) Support King County annexations of customers in South Bellevue and prepare to bill them for Storm Drainage services beginning on the annexation date. (d) Implement utility taxes for service area jurisdictions to fund fire flow capacity. (e) Continue to 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. (f) Provide an electronic bill option instead of mailed paper bills for a savings of \$12K/year.

Short- and long-term benefits of this proposal:

The CIS system and support staff enable Utilities to collect revenue 24 x 7, providing the funds necessary to deliver reliable services to customers. Utilities configures and interfaces the systems and services to ensure ability to adapt to business changes and avoid errors that could impact customers

and revenue. CIS provides data for comprehensive planning and rate-setting supporting long-term management of utilities systems.

Scalability:

This proposal is funded minimally for its purpose. The primary work of this proposal supports quality control and change management of a revenue producing function. Resources funded by this proposal operate and test systems and interfaces. This quality control is performed locally in a proactive manner, decreasing the likelihood of billing errors that negatively affect customers and revenue generation. Billing errors make customers very unhappy and require more resource to correct than to avoid. By having staff that are business subject-matter experts, Utilities keeps service agile and responsive. A data analyst and a project manager are immediately available to troubleshoot user issues and perform testing. They 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 negative impact on customers and internal processes. They are also best suited to recommend and implement process improvements.

Section 5: Responsiveness to Request for Results

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

PRIMARY Outcome Factors:

A reliable billing system and means to mine data for information is critical to collecting revenue for infra-structure to meet the need for clean air, reliable water, clean and green city, and a natural environment.

- Factor 1: Clean air; Factor 2: Clean reliable water; Factor 3: Clean and green city; Factor 4: Natural environment. Generation of revenue through billing and collection provides funds to operate, maintain and replace infrastructure, treat sewage, and reduce failure and subsequent harm to the natural environment. Storm drainage billing considers impervious service and rewards preservation of natural drainage features.

PRIMARY Outcome Purchasing strategies:

- 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. Customer Service Representatives (CSRs) track customer feedback and work with business systems to make bills and communications easier to understand.

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

- Responsive Government Factor 3: Customer-Focused Service. Customers want convenient, timely, and quality service, and they 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. eBills and ePayment counts are increasing over time. "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.

- Responsive Government, Factor 4: Stewards of the Public Trust. The billing system is designed and operated with best accounting practices and an automated interface to the City's general ledger system. In this way, it ensures that public funds are managed in an ethical, prudent, responsible, and fiscally sustainable manner.

- Innovative, Vibrant and Caring Community, Factor 1: Support Services. The billing system supports a billing program that is sensitive to the needs of senior and disabled customers with discounted utility rates.

C. Partnerships and Collaboration proposed:

We use outsourcers, selected competitively, to reduce expense to the Utility. Examples of these follow:

- Internal: Development Services (shared resources for phone inquiry/payment), Information Technology Department;

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- External: Advanced Utility Systems (CIS, MyUtilityBill [MUB]), Selectron (MUB By Phone), PayPal (online payments), Kaye-Smith (statement printing and mailing), Puget Sound Energy (lockbox for mailed payments), Bank of America PayMode Concentrator (third-party billing) and B2B payments, elecsys corporation (Radix meter reading).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

- 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.
- Customer Impact: Customers could not make the online or phone inquiries/ payments they require.
- 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.
- 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.

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Section 1: Proposal Descriptors

Proposal Title: Asset Replacement

Proposal Number: 140.47DA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Scott Pickard, x4587

List Parent/Dependent Proposals: P 140.40PA

Previous Proposal Number(s): 140.47DN

Version Tracking: N/A

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 2013-14 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 2012. This money will be used for planned enhancements to the CIS in 2013-14 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: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|---------------------------|--------------|-------------|
| Personnel | \$ 0 | 0 |
| Other | 521,143 | 1,302,075 |
| Capital | 2,544,291 | 465,743 |
| | \$ 3,065,434 | 1,767,818 |
| Supporting Revenue | 2013 | 2014 |
| | \$ 2,142,335 | 1,767,818 |
| Rev-Exp Balance | \$ -923,099 | 0 |
| FTE/LTE | 2013 | 2014 |
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

A. "Other" Expenditures: None

B. "Capital" Expenditures: 2013 2014
Transportation Work Equipment \$ 198K
\$ 400K

C. Supporting Revenue: Asset Replacement Reserves

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: 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 2013-14 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

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funding for annual equipment replacement needs. In some years, contributions from rates are below the level of current expenditures, requiring the use of asset replacement reserves to help fund the replacements. In other years, contributions from rates exceed current replacement needs, allowing reserves to be rebuilt. 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, 2013 capital outlay requests for the Water, Wastewater and Stormwater utilities total \$1.6 million, and include a hydro excavator, a dump truck, and 14 other vehicles, each of which has reached the end of its useful life. 2014 capital outlay requests include 8 vehicles and amount to about \$0.5 million. Asset replacement reserves are funded through annual contributions from operating funds, currently totaling approximately \$1.6 million.

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 2013 and 2014 and the estimated replacement cost for each, is provided in 140.47DA_Attach 1.

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.

This proposal already reflects the deferral of certain equipment replacements. 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.

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 2013-14 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 2013-14 and beyond.

Scalability:

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.

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.

With limited funding, some assets would not be replaced during the 2013-14 time frame. Depending on which assets would have insufficient funds, our ability to provide services identified in other Utilities proposals could be impacted.

Funding for these purchases has already been accumulated in asset replacement reserves.

Section 5: Responsiveness to Request for Results

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

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:

Clean Reliable Water. The vehicles and other equipment scheduled to be replaced during the 2013-14 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.

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

Other factors addressed by this proposal:

Economic Growth and Competitiveness: Land, Infrastructure and Planning, and Responsive Government: Stewards of the Public Trust.

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:

- Provide the best value in meeting community needs, Provide for gains in efficiency and/or cost savings, and Ensure sound management of resources and business practices. 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. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

N/A

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Section 1: Proposal Descriptors

Proposal Title: Operating Transfer to R&R

Proposal Number 140.48DA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Bob Brooks, x7199

List Parent/Dependent Proposals: P 140.41PA

Previous Proposal Number(s): 140.48DN

Version Tracking: N/A

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.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|--------------|-----------|
| Personnel | \$ 0 | 0 |
| Other | 4,742,360 | 1,355,438 |
| Capital | 0 | 0 |
| | \$ 4,742,360 | 1,355,438 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|--------------|-----------|
| | \$ 4,742,360 | 1,355,438 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 0.00 | 0.00 |
| LTE | 0.00 | 0.00 |
| Total Count | 0.00 | 0.00 |

Please briefly describe:

A. "Other" Expenditures: Transfer to R&R reserves.

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: 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. (See attachment 140.48DA_Attach1_Figure 1.)

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.

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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.

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."

Short- and long-term benefits of this proposal:

Short-term benefits: In the short term, the operating transfer provides funding to build R&R account balances in accordance with Council-adopted financial policies.

Long-term benefits: Over the long term, 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.

Scalability:

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. For this reason, no alternate proposal is being submitted. 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.

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 5: Responsiveness to Request for Results

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

This proposal provides funding for capital replacement projects needed to replace infrastructure as

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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, each of which potentially have significant customer impacts.

Factors in the Healthy and Sustainable Environment outcome:

Factor 2: Clean Reliable Water. 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Citywide purchasing strategies addressed by this proposal:

Best Value. This proposal 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.

C. Partnerships and Collaboration proposed:

N/A

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all:

- Customer Impact: The long-term financial forecast projects a certain funding level for the transfers to the CIP and the R&R Accounts. Rates should be established consistent with this long-term financial plan to generate the funds for such transfers. Setting rates at lower levels may result in current ratepayers contributing less than their fair share for long-term equity.
- 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.

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.

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Section 1: Proposal Descriptors

Proposal Title: Fiscal Management

Proposal Number: 140.49NA

Outcome: Healthy and Sustainable Environment

Proposal Type: Existing Service

Proposal Status: Proposed

Primary Department: Utilities

Attachments: No

Primary Staff Contact: Bob Brooks, x7199

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.49NN

Version Tracking: N/A

Section 2: Executive Summary

Unlike General Funds departments, Utilities are separate enterprise funds that, by law, must be self-supporting. 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. 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.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 649,390 | 672,434 |
| Other | 120,000 | 96,700 |
| Capital | 0 | 0 |
| | <u>\$ 769,390</u> | <u>769,134</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 769,390 | 769,134 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 6.00 | 6.00 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>6.00</u> | <u>6.00</u> |

Please briefly describe:

A. "Other" Expenditures: General financial consulting, COSA, and other prof svcs 2013: \$53K/ 2014: \$28K; Intergovernmental 2013: \$46K/2014: \$48K; supplies, misc. 2013:

B. "Capital" Expenditures: None

C. Supporting Revenue: Utility rates

D. Dedicated Revenue: None

E. FTE/LTE: None

Section 4: 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: State law requires the development of an annual or biennial

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budget; outlines specific requirements for timing, content, and mandatory public hearings; and requires filing quarterly reports showing expenditures and liabilities against each budget appropriation and revenues received. Staff develops Utilities' biennial budget according to the City's comprehensive financial management policies and utility financial policies. The development process includes identifying programs and activities, preparing budget requests, developing financial forecasts, and preparing 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 the determination of mid-course budget corrections, if needed, such as changing spending patterns and/or adjusting the budget. This proposal helps accomplish the operating expense performance measure through vigilant budget monitoring to identify the potential for major variances before they occur and through active cost containment.

Rate-making 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 rate-making 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. This proposal helps accomplish the rate comparability performance measure by minimizing rates through cost controls, efficiencies, and using forecasting/rate-making techniques aimed at mitigating rate impacts.

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.

RCW 43.09.210 specifies that "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. State law therefore requires separate accounting for each of the four Utility operating funds and three CIP funds.

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.

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.

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").

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.

Scalability:

Reducing the level of service for fiscal management would negatively impact Utilities' ability to perform its mission. For example, ratemaking and forecasting could be curtailed or outsourced at a higher cost, and grants and program support services could be curtailed, putting more of the burden on program managers who are not as familiar with program financial details and/or reducing our ability to apply for and receive grant funding. Budget monitoring could be scaled down from the current level of service (monthly), but this would eliminate key internal checks and significantly reduce our ability to adjust for variances while not significantly reducing the costs associated with this activity. As noted above, the level of effort required to perform Utilities accounting support is not scalable; removing this activity from this proposal would merely be shifting it to another department. Utilities is 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.

Section 5: Responsiveness to Request for Results

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

Factor 2: Clean Reliable Water; Factor 3: Clean Green City; Factor 4: Natural Environment. These activities ensure the appropriation and management of funds to support programs for clean drinking water, reliable water supply, wastewater management, storm and surface water management, conservation of natural resources, solid waste and hazmat management, and other programs. The Fiscal Management Team is responsible for the design of water and wastewater utility rates, which are structured by charging lower rates for low levels of consumption and progressively higher rates for greater consumption, thereby promoting conservation.

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

Responsive Government, Factor 3: Customer-Focused Service. This proposal directly addresses

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several key sub-factors identified under this factor. Specifically, this proposal provides staff to: deliver the services internal and external customers want in an effective and efficient manner, 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 conditions; and perform its functions in the most productive and cost-effective manner. The fiscal team routinely looks for opportunities to collaborate, reduce redundancies, and implement innovative approaches to better deliver the services the community and internal customers want and expect.

Responsive Government, Factor 4: Stewards of the Public Trust. This proposal directly addresses several key sub-factors identified under this factor. This proposal provides staff to manage income, assets, expenses, and reserves in a deliberate, well thought out, and fiscally prudent manner. Utilities' services and processes are evaluated to ensure compliance with applicable state and federal laws and are compared with benchmark organizations to ensure adherence to best practices and industry standards. Staff routinely develop and maintain integrated systems used both by fiscal staff and other department staff to support business objectives efficiently; examples include tools for budget development and management. Staff also ensure 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:

Best Value, Efficiency Gains/Cost Savings, "Right-Sized" Services, 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. Partnerships and Collaboration proposed:

External: Environmental Services Commission, Cascade Water Alliance (Cascade), King County, other communities served by Bellevue Utilities, Metropolitan Water Pollution Abatement Advisory Committee (MWPAAAC), Utilities Engineering and O&M Divisions, Finance and Development Services Departments, Budget Office, and Fiscal Managers in other Departments.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

The Fiscal Management Team's activities support all other Utilities' proposals by providing needed budgeting, budget management, and technical and financial assistance on an ongoing basis. Centralizing this work effort in the Resource Management and Customer Service division provides a cost-effective way to support the services, programs, and activities performed by Utilities at a lower cost than would be required if the workload was distributed throughout the organization.

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Section 1: Proposal Descriptors

Proposal Title: Utilities Maximo System User Support

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.51NN

Proposal Number 140.51NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Margaret Nolen, x6131

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides user support for utility work management. Utilities uses the enterprise Maximo work management system to manage daily operations/maintenance. Water, sewer, storm water, and streets infrastructure are key to a Healthy and Sustainable Environment. Utilities staff can work 24x7, and Maximo is on-line to them. It plays a role in business processes including purchasing, tracking work, planning and scheduling, completing payroll time reports, scheduling tools/equipment, stocking inventory, performing financial reporting, responding to customer requests, preparing regulatory reporting, and annual planning. With its extensive data, Maximo contains information to analyze and inform infrastructure planning, budget for asset replacement, support claims, and support billable work is reimbursed. It funds staff and professional services to support Utilities' use of Maximo, realize its capabilities to advance sound practices, and improve the asset management program.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|------------|---------|
| Personnel | \$ 200,179 | 207,172 |
| Other | 93,600 | 71,700 |
| Capital | 0 | 0 |
| | \$ 293,779 | 278,872 |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 281,463 | 266,117 |

Rev-Exp Balance \$ -12,316 -12,755

| FTE/LTE | 2013 | 2014 |
|--------------------|------|------|
| FTE | 1.60 | 1.60 |
| LTE | 0.00 | 0.00 |
| Total Count | 1.60 | 1.60 |

Please briefly describe:

A. "Other" Expenditures: IBM vendor software maintenance and Interloc professional services for specialized support and enhancements.

B. "Capital" Expenditures: N/A

C. Supporting Revenue: N/A

D. Dedicated Revenue: N/A

E. FTE/LTE: No add of FTE; -0.25 reallocation of existing FTEs to 140.53NA based on 10-11 data and 13-14 plans

Section 4: Budget Proposal Description

Technology services in this proposal are different from those provided by the IT Department, and doesn't duplicate IT services. Utilities funds its share of Maximo system vendor support directly from this proposal.

Utilities uses Maximo to manage over 240,000 assets that make up the water, sewer, storm water, and streets maintenance systems. This proposal provides support staff, Utilities' portion of vendor support

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costs for all Utilities user licenses, and professional services for enhancing Maximo to meet Utilities' specific business needs.

The Maximo System User Support team provides these business-specific services:

- Operations support: answering business-related system questions ("How do I do x?" or "Why isn't this working?" or "What is the most efficient query to answer this business operational question?").
- Reporting and data mining: Create ad-hoc and enterprise reports and providing assistance in answering questions using system data. This includes identifying and reporting on key performance measures.
- Project management and testing for process changes, system enhancements, and "bug" fixes.
- Interface management: Maximo interfaces with JDE (payroll/purchasing), AutoCAD (adding/modifying asset infrastructure), Amanda (new permit requests), and GIS (spatial reference of utility assets and work orders).
- 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 users or changing asset categories.

Efficiencies/Innovations: Efficiency projects will continue through 2013-2014 as part of Utilities' continuous improvement program. Examples of recent and planned efforts include:

- Developing a mapping-based mobile application to support equipment survey as part of a partnership between Parks and Utilities with a mobile application pilot. Other utilities are reporting a 20-30% productivity gain by enabling a mobile field service workforce. This project is a first step toward realizing a mobile field service workforce and testing efficiencies by concentrating on a single critical function. A pilot project will allow both departments to test equipment and processes with limited investment and risk.
- Adding additional asset types that are currently not managed in Maximo.
- Continue to 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.
- Build an automatic interface with the Customer Information System to support water meter change outs and new sets, avoiding the errors and time required to enter updated meter information in two systems (CIS and Maximo);
- Continue to enhance the MaxEvent emergency event management dispatch program to provide better support for snow/ice and wind events.
- Support the impact to Maximo of a planned AutoCAD to ESRI conversion of water, sewer, and storm assets which will improve utility mapping capability and architecture. It will require design and transition support, interface revision, and testing.
- Support Streets Maintenance as they further develop their asset management program.
- Support water meters as a rotating, rather than a fixed asset, allowing better retention of historical data.

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 improve-ment programs. Maximo contributes to the preservation of infrastructure for use by future generations.

Scalability:

Bellevue's IT service model relies on user departments providing business-specific systems

requirements, design, testing, and training support. The funding level for this proposal allows minimum resources to ensure quality control when the system changes and user support for operational reports and analysis. Maintaining the current service level allows Utilities the ability to manage system changes and interfaces, and train users. This proposal decreases the likelihood that system error or data quality problems will erode our ability to effectively manage assets, or negatively impact customer service. It allows Utilities to make incremental progress in its efforts to evolve the asset management program, and improve 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 5: Responsiveness to Request for Results

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

PRIMARY Outcome Factors:

- Factor 1: Clean Air; Factor 2: Clean Reliable Water; Factor 3: Clean and Green City; Factor 4: Natural Environment. The Maximo support team enables Utilities' use of the system to manage work, assets, and inventory in order to repair and maintain the infrastructure that delivers clean reliable water, conveys wastewater, controls storm water, and preserves the natural environment. Streets maintenance crews use Maximo for street/sidewalk sweeping and repair, providing a clean and green city.

PRIMARY Outcome Purchasing Strategies:

- Place more emphasis on proactive versus reactive actions. Maximo helps work groups utilize the preventive maintenance (PM) capability to support proactive inspection and maintenance of water, sewer, and storm 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 less expensive to prevent problems than it is to respond to them after they happen.

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

- 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 that helps put Utilities responders in the field. Maximo is used in training and disaster exercises for staff to prepare for responding to events and recording costs for FEMA funding.

- 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: Land, Infrastructure and Planning. 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, storm water, and street maintenance services quickly and safely to homes and businesses.

- Responsive Government, Factor 2: High Performing 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:

- Best Value in Meeting Community Needs. Enterprise Maximo realizes the "One City" approach to citizen response and work management. With each citizen 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; Ensure that Services are "Right Sized." Several of the initiatives in Section 4 are changes that will lead to gains in efficiency. Utilities staff works collaboratively with other departments to take full advantage of Maximo's functionality, leverage

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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. Maximo was re-implemented in 2010 as an enterprise system serving many departments, and continues in that direction as it matures. The Utilities Maximo support team works closely with the vendor, IT, 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; Reduce duplicative services; Consider alternative sourcing; Ensure sound management of resources and business practices; Use an evidence-based approach to determine how to achieve Outcomes; Consider short- and long-term financial impacts; Consider new investments. Maximo is a web-based system that will be the foundation to enable the City to have a truly mobile workforce starting with a pilot in 2013_2014. The Utilities 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 ready. Maximo and the support team are instrumental in ensuring sound management of resources through efficient operations and sound business practices.

C. Partnerships and Collaboration proposed:

We use outsourcers, selected competitively, to reduce expense to the utility. Examples of these follow:

Internal: Parks, Fleet, Civic Services, Fire, and Transportation Departments for priorities, design, development, testing, and implementation. Information Technology provides in-house technical and administration support.

External: IBM (software vendor), Interloc (provides professional services via a maintenance contract).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

This proposal supports most water, sewer, storm, and streets field operations and maintenance proposals.

Consequence of not funding the proposal at all

- 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), requiring Maximo data for reporting.
- Customer Impact: All customer inquiries related to Utilities and Street Maintenance functions are entered and tracked in Maximo. Without system and staff support, customer service would be impaired.
- Investment/Costs already incurred: The investment of \$1.8 million to upgrade to Maximo 7.1 in February 2010 was made in anticipation of its long-term use. Support staff are needed to leverage this investment.
- Other: If vendor maintenance and Utilities support staff are not funded, information will not be available when needed and system reliability/effectiveness will be compromised. Without an automated system, Utilities Operations and Maintenance couldn't effectively perform its primary mission.

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Section 1: Proposal Descriptors

Proposal Title: Customer and Field Services Support
Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.52NN

Proposal Number: 140.52NA
Proposal Type: Existing Service
Proposal Status: Proposed
Attachments: No

Primary Staff Contact: Kathryn Lew, x4893

Version Tracking: N/A

Section 2: Executive Summary

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 special projects such as field services continuous process improvement and level-of-service studies; mandatory training; 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 major snow event, windstorms, and flooding events.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|------------------------|--------------------|-----------------|
| Personnel | \$ 669,174 | 693,264 |
| Other | -115,992 | -122,180 |
| Capital | 0 | 0 |
| | <u>\$ 553,182</u> | <u>571,084</u> |
| Supporting Revenue | 2013 | 2014 |
| | \$ 379,406 | 390,685 |
| Rev-Exp Balance | \$ -173,776 | -180,399 |
| FTE/LTE | 2013 | 2014 |
| FTE | 7.05 | 7.05 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>7.05</u> | <u>7.05</u> |

Please briefly describe:

- A. "Other" Expenditures:** PT/1040 2013: \$69K/2014: \$72K; Eastgate Yard & BSC lower lot maintenance & other professional svcs, 2013/2014: \$25K; office supplies and other
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Utility Service Fees
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** N/A

Section 4: Budget Proposal Description

This proposal includes funding for staff, supplies, and equipment for customer services, strategic planning, process improvement, and performance management in the Utilities Operations & Maintenance Division. Services in this proposal include:

External & Internal Customer Services:

- 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.

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- 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, Street Maintenance, 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/receivable, word processing and spreadsheets, utility locate requests ("Call Before You Dig"), office equipment maintenance, bulk mailings, and petty cash services for all sections.
- Issue hydrant permits and tank lot permits, collect the fees, and provide documentation through Maximo work order module.
- Respond 24/7 to emergency and severe weather events to answer phones, dispatch field crews, and enter information into the Maximo tracking system.

Performance Management: Comprehensive performance management includes (1) budget management, (2) structured workload planning, and (3) process improvement. 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.

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.

Short- and long-term benefits of this proposal:

Short term: Accurately ascertaining customer concerns, prioritizing/coordinating the response, 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. Process improvement projects and performance management help to improve business processes, contain costs, and keep rates low. Utility staff have the training necessary to perform their jobs efficiently and safely.

Describe why the level of service being proposed is the appropriate level/Scalability:

Customer services. Citizens expect prompt response and resolution to emergencies, such as sewer overflows, watermain breaks, flooding storm drains/streets, snow/ice, road hazards, etc. 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.

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.

Scalability would result in the reduction of FTEs. The existing services would be reduced to provide a lower level of direct customer service and support to field staff which directly impacts their ability to perform their jobs.

Section 5: Responsiveness to Request for Results

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

Factor 2: Clean Reliable Water, Factor 3: Clean Green City, Factor 4: Natural Environment

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. Examples of customer calls include watermain breaks and private service line issues; potholes, downed stop signs, roadway flooding, and sewer blockages.

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. Citywide Purchasing Strategies and 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 3: Customer-focused Services. 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 2: High Performing Workforce. 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.

C. Partnerships and Collaboration proposed:

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), and vendors.

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.

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

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

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customer service process improvements. It provides integrated, centralized services that support 114 employees in all five 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.

The Administrative Group has been actively involved in a Lean Six Sigma process for the past year analyzing current business practices, identifying efficiencies, and implementing changes. This has resulted in the ability to take on additional tasks from the five sections.

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.
3. 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, provide data entry, monitor confined spaces/telemetry, etc.

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 Computer Replacement and Small System User Support

Outcome: Healthy and Sustainable Environment

Primary Department: Utilities

List Parent/Dependent Proposals: No

Previous Proposal Number(s): 140.53NN

Proposal Number 140.53NA

Proposal Type: Existing Service

Proposal Status: Proposed

Attachments: No

Primary Staff Contact: Margaret Nolen, x6131

Version Tracking: N/A

Section 2: Executive Summary

This proposal provides computer replacement funding and small systems user support for Utilities. With multiple business lines, 24x7 responsibilities, mandated reporting, and complex internal accounting needs, Utilities plans and procures computer equipment outside of IT's equipment replacement reserve. This proposal provides computers, software, and accessories. Utilities staff also provide technology planning and project management for the department with input from all Utilities divisions. This proposal includes the subscriptions, vendor support, and professional services to support a growing array of specialized niche software and cloud services to accomplish utility functions. These small or niche systems and services are also provisioned in this proposal, along with business staff supporting successful integration and reporting. Internal business systems staffing to support the new CIP project to replace AutoCAD-based infrastructure mapping with an ESRI mapping is included.

Section 3: Requested Resources

Fund: 00000

Project Number: N/A

OPERATING

| Expenditures | 2013 | 2014 |
|--------------|-------------------|----------------|
| Personnel | \$ 107,333 | 111,104 |
| Other | 155,775 | 116,750 |
| Capital | 0 | 0 |
| | <u>\$ 263,108</u> | <u>227,854</u> |

| Supporting Revenue | 2013 | 2014 |
|--------------------|------------|---------|
| | \$ 263,108 | 227,854 |

Rev-Exp Balance \$ 0 0

| FTE/LTE | 2013 | 2014 |
|--------------------|-------------|-------------|
| FTE | 0.90 | 0.90 |
| LTE | 0.00 | 0.00 |
| Total Count | <u>0.90</u> | <u>0.90</u> |

Please briefly describe:

- A. "Other" Expenditures:** Computer replacement for Utilities; vendor software subscriptions for niche (non-enterprise software and cloud services)
- B. "Capital" Expenditures:** N/A
- C. Supporting Revenue:** Utilities Engineering CIP (W-16, S-24, D-64) AutoCAD Business Process Improvement
- D. Dedicated Revenue:** N/A
- E. FTE/LTE:** No add of FTE; +0.45 reallocation of existing FTEs based on 10-11 data and 13-14 plans

Section 4: Budget Proposal Description

The Utilities Department manages activities in five separate funds for specific business needs by line of business. There is a requirement to manage funds separately, so Utilities does not participate in the City's IT equipment replacement reserve program, in order to accurately reflect the utility served. This proposal includes equipment such as PCs, laptops, and mobile devices and the staff to support procurement planning and allocation. Additionally, the proposal supports specialized niche software

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and services based on the unique asset characteristics and tasks performed. Increasingly, these services are being offered as part of web-based “cloud services” through subscription. This proposal encompasses these subscription and licensing costs, as well as the staff to work with remote vendors with remote operations and solutions accessed via the Internet. Cloud-based services require staff support to configure systems, plan projects, and integrate solutions into processes; this proposal funds those planning, testing, and integration personnel. The services provided in this proposal are different from those provided by the IT Department, and don’t duplicate their activities.

Technology Planning, Analysis, Configuration, Rollout, and Communication

Staff provides ongoing planning and analysis for Utilities systems supporting business operations, including:

- Identifying new technology initiatives based on industry trends and staff need;
- Performing feasibility analysis, software selection/development, testing, and implementation;
- Positioning Utilities IT technology rollouts, minimizing impact on customer service and operations and maximizing the benefit of enterprise technology changes;
- Representing Utilities on the ITD Change Advisory Board;
- Representing Utilities on Enterprise task forces (e.g. unified communications, central services task force);
- Planning and budgeting for replacement, upgrade, or repair of existing hardware and software for Utilities;
- Providing technology communication tailored to the needs of the department.

Utilities has created a cross division committee, the Utilities Automation Policy Team (APT), made up of future-focused leaders from each division and led by user support staff funded by this proposal. The team reviews automation topics and enterprise changes; it also considers Utilities interests on automation issues within the enterprise. APT provides oversight to ensure consistency and support of department initiatives and sets department technology priorities and requirements to match Utilities mission, goals, and initiatives.

PC Procurement and Management

This proposal funds Utilities technology hardware, accessories, desktop and niche application software, and system subscriptions. Staff maintains Utilities inventory of 190 PCs and peripherals/accessories and plans for replacement, upgrade, or repair of hardware and software. This centralized procurement allows for the redistribution of available equipment when staff or operations change, 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. Staff monitors expenditures ensuring earmarked funding is being used as planned across the department. New automation purchases are centralized and approved.

“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 small applications. Staff funded by this proposal is often able to produce quick, cost-effective tools for those needs by customizing commercial software or developing in-house products. If an outside vendor were used for this purpose, it could be prohibitively expensive. The turnaround time for IT support can sometimes be prohibitive due to immediacy of the need. Examples of niche software developments include the utility private drainage inspection business process improvement program, 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 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. New with this budget is support of the subscription service (irthNet On Demand) which facilitates one-call locate ticket tracking with mobile devices connected to

the cloud.

Efficiencies: Staff provides Utilities with centralized procurement and deployment of technology equipment and software. Staff also supports centralized ordering and maintenance for the department's mobile devices and Smartphones, maintaining an inventory of shared automation equipment for checkout by Utilities staff.

Innovations: (a) Support staff created a software tool that automates the entry of data for NPDES reports. This tool streamlined a tedious process, saving staff time. (b) Staff will assist in project managing and implementing a cloud-based automated vehicle locate system which is being proposed as part of emergency management snow/ice/storm response. (c) Staff supports the irthNet On Demand system integration mentioned above which replaced a paper-based system. Our three locaters each report saving an hour a day in being able to receive/complete new tickets in the field. (d) Staff is needed in to assist in the AutoCAD mapping conversion to ESRI included in CIP.

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.

Describe why the level of service being proposed is the appropriate level: Given the broad scope of responsibility, proposed staffing is minimal. With the number of users at both City Hall and Bellevue Service Center (BSC), staff maintains office hours in each location in order to be responsive. The technology needs and technical skills of Utilities' three divisions are diverse including the needs of field and office workers. This proposal 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, this proposal supports proactive participation in automation change and thoughtful accounting of total cost of ownership.

Section 5: Responsiveness to Request for Results

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

PRIMARY Outcome Factors:

- Factor 2: Clean, Reliable Water; Factor 3: Clean Green City; Factor 4: Natural Environment. 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.

PRIMARY Outcome Purchasing Strategies:

- Emphasize proactive 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. Citywide Purchasing Strategies and Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Responsive Government, Factor 4: 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:

- Best Value in Meeting Community Needs. By ensuring that automation purchases are applied correctly by fund, we ensure utility revenue is used as intended. In supporting niche systems, we serve the needs of specialized users who serve the community.
- Gains in Efficiency and/or Cost Savings; Ensure that Services are "Right Sized." Adoption of the 4-year equipment obsolescence schedule reduced costs. Planning across all lines of business assures that economies can be shared by all. Using shared equipment whenever appropriate saves money.
- Leverage Collaboration or Partnerships w/ other departments, external organizations. The Utilities support staff works closely with IT and others to communicate and prepare Utilities for technology changes.
- Innovative and Creative; Reduce duplicative services; Consider alternative sourcing; Ensure

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sound management of resources and business practices; Use an evidence-based approach to determine how to achieve Outcomes. 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 which required input from across the City, but needed to be in a specific format. By providing a central database and report, staff was able to help employees meet deadlines with accurate data, saving clerical time to assemble and format information City-wide. As part of Utilities irthNet On Demand project which required 3 mobile devices, we evaluated different device alternatives to assess needs and issues for mobile field workers for projects in 2013-2014. This procurement, performed with IT assistance, is helping us develop evidence-based approaches to achieving outcomes.

- Consider short- and long-term financial impacts. This proposal supports both short- and long-term fiscal stewardship. APT approves every added PC and new piece of technology, considering not just the one-time cost but also ongoing total cost of ownership. This stewardship ensures that equipment is justified prior to purchase based on long-term costs and potential downtime impact.

C. Partnerships and Collaboration proposed:

- Internal: Information Technology Department (IT), Finance Department;
- External: Vendors: Verizon, AT&T, Cues Inc. (GraniteXP pipe video software), irth Source (irthNet On Demand locate subscription service).

D. Activities in this proposal that support the work of other proposals, or save costs that would otherwise have to be expended:

Consequence of not funding the proposal at all

- 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 maintain accurate funding. (See RCW 43.09.210 Local Government Accounting for separation of funds requirements.)

- Customer Impact: IT would lack a Utilities representative on the City's Change Advisory Board (CAB) and as part of enterprise task forces. As part of IT best practices, documented in IT Certification (ITIL), the CAB is a group of people who can give expert advice to the Change Management team for implementation of technology changes. CAB is made up of representatives from all areas within IT and from other business units.

- 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.