

City of Bellevue - Budget One

2017-2018 Operating Budget Proposal

Section 1: Proposal Descriptors

Ranking: 1

Proposal Title: Water Mains and Service Lines Repair Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.13NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.13NA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

Section 2: Executive Summary

Bellevue Utilities provides water service to Bellevue, Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah. The water repair program's primary objective is to fix system breaks, stop leaks, protect drinking water quality, restore water service to customers, and mitigate environmental damage. The City benefits financially from efficient repairs that minimize revenue loss and claims for damages. Failure of the water system infrastructure can have catastrophic consequences, including damaged property, roadways, the natural environment and water service interruption to homes and businesses. While Utilities has sound water maintenance and capital improvement programs, main breaks can occur at any time and increase as infrastructure ages. Examples of services included in this proposal include leak detection services and repairs to broken, leaking or malfunctioning water mains, service lines, fire hydrants, and control valves.

Section 2b: Performance Narrative

Performance Indicators are established to measure the rate and frequency of system failure against established targets for acceptable service levels. An upward failure trend would point to higher required investment. Other indicators measure progress toward timely repairs of pipes, fire hydrants, water service to residential and commercial use, and reservoirs. Timely asset repair reduces the impact from catastrophic failure, unplanned customer service interruptions, and costly damage claims. Timely repairs also help reduce revenue impacts to businesses that rely on water while also ensuring a high level of confidence that city owned fire hydrants will work and provide water to protect life and property.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: Timely replacement of water system infrastructure supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to deliver quality drinking water that ensures public health and protects the environment.

Community Values are reflected by using sustainable best practices that maintain water infrastructure to support healthy living, and demonstrated resource stewardship by managing to lowest responsible life cycle cost for current and future generations.

Customers expect and depend on safe and reliable water service to meet their household and business needs. The City's drinking water system includes 620 miles of water mains, 10,000 valves, 40,000 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 infrastructure in order to minimize service disruption, property damage and claims for damages, revenue loss and the protection of drinking water quality.

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Water main breaks and service line leaks are repaired as reactive maintenance and are demand-driven services dictated by the number of breaks and leaks that occur. Timely repairs are completed to maintain water service and drinking water quality, mitigate environmental damage, minimize claims for damages and reduce traffic impacts.

Repair needs are discovered through inspections, maintenance activities and emergency service requests generated by citizens, staff, and contractors within the City. Repair crews often work in very difficult conditions including deep trenches and heavy traffic areas. The repair program provides leak detection services, system inspections, and protects public safety by quickly fixing any broken City-owned fire hydrants and mainline valves. This is critical to controlling the flow and delivery of water during fire suppression. Utilities complete approximately 650 hydrant repairs and 120 valve repairs per year.

Maintenance crews have key roles in responding to disasters and major emergency events. Having in-house staff available to respond requires 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible emergency events include extreme rain/flooding, snow/ice events, windstorms, earthquakes.

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 perform 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 may cause 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. In 2014/2015 Bellevue Utilities collaborated with Washington Department of Health and the Water Research Foundation to develop and implement best management practices for responding to catastrophic water main breaks to protect the drinking water and help prevent water borne pathogens from being delivered to customers.

Short- and long-term benefits:

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 consumption and to firefighting.

Long-term benefits - Repairs help extend the life of the infrastructure and save replacement costs. Repairing the water system is an investment to maintain a reliable water supply for homes, businesses and firefighting. In addition, it lowers water loss, decreases the damage to streets, minimizes traffic impacts, and reduces the duration and impacts of water services interruptions to the customer. These programs aid in more efficient energy usage, optimizing drinking water quality and supporting water conservation.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT: Timely repairs to the water system help ensure reliable and efficient water

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management as well as responsible conservation, and less impact to streams, lakes and wetlands.

NATURAL ENVIRONMENT: Repair services under this proposal conserve water and energy while ensuring reliable supply, storage and conveyance of clean water are critical services for the community. Water is vital to personal health, economic viability and a healthy environment.

High-quality drinking water is not only safe to drink but also free of contaminants that adversely affect its look, taste and smell. Ensuring that drinking water conveyed to homes and businesses is safe, reliable and high quality is essential to the health and well-being of Bellevue residents.

PURCHASING STRATEGIES in the HSE outcome:

BUILT ENVIRONMENT: Provide water in a reliable, efficient, and environmentally sustainable manner, encourage reduction of waste and conserve resources by responding to and mitigating damage caused by water main breaks. Ensure that surface water runoff is controlled to minimize negative impacts such as erosion and flooding by responding quickly to stop the damaging flow of water when drinking water infrastructure fails resulting in debris eroding hillsides and yards. Restore, manage, preserve and improve natural environments and the habitats they provide by responding quickly to stop the damaging flow of water when drinking water infrastructure fails resulting in debris and chlorinated water entering streams and clogging sewer and storm pipes.

NATURAL ENVIRONMENT: Restore, preserve, protect, enhance, and increase Bellevue's open spaces and natural environment by responding and mitigating leaks in a timely manner. Ensure compliance with applicable environmental regulations by minimizing the amount of chlorinated drinking water entering the natural environment.

Citywide purchasing strategies:

Provide the best value in meeting community needs. Preventing water loss helps keep water rates low and provides the best value to the community. Services 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 savings in energy costs to pump the water which directly impact water rates.

Provide the best value in meeting community needs. The repair program coordinates workload to achieve maximum results based on several considerations: location, time of day, impacts from traffic and other job-specific concerns. It is not uncommon to find crews 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.

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0212f	Utilities: Unplanned water service interruptions per 1,000 customer accounts	Years	1.85	1.91	0.75	3	3
140.0215	Utilities: Water distribution system - water loss percentage (most recent year)	Years	6.4%	3.3%	6%	6%	6%
140.0246	Utilities: Number of water service repairs	Years	277	284	250	250	250
140.0247	Utilities: Number of water main repairs	Years	48	27	7.5	30	30

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

\$11K increase in overtime each year to reflect 6 yr. trend, and a one-time increase of \$180k due to 2015 asphalt restoration backlog.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	10.65	10.65
LTE	0.00	0.00
Total Count	10.65	10.65

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	712,974	531,873
Personnel	1,105,639	1,149,393
Revenue	0	0
Rev-Exp Balance	-1,818,613	-1,681,266

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Section 1: Proposal Descriptors

Ranking: 2

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

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.15NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.15NA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

Section 2: Executive Summary

WATER is required to sustain life, convey waste, protect against fire and to keep our parks and open spaces green and healthy. This proposal provides necessary preventive maintenance and repair of water pump stations, reservoirs and pressure regulating valves (PRVs) throughout the public drinking 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. Bellevue's unique topography (with elevations ranging from sea level to 1,440 feet) requires a complicated system of reservoirs, pump stations, and PRVs to provide safe water and adequate fire flow throughout the service area. Due to the likelihood and high consequences of failure if preventive maintenance services are not provided, this proposal supports the goals for reliability and performance of the drinking water storage and delivery system.

Section 2b: Performance Narrative

Effective preventive maintenance reduces the frequency and potential for catastrophic failure, unplanned customer service interruptions, damage to the environment, property damage and costly claims. Performance indicators established by using industry standards and State and Federal mandates, measure the workload, efficiency, mandated compliance, cost of failure and the rate of system failure against established targets for acceptable service levels. An upward failure trend or consistent pattern of not meeting established targets would point to higher required investment and service levels.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: Preventive maintenance of water system infrastructure supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to deliver quality drinking water, parks and open spaces that are green and healthy, and adequate pressure and flow for fire protection that ensures public health and protects the environment.

Providing services that reliably ensure public health and protect the environment reflects Community Values. These services use sustainable best practices that improve the water infrastructure. This in turn supports healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations. Preventive maintenance to the water system components is crucial to ensure the longest possible life cycle with the fewest number of failures.

Funding for this proposal provides the necessary resources to efficiently pump, store, and 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), and maintain storage capacity of 42.5 million gallons for fire flow and peak demand.

These services are critical to ensure the pump stations operate reliably 24 hours a day, 365 days a year.

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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 Operations and Maintenance uses industry accepted performance measures and strives for zero pump failures annually. In addition, pump stations have multiple pumps for redundancy.

Reservoir Maintenance and Repair:

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 25 reservoirs. Scheduled maintenance prolongs the useful life of these long-lived assets and reduces instances of catastrophic failure. The objective of the program is to have zero reservoirs taken out of service as a result of drinking water quality concerns. 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 (PRV) Maintenance:

PRVs regulate water pressure throughout the water distribution system. Bellevue's drinking water distribution system is controlled by 276 PRVs and 127 relief valves. PRVs must always be ready to operate properly when needed in order to maintain adequate 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. 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 are trained to perform maintenance and repairs to highly technical components of the drinking water system. This level of service is critical to reduce customer service interruptions, costly repairs and downtime to critical infrastructure.

Mandates and Contractual Agreements: Ensure compliance with applicable environmental regulations 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.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT:

Provide water in a reliable, efficient and environmentally sustainable manner. 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, thereby Conserving Resources.

Properly maintained pump stations, reservoirs and valves support adequate and safe drinking water supply. Maintenance decreases system failures and helps prevent water quality issues, which positively impact public health and consumer confidence. Additionally, proper maintenance addresses water supply for firefighting, which is a life/safety issue.

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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.

NATURAL ENVIRONMENT:

A well-maintained water system is efficient in Conserving Natural Resources, saving energy and water. Properly maintaining the system minimizes failures and helps protect our waterways from environmental hazards. 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.

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: Firefighting response capabilities are supported by adequate water supply, flow and pressure.

PURCHASING STRATEGIES in the HSE outcome: Provide water in a reliable, efficient, and environmentally sustainable manner, Conserve resources, Ensure compliance with applicable environmental regulations.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0226	Utilities: Number of Water System Pressure Reducing Valve failures per year	Years	2	2	0	0	0
140.0227	Utilities: Number of water pump failures per year	Years	0	1	0	0	0
140.0228	Utilities: Number of reservoirs taken out of service as a result of drinking water quality concerns	Years	0	0	0	0	0
140.0229f	Utilities: Percent of Water System Pressure Reducing Valves maintained	Years	24.04%	26.96%	2%	20%	20%
140.0232f	Utilities: Percent of reservoirs cleaned	Years	20%	24%	20%	20%	20%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

5B: Are one-time expenditures included in this proposal?

Proposal includes \$400,000 in one-time funds to Coal Creek Utility District (CCUD) for water reservoir painting required under the joint use agreement. Reservoir is owned by CCUD and provides water to Bellevue customers under the joint use agreement.

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	4.30	4.30
LTE	0.00	0.00
Total Count	4.30	4.30

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	1,105,069	636,612
Personnel	490,496	509,532
Revenue	0	0
Rev-Exp Balance	-1,595,565	-1,146,144

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Section 1: Proposal Descriptors

Ranking: 3

Proposal Title: Water Quality Regulatory Compliance and Monitoring Programs
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.26PA **Primary Dept:** Utilities
Parent Proposal: 140.27DA, 140.31D **Proposal Type:** Existing
Dependent Proposal: 140.27DA, 140.31D **Budget Status:** Recommended
Previous Proposal: 140.26PA, 140.64N **Primary Staff:** Don McQuilliams, x7865
Fund: Water Utility Fund

Section 2: Executive Summary

This proposal provides Water Quality Regulatory Compliance for Bellevue Utilities. This proposal outlines overall management of the Water Quality/Regulatory Compliance section and establishes the framework for developing programs for field testing, inspection and response to meet requirements set forth by Agencies: SAFE DRINKING WATER ACT outlining sampling, monitoring and reporting requirements for our Drinking water within Bellevue.

CLEAN WATER ACT driving the City's National Pollutant Discharge Elimination System (NPDES) permit and establishes requirements for inspection, maintenance, outreach and reporting of Citywide efforts to manage storm and surface water.

CITY LAND USE, SEPA determinations and Clear and Grade permits necessary to achieve the project related tasks for daily operations.

ENDANGERED SPECIES ACT Regional Road Maintenance Program establishing guidelines for working near sensitive areas.

Section 2b: Performance Narrative

The Performance Measures used in this proposal are good indicators of Utilities' regulatory compliance. To help the City achieve 100% OF DAYS IN COMPLIANCE WITH DRINKING WATER REGULATIONS annually, the Water Quality section samples, monitors and analyzes the City's drinking water regularly, and has consistently achieved that benchmark. An example of this is measured by the NUMBER OF DRINKING WATER COMPLAINTS PER 1,000 CUSTOMERS and we have remained within our target of 2 per 1,000 customers. With an aggressive testing and monitoring program, the results of the PIs tell us that what we are doing is working well.

To ensure we are COMPLIANT WITH ALL SURFACE WATER REGULATORY REQUIREMENTS, we have an aggressive Illicit Discharge Detection and Elimination program. This is measured through a PI for the NUMBER OF ILLICIT DISCHARGES and number of calls responded to. As staff in our program educate the public when they see problems, this has resulted in an increased number of reported incidents over the years.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the operations and maintenance needs of the Utilities The Utilities Department is evidence of a HIGH PERFORMANCE GOVERNMENT. By ensuring a reliable infrastructure to deliver quality drinking water and to convey wastewater and stormwater runoff, our QUALITY BUILT ENVIRONMENT leads directly to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE Values and Factors: Prudent management of water delivery and wastewater and stormwater conveyance demonstrates RESPONSIBLE STEWARDSHIP, and ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER.

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This section outlines greater detail on each of the program areas within the Water Quality Regulatory Compliance and Monitoring proposal.

Drinking water quality: The regulatory drivers for this program are within the SAFE DRINKING WATER ACT and are implemented by the State Department of Health through the Washington Administrative Code (WAC).

Program staff ensure the City's drinking water is free of contaminants and is aesthetically pleasing through mandated sampling, monitoring and analysis of the drinking water system, including source water, storage (reservoirs), and the distribution system. Programs include maintaining awareness of upcoming regulations, monitoring water quality, protecting against contamination, coordinating water system operations and maintenance practices to ensure optimal operation of the water system, inspecting water infrastructure for hazards, and reporting as required by law. 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 two per thousand customers.

This proposal also includes operation and maintenance of the city's emergency drinking water wells. These critical infrastructure are the only drinking water sources Bellevue has outside of the sole reliance on the Seattle system. The wells are kept in a state of readiness through ongoing sampling and testing should catastrophic loss of water from the Seattle system occur.

Cross Connection Control minimizes the risk of contamination to our drinking water system by ensuring that we are protected against backflow events where potentially contaminated water can be pulled into the City system from an outside source. An aspect under the regulatory requirements as stated with WAC for drinking water, this program is covered under a dependent proposal for private utility system maintenance (140.27DA).

Storm and Surface Water quality is regulated under the CLEAN WATER ACT and is implemented by the State Department of Ecology through issuance of the City's Phase II NPDES permit.

The City is required to submit an annual Stormwater NPDES report stating whether we have achieved the requirements of the NPDES permit as well as a Stormwater Management Plan that outlines our objectives for the upcoming year. This proposal supports the staff to collate and prepare this report. The NPDES Annual Report is signed and submitted by the City Manager once completed.

The Illicit Discharge Detection and Elimination Program (IDDE) provides education, response and coordination of cleanup activities for illicit discharges (pollutants) to storm and surface water systems within the City. This program also supports field assessment of pipes into waterways to detect, trace and eliminate illicit discharges into our stream and lakes. This program provides the community with field staff who deliver "boots on the ground" education directly to customers in Bellevue. Staff use their water quality chemistry expertise to educate the public on how site specific behaviors affect the environment and work with community members to develop solutions to prevent further pollution.

Emergency response by Water Quality staff to pollutant spills provides assistance with containment of the spill, reporting to the Department of Ecology and coordinating cleanup if necessary. Bellevue experiences 200-300 spills per year that staff respond to in order to minimize impacts to our streams and lakes.

Private Drainage Inspection provides inspection services and maintenance requirements for private stormwater utility systems within the City. This program is detailed out in a dependent proposal for private utility system maintenance (140.27DA).

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Response to Request for Results Cause and Effects Map

This proposal directly supports the values listed on the cause and effect map for the Healthy and Sustainable Environment team. SERVICES AND INFRASTRUCTURE THAT RELIABLY ENSURE PUBLIC HEALTH AND PROTECT THE ENVIRONMENT are the primary reason for the Water Quality Section within Utilities. Factors within the Built and Natural Environment are achieved through this proposal by supporting RELIABLE AND EFFICIENT WATER MANAGEMENT through both our drinking water and surface water programs as well as speaking to CLEAN WATER AND HEALTHY OPEN SPACES as a result of providing illicit discharge detection and elimination programs designed to minimize damages to the waterways of Bellevue. STEWARDSHIP AND EDUCATION of the Natural Environment is also achieved through ongoing education opportunities during IDDE investigation and response as well as through correspondence with Water Utility customers on a regular basis through mailing inserts within the Utility bills.

Two of the four key community indicators identified help to provide a sense of how we are doing: PERCENT OF RESIDENTS who agree that Bellevue provides water, sewer and wastewater services and infrastructure that reliably ensure public health and protect the environment (95% in 2015); and PERCENT OF RESIDENTS who agree that Bellevue is doing a good job of creating a healthy natural environment that supports healthy living for current and future generations (87% in 2015)

Key performance indicators as identified by the results team that apply directly to this proposal are: PERCENT OF DAYS in compliance with state and federal drinking water regulations (100% for 2015); and COMPLIANT STATUS with citywide NPDES permit requirements (Yes in 2015).

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0264	Utilities: Percentage of days per year in compliance with state and federal drinking water regulations	Years	100%	100%	100%	100%	100%
140.0265f	Utilities: Number of drinking water quality complaints per 1,000 water service connections	Quarters	1.84	1.1	2	2	2
140.0270	Utilities: Compliant with all Surface Water Regulatory Requirements	Years	Yes	Yes	Yes	Yes	Yes
140.0271	Utilities: Number of illicit discharges detected and corrected annually	Years	268	251	155	200	200

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

In 2016, Utilities reorganized the Operations and Maintenance division to create a new Compliance Manager position that oversees the Water Quality and the Storm and Surface Water sections. This position was created by repurposing the previous NPDES coordinator position upon retirement of the previous FTE and incorporating the duties of that position into the Compliance Manager role supporting the Water Quality and Storm and Surface Water Superintendents. This did not result in any new costs but is a change in previous proposals as proposal 140.64NA has been incorporated into this proposal and others to account for the reorganization of duties.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	3.30	3.30
LTE	0.00	0.00
Total Count	3.30	3.30

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	366,808	370,488
Personnel	428,879	446,885
Revenue	0	0
Rev-Exp Balance	-795,687	-817,373

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Section 1: Proposal Descriptors

Ranking: 4

Proposal Title: Natural Resource Management

Outcome: Healthy and Sustainable Environment

Proposal Number: 100.09NA

Primary Dept: Parks & Community Services

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 100.09NA

Primary Staff: Dan DeWald

Fund: General Fund

Section 2: Executive Summary

This proposal funds the management, maintenance and environmental stewardship programs on 2,000 acres of public natural area and open space comprised of lakes, streams, wetlands and forests. These programs preserve native tree canopy, provide fish and wildlife habitat, retain stormwater, improve air and water quality and reduce greenhouse gases. Greenways and trails provide outdoor classrooms for diverse populations to interact with nature through hands-on stewardship activities that help preserve and enhance the natural environment in the community where they live, work and play. Urban natural areas must be proactively managed with the same commitment as other vital community resources in order to ensure public health and safety, and the environmental, social and economic values and benefits for which they were set aside. A healthy natural environment preserves the quality of life that residents and businesses look for when selecting a location to reside in now and in the future.

Section 2b: Performance Narrative

The measures included in this proposal will quantitatively demonstrate how well the Natural Resource Management program is delivering a healthy, sustainable and accessible open space system that supports healthy living for current and future generations. The combination of measuring the proximity and quantity of parks and open space in relation to location and population served demonstrates how well this program is performing in providing accessibility to the City's natural areas. Accessibility is a key component for enabling citizens to experience and appreciate firsthand the aesthetic and environmental values of nature and to learn about the complexity of ecosystem functions. Measuring the condition and overall health of the City's natural areas demonstrates this programs commitment toward preserving and enhancing all of the environmental functions and values of the urban forest. Finally, our customer satisfaction survey data helps us understand how well we are doing in providing opportunities for citizens to experience nature and how well the City's open space system is contributing to their personal health and well-being. All of these measures, taken together, demonstrate the effectiveness of this program in contributing to Bellevue's desired outcome of achieving a healthy and sustainable environment.

Section 3: Responsiveness to Request For Results

The City is buying a comprehensive Natural Resource Management (NRM) program to sustain a healthy natural environment for current and future generations. The funding level requested will ensure that the environmental factors including air, water, natural environment, and built environment are maintained to current citizen expectation levels. Lower funding will result in environmental degradation of the City's open space system, reduced biodiversity, reduced citizen satisfaction, increased liability, and will deprive the community of the environmental, social, and economic benefits currently provided.

NRM includes: 1) Planning – setting policies, goals and objectives that integrate the natural and developed environments; 2) Management – the scientific and technical understanding of the resource and prescribed actions necessary to achieve our community's goals and objectives; 3) Implementation – on-the-ground actions to preserve, enhance and restore the resource; 4) Maintenance – proactive and on-going tasks

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necessary for implementation to be successful; and 5) Community Education and Involvement – public outreach and community involvement to increase people’s knowledge, instill positive attitudes and behaviors, and educate citizens on the importance of planning, management, enhancement and maintenance as necessary tools to preserve environmental values and functions for current and future generations.

NRM focuses on the way people and the urban landscape interact. NRM recognizes that a healthy ecosystem is a dependent and interconnected web of air, land, soil, water, plants, fish, wildlife and people, and that their natural and built environments cannot be managed in isolation of each other. When development and urbanization occur, ecosystems and food chains are interrupted, and natural processes are no longer able to compete against the effects of outside influences. Bisected wildlife corridors, the disposal of refuse, encroachment by neighbors, illegal tree cutting, invasion of introduced (non-native) plants, eroding streams and unmanaged access by well-meaning recreationists are common problems. If these problems are not addressed through a science based proactive stewardship program, Bellevue’s air, water and natural environment, including its lakes, streams, wetlands, upland forest and wildlife habitat, will progressively degrade and cease to provide the healthy natural environment for which they were preserved.

NRM involves a scientific understanding of each individual site’s functional relationship with the system as a whole. It begins with a site specific analysis and evaluation of property including the legal boundary, past uses, tree and vegetation habitat type, existing tree and forest health condition, soil types, geology, degree of slope, site aspect, recreational and education opportunities, adjacent land uses, fish and wildlife habitat and system connectivity. This analysis results in site-specific plans and actions that ensure public safety, improve forest condition and expand native tree canopy, resulting in improved fish and wildlife habitat, reduced erosion, improved air and water quality and public education and access opportunities. All of these actions focus on the factors that ensure a healthy and sustainable environment for current and future generations.

CLEAN AIR

Annually, NRM improves the health and condition of 10-20 degraded acres of natural area and open space by planting over 10,000 native trees and plants to restore and expand tree canopy. This expanded canopy helps abate air pollution and reduce greenhouse gases in the atmosphere. A 2011 Urban Forest Effects Model (i-tree) developed by the U.S. Forestry Service showed that Bellevue’s maintained natural areas remove over 120 tons of air pollutants per year valued at \$961,000. In addition, these lands play a significant role in reducing greenhouse gas emissions by sequestering over 2,400 tons of carbon each year valued at \$1.34 million. NRM maintains 85 miles of interconnected multi-purpose trails that provide energy efficient transportation options for pedestrians and bicyclists to access neighborhoods, schools, parks and businesses. A well maintained non-motorized trail system reduces automobile use, promotes public health, and results in reduction of greenhouse gases leading to improved air quality. NRM stewardship programs and events help educate the community on ways to reduce air pollution. Stewardship Saturdays and Eco Fridays provide hands-on planting opportunities to educate and involve citizens in preserving and restoring tree canopy. Limited parking, bike racks, and outreach programs encourage carpooling and alternative modes of transportation to reduce greenhouse gas emissions.

WATER QUALITY

NRM forest enhancement activities intercept, store, and filter rainwater to protect and improve water quality. Bellevue’s tree canopy intercepts rain water to reduce erosion, and a healthy understory stabilizes soil to reduce sedimentation into our streams and lakes. A 2008 American Forests Ecosystem Analysis valued the water holding capacity of Bellevue’s urban forest at \$20.6 million. NRM restoration projects increase and enhance stream and lakeshore buffers to filter stormwater from surrounding development to help protect water quality. NRM utilizes low impact trail planning, construction and maintenance best-management-practices (BMP’s) to protect water quality in natural areas that drain stormwater into Lake Washington and

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Lake Sammamish. Trail planning delineates trails to help protect sensitive slopes and riparian corridors. Trail construction and maintenance utilize site sensitive, low impact BMP's to allow citizen access to gain appreciation for natural areas while safeguarding lands from excessive compaction and erosion to protect water quality. NR visitor center design and programming incorporate bio-swales, rain gardens, green roofs, pervious surfacing, cisterns, and other low-impact development (LID) technologies that help manage stormwater. Programming, interpretive signs, and other community involvement efforts educate citizens on these and other techniques they can use to help conserve water and protect water quality.

NATURAL ENVIRONMENT

NRM restoration activities remove noxious vegetation and plant native species to improve the health of our forests, streams, wetlands and lakes. These activities create a healthy natural environment that benefits both citizens and wildlife alike. Without proactive management, maintenance and outreach, the environmental values and benefits for which these areas were preserved will be compromised. NRM greenways and trail systems immerse citizens into the natural ecosystems that they are a part of, providing a nature experience in which to live, work, learn and play. Greenways also provide corridors linking wildlife to essential habitats. Ongoing trail management and maintenance helps ensure a safe and well used trail system that helps protect our finite natural resources. NRM environmental outreach programs provide opportunities for citizens to learn about how they can protect, conserve and enhance our shared natural resources. NRM programs made over 128,000 citizen contacts in 2015. Over 90% of Bellevue's land base is privately owned. Everything in nature is connected, and the cumulative negative actions of uninformed citizens lead to universal degradation of our shared natural resources. Only through proactive environmental education leading to positive community attitudes and behaviors can we effectively ensure a healthy, sustainable environment for present and future generations.

BUILT ENVIRONMENT

NR visitor centers use LEED (Leadership in Energy and Environmental Design) standards for sustainable facility construction and operations. Building materials utilize reused, recycled and sustainable products. Bio-swales, rain gardens, pervious surfacing, and cisterns protect water quality. Energy costs are reduced by tree canopy retention, green roofs and natural ventilation and lighting techniques. NR visitor center programming focuses on increasing community understanding of sustainable building and development. NR visitor center landscapes are registered as Backyard Wildlife Sanctuaries by the Washington Department of Fish and Wildlife (WDFW) and Certified Wildlife Habitats by the National Wildlife Federation (NWF). These landscapes are programmed as urban demonstration gardens that promote the use of native vegetation in urban residential landscapes to help improve wildlife habitat, promote water conservation, and reduce use of pesticides. Teaching citizens how they can apply similar techniques to their landscapes helps Bellevue sustain a healthy environment for current and future generations.

PROPOSAL STAFFING

The management, maintenance and stewardship of 2,000 acres of public natural area and open space requires the services of 23 positions across three major program areas. Services include environmental stewardship, customer service, education, volunteer training and coordination, site inspections, risk management, park rules and code enforcement, park asset inventory, invasive weed management, forest enhancement, habitat restoration, trail construction, trail maintenance and community outreach:

Nature Space and Forest Management (7 FTEs/LTEs): Parks Resource Manager, Community Services Supervisor, Senior Engineering Technician, Skilled Worker (2), and Maintenance Aide (2 LTEs).

Greenways and Trails (12 FTEs/LTEs): Community Services Supervisor, Lead Worker (2), Skilled Worker (3), and Maintenance Aide (8 0.75 LTEs)

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Nature Parks, Rangers, and Visitor Centers (4 FTEs/LTEs): Community Service Supervisor, Park Ranger (3)

In addition, this program requires the services of approximately 23 part-time seasonal positions (2 maintenance aids, 3 assistant rangers, 6 park patrol rangers, 2 Well KEPT program supervisors and 10 Well KEPT trainees). Credentials among all staff include International Society of Arboriculture (ISA) certified arborists, ISA certified tree risk assessors, Society of American Foresters (SAF) certified foresters, noxious weed specialists, licensed pesticide operators, wildlife biologists, wetland scientists, Certified Erosion & Sediment Control Leads (CESCL's), restoration ecologists and natural science educators.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014</u> <u>Actual</u>	<u>2015</u> <u>Actual</u>	<u>2016</u> <u>Target</u>	<u>2017</u> <u>Target</u>	<u>2018</u> <u>Target</u>
100.0010	Percent of households living within one-third mile walking distance of park or trail access point	Years	72%	72%	72%	72%	72%
100.0011	Percent of natural areas in healthy and sustainable condition (class conditions 1 and 2)	Years	72%	72.5%	70%	70%	70%
100.0014	Acres of park and open space per 1,000 population	Years	20.1	20	20	20	20
999.0060f	Somewhat/strongly agree Bellevue offers me and my family opportunities to experience nature where we live, work, and play	Years	88%	92%			
999.0063f	Somewhat/strongly agree Bellevue is doing a good job of creating a healthy natural environment that supports healthy living for current and future generations (added in 2010)	Years	87%	87%			

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

NA

5B: Are one-time expenditures included in this proposal?

NA

5C: Are dedicated revenues included in this proposal?

This proposal includes \$323,000 in dedicated revenue, including Natural Resource program fees (\$3,500), farm sales and contracts (\$129,000), staff labor charges to the Farm program (\$100,000), Parks Levy Lid Lift property tax revenue dedicated to maintaining and operating completed levy projects (\$27,000), and Tree Cutting Settlement funding (\$64,000).

5D: Are changes to the existing service levels included in this proposal?

NA

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	15.00	15.00
LTE	7.50	7.50
Total Count	22.50	22.50

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	620,985	638,643
Personnel	2,238,460	2,329,449
Revenue	421,925	458,807
Rev-Exp Balance	-2,437,520	-2,509,285

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Section 1: Proposal Descriptors

Ranking: 5

Proposal Title: Solid Waste Management, Waste Prevention, and Recycling

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.30NA

Primary Dept: Utilities

Parent Proposal: NA

Proposal Type: Existing

Dependent Proposal: NA

Budget Status: Recommended

Previous Proposal: 140.30NA

Primary Staff: Susan Fife-Ferris, x5216

Fund: Solid Waste Fund

Section 2: Executive Summary

City customers generate approximately 120,000 tons of solid waste annually, 72,000 tons of which is garbage being hauled to the local landfill. Efficient, effective, and responsible management of solid waste (i.e., garbage, recyclables, and organic waste) is critical to ensuring public health and the protection of the environment, maintaining the appearance of the City, contributing to the City's continued economic viability, and contributing to sustainability at the local, regional, and global level. This proposal provides for the management and oversight of the solid waste collection contract with Republic Services, the continuation of many of the City's successful waste prevention and recycling outreach, education, and technical assistance programs and the management of grants that fund many of the City's solid waste-related programs.

Section 2b: Performance Narrative

The performance measures included with this proposal help illustrate whether the solid waste collection contractor is performing to expectations of both the City and solid waste collection customers, and whether progress is being made towards diverting materials away from being landfilled and to a higher use via recycling.

Section 3: Responsiveness to Request For Results

This proposal provides:

- Solid Waste Collection Contract Management and Oversight: Staff manages the City-wide Comprehensive Garbage, Recyclables, and Organic Waste Collection Contract with Republic Services. The Contract, which is worth approximately \$22M annually, provides all garbage collection services, a variety of recycling, organics (i.e., yard debris and food waste), and litter collection services, and billing/customer services. Management and oversight of the Contract includes troubleshooting contract-related issues, reviewing, analyzing, and making recommendations on Republic's requests, working to improve existing and add new services, handling customer complaints, conducting annual customer satisfaction surveys and contract performance compliance audits, reviewing annual rate adjustment requests, addressing regional solid waste issues, and conducting research and analysis. Ensuring efficient, effective, and reliable solid waste (i.e., garbage, recyclables, and organics) collection on a regular schedule is essential to maintaining a healthy and sustainable environment – not only in the City, but throughout the region. Staff's oversight and management of the Contract is critical to ensuring the timely and efficient removal of garbage, recyclables, and organics from homes, businesses, and public facilities, and ensures that litter is regularly picked up from City streets.
- Waste Prevention and Recycling Outreach, Education, and Technical Assistance Programs: These programs affect every resident and business employee in the City, and include outreach, education, and technical assistance to single-family, multifamily, and commercial customers, two residential special recycling collection events (one in spring and one in fall), school programs (such as in-class workshops, assemblies, and science fair participation) offered in partnership with the Bellevue School District, and regional coordination for garbage, recycling, and organic waste issues. Waste prevention and recycling programs truly speak to responsible solid waste management (BUILT ENVIRONMENT Sub-factor). These programs help to preserve natural resources and keep customer garbage rates low by prolonging the useful life of the King County-owned landfill - the cheapest disposal option currently available. The overall goal is to decrease the amount of garbage generated City-wide,

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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. 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. City customers currently generate approximately 120,000 tons of solid waste annually, approximately 72,000 tons of which is garbage hauled to the local landfill, and the balance is diverted through recycling programs. Anticipated growth in the area's population will increase the amount of solid waste being generated within the City. To prepare for that eventuality, solid waste management remains a top priority and requires leadership and innovation by the City. All the programs delivered under this proposal are focused on preventing and reducing waste, promoting reuse opportunities, and encouraging the recycling of anything not prevented, reduced, or reused. Waste prevention and recycling also allows customers to downsize their garbage container size, which reduces their bill, which is based on the size and collection frequency of their garbage container. In order to address the City's growing diversity, program materials are developed in a variety of languages to reach diverse communities and some workshops are now offered in languages other than English. Staff works closely with partners to leverage resources and outreach activities wherever possible. Staff works closely with Republic Services (solid waste collection 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) on programs that increase participation in waste prevention and recycling activities. All programs are either rate- or grant-funded, and are subject to review by Council, the Environmental Services Commission, and granting agencies providing funds.

- Household and Moderate Risk Waste Management Programs: Staff manage programs that educate residents and businesses about the proper handling and disposal of household and moderate risk waste. These programs are often conducted in cooperation with the King County Solid Waste Division and the Local Hazardous Waste Management Program. The goal is to keep the City clean and free of waste, debris, and toxic materials to ensure the safety of the public health, the environment, and maintain the City's high quality of life.

- Regional Leadership: 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 local, regional, state, and federal level on issues that directly impact services available and rates, taxes, and fees paid by City customers. Additionally, 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 and schools, and under the current Contract has been expanded to multifamily residences and businesses.

Funding for most waste prevention and recycling 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. Staff manage the development, approval, compliance, and reimbursement requests for each of the grants. The grants include the 2-year King County Waste Reduction and Recycling Grant, the 2-year Department of Ecology Coordinated Prevention Grant, and the 1-year Local Hazardous Waste Management Program Grant issued by the Seattle-King County Department of Public Health.

There are a number of State mandates and other requirements that the City must comply with, including:

- Solid Waste Collection Contract with Republic Services: The current Contract runs through the end of June 2021. It obligates the City to provide contract management, oversight, and assistance with outreach and education. Under State statute, the City undertakes the regulatory role for solid waste collection.

- RCW 70.95: The City assumes primary responsibility for City-wide solid waste management, and provides waste prevention, source separation, and recycling strategies for the collection of solid waste in an environmentally safe and economically sound manner.

While the bulk of this proposal speaks to the BUILT ENVIRONMENT Subfactor – Responsible Solid Waste

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Management, other sub-factors are also touched on, including:

- The NATURAL ENVIRONMENT SUBFACTOR – CLEAN AIR is relevant since there is a direct connection between waste prevention and recycling and the reduction of greenhouse gas emissions. From a long-term perspective, preventing waste and recycling materials reduces the need for new materials that otherwise would have been harvested or extracted, saving those resources for the future. Recycled materials also require less energy to be used in the manufacture of a new product. The reduced need for resources and energy directly reduces greenhouse gas production. The City's involvement in encouraging waste prevention and recycling of materials has a direct impact on the reduction of greenhouse gas both locally and beyond.
- The NATURAL ENVIRONMENT Subfactors – CLEAN WATER, HEALTHY AND QUALITY OPEN SPACES, and STEWARDSHIP AND EDUCATION are all relevant since waste prevention, recycling, efficient, and effective solid waste collection, and outreach, education, and technical assistance to influence people's behaviors all support a clean living environment and the conservation of natural resources. As examples, the Natural Yard Care program and Waterwise Demonstration Garden educate local 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. Natural yard care programs teach the value and importance of and techniques to maintain natural spaces. Less toxic options are promoted through the household hazardous waste program. 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 prevent waste and use 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 provided under this proposal.

This proposal addresses the following purchasing strategies:

- Through the Management and Oversight of the Solid Waste Collection Contract, we "provide solid waste removal and disposal in a reliable, efficient, and environmentally sustainable manner." Environmental sustainability is further ensured through the provision of the Waste Prevention and Recycling Outreach, Education, and Technical Assistance Programs.
- The Waste Prevention and Recycling Outreach, Education, and Technical Assistance Programs "encourage reduction of waste," "encourage reuse and recycling," and ultimately result in "resources being conserved."
- The Household and Moderate Risk Waste Management Programs help to "ensure compliance around the use of toxic materials and their disposal," and "ensure compliance with applicable environmental regulations."
- Programs such as the Waterwise Demonstration Garden and Natural Yard Care "foster and incentivize stewardship of the natural environment through education and community activities."

Ultimately, all the activities and programs provided under this proposal contribute to a Healthy and Sustainable Environment, both in the City and throughout the region, and ensure that the City stays on the forefront of protecting and retaining natural systems and building for a sustainable future.

If this proposal is not funded, 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 ILA. The City would also not be able to manage the ~\$22 million/year Solid Waste Collection Contract, conduct the annual customer satisfaction surveys and contract performance compliance audit, or spend the 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, school programs, 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

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allocated to other jurisdictions. Thus, funds collected from City customers would not be spent in Bellevue. The City would not participate in regional planning and coordination efforts, and not be able to advocate for City customers for regional services (e.g., transfer station services). Finally, 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.

This proposal represents a base level of service, 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 Solid Waste Collection 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. As mentioned previously, 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 Bellevue. The City would fail in its fiduciary duty of being a good steward of customer funds.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0004	Utilities: Solid waste collection contract customer satisfaction	Years	97%	89%	80%	80%	80%
140.0006f	Utilities: Single-family Recycling Rate	Years	67.29%	67.45%	69%	69%	69%
140.0012f	Utilities: Meet State recycling goal of 50% of generated solid waste	Years	40.81%	39.73%	50%	50%	50%
140.0433	Utilities: Achieve overall recycling rate of 70% for contracted solid waste services by 2020	Years		39.73%	50%	55%	60%
140.0434	Utilities: Improve multifamily and commercial organics recycling rate for contracted solid waste services to 7.2% by year end 2016.	Years		2.2%	7.2%	10%	15%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

\$150,000 is included in 2017 for a consultant study to evaluate long-term solid waste management options to prepare for 2028, when the city's solid waste disposal contract with King County expires.

5B: Are one-time expenditures included in this proposal?

No.

5C: Are dedicated revenues included in this proposal?

Solid Waste Collection Contract Fee = 2017 ~\$729,000/2018 ~\$748,000; Anticipated Grant Funds = 2017 ~\$301,000/2018 ~\$305,000; Interest Revenue = 2017 ~\$5,000/2018 ~\$8,000; Contract Performance Fees = 2017 ~\$2,500/2018 ~\$2,600

5D: Are changes to the existing service levels included in this proposal?

No

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	2.67	2.67
LTE	0.00	0.00
Total Count	2.67	2.67

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	758,683	619,669
Personnel	347,418	361,997
Revenue	1,104,079	1,137,090
Rev-Exp Balance	-2,022	155,424

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Section 1: Proposal Descriptors

Ranking: 6

Proposal Title: Utilities Water Supply Purchase and Sewage Disposal
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.61NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.61NA **Primary Staff:** Martin Chaw, x 7199
Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

This proposal provides for the purchase of clean drinking water from the Cascade Water Alliance and the conveyance and treatment of wastewater by King County Metro. The purchase of wholesale water supply from the Cascade Water Alliance allows Bellevue Utilities to provide water service to over 40,000 service connections in the Bellevue Utilities service area, which includes Clyde Hill, Medina, Yarrow Point, and Hunts Point. 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 38,000 service connections in the City of Bellevue and surrounding jurisdictions.

Section 2b: Performance Narrative

The performance metrics appropriately measure the sufficient of of clean drinking water and wastewater treatment capacity to meet the needs of utility customers in the City of Bellevue service area. The Department's ability to provide drinking water and wastewater management services to its customers is dependent upon the availability of the CWA and King County Metro.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: The Utilities Department works closely with the CWA and King County to ensure the availability of clean drinking water and wastewater treatment services to the residents of the Utility Service Area. This close coordination is evidence of REGIONAL LEADERSHIP and a HIGH PERFORMANCE GOVERNMENT. Availability of clean drinking water and wastewater treatment services are required precursors to a vibrant and healthy community where it is characterized by a HIGH QUALITY BUILT AND NATURAL ENVIRONMENT, ECONOMIC DEVELOPMENT, and a GREAT PLACE WHERE YOU WANT TO BE.

HSE Values and Factors: Prudent management of water delivery and wastewater conveyance demonstrates RESPONSIBLE STEWARDSHIP, ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT, ENSURES PUBLIC HEALTH AND SAFETY, and CLEAN WATER.

Why this proposal is important: Availability of clean drinking water and conveyance of wastewater for treatment and safe disposal is imperative to a HIGH QUALITY BUILT AND NATURAL ENVIRONMENT and to support ECONOMIC DEVELOPMENT where businesses and residents WANT TO BE. Assurance of CLEAN WATER and conveyance of wastewater are essential for ENSURING PUBLIC HEALTH AND SAFETY and represents RESPONSIBLE STEWARDSHIP of the environment and of the businesses and residents that call Bellevue home.

The Purchase of Water and Sewage Treatment/Disposal is entirely supported by utility rates.

The City's water utility provides potable drinking and irrigation water within its service area by procuring water

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from the Cascade Water Alliance (Cascade), while sewer utility provides sewage collection and transmission services for the customers within its service area but contracts with King County Metro for treatment and disposal. This proposal is for the wholesale purchase of water by the City of Bellevue from the Cascade Water Alliance of which it is a member, and the treatment/disposal of sewage through King County Metro.

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. The City also has a long-term contract, effective through June of 2036, with King County Metro for the treatment and disposal of all sewage flows generated within the City's service area.

This proposal includes partial funding for an intergovernmental relations specialist focusing on issues directly related to water supply and Cascade Water Alliance and King County Metro sewage treatment issues. Services provided by this individual include both internal and external coordination and collaboration to effectively address emerging issues such as planning, 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.

The purchase of water from the Cascade Water Alliance and treatment of wastewater are governed by the following agreements:

- 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.
- 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.

Duty to Serve: 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.

- Federal Law: 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:

- Water 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.
- Water 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.
- Sewer Short-term benefits: King Country Metro manages the treatment and disposal of sewage, which relieves City staff of this task.
- Sewer 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.

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Consequence of funding at a lower level:

Failure to comply with the terms of the contract with Cascade Water Alliance and King County Metro would not only jeopardize the City's immediate water and sewage service needs, but also endanger access to services in the future. Bellevue is obligated to pay for its share of water and sewer needs for which it contracts.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0412	Utilities: Number of years for which projected water supply is sufficient to meet future water demand	Years	50	50	50	50	50
140.0413	Utilities: Number of years projected wastewater disposal needs are secured	Years	22	21	20	19	18

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

Payment to Cascade Water Alliance and King County Metro per demand.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	0.50	0.50
LTE	0.00	0.00
Total Count	0.50	0.50

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	53,132,816	53,931,676
Personnel	83,910	87,372
Revenue	0	0
Rev-Exp Balance	-53,216,726	-54,019,048

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Section 1: Proposal Descriptors

Ranking: 7

Proposal Title: Utilities Telemetry and Security Systems

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.25NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.25NA

Primary Staff: Dennis Fugier, x7940

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

Telemetry and SCADA equipment provide continuous automated monitoring and control of utility systems (such as reservoirs and pump stations) significantly reducing the need for on-site staff. This proposal provides for operation, maintenance, and repair of telemetry (remote monitoring and control), providing reservoir levels, water pressures, sewage station levels, storm retention pond levels, and transmission of data to a central SCADA (Supervisory Control & Data Acquisition) system. Security systems monitor facilities for intrusion and notify of breaches. These systems work to maintain water quality and supply, avoid sewer overflows, and manage regional storm facilities. To ensure performance of equipment ongoing installation, maintenance, and repair is required. Service levels balance the need for reliable delivery of drinking water, removal of sewage, and storm water management with the costs to provide telemetry, SCADA and security, and risks associated with failures.

Section 2b: Performance Narrative

Performance measures for this proposal emphasize the criticality and zero-tolerance for SCADA and Security equipment failures and reinforce that very high level of service required to effectively operate these systems. Because telemetry, SCADA and security system failures have high consequences of failure, service levels are not readily scalable without substantial risk.

The service levels proposed balance the need for reliable delivery of safe and sufficient drinking water, reliable removal of sewage, and management of storm water runoff with the costs to provide telemetry, SCADA and security and the risks associated with service failures.

The measures included in this proposal track the number of water/waste water/ storm service interruptions or failures caused by the SCADA / Telemetry system, the percentage of planned preventive maintenance activities completed, and the number of security breaches discovered but not detected at the time of intrusion. Each of these measures relate to the factors of reliable and efficient water management, clean water, and healthy and quality open spaces.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following HEALTHY AND SUSTAINABLE ENVIRONMENT FACTORS:
BUILT ENVIRONMENT - Reliable and efficient delivery of safe drinking water, effective waste and storm water management.

NATURAL ENVIRONMENT – Clean Water as well as Healthy and Quality Open Spaces

This proposal directly supports operation of water, sewer, and storm water systems to ensure safe reliable supply of drinking water meeting the needs of the community, provide site security, effective removal of sewage from homes and businesses, and control of surface water runoff to minimize flooding or environmental damage.

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With the proper level of preventive maintenance and repair, the telemetry/SCADA system will continue to perform as designed to help prevent premature failure of expensive pumping systems, valves, and monitoring equipment, while optimizing drinking water quality.

Imagine operating water, sewer and regional detention facilities by driving to these sites. It would be a significant challenge without centralized systems to monitor and adjust system performance. These systems are the “brains and control” of the City’s piped utilities, allowing staff to operate and regulate facilities. After the events of 9/11 additional efforts to secure water reservoirs and pump stations from deliberate contamination were implemented. This equipment requires installation, repair, replacement, maintenance, calibration, and testing. Historical data provided by telemetry and SCADA systems allows for trend analysis of system and equipment usage for asset management purposes. Additionally these systems can provide for early warning of catastrophic failures.

Telemetry/ SCADA systems warn in “real time” 24/7 if system components are operating outside normal parameters allowing operators to make adjustments and decisions based on live data. Problems can be detected and addressed with minimal time lost.

FTEs under this proposal have key roles in responding to disasters and major events. In-house staff maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. If telemetry/SCADA equipment becomes unreliable, monitoring and control functions are compromised. This can quickly overwhelm operations staff that will have to manually adjust system settings in the field. Water quality could be compromised and security of water supplies would be at greater risk.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT - RELIABLE AND EFFICIENT WATER MANAGEMENT: Telemetry and security systems are critical to the delivery of reliable, safe, sufficient and clean drinking water. Telemetry results in lowered fuel usage and greenhouse gas emissions as a result of requiring less driving to sites. Telemetry lowers electricity use at pump stations and conserves water by monitoring its quality and optimizing reservoir turnover, monitoring and controlling pumping to benefit water system needs. Support firefighting response by allowing operators to maintain or increase water supply to hydrants used to fight the fire, either during working hours or after hours. Deliver safe and clean drinking water for customer daily use and cope with local or regional water supply events. SCADA and Security Systems provide significant long term cost savings by reducing operational staffing needs on an ongoing basis and when emergency conditions would require manual operation of facilities. These systems provide remote after-hours control minimizing drive time. Telemetry, SCADA and security systems leverage technology to operate the water, sewer, and surface water components reliably with minimal labor costs and an estimated savings of 5+ FTEs.

NATURAL ENVIRONMENT – CLEAN WATER: 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. Telemetry/SCADA and Security systems lessen the possibility of a terrorist/ intentional attack and the impacts if an attack occurs by sending alarm notifications as soon as an intruder enters a controlled area instead of waiting for a door or hatch to be opened. SCADA and Security Systems would be negatively impacted if the equipment is not maintained and repaired.

NATURAL ENVIRONMENT – HEALTHY AND QUALITY OPEN SPACES: Manage and control pond levels, flows, or runoff, and alarm of conditions at regional storm water facilities to minimize flooding. Telemetry systems are critical to the reliable removal of sewage, and management of storm water runoff. Conveyance of sewage with

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minimal overflows to homes, businesses or environment is accomplished by alarming operators or standby staff when a level is above its normal operating range. This provides additional and critical time for corrective action to be taken. Telemetry systems support healthy and quality open spaces by controlling the infrastructure to reliably remove waste and protect stream, lakes, and wetland habitat for fish and other species.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0259	Utilities: Number of water/sewer service interruptions caused by SCADA/Telemetry system	Years	0	0	0	0	0
140.0260	Utilities: Number of security breaches discovered but not detected at the time of the intrusion	Quarters	0	0	0	0	0
140.0261f	Utilities: Percent of planned preventive maintenance activities completed at telemetry sites	Years	89.65%	76.68%	100%	100%	100%
140.0317	Utilities: Number of water or sewer pump station failures caused by SCADA/Telemetry failures	Years	1	0	0	0	0

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

This proposal includes an addition of \$150K to fund a SCADA vulnerability assessment. In the ever changing environment of technology, especially in the SCADA/Telemetry/Security realm, it is essential to have a clear and far-reaching outlook in terms of future capabilities and requirements to maintain this critical functionality moving forward. This plan will likely lead to significant future budget requests to fund/implement recommendations derived from the planning effort.

Other increases in this proposal represent transfers of funds from IT to the Telemetry budget. This transfer covers the cost of "Leased lines" that are the phone / communications line charges for the connections between our master controllers and our remote telemetry sites. The transfer of \$94K per year will more accurately reflect the department responsible and put this money into the proper budget.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	3.80	3.80
LTE	0.00	0.00
Total Count	3.80	3.80

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	374,458	223,758
Personnel	476,537	495,603
Revenue	0	0
Rev-Exp Balance	-850,995	-719,361

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Section 1: Proposal Descriptors

Ranking: 8

Proposal Title: Utilities Customer Service and Billing

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.33PA

Primary Dept: Utilities

Parent Proposal: 140.45DA

Proposal Type: Existing

Dependent Proposal: 140.45DA

Budget Status: Recommended

Previous Proposal: 140.33PA

Primary Staff: Virginia Barrett, x5368

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

The Customer Service and Billing group is responsible for issuing bi-monthly water, sewer, stormwater utility billings to approximately 36,000 residential accounts, 2,000 commercial and multifamily accounts, generating revenue of over \$128 million for Utilities and Utility taxes of almost \$9 million for the General Fund. The Utilities Customer Service and Billing unit mails 5,000 bills each week. In addition, the unit receives up to 200 calls per day, processes 85 moves per week, makes up to 50 reminder (late pay) calls per week, handles an average of 140 pending water disconnects per week and coordinates with field staff for an average of 30 water disconnections/reconnections per week.

Section 2b: Performance Narrative

The intended results of this proposal are the efficient delivery of services customers want and accurate, timely billing to Utilities customers. A family of measures are used to assess the delivery of services and customer satisfaction. The SATISFACTION SURVEY indicates that customers are happy with the services and how they are delivered. The AVERAGE HOLD TIME indicates how quickly we are answering their calls. The NUMBER OF ABANDONED CALLS indicates the percentage of customers who exit the queue prior to their call being answered. Taken together, this family of measures shows that we are responding efficiently and quickly to customer calls and they are satisfied that we are addressing their concerns.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target areas: Revenues generated by Utility billing activities contribute to a HIGH PERFORMANCE GOVERNMENT by enabling the construction and maintenance of a superb utility infrastructure that ensures a clean, safe city. Funds to manage conveyance of water, wastewater and stormwater are necessary for a HIGH QUALITY BUILT ENVIRONMENT with reliable infrastructure.

HSE Values and Factors: Utility Billing addresses sub-factors in the BUILT ENVIRONMENT factor by generating revenue that enables RELIABLE AND EFFICIENT WATER MANAGEMENT. Utility Billing addresses the NATURAL ENVIRONMENT sub-factor of CLEAN WATER in addition to the sub-factor of STEWARDSHIP and EDUCATION by generating revenues that make it possible for Utilities to purchase and reliably convey safe drinking water to our citizens and by being in a position to educate our customers through daily contact.

This proposal also addresses the CUSTOMER FOCUSED SERVICE Factor under RESPONSIVE GOVERNMENT by DELIVERING SERVICES CUSTOMERS WANT and CONVENIENT, TIMELY AND HIGH QUALITY SERVICE.

Council Vision – One of the points under HIGH PERFORMANCE GOVERNMENT speaks to implementing technologies “that improve customer service with the City of Bellevue”. Utility Billing has implemented several technologies that improve the customer experience. Customers have the option of paying online or over the phone. When they register for MyUtilityBill, they can view all of their account information online and sign-up to

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receive ebills. Approximately 15% of our customer have opted for ebills. This is not only a convenience for the customer, it saves Utilities over \$25,000 annually in postage and processing costs. We are looking to further enhance our services by offering recurring credit card payments in 2016.

Another aspect of the Council Vision is a HIGH QUALITY BUILT ENVIRONMENT. The timely billing and collection of revenues assures that funding is available to build and maintain reliable utility infrastructure for Bellevue now and into the future. Funding is also available for staff needed to support this built environment.

HSE Factor – BUILT ENVIRONMENT Sub-factor – RELIABLE AND EFFICIENT WATER MANAGEMENT

The reliable supply and conveyance of water is dependent on the utility's ability to purchase water, store it, and transport it to customers. Revenue generated by Utility billing and collections pay for the infrastructure necessary to do all three of these. The infrastructure that minimizes damage from stormwater runoff and supports a healthy environment for fish and wildlife is paid for by revenues generated by Utility billing and collections. Revenue generated also supports the staff required to read meters, inspect and maintain pipes and infrastructure. Through their daily, front-line contact with customers, Account Representatives educate customers on a wide range of conservation issues and services. For example, a representative may identify that a customer has high water use and they can then provide information on how to troubleshoot for leaks and suggest measures that can be taken for water conservation. Utilities also advises/educates managers of City-owned properties 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 these valuable resources.

HSE Factor – NATURAL ENVIRONMENT Sub-factors – CLEAN WATER and STEWARDSHIP and EDUCATION.

Much of what Account Representatives do on the phone is educational in nature. Many customers are not aware that Bellevue has City-wide storm drainage infrastructure to manage runoff and that there are Federal regulations and mandates that we are required to follow. Representatives help them to understand what they are paying for. The utility bills that go out to customers each billing cycle are also an excellent vehicle for delivering information to our citizens since all of them receive utility bills. A newsletter goes out to all customers every billing cycle with useful information, conservation tips, and announcements. In these ways we help make the customer aware of how their individual actions can affect the natural environment and help the customer to be better stewards of the natural environment through responsible water use, recycling, and preventing water pollution.

RESPONSIVE GOVERNMENT Factor CUSTOMER-FOCUSED SERVICE.

We deliver high quality services that customers want. They will let us know over the phone whether we are delivering information, services that are useful to them and will request additional services if they feel there is more we could be doing. One example of this is recurring credit card payments, mentioned previously. Currently, we take credit cards but not on a recurring basis. There is a huge customer demand for this service and we will be implementing this in 2016. We strive to make all of our service offerings convenient and timely; customers can pay online or over the phone 24/7.

In this proposal, Customer Service/Billing staff provides timely and accurate billing of residential, commercial, and multi-family customers for water, wastewater and storm drainage services. The revenues collected are used to operate, maintain and replace the complex water, wastewater and stormwater infrastructure that is essential to a Healthy Sustainable Environment. Services included in this proposal are billing, customer care and 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 from the field. Accuracy and timeliness are essential. The Account Representatives review the bills for exceptions and/or billing errors prior to releasing them to customers. Commercial and multi-family accounts typically have large and/or multiple meters and consequently, much higher water consumption volumes. These bills require extra

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scrutiny before they are released. The printing and mailing of weekly bills is outsourced to a Bellevue-based vendor for cost efficiency and timely delivery.

Customer Care/Account Management: Customer Service is more than a call center. Account Representatives are often the only contact a citizen has with City personnel. Representatives receive up to 200 calls per day, process 85 moves per week, make up to 50 reminder (late pay) calls per week, handle an average of 140 pending disconnects per week and coordinate with field staff for an average of 30 water disconnections/reconnections per week. They must also work with distraught or difficult customers while still acting in the City's best interest to collect monies owed for services provided. In addition, they research and document account adjustments, make notes on customer accounts after each call, and provide technical support for customers having trouble with our online or phone payment system.

Collections: Collections are critical to maintaining cash flow necessary for Utilities operations. We adhere to weekly collections processing to keep revenues coming-in timely. Representatives assist customers with payment arrangements when necessary and make referral to social service agencies as necessary. They process delinquent accounts for collection and follow-up on customers who have left the area. They must follow very strict collection procedures (dictated by RCW 35.21.290). Failure to adhere to the prescribed collection process results in the Utilities' loss of ability to collect through our normal process.

Accurate and timely billings and collections assure that the necessary funds are available for infrastructure build-out/maintenance, personnel and service delivery. Utility services are entirely supported by rates, generating funds that are collected by Utility Customer Service and Billing.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0025	Utilities: Customer Calls Abandoned	Years		6.93%	7%	7%	7%
140.0026	Utilities: Average Customer Hold Time (in seconds)	Years		25	35	35	35
140.0027f	Utilities: Customer satisfaction survey (weekly Customer Service & Billing)	Quarters	93.5%	91.75%	80%	80%	80%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

There are escalated costs beyond inflation in this proposal for Merchant Fee expenses. When customers pay their bills by credit cards, the bank charges us "merchant fees" to process those payments. As customers (specifically commercial customers) continue to embrace the convenience of credit card payments these fees continue to rise dramatically.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	7.75	7.75
LTE	0.00	0.00
Total Count	7.75	7.75

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	460,542	488,600
Personnel	800,282	834,451
Revenue	0	0
Rev-Exp Balance	-1,260,824	-1,323,051

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Section 1: Proposal Descriptors

Ranking: 9

Proposal Title: Water Distribution System Preventive Maintenance Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.14NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.14NA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

Section 2: Executive Summary

WATER is required to sustain life, convey waste, protect against fire and to keep our parks and open spaces green and healthy. This proposal funds preventive maintenance of the drinking water infrastructure. Bellevue's water system is a network of components that deliver almost 6 billion gallons of drinking water a year. Preventive maintenance ensures the ongoing safety and operational integrity of the distribution system. Services include annual inspection and maintenance of fire hydrants, isolation valves, and other important components to the water system. These programs 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 the ability to quickly repair water main breaks, increases the chance of waterborne disease and problems with water quality. It could also result in fire hydrants and valves not working when needed for firefighting or other emergencies.

Section 2b: Performance Narrative

Effective preventive maintenance reduces the frequency and potential for catastrophic failure, unplanned customer service interruptions, damage to the environment, property damage and costly claims. Performance indicators established by using industry standards and State and Federal mandates, measure the workload, efficiency, mandated compliance, cost of failure and the rate of system failure against established targets for acceptable service levels. An upward failure trend or consistent pattern of not meeting established targets would point to higher required investment and service levels.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: Timely replacement of water system infrastructure supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to deliver quality drinking water, parks and open spaces that are green and healthy, and adequate pressure and flow for fire protection that ensures public health and protects the environment.

Providing services that reliably ensure public health and protect the environment reflects Community Values. These services use sustainable best practices that maintain the water infrastructure. This in turn supports healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations. Preventive maintenance to the water system components is crucial to ensure the longest possible life cycle while minimizing system failures.

Bellevue customers expect their drinking water infrastructure to be reliable. Existing fire hydrants and valves are more than halfway through their useful life. Aging infrastructure increases the frequency of component failures and costs to repair and maintain the system. Preventive maintenance activities minimize system failures and prolongs the life of the drinking water system.

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FIRE HYDRANT MAINTENANCE includes inspecting, exercising, and maintaining fire hydrants to ensure that they function properly when needed. A proactive inspection program enables Utilities Operations and Maintenance to ensure that all City-owned fire hydrants function properly when needed to protect life and property. Fire hydrants cannot be fixed in the middle of a fire response so inspections and maintenance are conducted to detect problems and correct them prior to a hydrant being needed for emergency response.

VALVE MAINTENANCE includes locating, inspecting, and exercising all 10,000 water system valves on a 3-year cycle to identify those needing replacement or repairs. Properly operating valves are crucial to minimizing the number of customer service interruptions by limiting the area of the shutdown. Inspection identifies valves with access problems that can be corrected before the valve is needed in an emergency.

Maintenance crews have key roles in responding to disasters and major emergency events. Having in-house staff available to respond requires 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible emergency events include extreme rain/flooding, snow/ice events, windstorms and earthquakes.

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.

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.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT: Preventive maintenance to the water system helps ensure reliable and efficient water management and responsible conservation. It provides water in a reliable, efficient, and environmentally sustainable manner, and helps conserve resources that prolong the life cycle of components and keep replacement costs at a responsible level.

NATURAL ENVIRONMENT: Preventive maintenance services under this proposal provide reliable supply, storage and conveyance of clean water that are critical services for the community. Water is vital to personal health, economic viability and a healthy environment. Ensuring that drinking water conveyed to homes and businesses is safe, clean and of adequate pressure is essential to the health and well-being of Bellevue residents.

PURCHASING STRATEGIES in the HSE outcome:

BUILT ENVIRONMENT: Provide water in a reliable, efficient, and environmentally sustainable manner for human consumption and firefighting through responsible management and proactive maintenance of the water system and its components. It supports a SAFE COMMUNITY through Prevention/Response. This proposal provides public safety and firefighting response capabilities supported by inspection, maintenance, and repair of all City-owned fire hydrants. Additionally, regular maintenance and inspection supports Insurance Service Office (ISO) fire insurance ratings. 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. Hydrant inspection and maintenance is coordinated with the Fire Department.

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NATURAL ENVIRONMENT: Ensure compliance with applicable environmental regulations. Left for long periods of time fire hydrants and valves will leak and natural minerals in water will cling to internal components causing chlorinated water to seep into the natural environment where it can cause harm to wildlife and streams.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0216	Utilities: Number of fire hydrants that fail fireflow delivery at time of inspection	Years	3	1	0	0	0
140.0220f	Utilities: Percentage of fire hydrants inspected	Years	51.71%	49.3%	12.5%	50%	50%
140.0223f	Utilities: Percentage of water system isolation valves inspected	Years	31.23%	36.25%	8.25%	33%	33%
140.0257	Utilities: Number of water claims paid due to system failure	Years	14	9	1.25	5	5
140.0258	Utilities: Number of water claims paid greater than \$20,000 due to system failure	Years	2	0	0	0	0
140.0378	Utilities: Total cost of Water claims paid	Years	\$105,903	\$47,279	\$50,000	\$200,000	\$200,000

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	6.85	6.85
LTE	0.00	0.00
Total Count	6.85	6.85

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	153,268	159,692
Personnel	706,558	734,252
Revenue	0	0
Rev-Exp Balance	-859,826	-893,944

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Section 1: Proposal Descriptors

Ranking: 10

Proposal Title: Sewer Pump Station Maintenance, Operations and Repair Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.21NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.21NA

Primary Staff: Nate Dickey, x4889

Fund: Sewer Utility Fund

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 2b: Performance Narrative

The people of Bellevue expect and deserve proper maintenance, trustworthy operation, and timely maintenance of the pump stations. The Wastewater section tracks and monitors; overflows, station visits, and maintenance calls monthly to reduce the potential for catastrophic failure, unplanned customer service interruptions, overflows that negatively affect homeowners, streams or lakes and costly damage claims.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors.

Council Strategic Target Areas: A proactive wastewater repair program supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to convey wastewater. The Sewer Pump Station Maintenance Program ensures public health and protects the environment keeping parks and open spaces green and healthy.

HSE Values and Factors: Providing services that reliably ensure public health and protect the environment reflects the Community Values. These services use sustainable best practices that improve and maintain the wastewater infrastructure, supporting healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations.

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 convey uninterrupted flow for an average 11 million gallons of sewage per day 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

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this proposal and is based on demand.

The criticality of these facilities requires redundancy in the form of multiple pumps at the pump stations 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.

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 - Ensures that pump stations are operational and that defective equipment and components are repaired or replaced prior to failure; Reduce overflows into the environment due to station failure; Many of the stations are located on or in close proximity to lakefront properties and this maintenance preserves good customer relations in these locations.

Long-term benefits - Contributes to the longevity of the stations and reduces power consumption by keeping the station running efficiently; station reliability keeps the cost associated with after-hour callouts to a minimum; documents station performance which is used in planning station rehabilitation; and 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, 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.

Factors in the Healthy and Sustainable Environment Outcome:

BUILT ENVIRONMENT:

Reliable and Efficient Water Management: Proper Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods using ongoing sewer main/lateral/manhole repair activities. It ensures that the sewer system is adequately maintained to minimize

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negative impacts from sewage backups and overflows.

Additionally, it Conserves Resources by providing the best value in meeting the community needs by minimizing life cycle costs through effective asset management and minimizing claims due to sewage backups.

NATURAL ENVIRONMENT:

Clean Water; Healthy and Quality Open Spaces: Containment of sewage on the ground surfaces and in the waters of Bellevue and the reduction of wastewater overflows helps to restore, preserve, protect, enhance, and increase Bellevue's open spaces and natural environment (including biodiversity and native plants and animals). The State and Federal mandates followed by the Sewer section ensure compliance with all applicable environmental regulations, so that the natural environment and public health is protected at all times.

OTHER FACTORS:

Economic Growth and Competitiveness: 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: Traffic Flow. Pump station Maintenance significantly reduces the chance of a sewer system failure that would cause emergency road closures and impact traffic flow, increasing traffic congestion even further.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0202f	Utilities: Non-weather related pump station overflows per 1,000 wastewater customer accounts (value of 0.027 represent 1 overflow)	Years	0	0	0	0	0
140.0205f	Utilities: Weather related wastewater pump station overflows per 1,000 customer accounts (value of 0.027 represents 1 overflow)	Years	0.03	0	0	0	0
140.0208f	Utilities: Percent of wastewater pump station inspections completed as planned	Years	87.94%	93.58%	100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	5.55	5.55
LTE	0.00	0.00
Total Count	5.55	5.55

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	330,115	336,300
Personnel	592,084	614,993
Revenue	0	0
Rev-Exp Balance	-922,199	-951,293

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Section 1: Proposal Descriptors

Ranking: 11

Proposal Title: Sewer Mains, Laterals and Manhole Repair Program
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.18NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.18NA **Primary Staff:** Nate Dickey, x4889
Fund: Sewer Utility Fund

Section 2: Executive Summary

Bellevue's Wastewater section is responsible for operation, maintenance, and repair of 655 miles of buried or submerged pipe and 14,508 manholes and cleanouts (maintenance access structures) within its service territory. This proposal provides repair services for the sewer collection system. These repairs correct deficiencies predominantly 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 2b: Performance Narrative

Timely asset maintenance and repairs reduce the potential for catastrophic failure, unplanned customer service interruptions, and costly liability claims. Performance Indicators, established by using industry standards with State and Federal mandates, measure the workload, efficiency, mandated compliance, cost of failure and the rate of system failure against established targets for acceptable service levels. The Wastewater section monitors the number of maintenance activities (repairs) that reduce the potential for sewer overflows and works to control the negative impacts that a non-functioning sewer system would have on customers, the community, and the natural environment. We track how many pipe issues we find to maintain the aging infrastructure and calculate how to best allocate our resources.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: A proactive wastewater repair program supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to convey wastewater. This repair program ensures public health and protects the environment keeping parks and open spaces green and healthy.

Providing services that reliably ensure public health and protect the environment reflects Community Values. These services use sustainable best practices that maintain the wastewater infrastructure. This in turn supports healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations.

Bellevue's Wastewater section is responsible for the operation, maintenance and repair of 655 miles of buried or submerged pipe and 14,508 manholes and cleanouts (maintenance access structures) within its service territory. The sewer collection system is aging and requires scheduled and emergency repairs to ensure reliability and service to Bellevue's citizens and businesses. Defects to the system are discovered through Closed Circuit TV (CCTV) video inspections, maintenance activities and emergency service calls from customers.

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Repairs include spot repairs to sewer mainlines, side sewer stubs within the right-of-way and manhole repairs. The 130 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 up to 14' deep to access the pipe for repair.

In response to the growing number of needed repairs, in 2009 Wastewater O&M 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 CIP repair work, the backlog of repairs has been reduced from over 900 in 2011-2012 to less than 550 currently. The long-term goal is to eliminate the backlog and keep pace with newly identified repair needs on an ongoing basis. The condition assessment program continues to find an average of 10 new defects a month.

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.

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 \$6,500 using traditional methods are completed at an average cost of \$1,700 per repair. And because repairs can be done without traditional invasive methods, it lessens the impact to traffic and lowers restoration costs for asphalt.

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.

The service levels proposed address 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. An average of 10 deficiencies are identified each month which has led to a significant backlog of repairs needing repair and/or monitoring. These repairs 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 immediately address all of the known defects. Defects are prioritized for repair based on the assessed level of risk which is based on the probability and consequence of failure. Maintaining current service levels will ensure a minimal risk of sewer blockage/overflows, and minimal risk of customer claims and impacts to the natural environment.

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Factors in the Healthy and Sustainable Environment Outcome:

BUILT ENVIRONMENT:

Reliable and Efficient Water Management: Proper Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods using ongoing sewer main/lateral/manhole repair activities. Proactive repairs Conserve Resources by lowering the need for emergency repairs which are generally 50% more expensive if outsourced through contracting, and can range up to 200% more in cost than planned in-house repairs. These repairs 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.

NATURAL ENVIRONMENT:

Clean Water; Healthy and Quality Open Spaces: Containment of sewage on the ground surfaces and in the waters of Bellevue and the reduction of wastewater overflows helps to restore, preserve, protect, enhance, and increase Bellevue's open spaces and natural environment (including biodiversity and native plants and animals). The State and Federal mandates followed by the Sewer section ensure compliance with all applicable environmental regulations, so that the natural environment and public health is protected at all times.

OTHER FACTORS:

Economic Growth and Competitiveness: 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; Traffic Flow: Closing roads or diverting traffic during an unplanned sewage repair or emergency can contribute to more traffic congestion. Planned repairs help to avoid crisis situations where sewer line emergencies can disrupt traffic, impacting mobility.

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0187	Utilities: Number of identified wastewater pipe defects requiring repair within 5 years	Years	761	387	200	200	200
140.0188	Utilities: Number of wastewater in-house pipe repairs completed annually	Years	95	104	25	100	100
140.0338	Utilities: Number of new wastewater pipe defects identified for repair or replacement	Years	63	35	100	100	100

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	7.00	7.00
LTE	0.00	0.00
Total Count	7.00	7.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	356,635	359,516
Personnel	677,427	703,971
Revenue	0	0
Rev-Exp Balance	-1,034,062	-1,063,487

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Section 1: Proposal Descriptors

Ranking: 12

Proposal Title: Capital Project Delivery

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.01NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.01NA

Primary Staff: Regan Sidie, x6857

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

Capital Project Delivery develops and implements cost-effective capital investment projects necessary to accomplish the City's \$221 million 2017-2023 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 2b: Performance Narrative

In order to accomplish the CIP, projects must be completed on schedule and within budget, while maintaining quality needed to ensure that utilities infrastructure provides customers with long service life. The performance indicators are established to:

Measure completion of projects against established schedules to ensure that output is keeping pace with the needed rates of asset replacement and expansion to prevent property damage from facility failures, and provide utility systems that are ready to serve expanding development.

Ensure that inspection practices result in high quality constructed projects through maintaining a low rate of projects that require warranty repair.

Assess the quality and completeness of contract documents by a high percentage of projects that are completed under the original bid amount.

Track annual percentage of CIP expended against the budget to ensure that adequate resources are provided to deliver the capital program.

Section 3: Responsiveness to Request For Results

This proposal includes staff and resources needed to develop, manage, design, and construct projects that accomplish the \$221 million 2017-2023 CIP (average over \$30 million per year).

CIP Management (3.41 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. Process improvement and innovation are employed to boost productivity and effectiveness.

CIP Design (12.75 FTE & 0.50 Temp. Staff): CIP design involves selecting best project alternatives based on a decision model that includes economic, social, and environmental impacts. Condition assessment of utilities facilities determines future capital improvement needs. Engineering drawings, specifications, and cost estimates are developed for each design, along with securing required permits and property rights if needed. Quality Control and Assurance is provided throughout design. The design process uses a collaborative approach for decision making that includes staff from throughout Utilities and other stakeholder departments. CIP Design includes the addition of one Senior Engineer FTE, starting 2017. This new position is needed to respond to the growing Utilities Capital Improvement program, which has been right-sized to match the Utilities long-

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range infrastructure needs.

CIP Inspection (9.85 FTE): 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.

Design/Construction Support (2.45 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. Design/Construction Support includes the addition .25 of a Skilled Worker, being added in 2017. This new position is needed to address water main shutdown workload increases resulting from; increases in annual mileage for asbestos cement (AC) water main replacement, growth in Transportation CIP and Increased development activity.

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

- Staff are cross-trained to work on all three utilities.
- Engineering standards allow 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.
- Developed a programmatic, multiple-project SEPA to shave several months of permit review for each project.
- In 2015, Utilities began a project management improvement initiative to provide staff with skills needed to effectively manage the growing CIP. Staff received training and are implementing industry best practices.
- In 2016, initiated 6 large on-call consultant contracts as a process improvement. With the on-call contracts Utilities will have immediate access to a total of 73 firms. This provides a deep pool of resources and expertise, and will save over 5,000 hours of staff time spent in contract procurement over the 3-year contract period.

Mandates & Contractual Agreements: Capital Project Delivery ensures that these obligations are met.

- Washington State Department of Transportation (WSDOT) requires utility relocations ahead of freeway work.
- Comprehensive and utility system plans policies are met. Interagency agreements are upheld (Sound Transit).

Cost Avoidance:

- Economic cost of having to delay development projects awaiting system capacity
- Financial and environmental costs associated with water main breaks, wastewater overflows, and flooding

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. 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.

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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.

Factors addressed by this proposal in the Healthy and Sustainable Environment outcome:

- **Factor 1: BUILT ENVIRONMENT. EFFICIENT AND RELIABLE WATER MANAGEMENT** is achieved by providing reliable, safe wastewater removal and by ensuring that surface water run-off from rain and storms is controlled to minimize negative impacts such as erosion, flooding, and water quality. Sustainable building practices are aided by wise use of assets. **FULL LIFE CYCLE COST ANALYSES** are used to make well informed decisions on CIP projects to replace or rehabilitate utility buildings and facilities such as pump stations and water reservoirs. Renewable clean energy is promoted through energy efficient components in pump stations powered by electric motors. Periodic rehabilitation of water and wastewater pump stations improves pump and motor efficiencies, thereby **CONSERVING ENERGY** and **REDUCING GREENHOUSE GAS EMISSIONS**.
- **Factor 2: NATURAL ENVIRONMENT.** Enhanced landscaping and restored tree canopies provided by stream restoration projects help to cool and **CLEAN THE AIR**. CIP programs and projects ensure a continued reliable supply of **CLEAN DRINKING WATER**. **HEALTHY AND QUALITY OPEN SPACES** are restored and preserved through implementation of the CIP to ensure 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 and Other Outcomes:

- **NATURAL ENVIRONMENT & 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.
- **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.
- **BUILT ENVIRONMENT:** Construction site sweeping and other erosion control and pollution prevention measures keep our built environment clean and free of waste, debris, and toxic materials.
- **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 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 and Connectivity is aided by providing reliable and functioning

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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 on a triple bottom line decision model that includes economic, social, and environmental impacts.
- **LEVERAGE COLLABORATION WITH OTHER CITY DEPARTMENTS** (Transportation/Parks) and external organizations (WSDOT and King County Wastewater Treatment Division) to save costs, minimize disturbance, and enhance outcomes.
- **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 CIP monitoring is performed to assess the program's cost effectiveness. Long-term (75+year) planning assures that utility facilities continue to function and that funding will be available to replace these systems as they reach the end of their useful life.

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.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0183f	Utilities: Percent of total CIP expended vs budgeted	Years	42.59%	70.45%	85%	90%	90%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

2017: \$159K Salary & Benefits, \$4K Supplies & Opp Expense for new FTE's (1 FTE - Sr. Engineer, 0.25FTE – Skilled Worker). 2018: \$165K Salary & Benefits, \$1K Supplies & Opp Expense for new FTE's (1 FTE - Sr. Engineer, 0.25FTE – Skilled Worker).

5B: Are one-time expenditures included in this proposal?

2017: \$12K Utility Vehicle for new FTE (0.25FTE – Skilled Worker)

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	28.96	28.96
LTE	1.00	1.00
Total Count	29.96	29.96

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	257,298	488,028
Personnel	4,032,530	4,117,172
Revenue	3,560,720	3,798,471
Rev-Exp Balance	-729,108	-806,729

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Section 1: Proposal Descriptors

Ranking: 13

Proposal Title: Street Cleaning (Sweeping)

Outcome: Healthy and Sustainable Environment

Proposal Number: 130.26NA

Primary Dept: Transportation

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 130.26NA

Primary Staff: Judy Johnson, x4891

Fund: General Fund

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, traffic accident debris, and removes traction sand applied during snow and ice response – keeping Bellevue an attractive place to live and work. 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 Municipal Stormwater Permit issued by the State Department of Ecology. Half of the program represents revenue from Utilities Dept. This program was identified in the 2016 budget survey as the 9th most important of 39 City services.

Section 2b: Performance Narrative

The performance measures for this proposal are primarily customer satisfaction-based measures. This includes overall satisfaction with street sweeping in general, and number of calls per 1,000 customers annually. As bike lanes are added, the service level on bike lane streets doubles, taking away from neighborhood sweeping service levels. As a result, our satisfaction ratings have been steadily creeping downward. We are adding a measure that tracks back to 2009 to measure the miles of new bike lanes added – which we believe is a partial driver of the downturn in overall customer satisfaction.

Section 3: Responsiveness to Request For Results

This proposal provides resources for Street Sweeping activities which remove gravel, leaves, pine needles, dirt, broken glass, litter, sediments and other debris from the surface of the roadway and bicycle lanes. Street sweeping helps prevent loose materials such as leaves, gravel or sand from decreasing the friction between the car and bicycle tires and the roadway surface that can negatively impact the safe use of the transportation system. The proposed service levels include sweeping bicycle lanes twice a month, arterial streets monthly, and residential streets in neighborhoods 2-3 times a year (previously 3-4 times a year, reduced due to workload factors such as new bike lanes and expanded city area.) There is also a need to clean up traction sand as soon as possible after snow response for safety and environmental reasons. Traction sand decreases roadway friction after snow and ice are gone, increasing braking distances and crash potential; sand also clogs catch basins and pollutes natural waterways and lakes – sand can also create air pollution as it dries out and becomes airborne. It should be noted snow and ice emergency response/recovery costs are not proactively budgeted at this time. Year around, the motion of larger vehicles pushes loose sand, glass and debris on roadways toward the curb line, causing safety concerns for bicyclists. One objective of this offering 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 reduces flooding caused by blocked or clogged drainage structures designed to convey storm runoff from street surfaces, and saves the City money because it is less expensive to remove the materials before they enter the enclosed drainage system than after. The approximate cost for sweeping a half mile of roadway is \$31; it costs \$30 for the Utilities Department to clean each catch basin (there are typically many catch basins in a half mile of road). This service is especially critical in the fall when leaves often plug storm

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grates causing roadway flooding.

REDUCED POLLUTANTS - To protect water quality, Bellevue manages storm water runoff in a number of ways; street sweeping is the first step in a chain of environmental best management practices. The City operates under a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the state Department of Ecology. This permit is a requirement of the Federal Clean Water Act.

INNOVATION –Staff-implemented cost saving ideas continue to stretch sweeping resources. Ideas such as shifting from an every-day cleaning of both of our Sweepers to alternating cleanout schedules to clean them three times a week and leveraging of NPDES grant funds to install kits on the Sweepers that allow faster and easier cleanout by mechanically lowering the screens have helped us despite a growing workload with no new resources. Each of these improvements increased the time the equipment is providing service while decreasing hours per unit spent on cleanout - decreasing water use and vault cleaning required at the maintenance yard. Unfortunately the current Sweepers are experiencing a lot of down-time and we are still waiting for their replacements.

EVIDENCE AND LOGIC SUPPORTING THIS PROPOSAL – The 2016 (2015 data) Budget Survey ranked maintaining existing streets and sidewalks as the #6 service, and keeping streets clean as #9 out of 39 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 during this time we have seen many increases in motorist and bicycle lanes, traffic, annexations, weather events, and population. The additional demands on the Street Cleaning service has resulted in a decrease in service in our neighborhoods - the neighborhood sweeping task has been gradually scaled down to 2 - 3 visits per year rather than the 3 - 4 provided 10 years ago. Since this change, the customer satisfaction rating has trended down from a consistent 97-98% to 86-94% overall and 81% (down from 82-86% over the last four years) 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 ten or even twelve hour days to add available equipment hours for each sweeper. All section staff members are trained to operate the equipment, so extra hours of equipment time can be provided by diverting on-duty staff from other duties; however those services are valuable and usually safety-related as well. Agency comparison calls have indicated the COB sweeping resources (mainly equipment and staff) are low per mile swept compared to the surrounding area. This program has been reduced but reinstated through several budget processes as decision makers realized how important this service is to our citizens, as well as environmental and safety considerations. The Utilities Department (Surface Water) now funds half of this service due to the environmental and water quality importance.

SCALABILITY: This program has been automatically scaled down over the years by the addition of infrastructure without added resources; resulting in changes in the frequency of service in neighborhoods over the last 10-15 years from 3-4 times per year to 2-3. As mentioned above; the customer satisfaction rating has gradually decreased over those years. Because of these trends, scaling back this service is not recommended.

HEALTHY AND SUSTAINABLE ENVIRONMENT

Compliance with the NPDES Permit requirements is a Key Performance Indicator under the Healthy and Sustainable Environment cause and effect map. Street Sweeping is a specific listed requirement under the

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NPDES permit. 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 Healthy and Sustainable Environment Factor NATURAL ENVIRONMENT is supported by the Street Cleaning proposal:

- [CLEAN 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.”
- [HEALTHY AND QUALITY OPEN SPACES] - “Street Cleaning service contributes to reliably ensuring public health and safety, as well as protecting the environment.”

BUILT ENVIRONMENT is supported by the Street Cleaning proposal: – “Responsible Solid Waste Management” – “Keeping our City clean and free of waste, debris and hazardous/toxic materials is essential to public health, the environment and to maintaining Bellevue’s high quality of life.”

Improved Mobility and Connectivity Purchasing Strategies include “Maximise efficiency and value of existing infrastructure and balance with future infrastructure investments”. 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. Staff is always looking for innovative options and process improvements.

SAFE COMMUNITY AND IMPROVED MOBILITY – Flood Prevention [Inspection and Maintenance]
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.

INNOVATIVE, VIBRANT AND CARING COMMUNITY and QUALITY NEIGHBORHOODS FACTORS [Facilities and Amenities Factor] and [Neighborhood Mobility Factor] Both speak to being “Safe and Well Maintained”. 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. 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.

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. 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.

PARTNERSHIPS

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 traffic crash or when a passing truck spills gravel into the roadway. 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 received to remove debris after city-community events.

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Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
130.0030	Customer satisfaction rating for clean streets	Years	94%	94%	90%	90%	90%
130.0031	Number of routine sweeping requests per 1,000 Customers	Years	0.48	0.73	0.5	0.5	0.5
130.0032	Number of street miles swept (lane miles serviced)	Years	5,182	5,696	6,042	6,042	6,042
130.0165	Annual Added Number of Bike Lane Miles	Years	1.53	2.2	2.2	5	7

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

COB Surface Water Utility reimburses the General Fund for one half of program costs.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	3.00	3.00
LTE	0.00	0.00
Total Count	3.00	3.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	146,949	173,129
Personnel	299,347	310,840
Revenue	225,677	234,953
Rev-Exp Balance	-220,619	-249,016

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Section 1: Proposal Descriptors

Ranking: 14

Proposal Title: Storm and Surface Water Repair and Installation Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.22NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.22NA

Primary Staff: Brian Krause, x6992

Fund: Storm & Surface Water Utility Fund

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 in protecting life, property, and the environment during major storm and flooding events, and in reducing 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 2b: Performance Narrative

The Performance Measures included in this proposal tell us if the Utilities Department, O&M Storm and Surface Water (SSW) section is completing installation and repair work targets outlined in the section annual plan. The section annual plan objectives are derived from Bellevue Storm and Surface Water Utility Code, the Storm and Surface Water Plan, storm water policies, and the NPDES permit. To help assure that the city's storm infrastructure is sustainable and in 100% compliance, on an ongoing basis, Operations and Maintenance measures the number of catch basin and manhole repairs completed as required by NPDES. Storm and Surface Water also measures labor hours per repair to assure work is completed efficiently and in line with historical trends.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the capital infrastructure needs of the Utilities Department is evidence of a HIGH PERFORMANCE GOVERNMENT. By ensuring a QUALITY BUILT ENVIRONMENT, reliable infrastructure to deliver quality drinking water and to convey wastewater and stormwater runoff is a required precursor to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE Values and Factors: Prudent management of water delivery and wastewater and stormwater conveyance demonstrates RESPONSIBLE STEWARDSHIP, ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER.

The City of Bellevue Storm & Surface Water system directly contributes to CLEAN WATER and HEALTHY AND QUALITY OPEN SPACES through measured maintenance of the system and assets. The Storm and Surface water System is comprised of over 400 miles of underground pipe; more than 20,000 catch basins and manholes; over 350 water quality and flow control facilities, along with 11 large regional facilities; 86 miles of open ditches; over 80 miles of stream in public/private ownership; and 860 acres of wetlands and riparian areas.

On average, the Surface Water System Repair and Installation Program repairs over 150 structures (catch basins, manholes, vaults, tanks, and WQ facilities) and approximately 500 feet of pipe annually, and works

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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 to 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. Preventive 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.

Repairs are typically performed as reactive maintenance which limits the scalability of the proposal. These are demand-driven, dictated by the number of defects that are detected through inspections, public reporting and condition assessment. Timely repairs are completed to mitigate environmental damage, meet NPDES permit requirements, minimize damage claims and reduce traffic impacts.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT - Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner. According to NPDES, dirt entering the storm system is considered pollution. The Storm and Surface Water Repair and Installation Program provides ongoing repair and new installation that ensures the stormwater system is functioning as designed to prevent pollution from entering the system of pipes, creeks, ponds, wetlands and lakes. 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, while 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 (e.g., sedimentation of gravel salmon spawning beds).

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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 reduce pollutants reaching streams and lakes.

NATURAL ENVIRONMENT – Ensure compliance with applicable environmental 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. Eight out of ten of our regional detention facilities are classified under WAC 173-175 (Dam Safety), which requires the City to inspect and conduct needed repairs and maintenance; Coal Creek/Newport Yacht Club sedimentation agreement; WAC 173.201A: Water Quality Standards for Surface Waters of the State of Washington: applies to repairs conducted to achieve water quality standards. Performance Indicators associated with this proposal inform whether we are meeting regulatory timelines and requirements.

HEALTHY LAKES, STREAMS AND WETLANDS, OPEN SPACE, NATURAL AREAS AND GREENBELTS. 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. These properties also provide habitat to wildlife and help to preserve the tree canopy and native vegetation.

OTHER OUTCOMES

Improved Mobility; Existing and Future Infrastructure – Much of the drainage system within Bellevue is under streets and sidewalks. Preventive maintenance of the system aids in the overall planning, safety and maintenance of the transportation system.

PURCHASING STRATEGIES in the HSE outcome:

Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0291f	Utilities: Percentage of Surface Water repairs completed	Years	131.43%	14.22%	100%	100%	100%
140.0371f	Utilities: Labor hours per catch basin/manhole repair	Years	8	12.81	12	12	12

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

\$20k increase in both years for increased street waste disposal costs

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	4.65	4.65
LTE	0.00	0.00
Total Count	4.65	4.65

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	427,077	426,329
Personnel	512,487	532,692
Revenue	0	0
Rev-Exp Balance	-939,564	-959,021

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Section 1: Proposal Descriptors

Ranking: 15

Proposal Title: Utility Locates Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.44NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.44NA

Primary Staff: Kipp Fockler x 2923

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

Locators are required by Washington State law to mark underground City-owned utilities. This proposal provides resources for Utilities to protect underground City-owned and operated utility infrastructure. The Utility Locate program safeguards approximately 1675 miles of City owned underground utility pipelines for the delivery of drinking water and conveyance of surface runoff and sewer pipes by accurately marking utility locations prior to construction excavation in support of development, CIP and franchise utility renewal and repair.

Section 2b: Performance Narrative

Effective preventive maintenance reduces the frequency and potential for catastrophic failure, unplanned customer service interruptions, damage to the environment, property damage and costly claims. Performance indicators established by using industry standards with State and Federal mandates, measure the workload, efficiency, mandated compliance, cost of failure and the rate of system failure against established targets for acceptable service levels. An upward failure trend or consistent pattern of not meeting established targets would point to higher required investment and service levels.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: Preventive maintenance of water system infrastructure supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to deliver quality drinking water, biosolid conveyance, parks and open spaces that are green and healthy, and adequate pressure and flow for fire protection that ensures public health and protects the environment.

Providing services that reliably ensure public health and protect the environment reflects Community Values. These services use sustainable best practices that protect the underground pipe and system components for the distribution of drinking water and the conveyance of wastewater and surface water runoff. This in turn supports healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations. Preventive maintenance to the water system components is crucial to ensure the longest possible life cycle with the fewest number of failures.

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.

Responsibilities include:

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Responding to excavation notices during normal business hours and after-hours for emergency locates. Locators work closely with the contractors to assure the locate markings are done within the 48-hour time requirement.

Maintaining records, including site sketches, and performing as-built corrections.

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.

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 to mark their underground utility within 48 hours of notice to dig.

Efficiencies/Innovations:

Since early 2012, with the implementation of the Irthnet Software system, the locators have been using mobile tablets 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, eliminating manual sorting. Tickets are managed both geographically and by priority. 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. Vehicles in support of the locate program have also been replaced with Hybrid SUVs thereby reducing the carbon foot print. However, efficiency savings has not been able to keep up with the increased workload resulting from increases in annual mileage for asbestos cement (AC) water main replacement, growth in Transportations CIP and Increased development activity. This Proposal includes the addition of .75 Skilled Worker FTE, being added in 2017, to help keep pace with the growing demand.

BUILT ENVIRONMENT:

Provide water in a reliable, efficient and environmentally sustainable manner:

Safeguards citizens and construction personnel working around utilities; protects the underground infrastructure from damage that could disrupt utility services and threaten public health, safety and environment; and minimize City liability for property damage and revenue loss due to service interruptions to businesses. Accurate and timely marking of water pipes before excavation work prevents accidental damage to the water system.

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 for ensuring Clean Water. The locates help prevent 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 HSE outcome:

BUILT ENVIRONMENT: 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 Conserves Resources by decreasing costs for developers and contractors.

Ensure the safe and reliable supply of water and removal of wastewater from homes and businesses.

Keep properties, streets and open spaces clean and free of waste, debris, and toxins.

NATURAL ENVIRONMENT: Restore, preserve, protect, enhance, and increase Bellevue's open spaces and

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natural environment (including biodiversity and native plants and animals): 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.

OTHER OUTCOMES AFFECTED:

Improved Mobility and Traffic Flow. When a contractor is working in the right-of-way, traffic movement is temporarily impacted. Accidental damage to the piped utilities results in extended traffic disruptions while damage is mitigated and repairs completed.

Skilled locate staff play an important role in providing assistance to contractors working for East Link and Sound Transit as well as development of the Spring District. Many underground utilities need to be moved and navigated around and in-house staff have the best knowledge and expertise to keep these important projects moving forward without delays.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0248f	Utilities: Percent of locates performed within mandated deadlines	Years	100%	100%	100%	100%	100%
140.0251	Utilities: Dollar value of claims paid due to mis-locates	Years	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
140.0252	Utilities: Number of damaged assets due to mis-locates	Years	6	1	0	0	0
140.0253	Utilities: Number of locates received	Years	20,306	23,730	26,000	28,500	31,000

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

2017: \$70K (\$67K Salary & Benefits, \$3K Supplies & Opp Exp) and 2018: \$70K (\$69K Salary & Benefits, \$1K Supplies & Opp Exp) for the new FTE (.75 FTE Skilled Worker).

5B: Are one-time expenditures included in this proposal?

2017: \$38K Utility Vehicle for the new FTE (.75 FTE Skilled Worker).

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	3.40	3.40
LTE	0.00	0.00
Total Count	3.40	3.40

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	79,034	40,356
Personnel	350,343	364,117
Revenue	0	0
Rev-Exp Balance	-429,377	-404,473

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Section 1: Proposal Descriptors

Ranking: 16

Proposal Title: Utility Asset Management Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.11NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.11NA

Primary Staff: Andy Tuchscherer, x2067

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

This proposal funds the Utility Asset Management Program (AMP), to determine the resources needed to operate, maintain, repair, and eventually replace or rehabilitate utility system assets and assures cost effective strategies. Bellevue Utilities manages more than \$3.5 billion worth of utility assets such as pipelines, pump stations and reservoirs. The AMP develops and employs strategies to assess asset condition so that service levels expected by customers and required by state and federal regulations are provided at the lowest cost. More than 50% of Utility assets are at least halfway through their useful life. As assets age they continue to deteriorate; maintenance, repair, rehabilitation and replacement costs increase, making it even more critical that resources are used effectively.

Section 2b: Performance Narrative

The performance metrics for this proposal consist of service levels that gauge the effectiveness of existing Asset Management strategies. Cost-effective methods are continually evaluated and adjusted to maintain, repair, rehabilitate or replace assets to achieve target service levels. A robust AMP minimizes the cost to provide acceptable utility service levels and maintain up-to-date system maps and asset data.

Section 3: Responsiveness to Request For Results

This proposal is to maintain Bellevue's Asset Management Program (AMP). It is proposed at minimum staffing resources to deliver and advance the required program.

THIS PROPOSAL PRIMARILY SUPPORTS HEALTHY AND SUSTAINABLE ENVIRONMENT FACTORS. AMP supports a reliable supply of safe drinking water and safe, efficient removal of sewage and safe management of surface waters. Minimizing system failures means reduced environmental damage from flooding and sewage backups that pollute and erode lakes, streams & wetlands. Efficient asset management is a sustainable and coordinated approach that conserves resources.

QUALITY NEIGHBORHOODS/INNOVATIVE, VIBRANT AND CARING COMMUNITIES, AND SAFE COMMUNITIES each require reliable, safe, and affordable clean drinking water, sewage removal, stormwater runoff drainage management and flood control. Reliable and inexpensive utility service delivery supports ECONOMIC GROWTH AND COMPETITIVENESS.

WHAT THIS PROPOSAL BUYS. The AMP manages city-owned water, sewer, and stormwater assets valued at over \$3.5 billion 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.

-The AMP develops accurate asset information and makes it readily accessible; monitors and evaluates asset condition, performance, criticality and costs; and uses life cycle analyses that incorporate triple bottom line

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principles (economic, environmental, and social costs and benefits) to make capital and maintenance decisions.

-The utility system replacement value is over \$25,000 each for the approximately 130,000 residents of Bellevue and neighboring communities that depend on Bellevue's utility systems. Consequently, smart, cost-effective system management is imperative.

-Maintenance, repair, rehabilitation and replacement costs, and failures are increasing - The AMP helps ensure that the resources needed to operate, maintain, repair, renew, and eventually replace aging assets are available and used cost-effectively.

-The AMP pays for itself by minimizing the life cycle cost of owning an asset.

-The AMP is foundational to many other Utility proposals, including utility operations & maintenance requirements; R&R account funding; utility system planning; and development of CIP programs that fund asset replacement.

STAFFING - This proposal includes funding for 5 FTEs which includes the Asset Manager, 1 LTE in charge of the Storm Video Project, 2 Engineering Techs who maintain the mapping system and asset inventory, 33% of the Planning Manager's time, and 67% of the Planning Senior Engineering Technician (SET). This proposal also funds a part time student intern (temp budget). The SET and Engineering Techs maintain utility maps (record drawings) and asset inventory. Record drawings and associated asset data provide the critical inventory information needed to manage assets systematically. Asset attribute data (e.g. size, pipe material, date installed) is organized in databases and then 'pushed' to various enterprise computer systems (e.g. Maximo for asset inventory data; MapShot for electronic map and data access). They continuously update utility maps to add new assets, make corrections based on field staff observations, and archive drawings per state requirements. The Planning SET also maintains annual Utility performance records and statistics. The 3 year LTE position manages the Storm Video Project (CIP D-107) which will result in knowledge and condition assessment of 25% of the Storm pipe system. The intern analyzes asset condition, criticality and performance through exhaustive data mining and GIS mapping.

IF THIS PROPOSAL WAS NOT FUNDED CONSEQUENCES WOULD INCLUDE:

-Increased failures and the associated environmental impacts would likely result in state or federal mandated system improvements.

-Damage claims would increase.

-State-issued consent decrees would result in loss of public confidence and rate increases to meet decree requirements.

-Service would decline as system failures and service interruptions increase.

-Sporadic sharp rate increases would be required to repair system failures and result in overall higher rates in the long term.

-Reduced responsiveness to staff, developers, and citizens about utility facilities.

-Third-party claims against the City would increase since utility failures such as watermain breaks, sewage overflows and stormwater flooding often damage adjacent buildings and infrastructure.

-Damage to the environment would increase.

-The quality of data available to prioritize work on system deficiencies and long term capital planning will decline.

-Reactive system work that is less cost-effective and could negatively impact the customers.

-Trend data on system performance, failures and claims could not be produced or analyzed.

HSE - STEWARDSHIP AND EDUCATION THAT SUSTAIN A HEALTHY ENVIRONMENT FOR CURRENT AND FUTURE GENERATIONS

-The 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

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service delivery. It assures that assets are replaced before the risk of failure is unacceptable while at the same time making sure assets aren't replaced prematurely.

-Asset management is proactive system management. 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.

-The Asset Management Program reduces the chance of failure and reduces 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.

-The AMP continually finds ways to better manage Bellevue's utility systems cost effectively while maintaining customer service by improving and analyzing asset data.

-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 more than \$6 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.

-Planned utility improvements are mapped against transportation overlays and street projects, to coordinate schedules, saving money and minimizing disruption.

-As sewer pipes have aged, the number of identified pipeline defects that could lead to blockages and overflows has increased. The AMP prioritized the defects for repair and determined that in some cases it would be more cost-effective to rehabilitate or replace entire pipe sections instead of making multiple point repairs.

-The AMP collects, analyzes and maps asset data. After the conversion to a GIS-based mapping system is implemented, the asset data and mapping that is stored in multiple data bases (e.g., Maximo, Mapshot, AutoCAD, Oracle, ArcMap, etc.) will be integrated within an enterprise system so that it is more readily available to staff instead of just those staff that have access to the different data bases and programs.

REGIONAL LEADERSHIP AND HIGH PERFORMANCE GOVERNMENT - The AMP develops the data needed to determine how large the Utility Renewal and Replacement (R&R) reserve accounts should be so that resources are available to replace assets when it makes sense to do so. Consequently, Bellevue's utility rates will become even more competitive in future years, when 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).

-Evaluation of asset condition leads to cost-effective management strategies for maintenance and replacement.

-Life-cycle cost analysis that considers all costs, including planning, design, construction, operations, maintenance, risk of failure, decommissioning, and replacement is a core asset management principle.

-Triple bottom line (economic, environmental, and social) costs and benefits are considered in the life cycle cost analysis.

-The US EPA defines asset management as a best business practice for Utility providers.

-Eliminate low value-added activities.

-The AMP determines the criticality of each utility asset toward meeting service level goals while reducing risk. ---Fewer resources are allocated to less critical assets.

-The 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 asset management strategies are selected to meet them. This iterative process assures service levels commensurate with available resources.

-Bellevue participates with other U.S. utilities to determine best management practices for AC water mains (short-lived, fragile pipe that comprises over 45% of Bellevue's water system piping) through the Water Research Foundation.

-The AMP continually evaluates and when appropriate implements new technologies, such as AC water main management strategies and industry technologies for asset assessment, maintenance, and replacement.

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-Short and long-term financial impacts-The Asset Management Program 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. Asset management reduces the likelihood of high-consequence asset failures.

-Asset management decisions are data-driven. Asset life forecasts are based on risk, the probability of failure multiplied by the failure consequences. The failure probability is based on asset condition, install date, performance of similar assets, material, etc. Failure consequences include impact on customer utility services, life safety, damage to buildings and other infrastructure, and the environmental, and social impacts such as beach closure.

-Near-Term Benefits: The AMP helps Bellevue provide utility services cost effectively by providing quality data and 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: The 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.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0082f	Utilities: Condition related water main failures per 100 miles of water main	Years	4.53	3.23	1.25		
140.0085f	Utilities: Percentage of water pump stations rehabilitated within their useful life (25 years)	Years	71.43%	61.91%	76%	76%	76%
140.0092f	Utilities: Percentage of sewer pump stations rehabilitated within their useful life (25 years)	Years	58.7%	58.7%	65%	65%	65%
140.0097	Utilities: Drainage system pipeline failures	Years	4	1	5	5	5
140.0430f	Utilities: Wastewater overflow events per 100 miles of pipe	Years	3.36	2.29	1		

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue

5D: Are changes to the existing service levels included in this proposal?

This proposal contains a \$160,000 line item for life cycle cost analysis. This will provide cradle to grave asset costs for water and wastewater pipelines. From this effort will come a better defined methodology for maintenance, operation, and replacement which maximizes life and minimizes cost of the asset.

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	5.00	5.00
LTE	0.00	0.00
Total Count	5.00	5.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	45,175	205,483
Personnel	606,165	631,273
Revenue	0	0
Rev-Exp Balance	-651,340	-836,756

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Section 1: Proposal Descriptors

Ranking: 17

Proposal Title: Sewer Mainline Preventive Maintenance Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.20NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.20NA

Primary Staff: Nate Dickey, x4889

Fund: Sewer Utility Fund

Section 2: Executive Summary

This proposal provides preventive maintenance cleaning services on the sewer collection system to keep the lines clear. Preventive maintenance lowers service interruptions due to blockages, the associated claims due to backups, and minimizes overflows which impact the environment and public health. This preventive maintenance program allows us to maximize the life of the sewer system for the lowest long-term cost.

Section 2b: Performance Narrative

To keep up the City's infrastructure working properly, preventative maintenance of the sewer system is monitored on a monthly and yearly basis. Wastewater measures the rate of the total system cleaned and sets the target for customer service levels. We also track the number of overflows per 100 miles of pipe, which will show us if we are having a positive effect on the conveyance system. Providing this service should increase the life of the asset and reduce the negative impacts and the potential for catastrophic failure, unplanned customer service interruptions, overflows that negatively affect homeowners, streams or lakes and costly liability claims.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors.

Council Strategic Target Areas: A proactive wastewater repair program supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to convey wastewater. The Condition assessment program ensures public health and protects the environment keeping parks and open spaces green and healthy.

HSE Values and Factors: Providing services that reliably ensure public health and protect the environment reflects the Community Values. These services use sustainable best practices that maintain the wastewater infrastructure, supporting healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations.

This proposal provides necessary preventive maintenance services for dependable sewage collection service for 37,139 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 sewer mains.

Other services under this proposal include emergency response to clear blockages and overflows, manhole

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inspection, and treatment of fats, oil, and grease. These services minimize the potential for sewage blockages and overflow that impact customers 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 provides maintenance services on the submerged sewer "lake lines" in Lake Washington and Lake Sammamish. Automatic flush stations are used to help 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 14.6 miles of Lake Washington submerged sewer lake line was jetted 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 options as to how best rehabilitate or replace the lake line. In the meantime, staff provide uninterrupted service to lakefront properties and protects 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, and other unforeseen disasters.

Efficiencies/Innovations:

In concert with the Wastewater Condition Assessment program, staff has targeted specific high maintenance sewer mains to evaluate and adjust the frequency of maintenance (cleaning) to ensure adequate but not excessive maintenance levels. These efforts have reduced the amount of recurring 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

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.

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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.

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 \$76,000 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 if 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 Outcome:

BUILT ENVIRONMENT:

Reliable and Efficient Water Management: Proper Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods using ongoing sewer main/lateral/manhole repair activities. It ensures that the sewer system is adequately maintained to minimize negative impacts from sewage backups and overflows.

Additionally, it Conserves Resources by providing the best value in meeting the community needs by minimizing life cycle costs through effective asset management and minimizing claims due to sewage backups.

NATURAL ENVIRONMENT:

Clean Water; Healthy and Quality Open Spaces: Preventive maintenance helps to avoid crisis situations where sewer line emergencies can impact the Natural Environment/Lakes, streams, Wetlands and improved wildlife habitat. The State and Federal mandates followed by the Sewer section ensure compliance with all applicable environmental regulations, so that the natural environment and public health is protected at all times.

OTHER FACTORS:

Economic Growth and Competitiveness: 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; Traffic Flow: By performing proactive Preventive Maintenance of sewer pipes reduces the chance of a sewer system failure that would cause emergency road closures and impact traffic flow, increasing traffic congestion even further.

Responsive Government; Stewardship 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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Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0199f	Utilities: Percent of wastewater pipe cleaned	Years	19.9%	18.76%	5%	20%	20%
140.0211	Utilities: Number of wastewater claims paid due to system failure	Years	14	12	2.5	10	10
140.0315	Utilities: Number of wastewater claims paid greater than \$20,000 due to system failure	Years	2	1	0.25	1	1
140.0379	Utilities: Total cost of Wastewater claims paid	Years	\$184,824	\$91,650	\$15,000	\$60,000	\$60,000
140.0430f	Utilities: Wastewater overflow events per 100 miles of pipe	Years	3.36	2.29	1		

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	8.30	8.30
LTE	0.00	0.00
Total Count	8.30	8.30

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	241,615	240,297
Personnel	860,836	894,641
Revenue	0	0
Rev-Exp Balance	-1,102,451	-1,134,938

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Section 1: Proposal Descriptors

Ranking: 18

Proposal Title: Water Service Installation and Upgrade Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.17NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.17NA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

Section 2: Executive Summary

This proposal provides resources for the installation of drinking water service for new homes and for businesses to obtain occupancy permits without costly delays to the property owner or contractor. Utilities perform water main shutdowns, water main condition assessments, and pipe work to install new 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 and condition assessment data critical for asset management. Additionally it minimizes customer service impacts of water shutdowns and assures consistent quality control and sanitation while supporting economic development.

Section 2b: Performance Narrative

Performance indicators tied to this proposal point to how robust development is and how well the City is doing to keep up with demand. The number of new service installations is a sign of a healthy economy and being resourced to meet customer requests for new water services in 4 weeks is excellent customer service.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors.

Council Strategic Target Areas: Providing water to homes and businesses supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to deliver quality drinking water, biosolid conveyance, parks and open spaces that are green and healthy, and adequate pressure and flow for fire protection that ensures public health and protects the environment.

Water service connections support community growth and economic development if they are performed expeditiously and minimize construction delays. Commercial and residential development requires water service prior to occupancy, so delays can be very costly for customers and contractors.

NOTE: These are billable services with offsetting revenues that support the cost of installing water service connections.

NEW WATER SERVICE INSTALLATIONS: Water services are installed when a new building or home is being built or remodeled. 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 goal is to complete 95% of all water service installs within 4 weeks of the customer's request to do so.

Installation of Water Meters in New Development Projects: When a water distribution system extension is

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completed in a residential plat for a new development project with multiple homes, Utilities installs the new water meters for each home. Crews clean the service lines, install the new water meters, and document the meter's serial numbers, locations, and other pertinent information needed to activate services and billing.

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.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT: Provide water in a reliable, efficient and environmentally sustainable manner.

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.

Water service connections support community growth and development and boost the local economy. The integrity and safety of the drinking water system is maintained through this program.

NATURAL ENVIRONMENT: Utility crews provide high quality work to ensure that water services will not leak or fail, thereby reducing water system losses and contributing to the reliable supply of Clean Water. Having skilled City staff perform this work ensures that drinking water conveyed to homes and businesses safely and reliably. When City staff make the connections they provide a high level of workmanship to ensure we get the longest possible life cycle free of leaks or failures for the next 50 to 100 years. This demonstrates excellent stewardship and promotes a healthy environment for current and future generations.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

Consider a broad range of strategies. 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.

Maximize efficiency and value of existing infrastructure and balance with future infrastructure investments. 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. 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.

Create synergies to achieve multiple outcomes.

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.

Other factors addressed in this proposal:

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Economic Growth and Competitiveness , Infrastructure Development. 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, Prevention. The role Utilities 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.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0242f	Utilities: Percent of water service installations completed within four weeks of request	Years	100%	100%	100%	100%	100%
140.0245	Utilities: Number of water service installations	Years	71	16	50	50	50

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	1.00	1.00
LTE	0.00	0.00
Total Count	1.00	1.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	147,808	147,542
Personnel	99,390	103,201
Revenue	0	0
Rev-Exp Balance	-247,198	-250,743

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Section 1: Proposal Descriptors

Ranking: 19

Proposal Title: Utility Water Meter Reading

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.45DA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.45DA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

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. Meter reading is essential to maintaining water and wastewater revenue flow and equity among ratepayers. Other services are provided directly to property owners at their home or business in locating leaks and meter turn-offs.

Section 2b: Performance Narrative

The key performance indicators related to this budget proposal help assure the Utility's fiscal stewardship and financial stability by having a high degree of accuracy and efficiency for the quarter million meter reads each year. Accurate meter reads ensure equitable revenue gained for the water sold, and efficiency ensures rate payers are receiving the best value for the rates they pay for these important utility services. If Advanced Metering Infrastructure (AMI) is funded and implemented in the next three years, the KPI's for meter reading will evolve to reflect those advances. Examples likely will include meter read accuracy, meter connectivity, meter battery life.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target areas: Revenues generated by Utility meter reading activities contribute to a HIGH PERFORMANCE GOVERNMENT by enabling the construction and maintenance of infrastructure that ensures a clean, safe city. Funds to manage conveyance of water, wastewater and stormwater are necessary for a HIGH QUALITY BUILT ENVIRONMENT with reliable infrastructure.

HSE Values and Factors: Utility metering addresses sub-factors in the BUILT ENVIRONMENT factor by generating revenue that enables RELIABLE AND EFFICIENT WATER MANAGEMENT. Utility metering addresses the NATURAL ENVIRONMENT sub-factor of CLEAN WATER in addition to the sub-factor of STEWARDSHIP and EDUCATION by generating revenues that make it possible for Utilities to purchase and safely convey water to our citizens and by being in a position to educate our customers through daily contact.

This proposal also addresses the CUSTOMER FOCUSED SERVICE Factor under RESPONSIVE GOVERNMENT by delivering services customers want, and convenient, timely and high quality service..

This proposal requests funding for meter reading staff, supplies, and equipment necessary to read, record, and report customer water consumption for customer billing purposes. Activities include:

Read all commercial and residential water meters. Meter readers read over 40,000 water meters six times a year on assigned schedules and routes. They inspect meters for damage, tampering, leaks and malfunctions.

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Meter reads are entered into handheld data loggers and downloaded into billing software at the end of each day.

Council Vision – One of the points under HIGH PERFORMANCE GOVERNMENT speaks to implementing strategies “that improve customer service with the City of Bellevue”.

Meter readers provide direct customer service and build goodwill by answering questions, helping customers solve leak and high consumption problems, and explaining City policies.

Readers repair or replace meters that are obsolete, inaccurate, or damaged, and maintain and adjust water meter boxes to reduce the potential for trips and falls. If a customer requests a meter accuracy test, the request is done within a 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 conserves 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.

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.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT Sub-factor – Provide water in a reliable, efficient, and environmentally sustainable manner

The reliable supply and conveyance of water is dependent on the utility’s ability to purchase water, store it, and transport it to customers. Revenue generated by Utility billing and collections pay for the infrastructure necessary to do all three of these. Revenue generated also supports the combined total water budget needed to maintain the drinking water distribution system as well as the bio waste conveyance system.

NATURAL ENVIRONMENT

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.

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. These educational activities foster and incentivize stewardship of the natural environment.

Regular cleaning of meter box sites not only provides better access to read meters, but also provides a clean and safe environment to citizens and contributes to well maintained and attractive neighborhoods.

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.

Responsive Government with 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

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help customers who may qualify for low-income discounts. 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.

Purchasing strategies in the HSE outcome:

Encourage reduction of waste, Encourage reuse and recycling, Conserve resources and discourage excessive consumption by working directly with customers face-to-face to identify excessive use or leaks so they can be mitigated quickly to avoid waste. The meter readers have many opportunities to interact with customers to promote water stewardship by giving advice and handing out informational brochures.

Deliver results in an environmentally sensitive, equitable, and sustainable way. The meter reading program provides customer equity by accurate and regular reading of meters and conservation benefits for the environment.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0254f	Utilities: Meter reading accuracy	Years	99.99%	99.99%	99.75%	99.75%	99.75%
140.0316f	Utilities: Meter reading productivity in meter reads per hour	Years	43.81	75.04	43	43	43
140.0401f	Utilities: Total cost per meter read	Years	\$0.85	\$0.69	\$0.85	\$0.85	\$0.85

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	5.80	5.80
LTE	1.00	1.00
Total Count	6.80	6.80

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	12,797	12,511
Personnel	534,331	554,039
Revenue	0	0
Rev-Exp Balance	-547,128	-566,550

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Section 1: Proposal Descriptors

Ranking: 20

Proposal Title: Storm & Surface Water Preventive Maintenance Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.24NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.24NA, 140.64N

Primary Staff: Brian Krause, x6992

Fund: Storm & Surface Water Utility Fund

Section 2: Executive Summary

The resources in this proposal fund preventive maintenance activities related to the City's storm and 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 2b: Performance Narrative

The Performance Measures included in this proposal tell us if the Utilities Department, O&M Storm and Surface Water (SSW) section is meeting system inspections targets outlined in the section annual plan. The section annual plan objectives are derived from Bellevue Storm and Surface Water Utility Code, the Storm and Surface Water Plan, storm water policies, and the NPDES permit. To help assure that the city is in compliance with regulatory drivers, on an ongoing basis, Storm and Surface Water measures claims paid due to system failure to determine if the preventative maintenance program is right-sized with annual preventative maintenance goals and trends. To help assure the city is in compliance, on an ongoing basis, Storm and Surface Water also measures the number of required NPDES public infrastructure inspections and percentage of planned preventative maintenance work are completed in accordance with CLEAN WATER Act requirements.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the capital infrastructure needs of the Utilities Department is evidence of a HIGH PERFORMANCE GOVERNMENT. By ensuring a QUALITY BUILT ENVIRONMENT, reliable infrastructure to convey wastewater and stormwater runoff is a required precursor to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE Values and Factors: Prudent management of water delivery and wastewater and stormwater conveyance demonstrates RESPONSIBLE STEWARDSHIP, ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER.

The City of Bellevue Storm & Surface Water system is comprised of over 400 miles of underground pipe; more than 20,000 catch basins and manholes; over 350 water quality and flow control facilities, along with 11 large regional facilities; 86 miles of open ditches; over 80 miles of stream in public/private ownership; and 860 acres of wetlands and riparian areas.

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To keep the system in good working order, the Surface Water O&M Section regularly performs inspection and cleaning operations of structures, pipes and open facilities such as detention ponds. During inspections, the system is scrutinized for sediment level as well as any deficiencies such as cracks and loose or broken components. Maintenance of the pipes and structures is typically performed through the use of two combination Eductor trucks designed to clean storm and sewer systems as well as excavators that are rented as needed for removal of sediment from detention ponds and stream channels.

Typical staff duties within Surface Water O&M consist of operation of Eductor trucks, operation of heavy equipment, inspection of storm system components including performing confined space entries as needed and making corrections to the Storm & Surface Water utility grid maps. For 2016, staffing was reorganized to better align with permitting requirements and for streamlined work flow. The work structure for the section now falls in four program areas, Inspection, Cleaning, Repair and Special Projects.

This proposal reflects an increase in preventive maintenance funding of \$75k in 2017 and \$75k in 2018 for a study to assess Regional Detention Pond Major Maintenance needs. The regional detention facilities have lost capacity over time due to build-up of sediment and dying vegetation. The lost capacity contributes to flooding of NE 8th Street @ 148th Ave NE and backwatering of Larsen Lake. The sediment and vegetation build-up has also caused the main stream to fill causing the loss of a central channel which makes fish passage through the facility extremely difficult. Because the regional facilities are in line with Kelsey Creek, permitting requirements for maintenance of the facilities are complex. The proposed increase will fund studies that will analyze current conditions and identify long-range maintenance strategies for restoring detention capacity and environmental habitat improvement. This proposal also reflects an increase of \$100K in 2017 for maintenance of the Meydenbauer Bay which is required by legal agreement. The crew successfully completed this work in-house in 2014.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT - Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner. The Storm and Surface Water Preventive Maintenance Program provides ongoing regular cleaning and debris removal to ensure the stormwater system is functioning as designed to prevent flooding and pollution from entering the system of pipes, creeks, ponds, wetlands and lakes. Regular cleaning and debris removal 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. The final discharge for all drainage in Bellevue is to our streams and lakes. Ongoing regular maintenance of the drainage facilities helps prevent pollutants from traveling past a structure that is designed to trap the pollutants.

NATURAL ENVIRONMENT – Ensure compliance with applicable environmental regulations.

The majority of the preventive maintenance program work conducted is mandated through the City's NPDES permit or other legal obligations. Work is accomplished through a mix of in-house staff and contract funds that allow for greater flexibility. The preventive maintenance program has the ability to focus workload efforts on those areas that have the highest needs. We achieve this by proactively inspecting and identifying any cleaning and sediment removal needs prior to sending crews out to perform the work. This provides the most effective use of resources. Efforts of this program ensure CLEAN WATER. Workload impacts of NPDES requirements have increased considerably, this proposal includes the addition of one new Skilled Worker FTE starting in 2017 to handle increased responsibility and stay in compliance with the NPDES permit.

The following Mandates and Contractual Agreements direct the work related to this proposal:
Federal Clean Water Act (aka Federal Water Pollution Control Act)

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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

Eight out of ten of our regional detention facilities are classified under WAC 173-175 (Dam Safety), which requires the City to inspect and conduct needed repairs and maintenance

Coal Creek/Newport Yacht Club sedimentation agreement

WAC 173.201A: Water Quality Standards for Surface Waters of the State of Washington: applies to repairs conducted to achieve water quality standards

HEALTHY LAKES, STREAMS AND WETLANDS, OPEN SPACE, NATURAL AREAS AND GREENBELTS. 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. These properties also provide habitat to wildlife and help to preserve the tree canopy and native vegetation.

FACTORS IN OTHER OUTCOMES

Improved Mobility; Existing and Future Infrastructure – Much of the drainage system within Bellevue is under streets and sidewalks. Preventive maintenance of the system aids in the overall planning, safety and maintenance of the transportation system.

PURCHASING STRATEGIES in the HSE outcome:

Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner.

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0289	Utilities: Number of surface water claims paid due to system failure	Years	0	3	0.5	2	2
140.0290	Utilities: Number of surface water claims paid greater than \$20,000 due to system failure	Years	0	0	0	0	0
140.0298f	Utilities: Percent of NPDES required public infrastructure inspections completed	Years	90.92%	477.39%	100%	100%	100%
140.0301f	Utilities: Percent of surface water planned preventive maintenance work orders completed	Years	100.2%	100%	100%	100%	100%
140.0380	Utilities: Total cost of Storm and Surface Water claims paid	Years	\$0	\$21,771	\$6,250	\$25,000	\$25,000

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses (with the exception of the new Skilled Worker FTE listed below). The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery. New FTE and/or operating expense requests are listed as needed.

In 2016, Utilities reorganized the Operations and Maintenance division to create a new Compliance Manager position that oversees the Water Quality and the Storm and Surface Water sections. This position was created by repurposing the previous NPDES coordinator position upon retirement of the previous FTE and incorporating the duties of that position into the Compliance Manager role supported by the Water Quality and Storm and Surface Water Superintendents. This did not result in any new costs but is a change in previous proposals as proposal 140.64NA has been incorporated into this proposal and others to account for the reorganization of duties.

One new Skilled Worker FTE is being added, starting in January of 2017. The total cost impact is as follows; 2017 \$93K (\$89K Salary & Benefits, \$4K Supplies and Opp Exp), 2018 \$94K (\$93K Salary & Benefits, \$1K Supplies and Opp Exp)

\$75k in 2017 and 2018 is included in this proposal for a study of Regional Detention Pond Major Maintenance needs. \$100K is included for 2017 for required maintenance of the Meydenbauer Bay outfall.

5B: Are one-time expenditures included in this proposal?

2017: \$50K Utility Vehicle for the new FTE (1FTE – Skilled Worker)

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	11.75	11.75
LTE	0.00	0.00
Total Count	11.75	11.75

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	875,204	731,980
Personnel	1,118,919	1,163,107
Revenue	0	0
Rev-Exp Balance	-1,994,123	-1,895,087

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Section 1: Proposal Descriptors

Ranking: 21

Proposal Title: Utility Planning and Systems Analysis

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.63NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.63NA

Primary Staff: Pam Maloney, x4625

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

This proposal supports utility planning and analysis for the drinking water, wastewater, and stormwater systems. Demand for Utility services changes over time, necessitating periodic assessment of their capacity and integrity, impacts on the natural environment, and opportunities for improvements. System analysis assesses current utility system capacity, integrity, and condition, and responds to customer requests for data, such as available sewer capacity, available water for fires or emergencies, and stream flow information. Stream health indicators are important in part because stormwater is conveyed via local streams and influences their condition. Utility System Plans guide projects and programs for a 20-year horizon, and are updated periodically as required by state or local requirements. One time studies measure specific system capabilities and needs, evaluate how to optimizing water rights or plan for future facility needs.

Section 2b: Performance Narrative

Performance metrics indicate:

- Whether System Plan updates for each utility comply with state and local mandates.
- Whether stream flows and habitat health indicators are stable, improving, or declining.
- Responsiveness to customer requests for current systems information
- Whether Utility CIP projects are constructed in time to avoid negative customer and environmental impacts (e.g. sewer overflows for lack of capacity, or development delay awaiting capacity).
- Whether Utility systems meet target service levels (e.g. water pressure and flow)
- Whether Bellevue's floodplain management provides sufficient protection for developers and the environment.

Section 3: Responsiveness to Request For Results

System Planning provides assurance that Bellevue's drinking water, wastewater, and stormwater systems will continue to provide reliable services at a reasonable cost while protecting the natural environment.

What does this proposal buy? System Planning is a mission-critical body of work to collect and analyze information about utility system performance to inform efficient operations, quantify capacity, and identify problems or deficiencies. Utilities systems include all of the built and natural components necessary to provide utility services. Bellevue's utility systems, valued at over \$3.5 billion, include pipes, water storage reservoirs, water and sewer pump stations, hydrants, valves, culverts, detention ponds and other facilities that deliver clean drinking water; collect and remove sewage; and collect, hold, and convey stormwater runoff.

Computer models 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 capacity and potential sewer overflows (sewer). Computer models and trend analysis rely on up-to-date, accurate information. Systems analysis costs include professional services contracts for one-time technical studies (storm, water, sewer) as well as on-going contracts for stream quality indicators (insects), flow gauges and maintenance, and investigations for invasive species infestations. Modeling assures the systems are operated efficiently, answers

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developer's questions about capacity, identifies potential deficiencies, and allows rapid response for emergencies. This proposal includes funding for development of modern, efficient and more accurate sewer system models for parts of the City with significant re-development or where capacity is a concern.

The proposal includes Bellevue's floodplain management program--the basis for reduced flood insurance costs for Bellevue citizens. The program includes 3rd party audits to evaluate Bellevue's floodplain activities against best management practices and provides comparisons to other jurisdictions across the nation. Storm analyses includes monitoring stream health based on fish usage and other biological indicators that respond to cumulative management actions and capital programs.

System plans and targeted studies identify, quantify, and recommend solutions to current and anticipated problems to increase operational efficiency and reduce expensive emergency situations. This proposal includes one time budget for performing a water well and rights assessment for emergency supply, a study assessing the water system's vulnerability to earthquakes as part of a regional cooperative effort with other water purveyors, completion of the Goff Creek basin study, water chemistry sampling on the Newcastle Tributary to inform future CIP projects, and for water quality retrofit opportunities for Kelsey Creek where salmon pre-spawn mortality has been very high. Water, Sewer, and Stormwater System plans require periodical updates; all have been updated in the last two years so are not included in this proposal.

This proposal includes no changes to staffing levels, which is funding for FTE/LTE staffing of 34% Utilities Planning Manager, 1 senior water engineer (modeling water/wastewater), 1 water/wastewater engineer (capacity analysis), 2 senior stormwater engineers (modeling/monitoring/natural drainage practices), 1 stream biologist, 50% administrative support, and 25% Assistant Director for Engineering. This proposal includes funding for 2 student interns who provide efficient data collection, management, and basic analyses for all three utilities.

Stakeholders: City-managed computer models allow rapid response to developer requests for quantifying system capacity, for emergency response, and provide in-house ability to quantify the impact of City initiatives such as rezones. Fire, PCD, and Development Services rely on Utility system analysis for future zoning, and building and planning permits. O&M use systems analyses to optimize operations of water reservoirs, water and sewer pump stations, and stormwater detention ponds. Cascade Water Alliance, King Co. Wastewater, and Wash. Dept. of Health (DOH) require water and wastewater forecast and demand data. Regional partners rely upon and help support USGS gages, and use biological indicators in support of salmon recovery efforts.

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 minimum requirements as outlined in the Code of Federal Regulations: 44 CFR Chap. 1, subpart B. This proposal develops the volume of drinking water lost to system leakage as required annually by DOH to satisfy the Water Use Efficiency Rule. Annual water use and consumption forecasts are required by Bellevue's contract with the Cascade Water Alliance. Storm system plans are required by city policy to be updated every 10 years.

Why is service level appropriate / Is it scalable? This proposal maintains the current level of service, which is the minimum viable level. Between system plan updates (which were recently completed) one-time, targeted studies are funded to plan proactively for utility system needs or to respond to issues identified in System Plans. The proposed budget funds completion of one stormwater basin study and professional services for technical studies specific to each utility. Technical studies could be deferred, but budgeting for them in the years between System Plan updates smooths rate impacts. Engineers and other technical staff have specialized expertise, but are cross-trained to support each other so we can maintain lean core staffing levels while

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providing ongoing inter-departmental support. Student interns provide cost-effective supplemental support.

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors. Council Strategic Target Areas: Smart management of utility systems by analyzing their capacity and planning for their needs is foundational to a HIGH QUALITY BUILT ENVIRONMENT, protects the NATURAL ENVIRONMENT, and results in a HIGH PERFORMANCE GOVERNMENT that provides critical, high quality water, storm and wastewater services. Community Values are reflected: Utility planning assures Bellevue will continue providing utility services and infrastructure that ensures public health and protects the environment, for current and future generations.

Built and Natural Environment primary factors of HSE are addressed by this proposal: This proposal supports Reliable and Efficient Water, Storm, and Wastewater management; delivery of Clean Water, and protects Healthy and Quality Open Spaces, particularly streams and lakes. Planning identifies what is needed to provide 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 both for current operations and future customers.

HSE Purchasing Strategies--Built Environment: System Planning assures water is delivered reliably, efficiently, and in an environmentally sustainable manner. It identifies actions that support management of stormwater in an environmentally reliable, efficient, and sustainable manner. Natural Environment: Stormwater basin planning helps restore, preserve, protect and enhance Bellevue's streams. Stream studies support biodiversity, native plants and animals.

This proposal supports other Primary Outcomes: Responsive Government (Strategic Leadership, Customer-Focused Service, Stewardship of the Public Trust); Economic Growth & Competitiveness (Infrastructure Development that plans intentionally for growth; Infrastructure for Utilities) by assuring that development is not slowed by utility system capacity and that customers receive high value at reasonable cost for utilities services.

Innovations/Efficiencies: Planning identifies potential efficiencies as new technologies emerge, opportunities arise, or operations can be streamlined. For example, Bellevue's existing emergency wells will be analyzed to determine whether they can supplement regional water supply during an outage, which may offset or reduce the need for additional reservoir storage. Planning for a second facilities maintenance yard will reduce inefficiencies of up to 25% of field staff time spent driving between the existing Eastgate Yard and their work assignments.

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0045f	Utilities: Stream Quality Indicator Trend - Insect samples (Healthy Natural Environment Indicator)	Years	1.04		1	1	1
140.0052	Utilities: Rainfall and Flow data downloaded and available for customer access each month (Storm)	Months	Yes	Yes	Yes	Yes	Yes
140.0104f	Utilities: Percent of requests for available wastewater capacity completed within 2 weeks	Years	0%	100%	100%	100%	100%
140.0305	Utilities: Structural flooding occurrences for storms less than a 100 year storm event (Storm Water)	Years	49	0	1.25	5	5
140.0307f	Utilities: Percent of requests for fire flow data provided within 2 weeks (Water)	Years	95.92%	95.53%	100%	100%	100%
140.0414	Utilities: Has lack of system capacity restricted or prevented any new development or redevelopment (System Capacity Planning)	Years	No	No	No	No	No

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

Costs were adjusted for E-fishing for species analysis (from \$7500/yr to \$10,000/yr); stream water quality indicator B-IBI analysis (from \$20,000/yr to \$35,000/yr); and for management of Bellevue's stream gages (from \$15,000/yr to \$25,000/yr). The increases reflect actual costs to deliver minimum required analyses.

5B: Are one-time expenditures included in this proposal?

One time cost of \$200,000 for analysis of needs for a second utilities maintenance yard, \$250,000 to start seismic vulnerability assessment of the water system in cooperation with other regional water purveyors; \$350,000 to perform a water wells and rights assessment for emergency supply; \$110,000 to complete the Goff Creek Basin Study and to scope and collect data for the next stream basin study; \$20,000 for water chemistry sampling on the Newcastle Tributary to inform future water quality CIP work; \$5000 for milfoil management in Mercer Slough (in cooperation with Parks); \$115,000 for professional services and temporary help to develop sewer models in areas where system capacity is of concern; and \$150,000 for storm water quality research in the Kelsey Cr. Basin to reduce salmon pre-spawn mortality.

5C: Are dedicated revenues included in this proposal?

Proposal costs are entirely supported by Utility rates.

5D: Are changes to the existing service levels included in this proposal?

No.

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	6.09	6.09
LTE	0.00	0.00
Total Count	6.09	6.09

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	843,272	917,499
Personnel	898,930	936,278
Revenue	0	0
Rev-Exp Balance	-1,742,202	-1,853,777

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Section 1: Proposal Descriptors

Ranking: 22

Proposal Title: Environmental Stewardship Initiative
Outcome: Healthy and Sustainable Environment
Proposal Number: 115.24NA **Primary Dept:** Planning & Community Development
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 115.24NA **Primary Staff:** Jennifer Ewing, ext. 6129
Fund: General Fund

Section 2: Executive Summary

The Environmental Stewardship Initiative (ESI) is a model “One City” initiative, which leverages resources across departments and community partners to improve environmental sustainability throughout the city and our municipal operations. ESI leads programming and policy analysis, and provides measurable cost savings, to directly address the Healthy & Sustainable Environment outcome and Council’s strategic target areas of High Quality Built and Natural Environment, Regional Leadership, and High Performance Government. By managing the implementation of the ESI Strategic Plan, ESI provides the City with strategic direction, key performance metrics, and program implementations that result in energy efficiency, greener buildings and infrastructure, cleaner transportation, tree canopy management, healthy natural systems, greenhouse gas emissions reductions, and an engaged public.

Section 2b: Performance Narrative

ESI oversees a portfolio of projects and programs to improve the quality of the built and natural environment in the city, which are measured by a suite of performance measures which affect two overall outcomes: citywide greenhouse gas emissions and the percent of residents who think Bellevue is doing a good job creating a healthy natural environment. The initiatives in this proposal will have a measureable impact on the following ESI performance indicators: citywide tree canopy coverage, residential energy consumption, renewable energy use, and the number of people actively engaged at ESI events. Reducing greenhouse gas emissions requires interdepartmental coordination and public private cooperation, and these efforts are managed and measured by reporting on the implementation progress of the ESI Strategic Plan. All of the activities in the proposal will address the overarching outcome of reducing community greenhouse gas emissions, which takes into account the energy use and emissions from our buildings, vehicles, waste, and

Section 3: Responsiveness to Request For Results

ESI is requesting a budget allocation for ongoing initiatives and one-time projects, designed to make a major impact in the factors and indicators of the Healthy & Sustainable Environment outcome and the ESI KPIs. ESI manages a suite of initiatives designed to improve environmental performance and save resources throughout the City of Bellevue, and reduce greenhouse gas emissions by 2%/year. To achieve the citywide outcomes of greenhouse gas emissions reduction and improving the quality of the built and natural environment, ESI works with interdepartmental staff, businesses and residents, as well as regional and national partners to achieve those objectives. The program leads the development of policies and initiatives managed by ESI, and coordinates with other departments to maximize the environmental benefit of interdisciplinary policies and programs. ESI’s priorities address both the Built and Natural Environment Factors of the Healthy and Sustainable Environment outcome, in particular the following sub-factors: Sustainable Building Practices, Renewable Clean Energy, Clean Air, Healthy and Quality Open Spaces, and Stewardship and Education.

ESI acts in accordance with the City’s Council Vision regarding regional leadership and a high quality built and natural environment, and is further directed by the Comprehensive Plan, ESI Strategic Plan, Economic Development Strategy, Resource Conservation Management Plan, the Mayor’s Climate Protection Agreement,

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the K4C Joint Commitments, as well as state and local policies. The Environmental Element of the Comprehensive Plan provides the key policy direction driving ESI's work. The ESI proposal specifically responds to the following policies in the Comprehensive Plan: promotion and investment in energy efficiency and renewable energy (EN-4); development of a greenhouse gas emissions reduction target (EN-6); development of climate change adaptation strategies (EN-7); regional leadership on environmental issues (EN-8); education and outreach on environmental issues (EN-9); increasing the citywide tree canopy to 40% (EN-12); and promoting the use of alternative fuels (EN-54).

This proposal provides an existing 1.0 FTE employee, along with a request for ongoing support and one-time projects to create measurable progress toward the KPI targets, address the directives in the Comprehensive Plan, and to address the HSE sub-factors. The ESI program was not funded in the last budget cycle, but the ESI FTE was funded through the Comprehensive Planning budget. The lack of funding in 2015-2016 constrained the capacity of ESI to fully deliver on existing priorities and to expand ESI's portfolio of initiatives to have a greater impact on reducing greenhouse gas emissions. The program could be significantly improved by restoring historical funding levels from when ESI was initiated, which would provide greater ability to deliver measurable results through the following activities:

BUILT ENVIRONMENT AND NATURAL ENVIRONMENT (ALL SUB-FACTORS)

1. UPDATE ESI STRATEGIC PLAN

ESI manages the implementation of the ESI Strategic Plan, and the City's environmental stewardship efforts have been directed by this plan since the inception of ESI. The first ESI Strategic Plan spanned from 2008-2013, and the updated plan from 2013-2018. This plan has been essential to guiding the work of ESI and establishing citywide priorities and strategies for preserving and enhancing the natural and built environment. The plan has helped to spur interdepartmental coordination and develop new performance metrics for measuring progress. 51% of the strategies in the current ESI plan have been implemented to date, and 100% will be implemented by 2018. The updated plan will address the directives in the Comprehensive Plan to establish an updated greenhouse gas emissions reduction target (EN-6), (e.g. reducing emissions by 35% by 2035) and will include a suite of policies, programs, and actions to achieve that target. The plan will consider a broad range of strategies: capital investments, operational improvements, enhanced services, changes to regulations (codes and compliance), incentives, education, community outreach, training, and other programs. The planning process will serve as an opportunity to engage the public, City departments, and the Council and establish an agreed target to reduce greenhouse gas emissions, to be adopted by Council and incorporated into the Council Vision. This target will provide key policy direction for ESI and a target of 35% by 2035 would cut 549,000 Tonnes of CO₂e citywide, the equivalent of taking 115,000 cars off the road.

The updated strategic plan will also include a plan for the future demands on the built and natural environment by analyzing the potential long-term impacts of climate change, per the direction in the Comprehensive Plan (EN-7), and will provide strategies for enhancing our resiliency to flooding, landslides, high heat events, and other anticipated long-term impacts. The updated ESI Strategic Plan will serve as a citywide workplan for managing environmental strategies and will address both the Built and Natural Environment Factors, and address all sub-factors in both areas.

2. REGIONAL LEADERSHIP AND COLLABORATION

ESI is a model program for executing Council's vision of regional leadership, which not only enhances our reputation as an environmental leader, but allows us to leverage our small investments to access resources and save significant amounts of money. ESI is involved in several collaborative activities which leverage our resources to support the City's HSE goals, which are budgeted as association dues. ESI participates in the King County-Cities Climate Collaboration (K4C), which provides ESI with access to a suite of best practice policies

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and programs which can be tailored and adapted to our city, which supports the achievement of HSE's sustainable building practices and renewable clean energy goals and significantly reduces ESI costs. ESI is participating in a Regional Green Business Program, EnviroSTARS, with ten other jurisdictions, led by King County and the City of Seattle. This collaboration allows Bellevue to help participate in the development of the program and significantly leverage our small investment to create a robust regional certification program. These collaborative efforts are excellent examples of securing greater levels of grant funding through regional projects, as envisioned by Council. By participating in these two regional efforts, the City saves approximately \$200k/year on staffing and professional services costs which would be required to provide comparable services.

ESI is also proposing to participate in the STAR Communities program, a national framework and certification system for city sustainability, which would help achieve Council's regional leadership and high performance government goals. The program provides a comprehensive suite of sustainability performance indicators, and is used by nearly 100 leading cities to benchmark and measure their current sustainability efforts and to identify opportunities to improve environmental performance. Participating in STAR would help Bellevue to benchmark its environmental performance, incorporate new sustainability KPIs into ESI's portfolio, and provide us with access to a wealth of experts and resources to support the expansion of our environmental stewardship efforts.

3. GREENHOUSE GAS EMISSIONS MANAGEMENT SOFTWARE

In order to manage and reduce our greenhouse gas emissions, we need to measure them. To this end, ESI has licensed the Scope 5 software to enable the management and reporting of energy use and greenhouse gas emissions data. Through K4C, ESI has developed an innovative model to re-license the software to other jurisdictions, which will save the City \$23k per year. This effort has been led by the City of Bellevue, and demonstrates our regional leadership and creativity in partnering with our neighbors to support shared goals and reduce costs. We are also seeking to leverage this investment for a Department of Energy grant we are proposing on, which would bring in another \$90K in grant funding, to support more advanced analysis and of our greenhouse gas emissions, on top of our existing capabilities.

4. OUTREACH AND EDUCATION

Public outreach has been a cornerstone of the ESI program since its inception, and studies have shown that goal setting and raising awareness of energy use serves to change behaviors and reduce energy consumption by 5% (Harding and Hsiaw, 2012). ESI has consistently reached a large audience by leveraging grant funding and working closely with PSE, and seeks to increase engagement opportunities through the ESI strategic plan update process and further energy conservation and renewable energy outreach, which will require additional core funding through the budget. The funding for support staff will support these outreach efforts, and will be supplemented by additional funding for the development of outreach materials and events which will directly support the HSE Factors of both the Built Environment and Natural Environment, with a focus on Stewardship and Education.

ESI has had great success supporting the installation of renewable energy in Bellevue through two Solarize campaigns, managed by ESI in partnership with Northwest SEED, which netted 88 new solar installations, increasing renewable energy production by 559 kwh, a 50% increase. The Green Power campaign, which ESI led in partnership with PSE, encouraged residents to purchase green power through PSE, netted 543 new green power customers, \$50,000 toward a solar array at Crossroads, and saved 27,200 Tonnes of CO₂e.

ESI has also conducted significant outreach around energy conservation as part of its pursuit of the \$5 million Georgetown University Energy Prize, and has actively engaged 1000 people in 2015 and will reach at least 1200 in 2016. To be in contention for the \$5 million prize, the City needs to continue its outreach and education efforts around energy conservation in 2017 and 2018. Continued funding for outreach will enable ESI to reach

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at least 1500 people in 2017 and 2000 in 2018. Taken together, all of these outreach efforts will decrease residential energy use per capita by 4% per year, saving Bellevue residents \$2 million per year. ESI's collaborative working relationship with PSE around energy efficiency and renewable energy has helped direct PSE's resources toward Bellevue, such as with the Urban Smart Bellevue program, aimed at reducing energy use in Bellevue's downtown buildings by 3% per year, and PSE's multi-family lighting upgrade program which is targeting buildings in Bellevue to support our pursuit of the Georgetown University Energy Prize.

NATURAL ENVIRONMENT: CLEAN AIR, HEALTHY AND QUALITY OPEN SPACES

5. TREE CANOPY AND IMPERVIOUS SURFACE ASSESSMENT AND ACTION PLAN

As Bellevue faces ongoing development opportunities, the City must act to preserve and enhance its tree canopy and monitor its impervious surfaces, to achieve the Council vision as a "City in a Park". The City has adopted a citywide tree canopy target of 40% in the Comprehensive Plan, a best practice recommended by American Forests. In order to achieve this target, the City needs to measure our performance and develop a tree canopy action plan, as directed in the Comprehensive Plan. The tree canopy action plan will be led by ESI and will require interdepartmental coordination, outreach activities, policy updates, new programs, and new public-private partnerships to increase the tree canopy by 840 acres, saving the City \$8.7M in stormwater management costs. To measure performance, ESI is proposing to update the vegetation and impervious surface data, which has historically been gathered and analyzed on a regular basis, in 1999, 2007, and 2013, and will need to update this data in 2018 to understand the latest trends related to tree canopy, vegetation, and impervious surfaces, along with the impacts of the new stormwater regulations.

6. ELECTRIC VEHICLE CHARGING INFRASTRUCTURE OPERATIONS

The City currently owns and ESI operates 23 electric vehicle (EV) charging stations for the City fleet and public vehicles. These stations were originally purchased and maintained through funding from the American Recovery and Reinvestment Act (ARRA). The stations have an annual operating cost, but also generate revenue to offset those costs. Continuing to provide this infrastructure supports increased use of emissions-free vehicles in Bellevue and the City's goals related to Downtown Livability, Improved Mobility and Connectivity, and HSE's Clean Air goals. The EV infrastructure has a direct impact on reducing greenhouse gas emissions from transportation and saved 40 Tonnes of CO₂e in 2015.

This proposal addresses the outstanding strategies in the current ESI Strategic Plan which have not been initiated, including the directives to establish a greenhouse gas emissions reduction target and minimize the negative impacts of climate change through resiliency planning (proposed update to ESI Strategic Plan); along with developing a plan and policies to reverse tree canopy loss and develop specific tree canopy strategies in sub-areas and zones in Bellevue (Tree Canopy Action Plan). The proposal is related to several others which address remaining strategies in the ESI Strategic Plan: Green Revolving Loan Fund (045.90 NA, Downtown Community Development (115.37NA), Advanced Metering Infrastructure Implementation (140.69NA), and Natural Resources Management (100.09 NA).

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Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
115.5058	Community greenhouse gas emissions	Years	1,430,000	1,340,000	1,308,300	1,282,134	1,213,439
115.5061	Citywide tree canopy coverage	Years			38%	39%	40%
115.5064	Renewable energy installed in Bellevue	Years	817	1,695	1,695	1,860	2,050
115.5065	Residential electricity use per capita kWh	Years	3,860	3,870	3,754	3,604	3,460
115.5088	Percent of residents who agree that Bellevue is doing a good job of creating a healthy natural environment that supports healthy living for current and future generations.	Years	87%	87%	90%	90%	90%
115.5091	Percent of strategies in ESI Strategic Plan which have been implemented	Years	10%	25%	51%	75%	100%
115.5092	Number of people actively engaged at ESI events	Month	1,000	1,000	1,200	1,500	2,000

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

An enhanced operating budget of \$183,000 in 2017 and \$156,000 in 2018 is requested to increase ESI's ability to make measurable progress toward achieving its KPI targets. This proposal is comprised of three new requests and three requests to continue funding programs which were initially funded through grants or other departmental budgets.

New costs:

1. Update ESI Strategic Plan ~ \$100,000 in 2017
2. Outreach and Education ~ \$20,000 in professional services and \$10,000 in temporary help in 2017 and 2018
3. Tree canopy and impervious surface assessment and action plan ~ \$80,000 in 2018

Existing commitments initially funded through grants or other budgets:

1. Regional Leadership and Collaboration ~\$17,000 in 2017 and \$10,000 in 2018
2. Greenhouse Gas Emissions Management Software ~\$28,000 in 2017 and 2018 (Nearly revenue neutral)
3. Electric Vehicle Charging Infrastructure Operations ~\$5,200 in 2017 and 2018 (Revenue neutral)

5B: Are one-time expenditures included in this proposal?

1. Update ESI Strategic Plan ~ \$100,000 in 2017
2. Tree canopy and impervious surface assessment and action plan ~ \$80,000 in 2018

5C: Are dedicated revenues included in this proposal?

1. Greenhouse Gas Emissions Management Software ~\$23,000 in 2017 and 2018
2. Electric Vehicle Charging Infrastructure Operations ~\$5,200 in 2017 and 2018
3. External grants: TBD for 2017 and 2018. ESI has historically benefited from minimal grant funding from KCD and other sources.

5D: Are changes to the existing service levels included in this proposal?

Increased ESI budget will result in the ability of ESI to meet its performance targets. The funding will enable the development and implementation of a plan to reduce greenhouse gas emissions, which will benefit all residents and businesses in Bellevue by creating an actionable plan for a healthier built and natural environment. The plan will result in the reduction of greenhouse gas emissions by 549,000 Tonnes of CO2e citywide, the equivalent of taking 115,000 cars off of the road. The increased funding will foster and incentivize stewardship of the built and natural environment through education and community activities and will save residents \$2M per year. Developing and implementing a plan for achieving the tree canopy goal will save the City \$8.7M and preserve, protect, and enhance Bellevue's open spaces and natural environment.

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	1.00	1.00
LTE	0.00	0.00
Total Count	1.00	1.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	228,475	279,072
Personnel	132,199	137,739
Revenue	228,675	279,272
Rev-Exp Balance	-131,999	-137,539

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Section 1: Proposal Descriptors

Ranking: 23

Proposal Title: Utilities Department Management and Support
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.42NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.42NA **Primary Staff:** Lucy Liu, x4445
Fund: Proposal Uses More Than One Fund

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 four distinct business lines (drinking water, wastewater, storm and surface water systems, and solid waste collection), with a proposed biennial operating budget of \$292M (2017-2018), capital budget of \$221M (2017-2023), and 171.75FTEs/LTEs. Each line of business has its own unique operational and capital requirements. Because of the long lives of utility systems, Utilities' planning horizon extends 75-100 years. With its diverse service portfolio, this large and complex department requires strong leadership, strategic vision, clear guidance, and thoughtful management.

Section 2b: Performance Narrative

The performance metrics for this proposal appropriately measures performance indicators relevant to the department's leadership. These include indicators that measure the engagement of its employees, the financial strength of the waterworks utility program, accreditation by peer organizations, and the relative satisfaction of utility ratepayers.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: The Utilities Department Management and Support Team provides the leadership required to ensure the department functions as a HIGH PERFORMING governmental entity through responsible stewardship of ratepayer dollars, demonstrates REGIONAL LEADERSHIP through collaboration and effective working relationships with regional partners, and enables HIGH QUALITY BUILT and NATURAL ENVIRONMENTS through efficient and effective management of drinking water, wastewater, and storm and surface water systems, and solid waste collection.

HSE Values and Factors: The Utilities Department Management and Support Team leads the department to ensure Bellevue Utilities' customers continue to receive RELIABLE and EFFICIENT WATER, SEWER, and STORM AND SURFACE WATER services and RESPONSIBLE SOLID WASTE management services through sound management and business practices that meet with industry best practices. The team ensures STEWARDSHIP through EDUCATION and technical assistance to promote responsible water use, pollution prevention, and recycling to ensure the provision of CLEAN WATER and HEALTHY OPEN SPACES for CURRENT AND FUTURE GENERATIONS.

This proposal includes 4.0FTEs: Department Director, Deputy Director, Senior Administrative Assistant, and

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staff to lead department-wide innovation and process improvement initiatives. The Utilities Department Management and Support Team:

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.

Ensure that the City's mission, core values, and Council priorities and direction are incorporated into Utilities' operational activities and services.

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:

- 4) Work closely with Utilities Assistant Directors to:
 - a) Provide strategic and policy direction in operations and maintenance, engineering, and financial management.
 - b) Manage the day to day administration of the Department, including the budget, personnel, labor relations and customer requests.
 - c) Oversee the preparation and update of short- and long-range strategic plans to ensure Utilities' contribution to the City's overall plans and strategies
 - d) Oversee the preparation of short- and long-range financial forecasts.
 - e) Direct ongoing research into new technologies and trends.
 - f) Recruit, develop, 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.
 - g) Present Utilities' issues and recommendations on major issues requiring policy direction to appropriate advisory bodies and to the City Council.
 - h) Coordinate Utilities' activities with those of other City departments and offices to ensure a consistent approach on common projects and interests.
 - i) 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.
 - j) Ensure Utilities practices and procedures meet or exceed industry best practices (e.g., American Public Works Association accreditation and Association of Metropolitan Water Agencies Platinum Award for Utilities Excellence and Sustainable Water Utility Management Award).
 - k) Lead department-wide initiatives related to innovation, process improvement, strategy development, workforce development and optimization, and corporate communication.

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. Council-adopted financial policies direct Utilities to 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 utility 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; leverages efficiencies and opportunities to improve processes; ensures the

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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 continuity of service and financial sustainability.

Why the Level of Service Being Proposed is Appropriate

Utilities is the third largest department in the City. Resources included in this proposal ensure utility customers continue to receive the level of service they currently enjoy. 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.

Utilities has a large and diverse portfolio of services. 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.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0056	Utilities: Employee job engagement score (Annual City Employee Survey)	Years	N/A	3.85	3.6	3.6	3.6
140.0120	Utilities: Maintain a minimum Aa2 bond rating	Years	Yes	Yes	Yes	Yes	Yes
140.0306	Utilities: Utilities services customer satisfaction survey - (Citywide citizen survey)	Years	94%	94%	85%	85%	85%
140.0417	Utilities: Is the Bellevue Utilities Department an Accredited Agency?	Years	Yes	Yes	Yes	Yes	Yes
140.0418	Utilities: Percentage of Utilities customers rating Bellevue Utilities Department services as good value for the money.	Years	89%	88%	90%	90%	90%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	4.00	4.00
LTE	0.00	0.00
Total Count	4.00	4.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	150,717	148,790
Personnel	672,904	700,505
Revenue	0	0
Rev-Exp Balance	-823,621	-849,295

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Section 1: Proposal Descriptors

Ranking: 24

Proposal Title: Utility Taxes and Franchise Fees

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.34NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.34NA

Primary Staff: Martin Chaw, x7199

Fund: Water Utility Fund

Section 2: Executive Summary

Bellevue Utilities is required to pay State Utility and Business and Occupation (B&O) taxes (RCW 82.04.220 and 82.16.020), City of Bellevue Utility Taxes (BCC 4.10.025), and a franchise fee to neighboring communities that have a franchise agreement with the City to provide water and wastewater services in their jurisdiction. These payments are required by State and Local laws and binding agreements with neighboring jurisdictions. These taxes and fees are passed through directly to utility rate payers and are included in their bi-monthly utility bills.

Section 2b: Performance Narrative

Timely payment of these financial obligations is a legal requirement and is integral to the Department's standing with the State of Washington, the City of Bellevue and its franchisees. The performance metrics for this proposal is an appropriate measure as it reports on the timeliness of payments made in compliance with state and local laws and binding agreements with neighboring communities.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Compliance with Departmental legal obligations ensures that the Department remains in good standing and is seen as a HIGH PERFORMING GOVERNMENT with the State of Washington, the City of Bellevue, and its neighboring communities.

HSE Values and Factors: Compliance with Departmental legal obligations ensures that it is able to continue providing RELIABLE SERVICES to its customers and also enables the Department to serve as RESPONSIBLE STEWARDS of the public's trust for CURRENT AND FUTURE GENERATIONS.

The payment of state taxes, City taxes, and franchise fees represents a legal obligation of the Utilities Department. This obligation is entirely supported by utility rates and charges. Money to pay for franchise fees is collected from customers in the pertinent jurisdictions. By complying with these legal obligations, the Utilities Department is able to continue operating as a HIGH PERFORMING GOVERNMENT, demonstrate RESPONSIBLE STEWARDSHIP, and remain in strong standing with the State, City and its local partners so that it is able to continue providing RELIABLE water, sewer, and stormwater services, for CURRENT AND FUTURE generations.

STATE AND CITY TAXES

As prescribed by RCWs 82.16.020 and 82.04.220, the Utilities Department is required to pay State and City 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

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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 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.

FRANCHISE FEES

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.

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 adopted or approved 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.

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.

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).

The following table summarizes the tax rates imposed under the above provisions:

	Water	Sewer	Stormwater	Governing Code
STATE				
B&O Tax Rate	1.5%	1.5%	1.5%	RCW 82.04
Excise Tax Rate	5.029%	3.852%	--	RCW 82.16
CITY				
Utility Tax Rate	10.4%	5.0%	5.0%	BMC 4.10.030
FRANCHISE FEES				
Clyde Hill	9.0%	9.0%	--	**
Hunts Point	6.5%	6.5%	--	**
Medina	4.0%	4.0%	--	**
Yarrow Point	5.0%	5.0%	--	**

** Governing community agreements

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014</u> <u>Actual</u>	<u>2015</u> <u>Actual</u>	<u>2016</u> <u>Target</u>	<u>2017</u> <u>Target</u>	<u>2018</u> <u>Target</u>
140.0352	Utilities: Percentage of Utility Tax & Franchise Fee payments made by applicable due date	Years	100%	100%	100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

Utility taxes are budgeted as a fixed percentage of projected rate revenue, and therefore may increase or decrease at a different rate than inflation.

5B: Are one-time expenditures included in this proposal?

No.

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

No.

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	0.00	0.00
LTE	0.00	0.00
Total Count	0.00	0.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	10,533,320	11,020,826
Personnel	0	0
Revenue	0	0
Rev-Exp Balance	-10,533,320	-11,020,826

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Section 1: Proposal Descriptors

Ranking: 25

Proposal Title: Sewer Condition Assessment Program
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.19NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.19NA **Primary Staff:** Nate Dickey, x4889
Fund: Sewer Utility Fund

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 service 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 2b: Performance Narrative

City asset and the overall health of the wastewater system is viewed, tracked, monitored and cataloged. Wastewater views pipes and manholes via CCTV and we track the total system inspected and set the target for service levels. Indicators measure progress toward timely replacement or rehabilitation of pipes and manholes. Asset knowledge gained from condition assessment supplements timely asset replacement reducing the potential for catastrophic failure, unplanned customer service interruptions, and costly damage claims.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors.

Council Strategic Target Areas: A proactive wastewater repair program supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT by ensuring reliable public infrastructure to convey wastewater. The Condition Assessment Program ensures public health and protects the environment keeping parks and open spaces green and healthy.

HSE Values and Factors: Providing services that reliably ensure public health and protect the environment reflects the Community Values. These services use sustainable best practices that improve the wastewater infrastructure, supporting healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations.

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 identify and prioritize repairs and determine which pipe defects can be deferred for future monitoring. This data also

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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.

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.

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 to determine the severity of deficiencies and to prioritize and schedule necessary repairs. The sewer system experiences more failures as it ages. Crews have identified over 1100 sewer defects in the last several years. Coordinating repairs with Engineering and the in-house repair crew that number has been reduced to less than 550. Recently the number of new defects identified (both needing repair and for monitoring) has averaged 10 a month.

This proposal also provides funding for emergency response and claims investigation. CCTV allows staff to identify causes of pipe failure in order to minimize recurring failures, and determine who is responsible for failure.

Efficiencies/Innovations:

Condition Assessment allows for quality repairs and maintenance decisions which help reduce environmental impacts and promote public health. Additionally, the services within this proposal support claims avoidance by proactively identifying deficiencies before sewage backups impact homes or businesses. The use of these resources to investigate claims ensures only legitimate claims against the city are paid.

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.

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. 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.

Condition assessment provides the necessary information to best manage the repair, replacement, and

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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.

Factors in the Healthy and Sustainable Environment Outcome:

BUILT ENVIRONMENT:

Reliable and Efficient Water Management: Proper Wastewater Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods using ongoing sewer main/lateral/manhole repair activities. It ensures that the sewer system is adequately maintained to minimize negative impacts from sewage backups and overflows.

Additionally, it Conserves Resources by providing the best value in meeting the community needs by minimizing life cycle costs through effective asset management and minimizing claims due to sewage backups.

NATURAL ENVIRONMENT:

Clean Water; Healthy and Quality Open Spaces: Containment of sewage on the ground surfaces and in the waters of Bellevue and the reduction of wastewater overflows helps to restore, preserve, protect, enhance, and increase Bellevue's open spaces and natural environment (including biodiversity and native plants and animals). The State and Federal mandates followed by the Sewer section ensure compliance with all applicable environmental regulations, so that the natural environment and public health is protected at all times.

OTHER FACTORS:

Economic Growth and Competitiveness: 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; Traffic Flow: Performing proactive condition assessment of sewer pipes prior to pavement overlay significantly reduces the chance of a sewer system failure that would cause emergency road closures and impact traffic flow, increasing traffic congestion even further.

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Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0195	Utilities: Linear feet of wastewater condition assessment performed	Years	226,623	218,997	68,750	275,000	275,000
140.0336f	Utilities: Percent of wastewater system video inspected	Years	6.8%	6.39%	2%	8%	8%
140.0338	Utilities: Number of new wastewater pipe defects identified for repair or replacement	Years	63	35	100	100	100

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

The changes seen in FTEs and base operating costs related to this request do not represent a net increase in the total number of authorized departmental FTEs or expenses. The proposed FTE/operating expense changes seen in this proposal reflect a department-wide effort to better align existing resources to departmental service delivery.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	4.45	4.45
LTE	0.00	0.00
Total Count	4.45	4.45

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	132,018	136,486
Personnel	481,794	500,538
Revenue	0	0
Rev-Exp Balance	-613,812	-637,024

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Section 1: Proposal Descriptors

Ranking: 26

Proposal Title: Cascade Regional Capital Facility Charges
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.37NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.37NA **Primary Staff:** Martin Chaw, x7199
Fund: Water Utility Fund

Section 2: Executive Summary

The City's wholesale water supplier, Cascade Water Alliance (CWA), establishes rates to cover the cost of providing water to its members. Bellevue is a member of the CWA. One component of these rates is a fee assessed on each new connection for the equitable recovery of growth-related costs pertaining to Cascade's water supply system. RCFCs are collected and paid as outlined in an interlocal contract with the Cascade Water Alliance (December 15, 2004). The City has a policy of ensuring that "growth pays for growth" (City Comprehensive Financial Management Policies 10.1.III.A). Under this policy it is the responsibility of the party seeking Utility service to make and pay for any extensions and/or upgrades to the Utility systems that are needed to provide service to their property; Bellevue Utilities passes these charges directly through to customers connecting to the water system.

Section 2b: Performance Narrative

The performance metrics for this proposal appropriately measures the revenue collected and subsequently paid to the CWA for connections to the water system, consistent with the interlocal contract.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Ensuring a consistent and reliable source of quality drinking water is in alignment with REGIONAL LEADERSHIP and HIGH PERFORMANCE GOVERNMENT. Access to quality drinking water and management of this natural resource is a required precursor to supporting ECONOMIC DEVELOPMENT, a HIGH QUALITY BUILT AND NATURAL ENVIRONMENT, and a GREAT PLACE WHERE YOU WANT TO BE. The Cascade Water Alliance (Cascade).

HSE Values and Factors: Prudent management of this natural resource demonstrates RESPONSIBLE STEWARDSHIP, is needed to ensure a source of RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER for CURRENT AND FUTURE GENERATIONS.

This proposal represents the collection of fees from new connections and the payment of the same fees to the Cascade Water Alliance. Members include the Cities of Bellevue, Issaquah, Kirkland, Redmond, and Tukwila, and the Covington, Sammamish Plateau, and Skyway Water/Water and Sewer Districts. These payments serve as a source of funding for the CWA to fund its water delivery infrastructure. Similar to Bellevue Utilities operations, CWA operations is highly capital intensive and RESPONSIBLE STEWARDSHIP through the construction, maintenance and replacement of this capital infrastructure is imperative to ensuring a QUALITY BUILT ENVIRONMENT, RELIABLE delivery of water services, and provision of CLEAN WATER to the community for current and future generations.

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

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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.

RCFCs are collected and paid as outlined in an interlocal contract with the Cascade Water Alliance (December 15, 2004). 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.

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").

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.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0354	Utilities: Percent of Monthly Regional Capital Facility Charge (RCFC) reports submitted by due date	Years	25%	25%	100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

No.

5B: Are one-time expenditures included in this proposal?

No.

5C: Are dedicated revenues included in this proposal?

This proposal is fully funded through connection fees charged to Utility rate payers

5D: Are changes to the existing service levels included in this proposal?

No.

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	0.00	0.00
LTE	0.00	0.00
Total Count	0.00	0.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	2,000,000	2,000,000
Personnel	0	0
Revenue	2,000,000	2,000,000
Rev-Exp Balance	0	0

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Section 1: Proposal Descriptors

Ranking: 27

Proposal Title: Fiscal Management

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.49NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.49NA

Primary Staff: Martin Chaw, x7199

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

The Fiscal Management Team operates as an internal support function and supports the daily financial operations of the Utilities Department by monitoring and reporting on the Utilities financial condition, conducting rate evaluations to ensure financial sustainability, protecting the City's investment by maintaining adequate operating reserves, and acting in the best interest of the ratepayers. Financial management of the Utilities are dictated by financial policies per the City's Comprehensive Financial Management Policies (10.1). By adhering to these financial policies, taking a long-term approach to financial planning, and practicing vigilant financial monitoring and management, Bellevue Utilities has earned a Aa1 bond rating (the highest rating possible for a utility our size) and is financially prepared to meet both operational and infrastructure replacement needs. In addition, the Team closely collaborates with city-wide partners and regional utilities partners.

Section 2b: Performance Narrative

The performance metrics for this proposal appropriately measure the internal support service provided by the Fiscal Management Team to departmental management in their monitoring and administration of departmental resources.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Through prudent financial planning and working closely with its fiscal management peers in other cities, the Fiscal Management Team is able to function as a HIGH PERFORMING governmental entity, demonstrate REGIONAL LEADERSHIP, and facilitate a QUALITY BUILT ENVIRONMENT through long-term financial rate models and financial planning.

HSE Values and Factors: Prudent financial management is in alignment with RESPONSIBLE STEWARDSHIP and by demonstrating prudent financial planning, the Fiscal Management Team is able to support RELIABLE AND EFFICIENT management of water, sewer, and stormwater systems and the provision of CLEAN WATER for CURRENT AND FUTURE GENERATIONS.

Why this proposal is important: The Utilities' Fiscal Management Team, is comprised of 6.0FTEs and supports four separate utilities (water, sewer, stormwater, solid waste), each with its own unique operational and capital requirements. A core HSE Factor demonstrated by this Team is RESPONSIBLE STEWARDSHIP. We do this by working closely with staff throughout the Utilities Department to facilitate budget development, budget monitoring/reporting, data analytics, and general internal consulting services. Through these services, the Team is able to support delivery of Department services. This includes supporting the BUILT ENVIRONMENT and its delivery of RELIABLE AND EFFICIENT water, sewer, and stormwater services and RESPONSIBLE SOLID WASTE MANAGEMENT and supporting the NATURAL ENVIRONMENT through supporting services that enables delivery of CLEAN WATER, HEALTHY SPACES, and ENVIRONMENTAL STEWARDSHIP.

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A description of the Services provided by this Team is included in this proposal below.

Budget Development and Monitoring: State law requires the development of an annual or biennial 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 each Utilities' biennial budget in accordance with the City's comprehensive financial management policies and utility financial policies. The budget 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.

Ratemaking and Forecasting: These activities are closely tied to budget preparation, and include highly technical activities that require a comprehensive knowledge of utility rate setting methodologies and a deep understanding of Utilities' business. The Utilities rate planning horizon includes up to 75 years. Rate revenues are the primary source of funding for Utilities, so the development of accurate rates to fully fund each utility's forecasted operating and capital needs is critical. 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.

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.

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; preparing specialized cost of service analysis; development of cost recovery strategies; fiscal evaluation of Departmental initiatives such as the Automated Metering Infrastructure initiative.

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Program Support: Staff provides ongoing support for Utilities' involvement with outside agencies, such as the Cascade Water Alliance and MWPAAC; Utilities capital improvement projects (through budgeting and monitoring); City-wide systems and initiatives (e.g., JDE reports, Mobility and Infrastructure Initiative); Technical support for other departments (e.g., timekeeping support for Civic Services Department, analytical support for Budget One planning teams); NPDES, and other issues.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0128f	Utilities: Operating expenditures vs. amount budgeted	Years	100.86%	98.93%	100%	100%	100%
140.0470	Utilities: Percentage of monthly financial reports distributed to workgroup managers within 10 days of reporting period end	Years			100%	100%	100%
140.0471	Utilities: Percentage of monthly financial reports distributed to BUD within 30 days of reporting period end	Months			100%	100%	100%
140.0472	Utilities: Percentage of quarterly financial reports distributed to the Budget Office within 45 days of the end of the quarter	Months			100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

No.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	6.00	6.00
LTE	0.00	0.00
Total Count	6.00	6.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	122,188	71,400
Personnel	724,694	755,304
Revenue	0	0
Rev-Exp Balance	-846,882	-826,704

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Section 1: Proposal Descriptors

Ranking: 28

Proposal Title: Storm and Surface Water Pollution Prevention

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.31DA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.31DA

Primary Staff: Susan Fife-Ferris, x5216

Fund: Storm & Surface Water Utility Fund

Section 2: Executive Summary

Storm and surface water pollution prevention programs are a key element to achieving Utilities' mission to actively support a healthy and sustainable environment. 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 water flowing into storm drains in Bellevue flows untreated directly into our local streams, lakes, and wetlands. Under this proposal, staff provides mandated residential public education and outreach as required by the National Pollutant Discharge Elimination System (NPDES) Phase II Permit, increasing understanding of storm and surface water issues, and promoting behaviors that prevent pollution locally and regionally. In addition, staff manages and oversees storm and surface water pollution prevention volunteer programs and provides pollution prevention technical support.

Section 2b: Performance Narrative

The performance measures included with this proposal highlight whether the City is in compliance with the NPDES Permit public education and outreach requirements, and level of participation in the education and outreach programs offered.

Section 3: Responsiveness to Request For Results

The mission of Bellevue Utilities is to actively support public health and safety, quality neighborhoods, and a healthy and sustainable environment and economy by effectively managing storm and surface water. Storm and surface water pollution prevention programs are a key element to achieving this mission.

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 and sustainability of our local and regional waters and the environments they support. In 2011, a City survey confirmed that almost half of residential respondents did not know that local storm drains connect directly to waterways or that water flowing down storm drains is not treated. Other surveys have shown that 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 increase in awareness of surface water pollution issues and changed behavior. This proposal directly targets increasing public awareness and changing behaviors through storm and surface water pollution prevention public education and outreach programs.

This proposal provides the following programs that have a direct and immediate impact on the health and sustainability of the local and regional environment:

- Stream Team Volunteer Programs: Stream-side restoration projects done by volunteers give citizens 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 (Salmon Watchers) and lookouts

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for other types of fish (Peamouth Patrols), and insect collections.

- Stream Monitoring Programs: Involving professionals, student interns, and volunteers, local streams are monitored for the types and health of fish and invertebrates, and assistance is provided for restoration projects and riparian field investigations.
- Public Storm Drain Marking: Through the use of summer student interns, all public storm drains are marked and maintained with storm drain markers that identify the destination of water in a particular drain, raising public awareness to decrease pollution.
- Used 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.
- Car Wash Alternatives 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. Providing residents and fundraising groups with alternatives to washing cars, such as taking cars to the local car wash or selling car wash coupons, has an immediate impact on pollution prevention.
- Natural Yard Care Program: Residents that learn natural yard care techniques use less fertilizer, chemicals, and other toxic materials, and frequently pass these practices on to neighbors. All this adds up to less toxics being washed off during storms.
- “Scoop the Poop” and “Poo-lution” Programs: 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.
- Watershed Outreach Campaign: A particular watershed is targeted with educational information on specific behaviors that the City would like practiced to prevent pollution, residents pledge to do certain behaviors and are sent a tool to aid in that behavior change, and response rates through pledges are tracked.
- School Programs: School curriculum and in-class workshops are provided to educate local students about our local streams, lakes, and waterways, and what choices they can make that will have a positive impact on the local environment. School programs include the Carbon Yeti educational campaign, which has been nationally recognized and replicated state-wide by the Department of Ecology and other organizations, Powerful Choices for the Environment, a 2-day cross-discipline cooperative effort with the Bellevue School District (BSD) that is integrated into the 6th grade science curriculum, “Be the Solution” curriculum that is offered in some BSD middle and high school science classes, in-class pollution prevention workshops for elementary students, field trips to streams, and hands-on demonstration booths at science fairs.
- General Development of Education and Outreach Pieces: Though both local and regional cooperation (STORM, a regional partnership, and “Puget Sound Starts Here”), staff develops posters, displays, and other educational and outreach materials, along with media outreach, including news stories, public service announcements, and public presentations.

The programs anticipated by this proposal provide the basic service levels required to comply with the following mandates and recognize that continued compliance and success depends on keeping customers engaged and aware through constant and consistent messaging and information:

- National Pollutant Discharge Elimination System (NPDES) Phase II Permit, effective August 2013 and runs through 2018: Requires the City to provide public education and outreach programs designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater 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.

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Staff's proactive approach to educating residents on how to prevent pollutants from entering the storm drainage and surface water systems is far less expensive than cleaning up pollution spills or repairing damage to waterways caused by pollution. While immediate impacts are the primary focus, in the long term the focus of many activities provided under this proposal are to change behaviors.

The activities and programs offered under this proposal directly support the following values:

- Services that reliably ensure public health and protect the environment.
- Stewardship and education that sustain a healthy environment for current and future generations.
- A healthy natural environment that supports biodiversity.
- A nature experience in which to live, work, learn and plan.

The activities and programs offered under this proposal support the Council Vision of a High Quality Natural Environment.

This proposal directly speaks to the NATURAL ENVIRONMENT Subfactors of CLEAN WATER, HEALTHY AND QUALITY OPEN SPACES, and STEWARDSHIP AND EDUCATION: 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 member's awareness of their choices and the consequences of those choices on local waterways. In addition, preventing pollutants from flowing into the City's waterways supports a clean and healthy living environment in the City. Through programs, such as the Natural Yard Care program, 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 to homeowners to maintain critical areas and stream-side property, resulting in a cleaner living 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.

This proposal addresses the following purchasing strategies:

- Through the various public education and outreach programs, we encourage the public to "manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner."
- Through stream-side restoration projects and stream monitoring activities, we "restore, preserve, protect, enhance, and increase Bellevue's open spaces and natural environment (including biodiversity and native plants and animals)."
- Programs such as Stream Team and Natural Yard Care "foster and incentivize stewardship of the natural environment through education and community activities."
- The Used Motor Oil Recycling and Car Wash Alternative Programs help to "ensure compliance around the use of toxic materials and their disposal," and "ensure compliance with applicable environmental regulations."
- All programs that help the City comply with the NPDES Permit, also help "ensure compliance with applicable environmental regulations."

Ultimately, all the activities and programs provided under this proposal contribute to a HEALTHY AND SUSTAINABLE ENVIRONMENT, both in the City and throughout the region, and ensure that the City stays on the forefront of protecting and retaining natural systems and building for a sustainable future.

All programs are either rate- or grant-funded, and are subject to review by the Council, Environmental Services Commission, and granting agency. 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

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partnerships with other cities and regional programs that reduce overall outreach costs. Staff works in partnerships with the Department of Ecology (NPDES Permit oversight), 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 and North Lake Washington cities' Stormwater Outreach Group), WRIA 8 (Cedar/Sammamish/Lake Washington Watersheds), Glendale Golf Course (program partner), and other private stream-side Owners (program partners).

If this proposal is not funded, 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. Additionally, the City would not be able to participate in regional planning and coordination efforts and not be able to advocate for City customers at the regional level. 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.

This proposal a base level of service, and costs cannot be adjusted downward without reducing the quality of storm and surface water pollution prevention 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.

This proposal supports the work of the proposal for the Citywide NPDES Management Program, promoting the protection of water quality and uses of our lakes, streams, and wetlands.

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Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0015	Utilities: All public storm drains continue to be marked with message "Don't Pollute - Drains to Stream"	Years	Yes	No	Yes	Yes	Yes
140.0016	Utilities: Number of volunteers participating in stream team events	Years	158	93	100	100	100
140.0017	Utilities: Number of people reached through storm and surface water pollution prevention events	Years	1,430	1,800	1,200	1,200	1,200
140.0018	Utilities: Number of middle and high school students reached by "Be the Solution" curriculum	Years	N/A	210	360	450	450
140.0019	Utilities: Compliant with NPDES permit outreach requirements	Years	Yes	Yes	Yes	Yes	Yes
140.0036	Utilities: Number of elementary students reached by storm and surface water pollution prevention in-class presentations or field trips	Years	2,040	2,000	1,500	1,500	1,500
140.0342	Utilities: Percentage of Bellevue School District 6th Graders that attend the Powerful Choices curriculum.	Years	68.99%	74.97%	80%	80%	80%
140.0375	Utilities: Number of attendees for Fall Natural Yard Care Classes	Years	316	0	160	160	160

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

No

5B: Are one-time expenditures included in this proposal?

No

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue and anticipated grant funding.

5D: Are changes to the existing service levels included in this proposal?

No

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	2.43	2.43
LTE	0.00	0.00
Total Count	2.43	2.43

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	183,702	188,876
Personnel	323,420	336,960
Revenue	0	0
Rev-Exp Balance	-507,122	-525,836

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Section 1: Proposal Descriptors

Ranking: 29

Proposal Title: Utilities Computer and Systems Support
Outcome: Healthy and Sustainable Environment
Proposal Number: 140.60NA **Primary Dept:** Utilities
Parent Proposal: None **Proposal Type:** Existing
Dependent Proposal: None **Budget Status:** Recommended
Previous Proposal: 140.60NA **Primary Staff:** Margaret Nolen
Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

The RMCS/Systems group funded by the Computer and Systems Support proposal supports delivery of efficient and cost effective utility services through leveraged technology solutions. The Utilities Department mails 5,000 utility bills weekly, collects over \$128M in revenue annually and delivers services to over 145,000 customers daily through a network of 619 miles of water and 525 miles of sewer pipe, 81 miles of rivers and streams, and 47 water reservoirs and pump stations. This proposal funds all the Utilities' software, hardware, vendor support, professional services, and department personnel who provide business automation support. Systems maintained by this group include billing, work/asset management, field worker mobility, sewer/storm condition assessment video systems, water meter reading, engineering design, and water modelling. System support include automation short and long-range planning, implementation, testing, training, process improvement analysis, and reporting.

Section 2b: Performance Narrative

Performance Measures used in 2015-2016 have been replaced in order to better reflect progress toward plan in 2017-2018. The development of the Utilities IT Strategic Plan in 2015 has given achievable goals and a governance process for IT strategic projects. Performance Measure "140.0155f Utilities: IT Strategic Roadmap Completion Rate" will capture the completed projects vs. planned during the year. Utilities Business System staff also respond to user assistance requests for necessary tasks that are unplanned and lack the size and scope of a "project". The new Performance Measure "140.0339 Utilities: Percentage of Business Systems user assistance requests completed" has been developed to show that body of work.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the resource needs of the Utilities Department in achieving the objectives of the 2016-2018 Utilities IT Strategic Plan, including department support for computing needs for utility programs, is evidence of a HIGH PERFORMANCE GOVERNMENT. By funding computer software, hardware, and services for Utilities employees, this proposal contributes to staff ability to build and maintain infrastructure to ensure a HIGH QUALITY BUILT AND NATURAL ENVIRONMENT and reliable infrastructure as a precursor to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

Technology services funded in this proposal differ from those provided by IT Department, and do not duplicate them. Effective systems solutions require a partnership with IT, and this proposal funds Utilities side of that partnership in program operations and innovation. Anticipating the budget, Utilities updated its department Strategic Plan and created its first department IT Strategic Plan in 2015 for the period 2016-2018. All Utilities workgroups, partner departments, and City IT contributed to the list of strategic goals and the plan development. Alignment of the IT Strategic Plan with the department Strategic Plan was a goal.

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Not incidentally, the plan supports HSE Factors as well: FACTOR BUILT ENVIRONMENT-RELIABLE AND EFFICIENT WATER MANAGEMENT: Several proposal initiatives support improved asset management of water, sewer, and storm infrastructure. For example, by investing in additional enhancements to our new Utilities Field Mobility system and mobile devices, we ensure that operations and maintenance crews are more responsive, accurate, and productive; their mobile devices will be synchronized to asset and work management databases when network connectivity is available instead of recording paper-based work detail for delayed back office entry. Proposal investments in mobile mapping integration with asset management will support mobile staff in verifying/updating asset location and attributes in the field; staff can edit for accuracy digitally instead of using paper map annotations.

FACTOR NATURAL ENVIRONMENT-CLEAN WATER: Funding for Water Quality systems and hardware support facilitates private infrastructure inspection and mandated reporting that ensure water quality and flood prevention.

Another factor supported by this proposal, but not called out by HSE, is FACTOR HIGH PERFORMANCE WORKFORCE- WELL TRAINED, SAFE AND EQUIPPED which is addressed with our Utility Field Mobility project planned enhancements that contribute to equipping mobile utility workers with devices and systems and training. Additionally, the FACTOR COMMUNITY SAFETY AND SUPPORT: ACCESSIBLE AND AFFORDABLE PROGRAMS is supported with the systems and devices funded by this proposal such as the Rate and Tax Relief program that offers bill discounts and tax relief for qualified low income applicants.

Utilizing enterprise and vendor solutions as much as possible, this proposal supports Utilities' share of the enterprise work/asset management system (Maximo) licensing costs, vendor support for the utility billing system (CIS), vendor support for our field workforce mobility system, and licensing for software to support engineering functions such as water, sewer, and storm modelling. The proposal also funds staff services including:

- Operations support: Answering business-related system questions
- Reporting and data mining: Creating ad-hoc and enterprise reports
- Project management, testing: Supporting upgrades, process changes, system enhancements, and fixes
- Ongoing system-related user training: Ensuring knowledge for data consistency and data quality
- Business process improvement and problem solving: Addressing operational efficiency and continuity
- System configuration, administration: Adding users, changing asset categories, and changing bill rates
- Computer Hardware: Procuring equipment for utility program needs
- Professional Services: Supporting vendor changes requested by users or mandates

IBM's Maximo work/asset management software is used to manage over 251,000 assets that make up the water, sewer, and storm water infrastructure. Maximo is also used by Parks, Transportation, Facilities, Fleet, and Fire. This 24-hour, 7-day a week work management system is critical to our ability to support HSE. The CIS system manages and bills the 38,000 accounts in Bellevue and surrounding communities. Revenues collected by CIS are the primary source of funds for Utility operations and the vendor support for CIS is funded by this proposal which supports HSE. Annually, the system bills \$128 million for utilities and collects over \$9 million in tax revenue for the General Fund. Specialized "niche software and services" are also needed for functions unique to utilities. 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, generate reports, and integrate solutions into processes; this proposal funds our planning, testing, and integration personnel. Whether cloud-based or hosted by IT, solutions are researched and evaluated by Utilities Business System staff partnering with IT.

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Staff also provide ongoing planning and analysis for Utilities systems supporting operations, including:

- Identifying new technology initiatives based on industry trends and business need;
- Performing feasibility analysis, software selection/ development, testing, and implementation;
- Positioning Utilities IT technology rollouts, minimizing impact on customer service and operations;
- Representing Utilities on the IT Change Advisory Board and Enterprise task forces;
- Planning and budgeting for replacement, upgrade, or repair of existing hardware and software;
- Providing technology communication tailored to the needs of the users in each department division;
- Updating and coordinating governance of the Utilities IT Strategic Plan.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014</u> <u>Actual</u>	<u>2015</u> <u>Actual</u>	<u>2016</u> <u>Target</u>	<u>2017</u> <u>Target</u>	<u>2018</u> <u>Target</u>
140.0155f	Utilities: IT Strategic Roadmap Completion Rate	Years			80%	80%	80%
140.0339	Utilities: Percentage of Business Systems user assistance requests completed	Years			80%	80%	80%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

Computer replacement volumes for Utilities vary depending on inventory age, so there is some variance in costs from year to year, especially since replacements are not level year over year. CIS, Maximo, and Granite XP vendor support annual increases are budgeted at vendor-projected increases, so those changes are reflected in budgeted costs. Vendor software subscriptions for new business-specific niche systems (non-enterprise software and cloud services) that were introduced in 2015-2016 also cause variations from inflation. CIS upgrade professional services costs of \$120K, which were originally budgeted for 2015-2016, are now projected for 2017 and are included in this proposal. New ongoing costs from the Utility Mobile Workforce Proposal 140.62 from 2015-2016 are now included in this proposal. As a result, Proposal 140.62 is not being proposed this budget cycle.

The attached 140.60 Proposal Addendum calls out the individual Utilities IT Strategic Plan initiatives in detail. One notable exception is the costs related to the new separate AMI Implementation Proposal 140.69NA which requires its own proposal due to its scope and duration. Another impact of the IT Strategic Plan is the need to “buy” additional GIS analyst and developer time that exceeds IT’s “baseline GTS support”. Utilities began converting infrastructure AutoCAD map drawings to native Esri starting in 2015, but that project will continue into 2017. Additional resources will help map editor and field staff users by creating programs for efficient operations.

Lastly, there are two changes in staffing costs as follows:

The Utilities IT Strategic Plan identified a greater need in Utilities Computer and Systems Support. This need is met by redeploying an FTE from Utilities Operations and Maintenance Division to this proposal.

Additionally, 30% of an FTE from proposal 140.33PA is redeployed to this proposal.

Both of these staffing redeployments represent a new cost to 140.60 with a corresponding reduction in other proposals. There is no net staffing addition to Utilities from these changes.

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

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5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	5.50	5.50
LTE	0.00	0.00
Total Count	5.50	5.50

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	788,944	840,058
Personnel	755,284	786,864
Revenue	0	0
Rev-Exp Balance	-1,544,228	-1,626,922

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Section 1: Proposal Descriptors

Ranking: 30

Proposal Title: Asset Replacement

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.47DA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.47DA

Primary Staff: Scott Pickard, x4587

Fund: Proposal Uses More Than One Fund

Section 2: Executive Summary

Consistent financial management policy dictates systematic Utility funding to replace vehicles, other work equipment and major technology systems that have reached the end of their useful lives (Comprehensive Financial Management Policy 10.1.V.C). Asset Replacement is the Utilities' equivalent of the Equipment Rental Fund and Information Technology Replacement programs. The utility vehicles, other equipment and major technology systems scheduled to be replaced in 2017-18 are needed to enable crews, inspectors, and other staff to perform services identified in other Utilities proposals. This proposal is funded from asset replacement reserves created specifically for this purpose, so there is no utility rate impact to customers.

Section 2b: Performance Narrative

The performance metrics for this proposal appropriately measure the level of reserve funding available to make current and future purchases and that required purchases are made as planned.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

COUNCIL STRATEGIC TARGET AREAS: Planning for and sufficiently funding the capital asset replacement needs of the Utilities Department consistent with financial policies is evidence of a HIGH PERFORMANCE GOVERNMENT. The vehicles, other equipment and major technology systems scheduled to be replaced in 2017-18 are needed to enable crews, inspectors, and other staff to perform services identified in other Utilities proposals, which contribute to a QUALITY BUILT ENVIRONMENT, and helps maintain a reliable infrastructure to deliver quality drinking water and to convey wastewater and stormwater runoff, all of which are needed to support ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE VALUES AND FACTORS: The vehicles, other equipment and major technology systems scheduled to be replaced in 2017-18 are needed to enable crews, inspectors, and other staff to perform services identified in other Utilities proposals, and are an integral to our ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT, and contribute to the delivery of CLEAN WATER to our customers. Managing the replacement of assets through a reserve fund to ensure stable and consistent rates demonstrates responsible STEWARDSHIP of the public's trust.

This proposal provides funding to replace vehicles, other work equipment and major technology systems that have reached the end of their useful lives. These are needed to enable crews, inspectors, and other staff to perform services identified in other Utilities proposals. As the asset replacements are funded from asset reserves (as described below), acceptance of this proposal will have no rate impact on customers.

This proposal includes the use of asset replacement reserves (see Proposal No. 140.40PA) to provide funding

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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.

Each of the assets being replaced has been reviewed and been determined to have reached the end of its useful life. The determination is based on the age of the asset, current maintenance costs, failure rates and service reliability. Asset replacement reserves are funded through annual contributions from Water, Sewer and Stormwater operating funds, currently totaling approximately \$2.0 million.

A specific list of the assets scheduled for replacement during 2017 and 2018 and the estimated replacement cost for each, is as follows:

Asset #	Description	2017 Budget Request	2018 Budget Request
3468	- 03 CHEV SILVERADO 1500	\$ 45,000	\$ -
3526	- 2004 SRECO FLEXIBLE TRAILER	4,000	-
3470	- 2004 SRECO FLEXIBLE EASEMENT RODDER	35,000	-
8993	- 88 STLY HYD UNIT/TLR	35,000	-
3023	- 98 PORTACO TLR HYD UNIT	65,000	-
3659	- 2008 FORD F450	-	90,000
3473	- 2005 STERLING L7500 JET TRUCK	-	286,700
3396	- 03 ISUZU NS400 FLATBED	-	90,000
3618	- 2008 PETERBUILT CAMEL 200 VAC-TRUCK	-	650,000
3620	- 2008 PETERBUILT CAMEL 200 VAC-TRUCK	-	650,000
	- SCADA Large Format Video Monitors	39,000	-
	- SCADA Remote Telemetry Units (RTUs)	75,000	75,000
	Totals	\$ 298,000	\$1,841,700

The replacement of assets through the use of an Asset Replacement Account is outlined in the Waterworks Utility Financial Policies (Resolution 5967 (1995)). 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." The financial policies are reviewed and approved each budget cycle by the Environmental Services Commission and the City Council.

This proposal addresses the following City-wide Purchasing Strategy:

PROVIDE BEST VALUE IN MEETING COMMUNITY NEEDS: This proposal utilizes 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.

In the short-term, this proposal provides funding to replace vehicles, other work equipment and major technology systems that have reached the end of their useful lives, and are needed to enable crews, inspectors, and other staff to perform services identified in other Utilities proposals.

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The long-term benefit of this proposal provides rate stability through the use of a reserve account, thereby preventing the replacement of expensive assets in a given year from causing fluctuations in the utility rates.

While this proposal is scalable, reductions to the levels proposed is not recommended as it could affect the City's 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 2017 and 2018 would not be replaced at least until 2019, and would expose the Utilities to risk of asset failure, loss of productivity, and negatively impact our ability to provide services identified in other Utilities proposals. This could also increase the amounts we would need to request during the 2019-2020 budget process. As noted above, deferring the replacement of these items would not provide any rate relief to customers.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0358	Utilities: Percentage to target: Asset Replacement Account balance	Years	88.57%	103.75%	100%	100%	100%
140.0360	Utilities: Percent Variance: Actual Capital Asset expenditures versus Budgeted Capital Asset expenditures	Years	84.43%	73.7%	100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

	2017	2018
Computer Hardware/Equipment	\$ 114K	\$ 75K
Transportation Work Equipment	45K	-
General Work Equipment	139K	1,767K
TOTAL	\$ 298K	\$ 1,842K

5C: Are dedicated revenues included in this proposal?

Asset Replacement Reserves – No impact to service rates.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	0.00	0.00
LTE	0.00	0.00
Total Count	0.00	0.00

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	298,000	1,841,700
Personnel	0	0
Revenue	0	0
Rev-Exp Balance	-298,000	-1,841,700

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Section 1: Proposal Descriptors

Ranking: 31

Proposal Title: Water Systems and Conservation

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.32NA

Primary Dept: Utilities

Parent Proposal: NA

Proposal Type: Existing

Dependent Proposal: NA

Budget Status: Recommended

Previous Proposal: 140.32NA

Primary Staff: Susan Fife-Ferris, x5216

Fund: Water Utility Fund

Section 2: Executive Summary

Conserving and promoting the efficient use of water resources to ensure an adequate supply of clean, safe drinking water into the future is a key element to achieving Utilities' mission to actively support a healthy and sustainable environment, and 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 the Cascade Water Alliance for primary water conservation and efficiency program delivery, and supplements Cascade's programs through local programs such as the Waterwise Demonstration Garden, Natural Yard Care programs, and Powerful Choices for the Environment Program, all of which promote the wise use of water and elimination of waste in order meet the City's water use efficiency goals.

Section 2b: Performance Narrative

The performance measures included with this proposal highlight whether the City, as a partner in Cascade Water Alliance, is progressing to meet a cumulative drinking water use efficiency goal by the end of 2019.

Section 3: Responsiveness to Request For Results

The mission of Bellevue Utilities is to actively support public health and safety, quality neighborhoods, and a healthy and sustainable environment and economy by effectively managing drinking water. Conserving and promoting the efficient use of water resources to ensure an adequate supply of clean, safe drinking water into the future is a key element to achieving that mission.

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), Cascade set a six-year regional water use efficiency savings goal that covers 2014-2019, which the City, as a member of Cascade, will assist in achieving. Cascade's cumulative drinking water use efficiency goal is to save 0.6 million gallons per day (gpd) on an annual basis and 1.0 million gpd during peak season (June-September) by the end of 2019. The City's portion of this goal roughly translates to 228,000 gpd of savings on an annual basis and 380,000 gpd of savings during peak season by the end 2019. The City will look to Cascade for most water conservation and efficiency program delivery during the next budget cycle, with the City focusing on three primary programs.

This proposal provides the following three programs that have a direct and immediate impact on the health and sustainability of the environment:

- The Waterwise Demonstration Garden, situated in the heart of the Bellevue Botanical Garden, which educates the community about natural yard care practices, including water use efficiency. Staff oversees and manages the Waterwise Demonstration Garden, working cooperatively with both the Parks Department and the Bellevue Botanical Garden Society, and using a core of volunteers for maintenance of the Garden.
- Natural Yard Care Program, which includes displays, Fall workshops, and how-to resources promoting the wise use of water.
- Powerful Choices for the Environment, a 2-day cross-discipline cooperative effort with the Bellevue School

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District that is integrated into the 6th grade science curriculum, which promotes a better understanding of where the City's water comes from, the value of it as a resource, why it is important to use it wisely, and how the drinking water system works with and within the surface water and waste water systems.

The programs offered under this proposal directly support the following values:

- Services that RELIABLY ENSURE PUBLIC HEALTH and PROTECT THE ENVIRONMENT.
- STEWARDSHIP AND EDUCATION that sustain a healthy environment for current and future generations.
- A HEALTHY NATURAL ENVIRONMENT that supports biodiversity.
- A NATURE EXPERIENCE IN WHICH TO LIVE, WORK, LEARN AND PLAN.

The programs offered under this proposal support the Council Vision of a High Quality Natural Environment.

This proposal directly supports the Built Environment Subfactor of RELIABLE AND EFFICIENT WATER MANAGEMENT: Conserving water can help customers manage their water use. 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 use. In the long-term, regional water supplies experience pressure due to population growth, climate change, and other factors. Using water efficiently and conserving water 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 that comes from their faucet. 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. All three of the programs funding by this proposal encourage residents to reduce their use of water through efficiency practices and behavior changes.

This proposal also speaks to the Natural Environment Subfactors of CLEAN WATER, HEALTHY AND QUALITY OPEN SPACES, and STEWARDSHIP AND EDUCATION: This proposal takes a targeted approach to educating local homeowners and students about the wise use of water and efficiency opportunities and activities, and promotes the value of water as a resource to the community through the Waterwise Demonstration Garden, Natural Yard Care Program, and Powerful Choices for the Environment Program. 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 use water resources wisely. As an example, the nationally-recognized Waterwise Demonstration Garden provides visitors a demonstration of best practices for planning, planting, and caring for landscapes to reduce the use of 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.

This proposal addresses the following purchasing strategies:

- Through the public education and outreach provided via the Waterwise Demonstration Garden, Natural Yard Care Programs, and Powerful Choices curriculum, we encourage the public use water in a responsible manner that results in the provision of "water in a reliable, efficient, and environmentally sustainable manner."
- All three programs encourage customers to "conserve resources."
- All three programs "foster and incentivize stewardship of the natural environment through education and community activities."
- All programs help the City comply with the State's Water Efficiency Rule, helping to "ensure compliance with applicable environmental regulations."

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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 Cascade water conservation and efficiency programs.

If this proposal was not funded the City would not meet ongoing obligations with program partners, including the Bellevue School District, Parks Department, and Bellevue Botanical Garden Society. The progress made towards meeting water use efficiency goals might be compromised, and the City might end up out of compliance with state law. The City would fail to comply with the City's Environmental Stewardship Initiative Strategic Plan calling for the conservation of drinking water resources.

This proposal represents a minimal level of funding for City water use efficiency efforts. Funding at a lower level would result in the need to cut those minimal programs, and may result in the City failing to contribute to the progress towards complying with water use efficiency goals.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0342	Utilities: Percentage of Bellevue School District 6th Graders that attend the Powerful Choices curriculum.	Years	68.99%	74.97%	80%	80%	80%
140.0375	Utilities: Number of attendees for Fall Natural Yard Care Classes	Years	316	0	160	160	160
140.0376	Utilities: Save 228,000 gpd of drinking water on an annual basis to meet Cascade cumulative drinking water use efficiency goal by the end of 2019	Years	40,958	257,664	114,000	152,000	190,000
140.0377	Utilities: Save 380,000 gpd of drinking water during peak season on an annual basis to meet Cascade cumulative drinking water use efficiency goal by the end of 2019.	Years	43,000	257,664	190,000	253,333	316,667

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

No

5B: Are one-time expenditures included in this proposal?

No

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

No

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	0.45	0.45
LTE	0.00	0.00
Total Count	0.45	0.45

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	78,400	80,400
Personnel	62,983	65,609
Revenue	0	0
Rev-Exp Balance	-141,383	-146,009

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Section 1: Proposal Descriptors

Ranking: 32

Proposal Title: Storm and Surface Water Infrastructure Condition Assessment

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.23NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.23NA

Primary Staff: Brian Krause, x6992

Fund: Storm & Surface Water Utility Fund

Section 2: Executive Summary

The Surface Water O&M 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. Defects can cause pollution to enter the system as well as lead to catastrophic failures that have the potential to result in flooding, damage to roadways and down-slope properties, and 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 2b: Performance Narrative

The Performance Measures included in this proposal tell us if the Utilities Department, O&M Storm and Surface Water (SSW) section is completing video inspection targets outlined in the section annual plan. The section annual plan objectives are derived from Bellevue Storm and Surface Water Utility Code, the Storm and Surface Water Plan, storm water policies, and the NPDES permit. To help the city achieve 100% compliance annually, Storm and Surface Water section measures the number of surface water pipe defects identified through condition assessment to ensure repairs are made according to NPDES requirements. Storm and Surface Water also measures the percentage of the pipe system video inspected to ensure that we are on track with completing inspection of the entire city-wide system in accordance with long-range system sustainability targets.

Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the capital infrastructure needs of the Utilities Department is evidence of a HIGH PERFORMANCE GOVERNMENT. By ensuring a QUALITY BUILT ENVIRONMENT, reliable infrastructure to deliver quality drinking water and to convey wastewater and stormwater runoff is a required precursor to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE Values and Factors: Prudent management of water delivery and wastewater and stormwater conveyance demonstrates RESPONSIBLE STEWARDSHIP, ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER.

The Surface Water O&M Infrastructure Condition Assessment Program examines the inside of drainage pipes to identify 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 completed prior to paving. It is more cost-effective to repair defects before repaving than to incur costly grind

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and overlay expenses to repair failures that occur after roadway resurfacing. Other drainage pipes inspected under this proposal include “critical pipes” (e.g., large diameter pipe and pipes under main arterials) with high consequence of failure and older pipes that are more likely to fail.

Typical staff duties associated with this program include coordinating work between the Utility and the contractor, reviewing the video to identify deficiencies within the system and documenting needed repairs to be completed by Surface Water O&M or Utilities Engineering Division via the CIP.

Historically this program has relied solely on outside contractors to perform the video assessment work. This resulted in time delays in obtaining the video for review by staff due to constraints experienced by the contractors outside of the Utilities control. Over the past few years, Surface Water O&M has been working with Wastewater staff to utilize in-house video assessment resources to perform a portion of the previously contracted video assessment. A pilot project for the 2015-16 budget cycle is yielding positive results and providing further data in support of in-house operations.

This proposal conducts video assessment of storm drainage pipes at the rate of about 2% of the piped drainage system or approximately 8 miles per year. 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.

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

Eight out of ten of our regional detention facilities are classified under WAC 173-175 (Dam Safety), which requires the City to inspect and conduct needed repairs and maintenance

WAC 173.201A; Water Quality Standards for Surface Waters of the State of Washington: applies to repairs conducted to achieve water quality standards

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT - Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner. 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, flooding and pollutants entering the system.

Utilities works closely with the Transportation Department to coordinate repairs and pavement overlay. Synchronizing surface water condition assessment activities with the Transportation Department’s pavement overlay program creates substantial cost savings and Conserves Resources. Incremental costs to repair underground pipes before planned paving are 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. Proactively assessing the drainage system and repairing deficiencies prior to failure decreases flooding and erosion. Rather than reacting to a failure in the system, necessary repairs are scheduled ahead of time.

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NATURAL ENVIRONMENT – Ensure compliance with applicable environmental regulations.

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. According to NPDES, dirt entering the storm system is considered pollution. The Storm and Surface Water Condition Assessment Program identifies failures and deficiencies resulting in pollution entering the system of pipes, creeks, ponds, wetlands and lakes. The condition assessment program identifies system deficiencies in order for repairs to be made in accordance with regulatory drivers.

Factors in other outcomes:

Improved Mobility; 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; Customer Focused Services: Bellevue citizens and business owners expect that even during heavy rains, the drainage system will operate in an effective manner to minimize localized flooding.

PURCHASING STRATEGIES in the HSE outcome:

Manage storm and surface water runoff in an environmentally reliable, efficient and sustainable manner.

Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014 Actual	2015 Actual	2016 Target	2017 Target	2018 Target
140.0294	Utilities: Number of surface water pipe defects identified through condition assessment activities requiring repair or replacement	Years	41	3	25	25	25
140.0295f	Utilities: Percent of surface water system video inspected	Years	2.36%	3.27%	0.59%	2.36%	2.36%
140.0296	Utilities: Linear feet of surface water condition video assessment performed	Years	49,754	69,066	12,461	49,844	49,844

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	1.20	1.20
LTE	0.00	0.00
Total Count	1.20	1.20

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	163,100	166,800
Personnel	123,612	128,805
Revenue	0	0
Rev-Exp Balance	-286,712	-295,605

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Section 1: Proposal Descriptors

Ranking: 33

Proposal Title: Water Meter Repair and Replacement Program

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.16NA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.16NA

Primary Staff: Kipp Fockler, x2923

Fund: Water Utility Fund

Section 2: Executive Summary

This proposal provides for regular testing, calibration, repair and replacement of City-owned water meters at established intervals to ensure meter accuracy for water and sewer revenue collection, equitable billing and rates, early leak detection for the customer, and to promote water conservation. Meter box maintenance activities are included to ensure safe access for meter reading and to shut off the water service in the event of an emergency. Utilities bills customers for water, wastewater, and storm drainage services, services which are necessary to foster a healthy and sustainable environment. Services are entirely supported by ratepayers and generate rate revenue. Bellevue's water system is a network of components that deliver almost 6 billion gallons of drinking water a year.

Section 2b: Performance Narrative

To help assure the Utilities' financial sustainability the performance indicators enable the City to track and monitor progress and trends that provide solid evidence of the health of our water meters since they are the prime asset we use to recoup the costs we incur to provide safe clean drinking water and bio waste removal. Some meters get heavy use and need to be calibrated and maintained more often than meters with less use. The performance measures help identify calibration and testing intervals. All commercial meters 3" and larger are tested every five years, at a minimum, and high use meters need to be tested and calibrated more often.

Section 3: Responsiveness to Request For Results

This proposal supports Council Strategic Target Areas, Community Values, and Healthy and Sustainable Environment (HSE) Factors.

Council Strategic Target Areas: Accurate meters are a major factor for infrastructure that supports a HIGH QUALITY BUILT ENVIRONMENT and HIGH PERFORMANCE GOVERNMENT. Accurate meters ensure reliable public infrastructure to deliver quality drinking water, biosolid conveyance, parks and open spaces that are green and healthy, and adequate pressure and flow for fire protection that ensures public health and protects the environment.

Providing services that reliably ensure public health and protect the environment reflects Community Values. These services use sustainable best practices that improve the water infrastructure. This in turn supports healthy living and demonstrates resource stewardship by managing to the lowest responsible life cycle cost for current and future generations. Preventive maintenance to the water metering components is crucial to ensure the longest possible life cycle with the fewest number of failures and equity to the rate payers.

Test, Calibrate and Repair Large Meters:

Internal components of water meters deteriorate with heavy use and age, which leads to inaccurate readings. Inaccurate readings provide incorrect information regarding usage, make leak detection more difficult, and result in lost revenue for the utility. All large meters should be tested for accuracy on a regular basis. The primary objective of the program is to maintain 280 commercial meters over 3" in size to ensure their continued accuracy. Testing and calibration is a best practice in water supply management because it provides

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accurate accounting and billing of water produced and delivered, facilitates leak detection, identifies high water users who may need assistance in reducing overall water use, and supports the goal of minimizing unaccounted for water. In addition, identifying failed commercial meters early minimizes the need to retroactively bill customers and supports customer service.

Meter Box Maintenance:

A water meter box protects the water meter, and provides the City and the customer access to their meter to monitor usage and access for meter reading and shut-off valves. Meter box maintenance activities include identifying leaks on the customer side of the meter and encouraging customers to make repairs in a timely manner to conserve water. Trimming overgrown vegetation and adjusting meter boxes to eliminate tripping hazards which can result in trip and fall claims is another benefit of meter box maintenance. 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.

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.

FACTORS IN THE HEALTHY AND SUSTAINABLE ENVIRONMENT OUTCOME:

BUILT ENVIRONMENT: Provide water in a reliable, efficient and environmentally sustainable manner.

Meter calibration, maintenance and replacement helps create a healthy environment by providing tools that allow for accurate measurement of water use, efficiently read meters for accurate and prompt billing with minimal mistakes, and detection of leaks to promote timely repairs, conserve water and electricity, and prevent damage to the environment. 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, thereby Conserving Resources. 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.

NATURAL ENVIRONMENT: Water is vital to personal health, the activities this proposal supports assure **ECONOMIC VIABILITY** by holding each customer accountable for the water they use. Meters are the core component to ensure stewardship at every level. The data produced by meter reads is used to educate customers so they have the ability to conserve and have some level of control over how much they pay for water and sewer. When customers conserve it not only helps them financially but it helps reduce the region's carbon footprint by using less electricity for pumping and treating water. It also helps ensure the water we have available lasts longer when we encounter longer spells of dry weather.

PURCHASING STRATEGIES: **HSE BUILT ENVIRONMENT:** Provide water and solid waste removal in a reliable, efficient, and environmentally sustainable manner **REDUCTION OF WASTE & CONSERVE RESOURCES.** These purchasing strategies ensure that our water resources are effectively managed to protect and conserve valued natural resources through preservation, restoration, and efficient use. Accurate meters help detect customer-side leaks and minimize water loss. Accurate water meters enhance the community's awareness and

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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.

Section 4: Performance Measures and Targets

<u>Code</u>	<u>Performance Measure</u>	<u>Frequency</u>	<u>2014 Actual</u>	<u>2015 Actual</u>	<u>2016 Target</u>	<u>2017 Target</u>	<u>2018 Target</u>
140.0235f	Utilities: Percent of commercial meters that meet accuracy standards at the time of the test	Years	18.18%	36.03%	85%	85%	85%
140.0238f	Utilities: Percent of commercial meters tested annually	Years	7.67%	46.26%	20%	20%	20%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

N/A

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue.

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	2.25	2.25
LTE	0.00	0.00
Total Count	2.25	2.25

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	174,622	175,506
Personnel	227,187	236,017
Revenue	0	0
Rev-Exp Balance	-401,809	-411,523

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Section 1: Proposal Descriptors

Ranking: 34

Proposal Title: Private Utility Systems Maintenance Programs

Outcome: Healthy and Sustainable Environment

Proposal Number: 140.27DA

Primary Dept: Utilities

Parent Proposal: None

Proposal Type: Existing

Dependent Proposal: None

Budget Status: Recommended

Previous Proposal: 140.27DA

Primary Staff: Don McQuilliams, x7865

Fund: Water Utility Fund

Section 2: Executive Summary

This proposal provides funding for Private Utility System Maintenance Program in which City Water Quality inspectors visit private business and residences to inspect private Utility infrastructure to ensure components are working correctly. Staff provide recommendations if maintenance is needed, and follow up to make sure the maintenance was correctly performed. This minimizes the risk to the public drinking water system from potential contamination, our streams and lakes from pollutants and the wastewater system from blockages.

This proposal protects public health by preventing drinking water from cross contamination, reduces pollutants in surface water, and funds the Fats, Oils and Grease program to reduce sewer blockages. These programs are mandated by the FEDERAL SAFE DRINKING WATER ACT, CLEAN WATER ACT (NPDES), and the King County Industrial Waste Program.

Section 2b: Performance Narrative

To ensure the City is meeting or exceeding the regulatory requirements of our programs for Private Utility Systems Maintenance, the Performance Measures used in this proposal are indicators of how we are doing.

For the Cross Connection Control Program, the NUMBER OF DOCUMENTED DRINKING WATER BACKFLOW EVENTS tells us if our program is successful. The target for this measure is zero and we have consistently achieved that showing that our outreach for this program is making a difference. We also use the NUMBER OF BACKFLOW ASSEMBLIES TESTED ANNUALLY as a measure of growth and compliance within the program. The amount of assemblies and related inspections are increasing at a rate of approximately 500 per year and we will have over 12,000 in 2016 that need to be tested and documented.

To minimize pollutants to our streams and lakes, the PERCENT OF PRIVATE DRAINAGE SYSTEMS INSPECTED is used as an indicator of our Private Drainage Inspection Program to measure how effective we are in reaching our goals of ensuring that necessary maintenance of private drainage systems is getting done. In 2014 this number was 65%, in 2015 it was 74% and our goal for 2016 is 100%. Currently we are implementing new software that will make the tracking and scheduling of these inspections more reliable and retain historical data for trending.

The Fats, Oils and Grease Program helps to minimize the type and amount of pollutants sent to the wastewater treatment plants and prevents blockages within our wastewater system. As a measure of success, the PI uses the PERCENT OF FAT, OIL AND GREASE REMOVAL DEVICES COMPLIANT WITH MAINTENANCE REQUIREMENTS. This measures the number of known FOG devices and how many of those were maintained during the year. In 2014, this was 25%, in 2015 it was 22%. Our target for this measure is 50%.

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Section 3: Responsiveness to Request For Results

This proposal is in alignment with the following Council Strategic Target Areas and Healthy and Sustainable Environment Factors:

Council Strategic Target Areas: Sufficiently funding the operations and maintenance needs of the Utilities Department is evidence of a HIGH PERFORMANCE GOVERNMENT. By ensuring a reliable infrastructure to deliver quality drinking water and to convey wastewater and stormwater runoff, our QUALITY BUILT ENVIRONMENT, leads directly to ECONOMIC DEVELOPMENT and a vibrant and healthy community.

HSE Values and Factors: Prudent management of water delivery and wastewater and stormwater conveyance demonstrates RESPONSIBLE STEWARDSHIP, and ensures the ability to provide RELIABLE AND EFFICIENT WATER MANAGEMENT and CLEAN WATER.

This section outlines the programs associated with this proposal including applicable regulatory drivers and benefits to our Utility systems and community. These programs effect 90% of Bellevue's businesses and over 4,000 residential properties.

Cross-Connection Control (CCC) Program. The regulatory drivers for this program are within the SAFE DRINKING WATER ACT and implemented by the State Department of Health through the Washington Administrative Code (WAC).

Backflow assemblies protect the drinking water supply by preventing the reversal of the normal direction of water flow from a potentially contaminated source into the drinking water system (backflow). The Washington State Department of Health has mandated testing and certification of the nearly 12,000 backflow assemblies connected to the drinking water system and tracked through the CCC Program. In addition, an average of almost 500 new backflow assemblies are installed in Bellevue every year. Since 2010 there have been three reported backflow incidents in Bellevue's service area. Even with a 96% certification compliance rate these incidents do occur, leaving the drinking water system vulnerable to contamination. As long as they are addressed Bellevue is not in violation of drinking water regulations. Fortunately in these cases no one was sickened.

Private Drainage Inspection (PDI) Program. This is regulated under the CLEAN WATER ACT and is implemented by the State Department of Ecology through issuance of the City's Phase II NPDES (National Pollutant Discharge Elimination System) Permit.

The PDI is an inspection program that protects lakes, streams, and wetlands from pollution and sediment. Utilities staff inspect over 1,500 privately-owned storm drainage systems for compliance with maintenance standards to ensure proper management for water quality and water quantity control. PDI Inspectors provide education and maintenance recommendations to system owners. Private drainage systems are interconnected with the public system and represent over half of the total drainage infrastructure in Bellevue. If not properly maintained there are increased incidents of flooding and property damage as well as potential pollutant releases to our streams and lakes. Additionally the cost of maintaining the public system increases through transference of sediment and pollutants from the private system to the public system. Ensuring they are maintained and functioning as designed is an important aspect of Bellevue's Stormwater Management Program. Compliance rates for maintenance of these systems averages 73%. This program also provides education to businesses on the proper storage, handling, and disposal of materials that can be hazardous to the environment. Education and outreach to the community is another requirement of the NPDES permit that regulates the PDI program.

Industrial Waste/Fats, Oils, and Grease (FOG). There is no outside agency regulatory requirement for this

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program but it is highly recommended by the King County Industrial Waste program and mandated to our customers by our own internal codes ensuring ongoing maintenance to prevent blockages within the wastewater system.

The FOG program provides education on what can and cannot be disposed of in the wastewater system. In addition, it ensures that discharges to the wastewater system do not contain prohibited substances that create blockages or sewage overflows, prematurely degrade pipes, endanger personnel, or cause disruption of regional treatment systems. FOG system owners (commercial businesses) report maintenance activities by private vendors to Water Quality inspectors to ensure compliance. The FOG program also provides site inspections and public education and training to restaurants and businesses on proper operation and maintenance of grease traps, interceptors, and the proper disposal of food waste and wipes. As with other programs, FOG handouts and posters are available in 5 languages to help bridge our multi-cultural communities' understanding of FOG-related issues.

Response to Request for Results Cause and Effects Map

This proposal directly supports the values listed on the cause and effect map for the Healthy and Sustainable Environment team. SERVICES AND INFRASTRUCTURE THAT RELIABLY ENSURE PUBLIC HEALTH AND PROTECT THE ENVIRONMENT are the primary reason for the Water Quality Section within Utilities. Factors within the Built and Natural Environment are achieved through this proposal by supporting RELIABLE AND EFFICIENT WATER MANAGEMENT through both our drinking water and surface water programs as well as speaking to CLEAN WATER AND HEALTHY OPEN SPACES as a result of providing private drainage inspection programs designed to minimize damages to the waterways of Bellevue. STEWARDSHIP AND EDUCATION of the Natural Environment is also achieved through ongoing education opportunities during site investigations as well as through correspondence with Water Utility customers on a regular basis through mailing inserts within the Utility bills.

Two of the four key community indicators identified help to provide a sense of how we are doing: PERCENT OF RESIDENTS who agree that Bellevue provides water, sewer and wastewater services and infrastructure that reliably ensure public health and protect the environment (95% in 2015); and PERCENT OF RESIDENTS who agree that Bellevue is doing a good job of creating a healthy natural environment that supports healthy living for current and future generations (87% in 2015)

Key performance indicators as identified by the results team that apply directly to this proposal are: PERCENT OF DAYS in compliance with state and federal drinking water regulations (100% for 2015); and COMPLIANT STATUS with citywide NPDES permit requirements (Yes in 2015)

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Section 4: Performance Measures and Targets

Code	Performance Measure	Frequency	2014	2015	2016	2017	2018
			Actual	Actual	Target	Target	Target
140.0272f	Utilities: Percent of Fat, Oil, Grease removal devices compliant with maintenance requirements	Years	24.93%	22.17%	50%	50%	100%
140.0278	Utilities: Number of documented drinking water system backflow events	Years	0	0	0	0	0
140.0281	Utilities: Number of backflow assemblies tested annually	Years	11,215	11,106	12,596	13,000	13,500
140.0319f	Utilities: Percent of planned private drainage inspections performed	Years	71.85%	72.48%	100%	100%	100%

Section 5: Requested Funding

5A: Are any new costs other than inflation included in this proposal?

No

5B: Are one-time expenditures included in this proposal?

N/A

5C: Are dedicated revenues included in this proposal?

Proposal is supported by Utility rate revenue

5D: Are changes to the existing service levels included in this proposal?

N/A

5E: Budget Summary

<u>FTE/LTE</u>	<u>2017</u>	<u>2018</u>
FTE	4.55	4.55
LTE	0.00	0.00
Total Count	4.55	4.55

<u>Operating</u>	<u>2017</u>	<u>2018</u>
Expenditures	74,574	73,704
Personnel	531,193	553,687
Revenue	0	0
Rev-Exp Balance	-605,767	-627,391

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