

CHAPTER 4 POLICIES

Storm and surface water policies are contained in this chapter. These stormwater policies provide the framework for guiding the Utilities Department in its management of the Storm and Surface Water Utility system. Current financial policies guiding the Waterworks Utility (Storm and Surface Water, Water, and Wastewater) are also included in this chapter.

The City of Bellevue Comprehensive Plan is an ‘umbrella plan’ that “provides a broad statement of community goals and policies that guide the orderly development of Bellevue into the future.” The City’s Comprehensive Plan is divided into several elements that provide additional policy details to help the City achieve the Plan’s stated goals. In particular, the Utilities, Environmental, and Capital Facilities Elements of the City’s Comprehensive Plan have special relevance for storm and surface water management. The Utilities Element establishes the foundation for the Utilities Department vision and goals across the Water, Wastewater, and Storm and Surface Water programs.

Policies specific to storm and surface water management stated in the Utilities Element are:

- **Policy UT-34**—Participate in regional watershed based efforts with the goals of achieving local drainage basin health and addressing Endangered Species Act issues. Manage the storm and surface water system within a system wide, watershed based context.
- **Policy UT-35**—Provide a storm and surface water system in Bellevue that controls damage from storms, protects surface water quality, provides for the safety and enjoyment of citizens, and supports fish and wildlife habitat and protects the environment.
- **Policy UT-36**—Design context appropriate stormwater management facilities that reflect the unique character of the neighborhood in which the site is situated.
- **Policy UT-37**—Educate the public on water quality issues.
- **Policy UT-38**—Encourage the use of low impact development and stormwater best management practices to manage stormwater runoff, which may result in smaller facilities constructed on- and off-site for flow control, conveyance, and water quality.

The Environmental Element has 113 separate policies to help integrate the natural and built environments. The Capital Facilities Element has 28 separate policies to facilitate the planning and construction of new public facilities. Subservient to the City’s Comprehensive Plan are several functional plans including the Storm and Surface Water System Plan. Storm and Surface Water System Plan policies are carefully written to be in alignment with and in support of the City’s Comprehensive Plan policies without establishing precedent. The relationship between the City’s Comprehensive Plan and the Storm and Surface Water System Plan is shown in Figure 4-1.

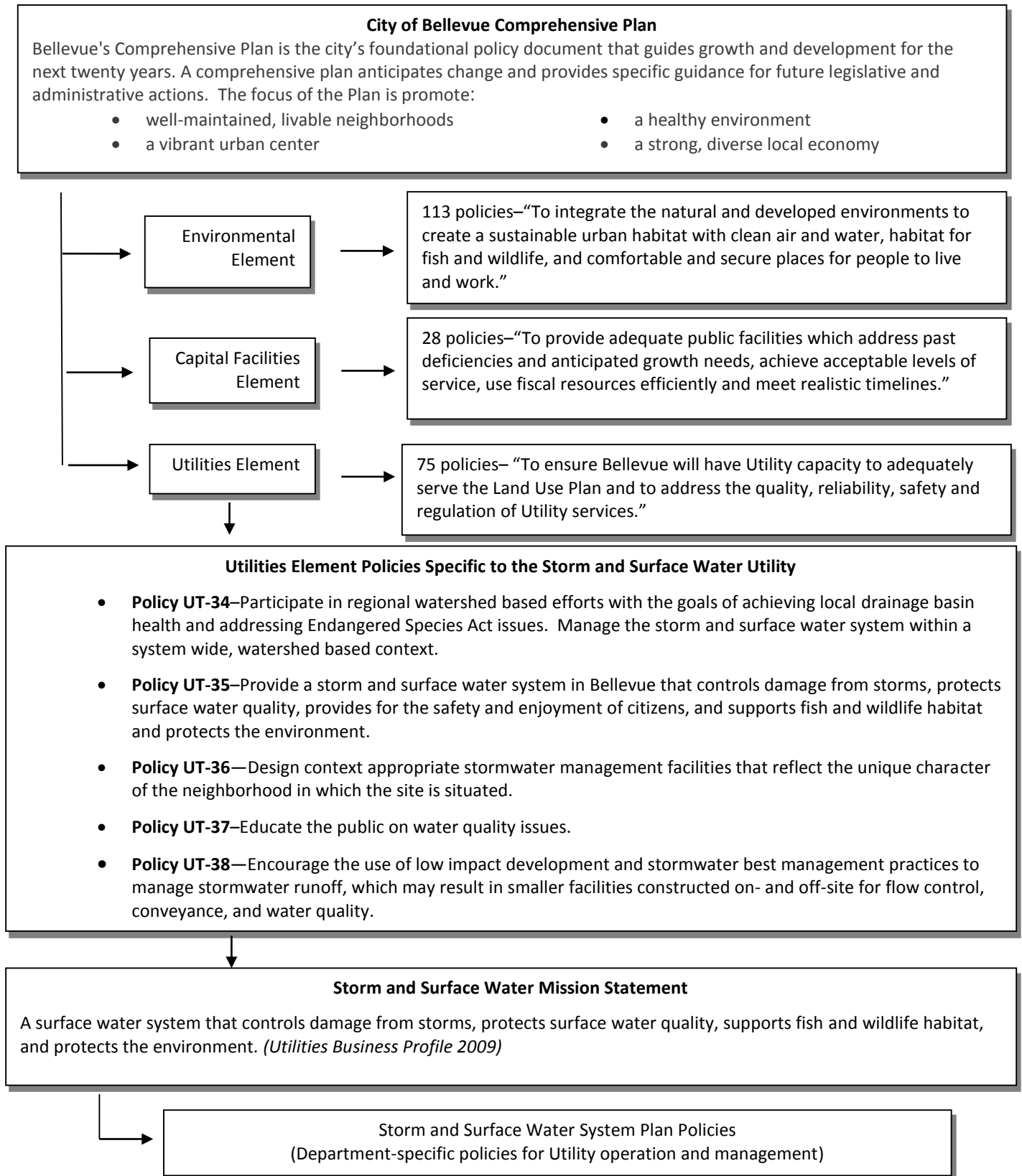


Figure 4-1. Policy flow chart.

Storm and Surface Water General Policies

The Utilities Department strives to manage the storm and surface water system in a manner that “controls damage from storms, protects surface water quality, supports fish & wildlife habitat, and protects the environment.” Typical of a Utilities Department system plan update, governing policies were reviewed for relevance and consistency. The development of the Storm System Plan involved interdepartmental staff, commissions, and public review of all policies from the 1994 plan. There were no significant changes to existing policies. Clarifying edits were made to the 1994 policies (as described below); two of the 1994 policies were combined into one, and four obsolete ones were deleted. One new policy was added concerning the evolving topic of Low Impact Development techniques. The Utilities Department Storm and Surface Water policies can be organized into four broad categories as shown in Table 4-1 - Customer Service, Water Quality, Regional, and Financial.

Table 4-1. Summary of storm and surface water policies by categories

Customer Service	Water Quality	Regional	Financial
Emergency Response	Surface Water Quality	Regional, State, and Federal Policy Involvement	General Financial
Storm and Surface Water System Responsibility	Lake Management		Capital Investment Program Policies
Capital Investment			System Expansion and Connection Policies
Deltas			Rate Policies
			Operating Reserve

A summary of the changes is presented below followed in a later section by the complete text of each policy.

Customer Service Policies

- **Emergency Response.** This policy was not substantially modified. The basic policy message was retained with minor edits to update the policy and discussion language.
- **Storm and Surface Water System Responsibility.** This policy is the result of combining two policies—Conveyance System Responsibility and Detention System Responsibility—into one. There was sufficient overlap and redundancy between the two that would allow a single policy document to retain the essence of each, yet present a more concise policy about System Responsibility. The policy goals from the original policies were preserved in this combined version.
- **Capital Investment.** This policy that was updated to reflect City Council policy decisions conducted during budget processes. Minor word and grammatical edits were also made.
- **Deltas.** This policy was updated to reflect current conditions and provide improved clarity of policy intent and to explain the role of delta management by the Utilities Department.

Water Quality Policies

- **Surface Water Quality.** The wording of the Surface Water Quality policy was updated to acknowledge issuance of the City’s National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit in 2007. Policy intent was not substantially changed.
- **Lake Management.** This policy was revised for clarity. Specifically, the policy acknowledged a need for coordination with lake management and to provide general background information on lakes.

Regional Policies

- **Regional, State, and Federal Involvement.** Changes were made to this policy to clarify, update, and make it consistent with other City processes without substantially altering the original intent of the policy.

Financial Policies

- Five separate financial policies are evaluated with each budget cycle. For the Storm and Surface Water System Plan, they were not part of the policy review process.

Deleted Policies

- **Residential Drainage Assistance Policy.** *“The Utility should offer education and advice to single-family property owners with private drainage problems.”*

This policy was deleted because the service described in the policy is an existing Level of Service (LOS) now in place for several years across all utility services (water, wastewater, and storm) and is not limited to residential areas.

- **Neighborhood Enhancement Projects Policy.** *“Each year the Utility shall allocate part of the capital budget to construct drainage projects identified through the Neighborhood Enhancement Program.”*

This policy was deleted because the Utilities Capital Investment Program includes an ongoing program to support the City’s Neighborhood Enhancement Program.

- **Stormwater Runoff Control Requirements Policy.** *“The Utility should develop appropriate Codes, Regulations and Standards to carry out the City Comprehensive Plan policy of restricting the runoff from all new development and re-development. The goal of this policy is to maintain a hydrologic balance that provides for the safety and enjoyment of citizens, and preserves and enhances habitat and sensitive areas. To address the goal of this policy, the City must minimize the potential for flooding and streambank erosion.”*

This policy was deleted because runoff control requirements are now required by the City’s Phase II NPDES Municipal Stormwater Permit that is issued by Washington State Department of Ecology (Ecology). Runoff control requirements for new and redeveloping properties consistent with the permit are included in the City’s Storm and Surface Water Codes, which have been adopted by the City Council.

- **Property Restoration Policy.** *“During the project design process, the Utility shall consider the impact to private property due to Utility construction.*

When property disruption is unavoidable, the Utility shall restore the area to the pre-existing conditions to the extent practical. Where not practical, the Utility may compensate the owner

for ornamental landscaping in lieu of restoration; compensation is limited to the reasonable replacement value of destroyed specimens in kind, but not in size.

Consistent with state and local law, the Utility shall not install landscaping improvements that increase the value of private property unless that is compensation for property rights granted to the Utility or unless the primary purpose is to benefit the City-wide drainage system.”

This policy was deleted because property restoration standards described in this policy are now included in the Storm and Surface Water Engineering Standards, as well as the easement documents necessary to gain access to the property.

Storm and Surface Water Policies

The full text of storm and surface water policies that are being implemented as part of this Plan is provided below.

Customer Service Policies

A. Emergency Response

Policy

The Utilities Department responds to drainage-related emergencies and may undertake emergency protective measures or activities as needed in the event of an imminent threat to public health, safety, or public resources (such as infrastructure, endangered salmonids, and water quality), or an imminent threat of significant property damage.

Discussion

The City responds to many kinds of emergencies. The Utilities Department has historically responded to drainage-related threats to life, health, or property. Since the 1988 Comprehensive Drainage Plan (CDP) was adopted, the Utilities Department has also responded to threats to water quality and aquatic resources.

It is sometimes necessary to undertake activities on private property to adequately respond to an emergency. The Utilities Department will seek permission from the owner; however, it may not be possible to reach the owner, and delaying response may lead to significant property or resource damage. In those cases, the Utilities Department may proceed with the activities as long as they are consistent with general policy direction from the City’s Emergency Operations Plan and the NPDES Municipal Stormwater Permit. In that way, the Utilities Department attempts to minimize the liability associated with work on private property while protecting property and resources.

In emergency situations, the Utilities Department shall follow the Bellevue Utilities Emergency Management Plan priorities and procedures and assure consistency with the City’s Incident Command Structure and City emergency protocols. During emergency situations, the City’s resources are often overloaded and it cannot respond to all needs. Priority shall be given to facilities that provide critical and essential services.

When major flooding is anticipated, the Utilities Department may provide sandbags to threatened neighborhoods. However, the Utilities Department crews will generally not provide public assistance to individual private properties for implementing preventative measures.

Private property owners are responsible for implementing preventative measures such as placing the sandbags to protect their property. It is the responsibility of the property owner to follow City codes and ensure that such measures shall not adversely impact streams, lakes, shorelines, or other critical

areas. Removal and proper disposal of the sandbags after the event are also the responsibility of the private property owners.

B. Storm and Surface Water System Responsibility

Policy

The Utilities Department shall own and maintain all components of the storm and surface water system in city-owned right-of-way and in easements or tracts dedicated to, and accepted by, the Utilities Department. The Utilities Department should not acquire or accept additional new or existing System components outside the city-owned right-of-way (through easements, ownership, or other property rights) except when needed for Utilities Department construction projects identified in the Utilities Department Capital Investment Program, or when all of the following conditions are met:

1. *There is a public benefit;*
2. *Easement or property is offered by the property owner at no cost;*
3. *The system meets current City standards or is brought up to current City standards by the owner;*
4. *There is access for Utilities Department maintenance from public right-of-way;*
5. *The Utilities Department has adequate resources to maintain the system, and for detention systems;*
6. *The system serves a residential plat or short plat (rather than a commercial property).*

Discussion

Much of the stormwater system in Bellevue is not owned by the Utilities Department. Private drainage conveyance and detention systems are those components for which the Utilities Department does not have a property interest. Detention and conveyance systems located in City-owned right-of-way are owned and maintained by the Utilities Department. In addition, the Utilities Department has acquired easements, rights-of-way, or fee titles (through purchase or dedication) for some additional system components.

All detention systems must be maintained to ensure they function as designed for flood control. Detention system maintenance also benefits water quality when trapped pollutants are removed from the system rather than being flushed downstream during a major storm. The Utilities Department maintains its facilities through ownership and allocation of maintenance resources. The functionality of private detention facilities is sought through the City’s private drainage inspection (PDI) program.

Where practical, and when in the public interest, multi-purpose detention facilities should be encouraged.

The City’s historical policy has been to acquire control of system components on an as-needed basis when brought up to current City standards by others or through an approved Utilities Department project.

An aggressive program to acquire additional segments of the stormwater system (conveyance and detention) is not recommended because:

- Owning and maintaining the stormwater system would not address the City's water

quality and flood control responsibilities because pollutants and runoff originate throughout each drainage basin. Also, most of the primary conveyance systems are streams (riparian corridors), and streams are regulated through local and state regulations.

- Acquiring all conveyance systems and bringing them up to standard would be high in cost and would also result in increased operation and maintenance costs.
- Assuming substandard systems could increase City liability.
- Continuing to work with property owners to ensure maintenance of privately owned detention systems is an objective of the Utilities Department's private maintenance and inspection program.
- Assuming ownership of private systems is not necessarily equitable to ratepayers.

C. Capital Investment Policy

Policy

The Utilities Department shall invest resources as necessary to further its mission, provided such investment is consistent with Utilities Department financial policies. Specifically, resources shall be invested for capital projects which:

- *protect property from flooding or other stream-related damage; or*
- *protect or improve water quality; or*
- *maintain or improve the reliability, effectiveness, and/or integrity of the storm drainage system infrastructure; or*
- *promote fiscal stewardship by generating cost savings or reducing potential liability; or*
- *promote resource stewardship by improving fish and/or riparian wildlife habitat; or*
- *respond to regulatory requirements or legal obligations of the Storm and Surface Water Utility; AND PROVIDED*
- *such investment has a public benefit, and if the cost is justified by that benefit.*

Prioritization and implementation of capital projects shall be based on objective guidelines that are periodically reviewed and published as part of the City's adopted Capital Investment Program plan (CIP). The most recently adopted CIP budget reflects the most current Capital Investment Policy.

Discussion

The mission of the Storm and Surface Water Utility is to provide a surface water system designed to control damage from storms, protect surface water quality, support fish and wildlife habitat, and protect the environment. Capital projects that prevent or reduce property damage from flooding or streams, protect or improve water quality, maintain or improve the reliability and integrity of the storm and surface water system, or improve fish and/or riparian wildlife habitat are consistent with this mission.

Projects should be prioritized based on rational, objective criteria that are periodically evaluated as part of the Capital Investment Program update. Due consideration should be given to cooperative collaboration with other City of Bellevue projects or priorities to achieve desired outcomes.

Cost/benefit analysis should include long-term ecological cost to the extent it is reasonably quantifiable. While the regional impact or beneficial significance of a project should not merit higher ranking, any such regional benefit should be included in the project description, because such a project may be

appropriate for regional mitigation, or could be assumed by a regional entity, such as the King County Flood Control District.

The Storm and Surface Water Utility capital investment program is not intended to be a property acquisition program. The City’s development regulations protect sensitive areas, and Bellevue has from time to time pursued open space acquisition initiatives for various objectives. That said, property acquisition as part of the Storm and Surface Water Utility Capital Investment Plan is not precluded, if that (in part or in total) is the optimal solution to achieve a project’s objective.

D. Deltas

Policy

The Utilities Department will fund delta modification only in situations involving a threat to life or dwellings from flooding or where the Utilities Department has an existing legal obligation by easement or agreement. Any delta modification should be limited to that needed to alleviate such flooding or to fulfill the legal obligation.

The Utility may provide non-financial support to any private or third-party-funded dredging projects that are found to be environmentally acceptable.

Discussion

Delta formation is a natural process. Deltas are dynamic; sediment deposition rates and channel location are likely to change over time. Deltas are typically fan-shaped deposits of sediment, such as gravel, sand, and silt that are found at the mouths of streams or rivers, and sometimes at piped stream outfalls. Sediments are carried by streams or through pipes and settle to the bottom when the water velocity slows to the point where the water no longer has enough energy to move the soil particles downstream. Larger particles take more energy to move than smaller ones, so larger-sized particles carried in suspension or dragged along the streambed will be dropped before smaller ones. Fine sediments are deposited when the stream enters still water, such as a lake.

Sediment in the streams may come from naturally occurring streambed erosion or slides or may result from human activities such as logging or construction. Development activities that increase peak stream flows may increase stream erosion. Therefore, deltas will and do form naturally, but any human activity that increases erosion will also tend to increase delta growth.

Many problems associated with deltas do not pertain to the Utilities Department’s overall mission. The Utilities Department will not modify deltas for navigation, recreation, or aesthetic purposes. Moreover, the Utilities Department is not an insurer against all natural and human-caused hazards. Therefore, the Utilities Department should not have a role in delta modification unless the delta involves a threat to life or dwellings from flooding or it has an existing legal obligation by easement or agreement. Any delta modification should be limited to that needed to alleviate the flooding or fulfill the legal obligation. The Utilities Department will consider petitions from a majority of affected property owners to assist with establishing a privately funded Lake Improvement District or special surcharge to assist with delta management issues.

Finally, the Utilities Department requires water quantity and water quality source controls throughout the city, consistent with other policies in the Storm and Surface Water System Plan. Such source controls—including strict application of erosion control measures on new construction, drainage facility maintenance, and the construction of detention and sediment control facilities—slow the rate of delta formation. Requiring basin-wide water quantity and water quality source controls is consistent with the Utilities Department’s flood control and water quality mission.

Water Quality Policies

A. Surface Water Quality

Policy

The City shall develop and update surface water quality protection programs as needed and shall carry out those programs and best management practices (BMPs) in order to make progress toward meeting state and federal requirements and the City Comprehensive Plan water quality and related resource goals. City surface water quality programs may include (but not necessarily be limited to):

- *Water quality studies and investigations;*
- *A water quality response program, including enforcement;*
- *Education programs (including promoting source controls);*
- *Preservation of lakes, wetlands and streams;*
- *Stormwater quality controls on new development, redevelopment (including, but not limited to, temporary erosion and sedimentation controls during construction as well as permanent on-site storm water management, flow control and runoff treatment best management practices);*
- *An operation and maintenance program, including an inspection program to ensure private maintenance of private drainage systems.*
- *Capital projects to address identified water quality problems; and*
- *Participation in regional studies and in the development of regional, state, and federal surface water quality policy. There is a separate Storm and Surface Water System Plan policy regarding regional, state and federal policy involvement.*

Discussion

Background

Surface water quality protection is required by federal, state, and local regulations and policies. The City of Bellevue Comprehensive Plan includes a policy EN-20 which states “maintain surface water quality defined by federal and state standards and restore surface water that has become degraded to the maximum extent practicable.” Related City Comprehensive Plan policies call for protection of natural surface water systems, biological health and diversity, wetlands, aquatic and riparian habitats, and groundwater resources.

To a large extent, protecting surface water quality in the city depends on managing stormwater runoff. Stormwater runoff collects pollutants such as oil, grease, and sediment as it travels along the ground surface, and can therefore become a significant transporter of pollutants. These “non-point source pollutants,” unlike pollution from industrial and sewage treatment plants, come from many diffuse and hard-to-trace sources. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into wetlands, streams, and lakes. Many of these non-point source pollutants are beyond the control of the City, such as those from fuel additives, brake pads, and pesticide applications. Successful management of these pollutants requires implementing effective practices from private interests, as well as other government entities, in addition to City management practices.

Stormwater management and surface water quality protection is required by state and federal mandates, most notably:

1. The federal Clean Water Act, through rules promulgated by the U.S Environmental Protection Agency (USEPA), requires municipalities to obtain an NPDES permit for their stormwater systems. USEPA has delegated permit authority for administering the permit to Washington State Department of Ecology—the state’s environmental agency. In 2007, Ecology issued municipalities in Western Washington, including Bellevue, the first (2007-2013) National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Discharges from Small Municipal Separate Storm Sewers in Western Washington, effective February 16, 2007 (referred to as the NPDES Western Washington Phase II Municipal Stormwater Permit or NPDES permit). The permit is also intended to ensure compliance with provisions of the state of Washington Water Pollution Control law, Chapter 90.48, Revised Code of Washington (RCW).

The NPDES Phase II Municipal Stormwater Permit requires municipalities to implement a permit-specified stormwater management program and comply with additional permit requirements such as monitoring. Bellevue implemented the first NPDES Permit requirements and is currently implementing Ecology’s second (2013-2018) NPDES Permit which took effect on August 1, 2013.

2. The Clean Water Act includes additional requirements that affect surface water management. Most notably, state surface water quality standards are promulgated by Ecology, and are revised every 3 years. Different water quality standards may apply to a particular water body depending on which beneficial uses the water body is classified as providing. Relative to these standards, every 2 years, Ecology must submit to USEPA a “water quality limited list,” which is a list of water bodies that do not meet current standards and are not subject to documented water quality protection programs likely to result in compliance with the standards. Once the list is approved by USEPA, Ecology must prioritize the listed water bodies and conduct studies to determine the Total Maximum Daily Loads (TMDLs) of the violating pollutant for the affected water bodies. The local jurisdictions (along with other dischargers to the affected water bodies) must then meet the TMDLs through implementation of water quality cleanup plans. Compliance with all current regulatory standards is not always possible; nonetheless, the City of Bellevue continues to proactively work to ensure all achievable state and federal requirements are met.

Both federal and state regulations focus on mitigating surface water quality impacts through source controls and head-of-the-pipe treatment. Source controls include any measures that keep pollutants out of the stormwater runoff (for example, erosion control and spill containment). Head-of-the-pipe treatment includes facilities such as oil/water separators and sedimentation ponds that remove pollutants from runoff before they enter the main stormwater conveyance system. Source controls are different from preventative measures; prevention avoids water quality problems altogether. Examples of preventative measures are limitations on land development and reduction in use or prohibition of polluting materials, such as lead in gasoline and copper in brake pads. In general, source controls are specific to a given site while preventative measures are applied across the landscape.

The emphasis on source controls and head-of-the-pipe treatment is intended to ensure a supply of clean water throughout the surface water system, to avoid irreversible resource damage, and to reduce the

possible need for costly future treatment. Additional treatment of urban runoff could be required in the future if the current approach proves inadequate.

To meet federal and state requirements, source controls and head-of-the-pipe treatment are needed both during and after construction. Other ongoing pollution prevention strategies may be needed as well. Different aspects of water quality protection are discussed further below.

Controlling Pollutants from Construction

Construction activities can be a significant source of sediment. As stated by the EPA in 40 Code of Federal Regulations (CFR), Part 122, "Over a short period of time, construction sites can contribute more sediment to streams than was previously deposited over several decades." Construction activities also can contribute other pollutants such as lubricants, oils or greases, and construction wastes.

Through the Clearing and Grading Permit process, the City requires erosion and sedimentation control BMPs to mitigate construction-related impacts to streams, lakes, and wetlands, as well as the constructed drainage system.

The City's clearing and grading development regulations and standards, together with Ecology's Stormwater Management Manual and the NPDES Municipal Stormwater Permit, provide guidance on erosion and sedimentation control BMPs. Such BMPs include, but are not limited to, marking clearing limits, restricting construction in some drainage basins to the dry weather season, constructing temporary sedimentation ponds, and installing runoff filtering devices. City approval is also required for Stormwater Pollution Prevention Plans for construction sites.

City of Bellevue staff strive to ensure that BMPs to control erosion, sedimentation, and other construction-related pollutants are adequate considering site conditions, the proposed development, expected weather conditions, and inspections made during the actual construction. However, erosion and sedimentation can occur regardless of the BMPs employed. Some degree of adverse impacts to the natural and designed drainage systems is inevitable. Costs associated with mitigating these impacts are typically borne by the responsible parties.

Permanent Stormwater Controls on New Development and Redevelopment

Once construction is complete, the potential for pollution still may exist. Therefore, to mitigate the potential impacts, new development and redevelopment over a certain threshold are required to install permanent stormwater quality controls. These include, but are not limited to, source controls and runoff treatment BMPs (such as wet ponds, oil/water separators, sand filters, biofiltration swales, and LID techniques, where feasible).

City implementation of the current (2013-2018) NPDES Permit includes adopting the Ecology 2014 Stormwater Management Manual for Western Washington (referred to herein as the Ecology Manual). The Ecology Manual contains the stormwater development standards for new development, redevelopment and construction sites. The 2014 Ecology Manual requires the use of certain low impact development (LID) best management practices (BMPs) where feasible, including rain gardens, bioretention facilities and pervious pavement. The NPDES Permit also requires municipalities to review and revise its development-related policies, codes, and standards to implement low impact development principles which are land use management strategies for new development and redevelopment sites that emphasize conservation, use of on-site natural features and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff. The intent of the LID BMPs and Principles is to make low impact development the preferred and commonly-used approach to site development.

Because water quality control knowledge is advancing over time, the state requirements will continue to be revised from time to time and may necessitate additional controls. The City desires to modify local codes and standards as necessary to address amendments to state or federal standards.

When a site is developed or redeveloped, City staff strive to ensure that wetlands, lakes, and streams are protected, and that disturbance of steep slopes and landslide hazard areas are avoided or minimized consistent with the Critical Area and Shoreline Overlay District requirements in the City's Land Use Code. These regulations are intended to prevent direct destruction of streams, lakes, and wetlands, as well as prevent major erosion and other problems otherwise caused from inappropriate development practices in geologically hazardous areas.

Ongoing Pollution Prevention

In addition to the runoff controls discussed above with respect to new development and redevelopment, the City has other water quality protection programs that are consistent with federal and state requirements. These are summarized below.

Public education and outreach. The City manages education programs intended to ensure residents, businesses, and students understand their ongoing role in pollution prevention. Education is important because many source controls require ongoing individual actions such as properly disposing of wastes and minimizing the use of pesticides and other pollution-causing products.

Public involvement and participation. In addition to making its staff readily available to its citizens, the City provides opportunities for the public to be involved in water quality management decisions by accepting public comment at Environmental Services Commission and City Council water quality policy discussions. The City also posts the annual stormwater maintenance plan and other relevant documents on the City website to inform customers and to provide another avenue for public input.

Spill control and water quality response (also known as illicit discharge detection and elimination, or IDDE, in the NPDES Permit). The City manages a program to detect and eliminate illicit connections and discharges to the municipal stormwater system and receiving waters, including a water quality response program. Pollutants are sometimes spilled or dumped into the storm drainage system (in violation of federal, state, and local laws). The City's water quality response program responds to water quality complaints, spills, and other illicit discharges or disposal, and can initiate enforcement actions, if warranted. The escalating enforcement process emphasizes education first and then proceeds, if necessary, to issue correction notices, stop work orders, notices of violation, and fines. The IDDE program maintains and published a spill hotline and provides training for staff who may observe illicit discharges in the field. Responding to pollutant spills and eventually eliminating improper disposal of pollutant materials to surface waters are program goals.

Pollution prevention and operations and maintenance requirements. The City's Operations and Maintenance (O&M) program include staff training on pollutant reduction from municipal operations, pollutant reducing drainage system maintenance standards, drainage system inspections and spot checks of drainage facilities for proper system functions, and maintenance of the public storm drainage system. The program also includes policies and procedures to reduce discharge from City-owned lands and facilities, including development of Stormwater Pollution Prevention Plans for equipment maintenance yards and storage facilities.

Stormwater controls need to be properly operated and maintained in order to function as intended in protecting water quality. Therefore, in addition to the O&M program to maintain its own facilities, the City has an inspection program to ensure private maintenance of private stormwater flow control and treatment facilities pursuant to federal and state requirements. Ineffective operation of private

drainage systems could result in environmental damage, an increased need for public system maintenance, or construction of new public capital facilities.

Monitoring and other investigations. In addition to performing water quality monitoring required by the NPDES Permit, the City investigates water quality in order to evaluate problems and assess how best to protect water quality. For example, the City has conducted monitoring and has also monitored individual watersheds and water bodies (such as Phantom and Larsen Lakes). When appropriate, the City coordinates with other jurisdictions when conducting studies and developing action plans. The city participates in the Regional Stormwater Monitoring Program through the NPDES permit. This is a coordinated program to inform stormwater management decisions.

The state and federal stormwater monitoring requirements are likely to increase over time.

Capital projects. Capital projects may be necessary to solve or provide mitigation for an identified water quality problem. Capital projects are identified and prioritized as discussed in the Storm and Surface Water System Plan Capital Investment policy.

Regional cooperation and input on state and federal policy. Bellevue and other jurisdictions are working to ensure that state and federal requirements are practicable and achievable. See the Storm and Surface Water System Plan Regional, State, and Federal Policy Involvement policy below (see page 4-16) for further discussion of the City's role.

Summary

It is clear that no single action can guarantee surface water quality protection. Protecting surface water quality requires a societal and cultural shift in citizen behavior combined with local, state, and federal actions. The City desires to meet federal and state requirements for the protection of surface water quality where practical and achievable. Therefore, consistent with state and federal mandates, the City has and continues to do its part in protecting surface water quality through a number of programs.

New state and federal requirements may result in regulatory changes that are intended to provide improvements to water quality and would likely increase costs to property owners and the City's required level of service. These expected changes may include additional operation and maintenance of targeted facilities; increased emphasis on basin studies; additional monitoring; and requirements or an emphasis on retrofitting stormwater systems to improve water quality and flow control. As these potential changes occur, the City intends to modify applicable policies, codes, standards, and procedures to address such changes.

B. Lake Management

Policy

The Utilities Department should take a lead role in lake management for flood control and water quality purposes only. Maximum use should be made of grants or other outside funding sources and financial cooperation of benefited lake property owners. The Utilities Department should not take a role in lake management issues for recreational or aesthetics purposes.

For Lakes that are sensitive to nutrient loadings and require special controls (see City of Bellevue Storm and Surface Water Engineering Standards) throughout their watershed the Utilities Department should:

- *Ensure that nutrient controls (and other mitigating measures related to flood control or water quality that are identified in a pertinent lake management plan adopted by City Council) are required of new development and re-development throughout the lakes'*

watersheds. These controls are in addition to standard City requirements for controlling water quantity and quality.

- Continue to educate and involve businesses and residents in lake protection through ongoing Utilities Department education programs and other management mechanisms.

Discussion

Bellevue is bounded on the west and east by Lake Washington and Lake Sammamish, respectively. Bellevue also includes three small lakes—Larsen Lake which is City owned, Phantom Lake which includes private and public land, and Lake Bellevue which is privately owned. Larsen Lake is managed as a regional detention (flood control) facility, as well as a Park amenity and aquatic habitat.

Lakes tend to become repositories for pollutants (such as nutrients, oil, and pesticides) that enter them with urban runoff, groundwater, or air deposition. In addition, once nutrients enter a lake and settle to the bottom, they can cycle from the bottom sediments back into the water, where they are available for algae growth. High nutrient levels can fuel nuisance amounts of algae; in turn, decaying algae can deplete dissolved oxygen levels needed by fish and other aquatic animals.

The 1988 and 1994 Comprehensive Drainage Plans concluded that the Utilities Department should have a role in lake management for water quality and flood control only; in addition, maximum use should be made of outside funding sources such as grants and financial cooperation of benefitted lake property owners.

Past work accomplished by the City related to Bellevue lakes and Lake Sammamish emphasized the need for ongoing lake and watershed management to limit phosphorus loading. Ongoing management involves maintaining capital facilities and working to minimize the entry of phosphorus and other pollutants into the lakes.

Reducing pollution can be accomplished by:

1. Ensuring BMPs are required of new development and redevelopment, including BMPs for nutrient control.
2. Continuing to educate businesses and residents on their role in lake protection.

The City routinely requires BMPs to control runoff from new development and redevelopment (except for very minor projects). Consistent with requirements in Ecology's Stormwater Management Manual, the City requires BMPs for water quality control, not just quantity control (see the Storm and Surface Water System Plan surface water quality policy).

In addition to requirements that apply city-wide, nutrient controls are warranted on new development and redevelopment in the watersheds of Lake Sammamish and Phantom and Larsen Lakes. This is consistent with minimum requirement #6 in Ecology's Stormwater Management Manual, which requires jurisdictions to impose more stringent water quality controls where needed to protect water quality sensitive areas. In particular, the Ecology manual requires nutrient controls (such as constructed wetlands and specially designed wet ponds) for new development and redevelopment in watersheds draining to receiving waters where nutrients are a concern.

The Phase II NPDES Municipal Stormwater Permit also requires local jurisdictions to have educational programs. In Bellevue, education programs are already in place. Because a lake is affected by residents and businesses throughout its watershed, and lakes are highly valued by many residents, the Utilities Department should involve public outreach when undertaking its lake management activities.

Regional Policy

A. Regional, State, and Federal Policy Involvement

Policy

The Utilities Department shall seek to:

- *Accomplish the City's environmental goals to promote a healthy environment, public safety and a strong economy, essential to maintaining the city's and region's quality of life;*
- *Ensure reasonable and prudent fiscal policies on behalf of ratepayers;*
- *Ensure state and federal requirements are fiscally prudent and achievable; and*
- *Maintain local control and flexibility in policy/program implementation.*

The Utilities Department's role is to develop proposed guiding principles/interests for Council approval. Pursuant to Council direction, the Utilities Department role in monitoring, influencing, developing and implementing regional, state, and federal surface water policies and programs may include:

- *Influencing legislation through lobbying and written/verbal testimony;*
- *Participating in rule-making;*
- *Reviewing technical documents;*
- *Serving on regional forums and coalitions, advisory committees and work groups; and*
- *Providing technical and staff support for Council members serving on regional, state, or federal storm and surface water committees.*

Discussion

The Utilities Department has participated in the development and implementation of regional, state, and federal drainage policies and programs for a number of reasons:

- Water resource issues are by nature regional; watersheds cross jurisdictional boundaries, and different watersheds can often benefit from similar flood control and water quality protection programs.
- The City has a direct interest in helping shape state and federal water resource mandates because they affect utility costs, can result in rigid programs that preclude more creative or effective local ones, or can result in requirements that are impossible to meet.
- The City has been looked to as a regional and national leader with respect to storm and surface water management and therefore has had an opportunity to serve as a technical resource and participant in shaping policy and programs to benefit the City.
- The City benefits from learning about the experiences and technical expertise of others.

The Utilities Department's role in developing regional, state, and federal policies and programs varies from influencing legislation, rules, and policy to sharing technical information and participating in joint studies. Through its involvement, the Utilities Department seeks to achieve the City's environmental goals while keeping down costs to utility rate payers and maintaining local control and flexibility.

Waterworks Utility Financial Policies

Introduction

The Waterworks Utility is the financial consolidation of the Sewer, Storm & Surface Water and Water Utilities of the City of Bellevue for debt rating and coverage purposes as established in Ordinance No.'s 2169, 2845, 3158 and 4568. It pledges the strengths and revenues of the three separate Utilities for the common financial good while keeping each Utility financially separate for budgeting, rate-setting, revenues, expenditures, debt and accounting.

These "Financial Policies" apply uniformly to the Sewer, Storm & Surface Water and Water Utilities with few, unique exceptions which are identified separately. This update reflects changes consistent with current long-range financial planning, particularly with regard to renewal and replacement funding, the use of debt and rate policies. They supersede the Financial Policies, which were adopted under Resolution No. 5967 in 1995.

These policies do not stand-alone. They must be taken in context with the other major City and Utilities documents and processes. For instance, each Utility has its own System Plan, which documents its unique objectives, planning, operations and capital needs. These System Plans have historically had a 20-year planning horizon. Future System Plans will need to evaluate long term renewal and replacement of aging facilities, much of which were constructed in the 1950's and 1960's during periods of high growth rates and are approaching the end of their useful life. Life cycle costs should be considered in planning the future capital facilities and infrastructure needs.

The City has a seven-year City-wide Capital Investment Program (CIP) Plan which is updated with each biennial budget cycle. All major City capital projects are included. Generally, they are described as over \$25,000; involving new physical construction, reconstruction or replacement; and involving City funding. The CIP identifies the level and source of funding for each project. The CIP includes specific sections for each Utility which identify near-term capital projects consistent with each current Utility System Plan and several projects of general scope including renewal and rehabilitation, capital upgrades, response to growth and other system needs.

General Policies

A. Fiscal Stewardship

Policy: The Waterworks Utility funds and resources shall be managed in a professional manner in accordance with applicable laws, standards, City financial practices and these Financial Policies.

Discussion: It is incumbent on Utility management to provide professional fiscal management of utility funds and resources. This requires thorough knowledge of and conformance with the City financial management processes and systems as well as applicable laws and standards. It also requires on-going monitoring of revenues and expenses in order to make decisions and report to City officials, as needed, regarding the status of Utilities financing. Independent financial review, analysis and recommendations should be undertaken as needed.

B. Self-sufficient Funding

Policy: Each Utility shall remain a self-supporting enterprise fund.

Discussion: The revenues to each Utility primarily come from customer charges dependent on established rates. State law requires that utility funds be used only for utility purposes. Since each Utility has somewhat differing service areas, it is essential for ratepayer equity that they be kept financially separate and accountable. The City's General Fund can legally contribute to the

Utility funds but does not. The City budgeting process includes a balanced and controlled biennial Utility budget. This requires careful preparation of expense and revenue projections that will be reviewed by City management, the Environmental Services Commission, the general public and the City Council prior to approval of any change in Utility rates.

C. Comprehensive Planning Policies

Policy: The Water Utility System Plan shall be updated every six years as required by state statute; the Wastewater and Storm & Surface Water System Plans shall be updated as required by changed conditions or state statute, between every six to ten years. All Utility system plans shall use a 20-year planning horizon or greater, and shall consider life cycle costs to identify funding needs. Studies to analyze specific geographic areas or issues, such as Storm & Surface Water sub-basin plans, Wastewater capacity and flow studies, or Water pressure zone studies will be completed as required using similar criteria for planning infrastructure needs.

Discussion: Substantial portions of the City utility systems were constructed in the 1950's and 1960's. These systems are approaching the end of their useful life as illustrated in Figure 4-2 - Watermain Replacement Spending and Figure 4-3 - Sewermain Replacement Spending. The storm & surface water infrastructure is of similar age but has not been graphed. It most likely has a relatively shorter expected life span. The object is to determine and follow a survivor curve replacement schedule rather than the replacement schedule based on age alone. Assumptions for survivor curves and useful lives are revisited periodically. These were assessed in 2004 and updated for the most recent engineering and financial findings. Significant changes include the adjustment of replacement costs to current price levels, categorization of pipe assets based on expected useful lives, and replacement of major non-pipe Utility assets such as pump stations and reservoirs. The Exhibits illustrate an example survival replacement curve based on preliminary estimates only. As real needs are determined, they will replace the estimated curves. Renewal and/or replacement will require substantial reinvestment in the future and have major rate impacts if large portions of the systems have to be replaced in relatively short periods of time. The actual useful life of underground utilities is difficult to determine and the best available data is needed to be able to plan for the orderly and timely renewal and/or replacement. For this purpose, the comprehensive plans need to have at least 20 year planning horizons and must address the aging of the Utility systems.

Long term system planning for the Utility systems is required in order to assure that future financial needs are anticipated and equitable funding plans can be developed. In order to keep funding plans current, utility system plans need to be updated between six and ten years. State law requires six years for water system plans. Wastewater system plans are not mandated to be updated on a six year cycle, however updating them between six and ten years is the common standard of practice. Stormwater system plans similarly have no state or federal mandate for updating, however with the implementation of the NPDES General Permit, it is reasonable to expect significant changes within two 5-year permit terms to warrant a system plan update. Depending on the significance of the changes, the Storm system plan may require updating sooner than after two 5-year permit cycles. These Financial Policies will be reviewed and updated as needed.

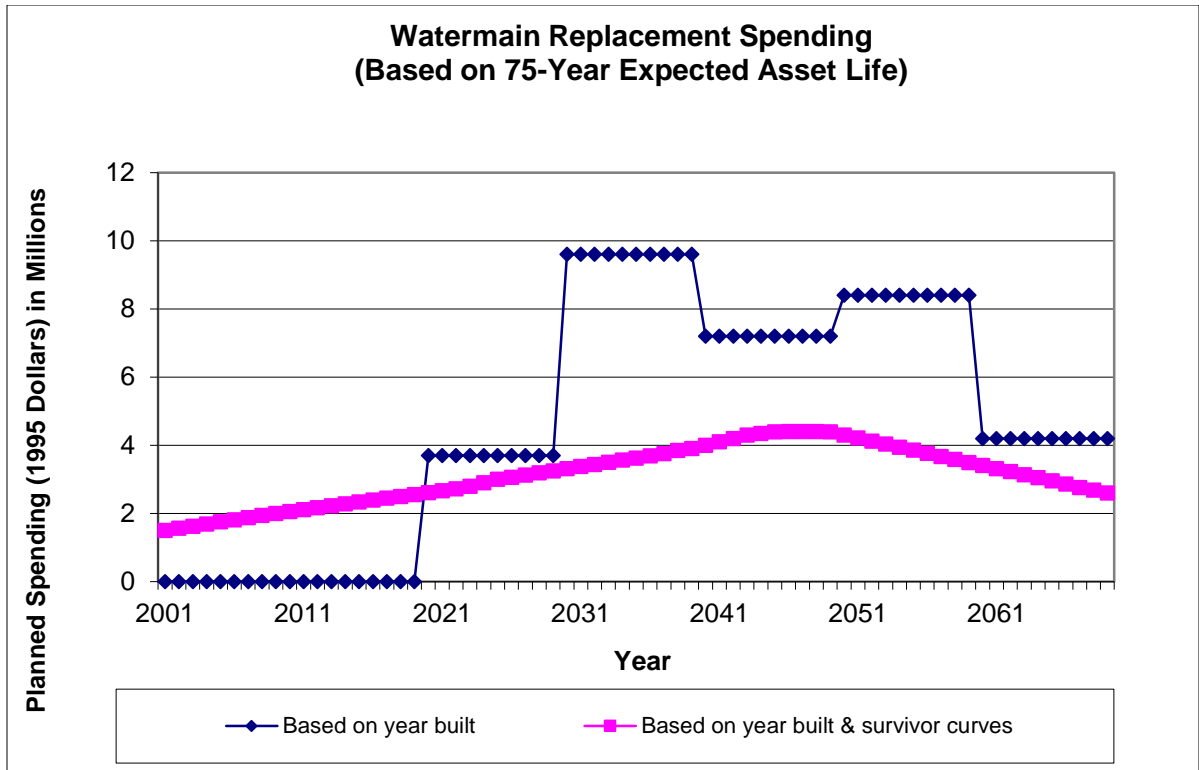


Figure 4-2. Watermain replacement spending

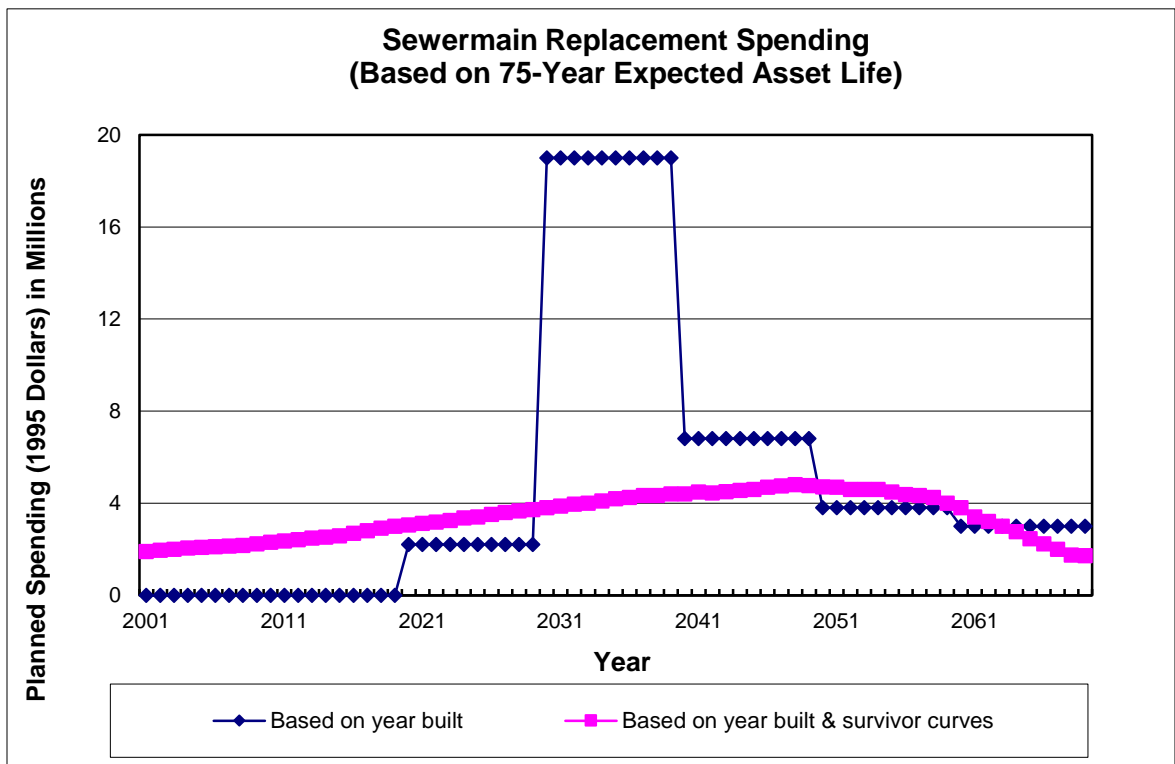


Figure 4-3. Sewermain replacement spending.

Capital Investment Program Policies

A. General Scope

Policy: The Utilities Capital Investment Program (CIP) will provide sufficient funds from a variety of sources for implementation of both short- and long-term capital projects identified in each Utility System Plan and the City-wide Capital Investment Program as approved by the City Council.

Financial planning for long-term capital investment shall be based on principles that result in smooth rate transitions, maintain high credit ratings, provide for financial flexibility and achieve inter-generational equity.

Discussion: These near-term capital projects are usually identified in each Utility system plan which also provides the criteria and prioritization for determining which projects will be constructed. Several projects of general scope are also included to allow for on-going projects that are less specifically identified due to their more inclusive nature.

In addition to these near-term projects, funding should be provided for long-term capital reinvestment in the system to help minimize large rate impacts as the systems near the end of their useful life and have to be renewed or replaced. Ordinance No. 4783 established a Capital Facilities Renewal & Replacement (R&R) Account for each Utility to provide a funding source for this purpose. Other policies describe how this Account is to be funded and expended.

A reinvestment policy by itself, without some form of planned and needed expenditure, could lead to excessive or unneeded expenditures, or conversely unnecessary accumulations of cash reserves. The reinvestment policy needs to tie the planned expenditures over time with a solid, long-term financial plan that is consistent with these policies.

The actual needs for the renewal/replacement expenditures should relate to the on-going need to minimize system maintenance and operating costs consistent with providing safe and reliable service, the age and condition of the system components, and any regulatory or technical obsolescence. In essence, pipes should be replaced when it is needed and before it fails. As such, the goal setting measure of how much is an appropriate annual or periodic reinvestment in renewals and replacement of existing assets should be compatible with the age and condition of the infrastructure and its particular circumstances.

THE CITY OF BELLEVUE STORM AND SURFACE WATER SYSTEM PLAN

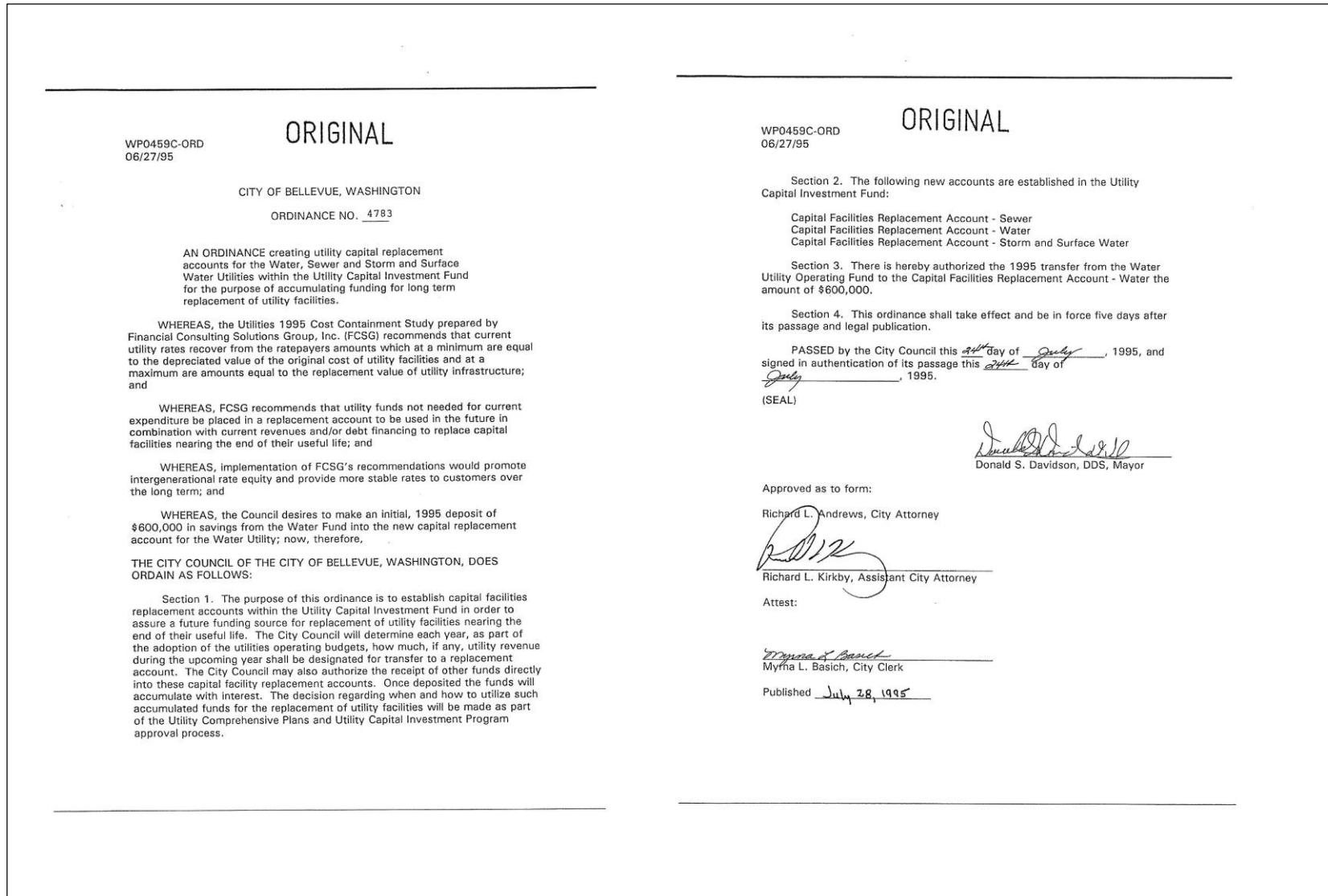


Figure 4-4. Ordinance 4783 Capital Facilities Renewal and Replacement.

B. Funding Levels

Policy: Funding for capital investments shall be sustained at a level sufficient to meet the projected 20 year (or longer) capital program costs.

Funding from rate revenues shall fund current construction and engineering costs, contributions to the Capital Facilities Renewal and Replacement (R&R) Account, and debt service, if any.

Inter-generational equity will be assured by making contributions to and withdrawals from the R&R Account in a manner which produces smooth rate transitions over a 20 year (or longer) planning period.

On an annual basis, funding should not fall below the current depreciation of assets expressed in terms of historical costs less any debt principal payments.

Discussion: These policies are based on the experience gained by developing a long-term Capital Replacement Funding Plan. In absence of such a plan, the range of capital investment funding should fall between the following minimum and maximum levels:

- The minimum annual rate funding level would be based on the current depreciation of assets expressed in terms of historical costs, less any debt principal payments.
- The maximum annual rate funding level would be based on the current depreciation of assets expressed in terms of today's replacement costs, less any debt principal payments.

The minimum level based on historical cost depreciation approximates the depletion of asset value. Some of the cost may already be in the rates in the form of debt service. Depreciation less debt principal repayment provides a minimum estimate of the cost of assets used. Any funding level below this amount defers costs to future rate payers and erodes the Utility's equity position, which puts the Utility's financial strength and viability at risk.

The maximum level based on replacement cost depreciation represents full compensation to the utility, in terms of today's value, for the depletion of assets. The replacement cost depreciation, again less debt principal repayment, provides a ceiling to an equitable definition of "cost of service".

The purpose of long-term capital reinvestment planning is to establish a target funding level which is based on need and to assure that funds will be available for projected capital costs in an equitable manner. The best projection of the needed capital reinvestment is based on a "survival curve" approach, approximating the timing and cost of replacing the entire system. This defines the projected financial needs and allows determination of equitable rate levels, funding levels for current capital construction and engineering, contributions to and withdrawals from the R&R Account, and the use of debt, if any. It also provides a means to project depreciation on both historical cost and replacement cost basis which are used to calculate minimum and maximum funding levels, debt to fixed asset ratios, and debt coverage levels, if debt is used. These later measures can be used to assure that the financial plan meets conventional standards.

C. Use of Debt

Policy: The Utilities should fund capital investment from rates and other revenue sources and should not plan to use debt except to provide rate stability in the event of significantly changed circumstances, such as disasters or external mandates.

Resolution No. 5759 states that the City Council will establish utility rates/charges and appropriations in a manner intended to achieve a debt service coverage ratio (adjusted by including City taxes as an expense item) of approximately 2.00". Please note that the Moody's Investor Services rating should be Aa2 (not Aa as stated in Resolution No. 5759).

Discussion: The Utilities are in a strong financial position and have been funding the Utility Capital Investment Program from current revenues for a number of years. The current 20 year and 75 year capital funding plans conclude that the entire long-term renewal and replacement program can be funded without the use of debt if rates are planned and implemented uniformly over a sufficient period. Customers will pay less over the long-term if debt is avoided, unless it becomes truly necessary due to unforeseen circumstances such as a disaster or due to changes in external mandates. Having long-term rate stability also assures inter-generational equity without the use of debt because the rate pattern is similar to that achieved by debt service.

Use of low interest rate debt such as the Public Works Trust Fund loans, by offering repayment terms below market rates, investment earnings or even inflation, should be viewed as a form of grant funding. When available or approved, such sources should be preferred over other forms of rate or debt funding, including use of available resources. Since such reserves would generate more interest earnings than the cost of the loan, the City's customers would be assured to benefit from incurring such debt.

WPO254C-RES
03/03/94

CITY OF BELLEVUE, WASHINGTON

RESOLUTION NO. 5759

A RESOLUTION relating to financial policy for the Waterworks Utility and adopting a debt service coverage policy for the Waterworks Utility

WHEREAS, the City of Bellevue is consistently recognized for its prudent financial management; and

WHEREAS, the City of Bellevue's Water and Sewer Bonds are currently rated Aa by Moody's Investor Services and AA- by Standard & Poor's Corporation, which are considered to be excellent ratings; and

WHEREAS, these excellent ratings result in lower interest costs on the City's Water and Sewer bonds, which, in turn, may result in lower water, sewer and storm drainage costs; and

WHEREAS, it is important to the rating agencies and to the financial community that the City articulate its financial goals for its Waterworks Utility; and

WHEREAS, a desirable debt service coverage ratio, the ratio of revenues available for debt service to the annual debt service requirement, positively affects the Utility's bond ratings; and

WHEREAS, the City Council deems it in the City's best interest to establish a debt service coverage policy target for the purpose of protecting its current bond rating and to allow for the development of financial projections, NOW, THEREFORE,

THE CITY COUNCIL OF THE CITY OF BELLEVUE, WASHINGTON, DOES RESOLVE AS FOLLOWS:

Section 1. The City Council hereby adopts the following debt service coverage policy for the bonds issued by the City's Waterworks Utility.

The City Council will establish utility rates/charges and appropriations in a manner intended to achieve a debt service coverage ratio (adjusted by including City taxes as an expense item) of approximately 2.00. The City Council authorizes the Waterworks Utility to utilize this policy in development of pro

WPO254C-RES
03/03/94

forma projections which will be disseminated to the bond rating agencies and to the financial community generally.

PASSED by the City Council this 7th day of March, 1994, and signed in authentication of its passage this 8th day of March, 1994.

(SEAL)


Donald S. Davidson, DDS, Mayor

Attest:


Myrna L. Basich, City Clerk

Figure 4-5. Resolution No. 5759. Waterworks Utility Debt Service Policy

D. Capital Facilities Renewal & Replacement (R&R) Account

1. Sources of Funds

Policy: Revenues to the R&R Account may include planned and one-time transfers from the operating funds, transfers from the CIP Funds above current capital needs, unplanned revenues from other sources, Capital Recovery Charges, Direct Facility Connection Charges and interest earned on the R&R Account.

2. Use of Funds

Policy: Funds from the R&R Account shall be used for system renewal and replacement as identified in the CIP. Because these funds are invested, they may be loaned for other purposes provided repayment is made consistent with the need for these funds and at appropriate interest rates. Under favorable conditions, these funds may be loaned to call or decrease outstanding debt.

3. Accumulation of Funds

Policy: The R&R Account will accumulate high levels of funds in advance of major expenses. These funds will provide rate stability over the long-term when used for this purpose and should not be used for rate relief.

Discussion: Revenues from Capital Recovery Charges, Direct Facility Connection Charges and interest earned on the R&R Account are deposited directly into the R&R Account. Other transfers are dependent on the long-term financial forecast, current revenues and expenses, and CIP cash flows. The long-term financial forecast projects a certain funding level for the transfers to the CIP and the R&R Accounts. Rates should be established consistent with this long-term financial plan and will generate the funds for such transfers. Setting rates at lower levels may result in current rate payers contributing less than their fair share for long-term equity.

R&R Account funds must only be used for the purpose intended; that is, the long-term renewal and replacement of the utility systems. They may be used for other purposes if it is treated as a loan, which is repaid with appropriate interest in time for actual R&R needs for those funds.

These accounts are each projected to accumulate tens of millions of dollars in order to meet the anticipated costs for the actual projects at the time of construction. It is the intent of these policies that these reserve funds will not be used for other purposes or to provide rate relief because that would defeat the long-term equity and could lead to the need for the use of debt to fund the actual needs when they occur.

SYSTEM EXPANSION AND CONNECTION POLICIES

A. Responsibilities

Policy: Those seeking or who are required to have Utility service are responsible for extending and/or upgrading the existing Utility systems prior to connecting.

Discussion: 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. The extensions or upgrades must be constructed to City standards and requirements. This is typically accomplished through a Developer Extension Agreement with the City wherein requirements are documented, standards are established, plans are reviewed and construction is inspected and approved. Service will not be provided until these requirements are met.

The philosophical underpinning of this policy is that “growth pays for growth”. Historically, developers constructed much of the City’s utility infrastructure. If the infrastructure eventually would benefit more than the initial developer, the Utility signed a Latecomer Agreement to reimburse the original financier from charges to those connecting and receiving benefit at a later point in time. When the cost to extend and/or upgrade the system to accommodate development or redevelopment is beyond the means of a single developer, the Utility has employed a variety of methods to assist in the construction of the necessary infrastructure. Local Improvement Districts (LID’s) historically have been used to provide financing for infrastructure for new development, with the debt paid over time by the property owners. Most of the older Utilities infrastructure was financed by this method.

The Utility has in some cases up-fronted the infrastructure construction for new development or redevelopment from rate revenues which are later reimbursed with interest, in whole or in part, by subsequent development through direct facility connection charges (see Cost Recovery Policy). Examples are the water and sewer infrastructure for Cougar Mountain housing development and Central Business District (CBD) redevelopment. Another example is the use of the Utility’s debt capacity to provide for development infrastructure whereby the City sells bonds at lower interest rates than can private development, constructs the infrastructure, and collects a rate surcharge from the benefited area to pay off the bonds. Examples of this type of financing include the Lakemont development drainage infrastructure and the Meydenbauer Drainage Pipeline in the CBD.

B. Cost Recovery

Policy: The Utility shall establish fees and charges to recover Utility costs related to: (1) development services, and (2) capital facilities that provide services to the property.

The Utility may enter into Latecomer Agreements with developers for recovery of their costs for capital improvements, which benefit other properties in accordance with State law. The Utility will add an administrative charge for this service.

Discussion: In general, Utility costs related to development services are recovered through a variety of fees and charges. There are fixed rates for some routine services based on historical costs and inflation. There are fixed plus direct cost charges and applicable overhead for developer extension projects to cover the lengthy but variable level of development review and inspection typically required to implement these projects. These rates are reviewed periodically to ensure that the cost recovery is appropriate.

When the means of providing the infrastructure to serve a new development or redevelopment are beyond the means of a single developer, the Utility may elect to assist the developer by using: LID’s, Latecomer Agreements, special debt (to be paid by special rate surcharges), up-fronting the costs from Utility rate revenues (to be reimbursed by future developers with interest through direct facility connection charges), or other lawful means. It is the intent of this policy to fully recover these costs, including interest, so as to reimburse the general rate payer.

Latecomer charges allow cost recovery for developers and private parties, for facilities constructed at their own expense and transferred to the Utility for general operation. Properties subsequently connecting to those systems will pay a connection charge that will be forwarded to the original individual or developer or the current owner depending on the terms of the Latecomer Agreement. The Utility collects an overhead fee on this charge for processing the agreements and repayments.

C. Use of Revenues

Policy: All capital-related revenues such as Capital Recovery Charges and Direct Facility Connection Charges should be deposited in the Capital Facilities Renewal & Replacement Accounts.

Discussion: Capital Recovery Charges are collected from all newly developed properties in the form of monthly rate surcharges over a ten year period to reimburse the Utility for historical costs that have been incurred by the general rate base to provide the necessary facilities throughout the service area. These Capital Recovery Charges should be deposited in the Capital Facilities Renewal & Replacement Accounts.

Direct Facility Connection Charges are collected for capital improvements funded by the City as described above in Section 2 under Cost Recovery. The total cost of the improvement is allocated to the area of benefit and distributed on an equitable basis such as per residential equivalent unit. Interest is collected in accordance with State law.

D. Affordable Housing Consideration

Policy: The Utility shall base connection charges on the number of units allowed under the basic zoning. Only incremental cost increases will be charged to affordable housing units.

Discussion: The City has adopted bonus density incentives for developers to build units specifically for affordable housing. Under historical practices these additional units would have been charged the same connection fee as all other units, resulting in a lower cost per unit for all units. While this is fair, it does not create any incentive to develop affordable housing. By charging only the incremental increased facility cost to the affordable housing units, all developers who include an affordable housing component will experience no increase in cost because of the affordable bonus density units. The cost per unit for affordable units is thereby reduced. The cost per unit for all other units, based on underlying land use zoning, remains unchanged.

RATE POLICIES

A. Rate Levels

Policy: Rates shall be set at a level sufficient to cover current and future expenses and maintain reserves consistent with these policies and long-term financial forecasts.

Changes in rate levels should be gradual and uniform to the extent that costs (including CIP and R&R transfers) can be forecast.

Cost increases or decreases for wholesale services shall be passed directly through to Bellevue customers.

Local and/or national inflation indices such as the Consumer Price Index (CPI) shall be used as a basis for evaluating rate increases.

At the end of the budget cycle, fund balances that are greater than anticipated and other one-time revenues should be transferred to the R&R account until it is shown that projected R&R account funds will be adequate to meet long-term needs, and only then used for rate relief.

Discussion: A variety of factors including rate stability, revenue stability, the encouragement of practices consistent with Utility objectives and these Waterworks Utility Financial Policies are considered in developing Utility rates. The general goal is to set rates as low as possible to

accomplish the on-going operations, maintenance, repair, long-term renewal and replacement, capital improvements, debt obligations, reserves and the general business of the Utility.

Long-range financial forecast models have been developed for each of the Utilities, which include estimated operating, capital and renewal/replacement costs for a 75 year period in order to plan for funding long-term costs. Operating costs are assumed to remain at the same level of service and don't include impacts of potential changes due to internal, regional or federal requirements. Capital costs, including renewal/replacement, are projected based on existing CIP costs and approximated survival curves for the infrastructure. The models are used to project rate levels that will support the long-term costs and to spread rate increases uniformly over the period. This is consistent with the above policy that changes in rate levels should be gradual and uniform. Uniform rate increases help ensure that each generation of customers bears their fair share of costs for the long-term use and renewal/replacement of the systems.

The biennial budget process provides an opportunity to add to or cut current service levels and programs. The final budget, with the total authorized expenses including transfers to the CIP Fund and the R&R Account, establishes the amount of revenue required to balance the expenses. A balanced budget is required. The budgeted customer service revenue determines the level of new rates. For example, if the current rates do not provide sufficient revenues to meet the projected expenses, the costs have to be reduced or the rates are increased to make up the shortfall.

For purposes of these policies, wholesale costs are defined as costs to the Utilities from other regional agencies such as the Seattle Public Utilities and/or the Cascade Water Alliance (CWA), and King County Department of Natural Resources for sewer treatment and any agreed upon Storm & Surface Water programs. Costs which are directly based on the Utilities' revenues or budgets such as taxes, franchise fees and reserve levels that increase proportionally to the wholesale increases are included within the definition of wholesale costs.

B. Debt Coverage Requirements

Policy: Utility rates shall be maintained at a level necessary to meet minimum debt coverage levels established in the bond covenants and to comply with Resolution No. 5759 which establishes a target coverage ratio of 2.00.

Discussion: Existing revenue bond covenants legally require the City's combined Waterworks Utility, which includes the Water, Sewer and Storm & Surface Water Utilities, to maintain a minimum debt coverage ratio of 1.25 on a combined basis. In 1994, Council also adopted Resolution No. 5759 that established a policy, which mandates the Utilities to maintain a target combined debt coverage ratio of approximately 2.00, to further protect the City's historically favorable Utility revenue bond ratings. Water and Sewer Utility resources are counted in the official coverage calculation though Storm & Surface Water is responsible for the major portion of current outstanding Utility debt. Requiring Storm & Surface Water to separately maintain the minimum 1.25 legal debt coverage level and to move toward the 2.00 level will help ensure that necessary coverage requirements are met, and that customers of the other Utilities will not be unfairly burdened with the cost of meeting this obligation. It also ensures that sufficient coverage is available to the Water and Sewer Utilities if they need to incur debt.

C. Frequency of Rate Increases

Policy: Utility rates shall be evaluated annually and adjusted as necessary to meet budgeted expenses including wholesale cost increases and to achieve financial policy objectives.

Discussion: In 1996, the City changed to a biennial budget process and adopted a two-year Utilities budget including separate rates for 1997 and 1998. This practice will continue on a biennial basis. However, Utility rates will be evaluated on an annual basis and adjusted as necessary to ensure that they are effectively managed to achieve current and future financial policy objectives. Annual rate reviews will include preparation of forecasts covering a twenty-year period for Utility revenues, expenditures, reserve balances and analysis of the impact of various budgetary elements (i.e. CIP transfers, R&R Account transfers, debt service costs, debt coverage levels, operating expenses, and reserves) on both current and future rate requirements.

D. Rate Structure - Sewer

Policy: The Sewer Utility rate structure will be based on a financial analysis considering cost-of-service and other policy objectives, and will provide for equity between customers based on use of the system and services provided.

Discussion: In 1993, a Sewer Rate Study was performed that resulted in Council approval of a two-step, volume-based rate structure for single-family customers based on winter average metered water volumes instead of the traditional flat rate structure. Flat rate structures were seen as inequitable to low-volume customers who paid the same amount as high volume customers. Rates are based on the level of service used, rather than the availability of service.

The revenue requirements are based on the "average" single-family winter average volume calculated annually from the billing database. The charge for an individual customer is based on their winter average and then charged at that level each bill for the entire year to avoid charging for irrigation use. The customer's winter average is based upon the prior year's three winter bills because the current year's bills include winter months, which would result in the average constantly changing. Customers without prior winter averages to use for a basis are charged at the "average" volume until they establish a "winter-average" or sufficient evidence that their use is significantly different than the "average".

E. Rate Structure - Storm & Surface Water

Policy: The Storm & Surface Water Utility rate structure will be based on a financial analysis considering cost-of-service and other policy objectives, and will provide adjustments for actions taken under approved City standards to reduce related service impacts.

Discussion: In the existing Storm & Surface Water rate structure, customer classes are defined by categories of development intensity, i.e., *undeveloped, lightly developed, moderately developed, heavily developed* and *very heavily developed*. Based on theoretical run-off coefficients for each of these categories, higher rates are charged for increasing degrees of development to reflect higher run-off resulting from that development. Under this structure, billings for both residential and non-residential customers are determined by total property area and rates assigned to applicable categories of development intensity. Customers providing on-site detention to mitigate the quantity of run-off from their property receive a credit equal to a reduction of one rate level from their actual development intensity. Property classified as "wetlands" is exempt from Storm & Surface Water service charges.

Large properties, over 35,000 square feet, with significantly different levels of intensity of development may be subdivided for rate purposes in accordance with Ordinance No. 4947. In addition, properties with no more than 35,000 square feet of developed area in the light and moderate intensity categories may, at the option of the owner, defer charges for that portion of the property in excess of 66,000 square feet. The property owner may apply for a credit against the Storm & Surface Water charge when they can demonstrate that the hydrologic response of the property is further mitigated through natural conditions, on-site facilities, or actions of the property owner that reduce the City's costs in providing Storm & Surface Water quantity or quality services.

Future design of a water quality rate component will also use cost-of-service principles to assign defined water quality costs to customer classes, according to their proportionate contribution to Utility service demand. It is anticipated that these rate structure revisions will also provide financial incentives to customers taking approved actions to mitigate related water quality impacts.

F. Rate Structures - Water

Policy: The water rate structure will be based on a financial analysis considering cost-of service and other policy objectives, and shall support water conservation and wise use of water resources.

Discussion: The water rate structure consists of fixed monthly charges based on the size of the customer's water meter and volume charges, which vary according to customer class and the actual amount of water that the customer uses. There are three different meter rate classifications: domestic, irrigation and fire standby. The different charges are based on a cost-of-service study.

State law and the wholesale water supply contract require the Utility to encourage water conservation and wise use of water resources. Seattle first established a seasonal water volume rate structure for this purpose in 1989 with higher rates in the summer than in the winter. In 1990, based on a water rate study and the desire to provide a conservation-pricing signal to our customers, the City adopted an increasing block rate structure for local volume rates. The rate structure was revised in 1991 to pass through an increase in wholesale water costs, which also included a higher seasonal water rate for summer periods. The block water rate structure was revised again in 1997, to incorporate new cost-of-service results from a 1996 water rate study.

An increasing block rate structure, charges higher unit rates for successively higher water volumes used by the customer. The current rate structure has four rate steps for single-family and three rate steps for multi-family customers, based on metered water volumes. All irrigation-metered water is charged at a separate, higher rate. Because non-residential classes do not fit well in an increasing block rate approach due to wide variations in their size and typical water use requirements, seasonal rates, with and without irrigation, were established for these customers. This rate structure will be thoroughly reviewed, as more historical information is available on the effect of the increasing block and seasonal rate structure.

In 1997, an additional category of fire protection charges was added for structures and facilities that benefit from the City water system but are not otherwise being charged for water service. For example, a number of homes are on private wells but are near a City-provided fire hydrant and enjoy the additional benefit of fire protection yet didn't pay for the benefit on a water bill. The charge is based on an equivalent meter size that would normally serve the facility. It also

applies to facilities that have terminated water service but still stand and require fire protection, such as homes or buildings that are not occupied.

G. Rate Equity

Policy: The rate structure shall fairly allocate costs between the different customer classes. Funding of the long-term Capital Investment Program also provides for rates that fairly spread costs over current and future customers.

Discussion: As required under State law, Utility rates will provide equity in the rates charged to different customer classes. In general, rates by customer class are designed to reflect the contribution by a customer group to system-wide service demand, as determined by cost-of-service analysis. The RCW also authorizes utility rates to be designed to accomplish "any other matters, which present a reasonable difference as a ground for distinction". For example, increasing water rates for irrigation and higher levels of use is allowed to encourage the wise use and conservation of a valuable resource. Formal rate studies are periodically conducted to assure ongoing rate equity between customer classes and guide any future rate modifications necessary to support changing Utility program or policy objectives.

Contributions from current rates to the R&R Account also provide equity between generations of rate payers by assuring that each user pays their fair share of capital improvements, including renewal and replacement, over the long-term. (See sections B and D under the Capital Investment Program Policies).

H. Rate Uniformity

Policy: Rates shall be uniform for all utility customers of the same class and level of service throughout the service area. However, special rates or surcharges may be established for specific areas, which require extraordinary capital investments and/or maintenance costs. Revenues from such special rates or surcharges and expenses from capital investments and/or extraordinary maintenance shall be accounted for in a manner to assure that they are used for the intended purposes.

Discussion: The City Water and Sewer Utilities originally formed by assuming ownership of three separate operating water districts and two sewer districts. In the assumption agreements, each included a provision that requires the Utility to uniformly charge all customers of the same class throughout the entire service area. The basic rates are set for all customers, inside and outside of the City, except for local utility taxes in Bellevue, and franchise fees in Clyde Hill, Hunts Point, Medina, and Yarrow Point. Unlike the Water and Sewer Utilities, the Storm & Surface Water Utility only serves areas within the City limits.

Under state law, Utilities are required to charge uniform rates to all customers in a given customer class, regardless of property location within the service area. The only exception permitted is for certain low-income customers (see below).

However, when conditions in particular service areas require extraordinary capital improvement or maintenance costs to be incurred, special rates or surcharges may be adopted to recover those costs directly from properties contributing to the specific service demand, instead of assigning that cost burden to the general Utility rate base. This will only apply for costs above and beyond normal operations, maintenance and capital improvements. For example, rate surcharges are being used to recover debt service costs for capital facilities in Lakemont and the

CBD. An additional rate surcharge for Lakemont properties is being collected for extraordinary maintenance costs of the storm water treatment facility.

I. Rate Assistance

Policy Rate assistance programs shall be provided for specific low-income customers as permitted by State law.

Discussion: Continual increases in all utility rates have had a significant impact on low-income customers. The City has adopted a rate discount or rebate program for disabled customers and senior citizens over 62 years old and with income below certain levels as permitted under State law and defined in Ordinance No. 4458. It has two levels, one discounting Utility rates by 40 percent and the other level by 75 percent, based on the customer's income level. Customers that indirectly pay for Utility charges through their rent can obtain a rebate for the prior year's Utility charges on the same criteria. The City also rebates 100 percent of the Utility Tax for these customers. The cost of this program is absorbed in the overall Utility expenses and is recovered through the rate base. The General Fund provides for the Utility tax relief.

There are other low-income customers who are less than 62 years old and currently receive no Utility rate relief. However, the City has instituted a separate rebate of Utility taxes for qualified low-income citizens.

OPERATING RESERVE POLICIES

A. Operating Reserve Levels

Policy: The Utilities' biennial budget and rate recommendations shall provide funding for working capital, operating contingency, and plant emergency reserve components on a consolidated basis in accordance with the attached Summary of Recommended Consolidated Reserve Levels table and as subsequently updated.

Discussion: Utility resources not spent for operations remain in the fund and are referred to as reserves. At the end of each year, these funds are carried forward to the next year's budget and become a revenue source for funding future programs and operations. Under the terms of this policy, the Utility budget is targeted to include a balance of funds for the specific purposes stated above. While included in the total operating budget, these reserves will only be available for use pursuant to these reserve policies. Setting aside these budget resources in the reserve balance will help to ensure continued financial rate stability in future Utility operations and protect Utility customers from service disruptions that might otherwise result from unforeseen economic or emergency events.

The working capital reserve is maintained to accommodate normal cyclical fluctuations within the two month billing cycle and during the budget year. These are higher for Water than for Sewer and Storm & Surface Water due to more variable revenues and expenditures. They are described in terms of a number of days of working capital as a percentage of a full-year's budget.

The operating contingency reserve protects against adverse financial performance or budget performance due to variations in revenues or expenses. Again, the Water Utility is most susceptible to year-to-year variations in water demand. They are described in terms of percentages of budgeted wholesale costs and operations and maintenance (O&M) costs.

The plant emergency contingency reserve provides protection against a system failure at some reasonable level. The Storm & Surface Water Utility requires the largest reserve due to the risk

of major flood damage to Utility facilities. Water and Sewer Utilities protect against the cost of a major main break or failure. These do not protect against the loss of facilities that are covered by the City's Self-Insurance to which the Utilities pay annual premiums nor are they sufficient to respond to a major disaster, such as a major earthquake.

The reserves of the three utilities have historically been treated separately. This protects against cross-subsidy, thereby retaining rate equity for each utility, each of which has different customers. However, it results in higher reserve targets, with more funds retained than otherwise may be needed. Sharing risks among utilities can reduce reserves. This does not require that reserves actually be consolidated into a single fund, but simply that individual reserve targets reflect the strength provided by the availability of cross-utility support. Under the "consolidated" scenario, cash shortfalls in one reserve could be funded through inter-utility loans, to be repaid from future rates. The likelihood that a serious shortfall would occur in more than one fund at the same time is slight and the benefits of lower overall reserve levels will benefit rate payers. Also, the rate policies and the debt coverage policy will ensure that there will be a strong financial response to any significant shortfall. The risk is considered a prudent financial policy.

City of Bellevue
Summary of Recommended Consolidated Reserve Levels

Type of Reserve	Water		Wastewater		Storm Drainage	
	Basis	Level	Basis	Level	Basis	Level
Working Capital – Reserves against revenue and expense fluctuations within the 2 month billing cycle and during the budget year.	48 days of budgeted O&M costs (excludes debt service, capital funding).	\$5,489,200	30 days of Metro costs and 20 days of City O&M costs (excludes debt service, capital funding).	\$3,440,600	29 days of budgeted O&M costs (excludes debt service, capital funding).	\$970,200
Operating Contingency – Reserves against annual budget shortfalls due to poor financial performance.	7.5% of water purchase costs and 11% of other water O&M costs.	\$3,908,900	2% of Metro costs and 5% of other wastewater O&M costs.	\$1,361,500	2.5% of O&M costs.	\$305,300
Plant Emergency Contingency – Reserves against failure of a major facility or piece of equipment.	Cost for repair of water main break.	\$100,000	Cost of repair for wastewater main break.	\$100,000	\$500,000 based on potential net cost of flood damage.	\$500,000
Less: Allowance for duplicating or offsetting reserves	None.	\$0	Working Capital and Operating Contingency include offsetting reserves equal to 2% of all O&M.	(\$932,600)	None.	\$0
Less: Allowance for consolidating reserves	2.5% of City O&M for interfund charges between utilities. Share of reduced plant emergency reserve. Lesser of min. working capital or plant emergency reserves.	(\$555,900) (\$15,000) (\$85,000)	1% City O&M for interfund charges between utilities. Share of reduced plant emergency reserve. Lesser of min. working capital or plant emergency reserves.	(\$143,000) (\$15,000) (\$85,000)	1% of City O&M for interfund charges between utilities. Share of reduced plant emergency reserve. Lesser of min. working capital or plant emergency reserves.	(\$122,100) (\$70,000) (\$220,000)
Total		\$8,842,200		\$3,726,500		\$1,363,400

Note: Reserve levels based on proposed 2016 Utility budgets

For this purpose, O&M costs are the entire annual operating budget of the Utility less the annual debt service, Capital Investment Program transfers and R&R Account transfers. Independent reserve levels are the levels that would be required by an individual Utility Fund (Water, Sewer and Storm & Surface Water) at any point in time to cover financial obligations if any one of the three reserve components were called for; i.e., working capital, operating contingency or plant emergency. At any single time, the full independent reserve levels should be available for the individual stated purpose, again because it is unlikely that all three components would be called for at once. For example, the Water Utility needs \$100,000 available for an emergency repair but it is not likely that the Sewer Utility will need \$100,000 and the Storm & Surface Water Utility will need \$500,000 all at the same point in time.

The consolidated basis is for budget and rate setting purposes only, to reduce the total revenue requirement by considering the reserve risk shared between the three utilities. The dual reserve levels should be considered as circumstances evolve.

In 2004, the Financial Consulting Solution Group (FCSG) performed an analysis of recommended changes to the Water Utility’s working capital and operating contingency reserves to reflect the new wholesale water contract with CWA and to update reserve levels for current conditions. Under the new contract, billing practices for wholesale costs have changed as follows:

CWA payment occurs before the associated revenues are collected, resulting in a greater lag between wholesale expense and when revenues are collected.

CWA payments are distributed over the whole year based on predetermined percentages and not based on actual consumption during the year. Due to seasonal revenue variation, there is an accumulative deficit in revenues prior to the peak revenue period.

In addition, the total costs to Bellevue are now largely fixed for the year due to the “take or pay” nature of the contract between CWA and Seattle Public Utilities. This shifts the risk during a poor water sales year to the City since there will not be a corresponding reduction in water purchase costs when water sales are down.

Changes in both billing practices as well as the fixed nature of the wholesale costs will result in an increase in required reserves for working capital and operating contingency for the Water Fund.

As part of their 2004 analysis, FCSG recommended increasing working capital operating reserve requirements for the Water fund from 48 days of budgeted O&M costs (excluding debt service and capital funding) to 70 days. The change was primarily related to an expected increase in seasonal revenue variation resulting from Cascade’s fixed monthly billing percentages. However, our experience has been that since implementing the change in 2005 there has been essentially no increase in seasonal revenue variation. As a result, beginning in 2011, working capital operating reserve requirements for the Water fund will be reduced from 70 days of budgeted O&M costs (excluding debt service and capital funding) to the original level of 48 days.

B. Management of Operating Reserves

Policy: Related to the recommended target reserve levels, a working range of reserves is established with minimum and target levels. Management of reserves will be based on the level of reserves with respect to these thresholds, as follows:

- *Above target - Reserve levels will be reduced back to the target level by transferring excess funds to the R&R Accounts in a manner consistent with the long-range financial plan.*

- *Between Minimum and Target - Rate increases would be imposed sufficient to ensure that: 1) reserves would not fall below the minimum in an adverse year; and 2) reserves would recover 50% of the shortfall from target levels in a normal year. Depending on the specific circumstances, either of these may be the constraint, which defines the rate increase needed.*
- *Below Minimum - Rate increases would be imposed sufficient to ensure that even with adverse financial performance, reserves would return at least to the minimum at the end of the following year. To meet this "worst case" standard, a year of normal performance would be likely to recover reserve levels rapidly toward target levels.*
- *Negative Balance - Reserves would be borrowed from another utility to meet working capital needs. Similar to the "below minimum" scenario, rate increases would be imposed sufficient to ensure that even with adverse financial performance, reserves would return from the negative balance to at least the minimum target at the end of the following year, which would allow for loan repayment within that time frame.*

Discussion: "Adverse financial performance" or "worst case" are defined by the 95% confidence interval based on historical patterns. The worst case year is currently defined as a year with sales volumes 15% below the sales volume for a normal year. This was determined by using statistical measurements of sales volumes for 18 years with a 95% confidence interval. That is, in any given year there is only a 5% chance that the worst case year would be more than 15% below the normal year. Another way to say the same thing is that in 19 out of 20 years the worst case year would not be more than 15% below the normal year.

Maintaining the 95% confidence interval, as more and more data becomes available, a worst case year could change upward or downward from the 15% variation from a normal year.

The recommended reserve policies are premised on the vital expectation that reserves are to be used and reserve-levels will fluctuate. Although budget and rate planning are expected to use the target reserve number, reserve levels planned to remain static are by definition unnecessary. It is therefore important to plan for managing the reserves within a working range between the minimum and target levels as stated in the above policies. There may be situations in short-range financial planning where reserves are maintained above target levels to overcome peaks in actual expenses.

In the event of an inter-utility loan, the balance for the borrowing utility would essentially be any cash balance less the amount owed. The lending utility would count the note as a part of its reserves, so that it does not unnecessarily increase rates to replenish reserves that are loaned.

In this management approach, there is still a risk that a major plant emergency could exceed the amount reserved. Such a major shortfall would require rate action to assure a certain level of replenishment in one year. To avoid rate spikes due to this type of action, they should be considered on a case-by-case basis. This will provide the flexibility to use debt or capital reserves in lieu of operating reserves to cover the cost and allow a moderated approach to replenishing reserves out of rates.

C. Asset Replacement Reserves

Policy: Utility funds will maintain separate Asset Replacement Accounts to provide a source of funding for future replacement of operating equipment and systems.

Anticipated replacement costs by year for the upcoming 20-year period, for all Utility asset and equipment items, will be developed as a part of each biennial budget preparation process.

Budgeted contribution to the Asset Replacement Account will be based on the annual amount needed to maintain a positive cash flow balance in the Asset Replacement Account over the 20-year forecast period. At a minimum, the ending Asset Replacement Account balance in each Utility will equal, on average, the next year's projected replacement costs for that fund.

The Utilities Department will observe adopted Equipment Rental Fund (ERF) and Information Services budget policies and procedures in formulating recommendations regarding specific equipment items to be replaced.

Discussion: Providing reserves for equipment and information technology systems replacement allows monies to be set aside over the service life of these items to pay for their eventual replacement and alleviate one-time rate impacts that these purchases might otherwise require. Annual revenues set aside for this purpose will be based on aggregate Utility asset replacement cash flow needs over the long-term forecast period, instead of individual asset replacement amounts. This strategy will allow Utilities to minimize the progressive build-up of excess Asset Replacement Account balances that would result from creating and funding separate reserve accounts for individual Utility asset and equipment items.