# Utilities 2021-2027 Capital Investment Program

**Executive Summary:**

The Utilities 2021-2027 Capital Investment Program (CIP) is a plan and budget for critical utility system infrastructure improvements that will be implemented in the next seven years. The Utilities CIP totals $236 million for the water, sewer, and storm and surface water utilities.

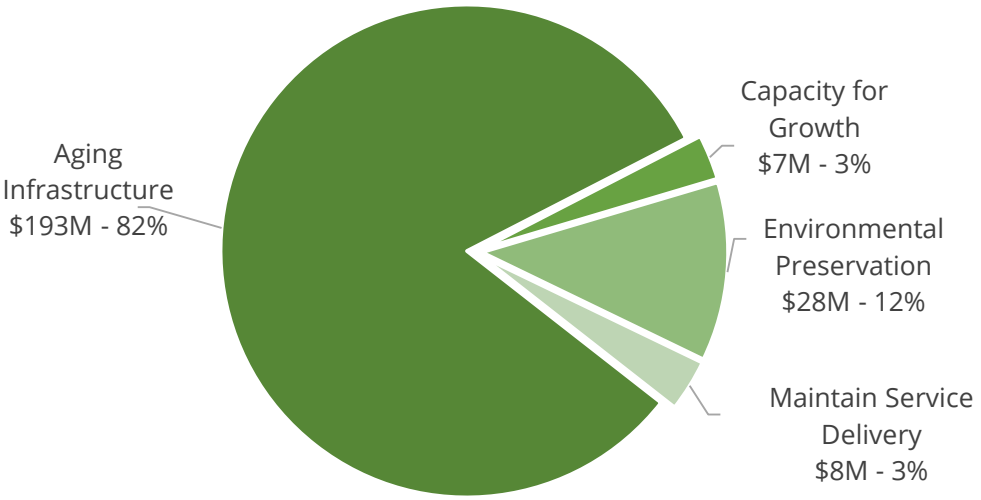
**Key drivers for the 2021-2027 CIP are:**

- Renewing and replacing aging infrastructure
- Adding system capacity to support anticipated growth
- Preserving the natural environment
- Maintaining service delivery

## Overview

The city's utility infrastructure is aging, and increased maintenance and capital investment are inevitable. The 2021-2027 Utilities CIP, summarized in the chart below, will enable Utilities to responsibly maintain and replace aged assets and avoid an increase in system failures and degradation of service to customers, provide capacity to support economic growth, meet regulatory requirements, support environmental preservation and maintain service delivery to customers.

**Figure 10-1**
**Adopted 2021-2027 Utilities CIP - $236M**



## Aging Infrastructure

Utilities owns, operates, and maintains over $3.5 billion of infrastructure assets, with over 1,600 miles of pipeline, 24 water reservoirs, 68 pump stations, and 62 pressure zones. The pipeline infrastructure was primarily constructed in the 1950s - 1970s, and most of the assets are well past midlife. As the infrastructure ages, it becomes less reliable and more failures occur. As a result, the cost to operate, maintain, rehabilitate, and replace the various assets increases. System renewal is the most significant driver of the Utilities CIP.

Utilities has a strategic asset management plan in place to minimize system failures and to mitigate future rate spikes through proactive planning focused on optimal infrastructure life cycle costs.

Each utility is in a different stage of system replacement; therefore, the size of the CIP differs for each utility. The water utility is in active system replacement and 57 percent of the aging infrastructure projects are for this utility. The sewer utility is just beginning systematic infrastructure replacement. The storm and surface water utility has not begun systematic infrastructure replacement and is focusing on condition assessment to determine future infrastructure renewal and replacement needs.

## Capacity for Growth

Bellevue's downtown was rezoned in 1981 to create an urban core, and since that time, multifamily and commercial growth continues to transform this area. In addition, the city's Bel-Red area was rezoned in 2009 to allow increased density. This area will continue to undergo significant redevelopment with accompanying infrastructure needs in all three utilities.

## Protecting Waterways/Reducing Flooding

Bellevue's storm and surface water utility was established in 1974 — one of the first in the nation. The city's philosophy emphasizes storm water management to reduce the risk of flooding, and to protect and enhance the city's streams, lakes, and wetlands. This is accomplished primarily by restoring streams, improving culverts and fish passage, and reducing flood hazards through storm water infrastructure projects.

## Maintaining Service Delivery

The CIP includes funding to build an additional operational facility to maintain service delivery to the community. Utilities needs an additional maintenance facility in the North End of Bellevue to better serve our customers by maximizing efficiencies and improving emergency response. The current operations and maintenance facilities are operating at or near capacity and will not meet all of Utilities operational needs to service the community into the future.

## Infrastructure Renewal and Replacement Account

Recognizing that the cost to replace Utilities aging infrastructure is significant, the Bellevue City Council established the Renewal and Replacement (R&R) Account in 1995 for future system infrastructure needs as identified in the Utilities CIP. Bellevue's long-term infrastructure funding strategy is to build rate revenues gradually over time to achieve a pay-as-you-go capital program and use the R&R funds to address peak capital needs. Proactive planning consistent with council-adopted policies allows for funding of infrastructure now and into the future while managing utility rate impacts and maintaining intergenerational equity. By establishing the R&R Account strategically and continuing to update and refine a 75-year financial model, Bellevue Utilities is better prepared than many utilities to meet increasing infrastructure investment to maintain continuity of service to customers.

## Water System

Over 600 miles of pressurized water pipeline, 24 reservoirs, 22 pump stations, 62 pressure zones, and 5,800 fire hydrants comprise the backbone of Bellevue's water system. Most of the pipe network was built 50 -70 years ago and is past its midlife. About 40 percent of the pipes are asbestos cement (AC), which are prone to catastrophic failure, especially the small diameter AC pipes. The rest of the water system pipes are predominantly ductile or cast iron, with an average expected life of 125 years.

Although the water system will not need to expand very much because the city is essentially built out geographically, two areas of the city have been rezoned for higher density development – downtown and the Bel-Red Corridor. Because these two areas are expected to grow in the next 15 years, new water system infrastructure with increased capacity (pipes and reservoir storage) will be needed to meet that anticipated growth.

## 2021-2027 Water Utility CIP: $135.1 million

## What type of projects are needed and why?

- A significant portion of the water utility CIP addresses the replacement of aging infrastructure and rehabilitation of systems. Through its asset management program, Utilities actively assesses whether the entire system needs replacement or just components. A good example is when a pump needs replacing, but the pump station that houses it does not. A total of $125.5 million is budgeted for replacement and rehabilitation of aging infrastructure in the water fund. Major programs include the following:

    - Replacement of aging water pipe, especially asbestos cement pipe, is a key ongoing annual program to address age-related degradation and risk of failures. Based on pipe age and life cycle assessments, the Utility determined

about 10 years ago that a ramp-up of the water main replacement rate was necessary to maintain system functionality and meet customer service levels for the future. The Utility is budgeting a total of $81.3 million over the 7-year CIP period, to continue proactive replacement of water pipe with the goal of 5 miles of water pipe replacement per year.

- Similarly, reservoirs and pump stations experience age and use-related degradation and regularly require structural upgrade or replacement, retrofitting for earthquakes, and replacement of system components (such as lining systems, pumps, and control systems). With 24 reservoirs and 68 pump stations in the system, Utilities is spending $30.4 million to ensure water is consistently available, even after emergencies, for peak demands and to fight fires.

- The Bellevue drinking water system is complex due to Bellevue's topography which ranges from 20 feet above sea level on the shores of Lake Washington to over 1,400 feet above sea level near Cougar Mountain. Sometimes gravity is all that is needed to deliver water to residents and businesses. In other areas, pumps are required to move water to reservoirs or directly to customers. To equalize the water pressure through the system, pressure reducing valves may be needed to ensure that water is delivered to neighborhoods with appropriate pressure. Like all mechanical devices, these valves wear out and need to be replaced. Utilities has budgeted $6.0 million for this effort.

- New growth brings with it many challenges, including increased water needs. Utilities continually assesses and meets these demands, either through expansion of existing storage, pipelines, and supply inlet facilities or by optimizing system operation. The cost is estimated to be $6.9 million in new or improved infrastructure.

- As Bellevue continues to grow, there is a critical need for utility operational facilities to meet the current and future needs in an efficient and timely manner. The current operational facilities are operating at or near capacity and will soon be unable to meet our service needs. Utilities is looking to add a new maintenance facility in the North End which will provide needed space for continued growth, improved efficiencies through reduced travel times and improved emergency response. The cost estimates to construct the new facility is $8.0 million, of which $2.7 million will be provided by the water utility CIP.

The following table is a list of the Water Utility CIP Plans included in the 2021-2027 Budget:

**Figure 10-2**
**Water CIP Overview**

| CIP Plan Number | Description | 2021-2027 Adopted Budget ($000) |
|---|---|---|
| W-16 | Asbestos Cement Water Main Replacement | $81,290 |
| W-67 | Pressure Reducing Valves | 6,000 |
| W-69 | Minor Capital Improvement Projects | 1,290 |
| W-85 | Reservoir Rehabilitation or Replacement | 23,380 |
| W-91 | Water Pump Station Rehabilitation or Replacement | 7,040 |
| W-98 | Large Commercial Meter Vault Replacement | 3,350 |
| W-99 | Service Lines & Saddle Replacement | 640 |
| W-103 | Reservoir Storage for Downtown | 4,080 |
| W-105 | NE Spring Blvd. | 2,850 |
| W-111 | Maintenance and Operations Yard - Water | 2,667 |
| W-115 | SCADA Upgrades – Water | 1,410 |
| W-117 | 170$^{th}$ Pl. Pressure Improvements | 1,080 |
| **Water Utility CIP Total** | | **$135,077** |

## Sewer System

Bellevue's sewer system, comprised of over 600 miles of pipes, 46 pump stations, and 34 major connections to the King County wastewater system, is more than halfway through its useful life. Ongoing condition assessments, coupled with monitoring of sewer overflows and resulting damage claims, help in planning for replacement of sewer system assets. Much of the system will need significant repair or replacement; the timing of this work is determined through proactive asset management assessments.

For the sewer system, replacement of pipeline infrastructure is only just beginning. In many cases, repair of pipe defects has been and will continue to be a cost-effective way to extend the life of sewer pipes. However, to continue to deliver safe, reliable sewer service, a significant increase in capital investment for pipeline replacement will be necessary. Pipes that convey sewage along the shores of Lake Washington and Lake Sammamish (lake lines) will be particularly difficult and expensive to replace.

Typically, sewer systems rely on gravity sewers to pass flows to major regional lines ("trunklines"). In some locations, pump stations are needed to lift the sewage to higher levels to again take advantage of gravity flow. For the lake lines, low-pressure flush stations periodically "flush" the sewer lake lines with lake water to keep sewerage flowing in the pipes. Pump and flush stations have electrical and mechanical components that must be replaced every 25-40 years.

As with the water system, increased system capacity (larger pipes and pump stations) will be needed to meet new growth in the downtown area and Bel-Red Corridor as these two areas develop to higher density zoning.

### 2021-2027 Sewer Utility CIP: $58.0 million

### What types of projects are needed and why?

- A major portion of the work for the sewer utility CIP addresses the need for rehabilitation or replacement of aging sewer pipelines and other system infrastructure, such as pump stations and SCADA control systems. These upgrades or replacements can have significant costs associated with them; proactive planning is performed to ensure these investments are made to meet customer needs at the lowest life cycle cost. Utilities has budgeted $52.6 million for replacement of pipe infrastructure and rehabilitation of sewer systems.

- A significant infrastructure program, currently in the planning stage, is the replacement of sewer pipelines submerged along the shores of Lake Washington. These lake lines comprise about 15 miles of infrastructure and will require replacement over the next 10 years or more. Utilities also owns and operates 4 miles of lake lines in Lake Sammamish; however, replacement is not expected until 2060. Due to the complexity and expense associated with lake line work, Utilities

has budgeted $0.3 million for Lake Washington Lake Line program planning; the outcome of this work will inform future sewer lake lines capital investment needs.

- As our infrastructure continues to age and the service area continues to expand and develop, our current maintenance facilities will soon be unable to meet our service needs. Utilities is looking to add a new maintenance facility in the North End which will provide needed space for continued growth, improved efficiencies through reduced travel times and improved emergency response. The cost estimate to construct the new facility is $8.0 million, of which $5.3 million will be provided by the sewer utility CIP.

The following table is a list of the Sewer Utility CIP Plans included in the 2021-2027 Budget:

**Figure 10-3**
**Sewer CIP Overview**

| CIP Plan Number | Description | 2021-2027 Adopted Budget ($000) |
|---|---|---|
| S-16 | Sewage Pump Station Improvements | 15,300 |
| S-24 | Sewer System Trunk Rehabilitation | 25,710 |
| S-32 | Minor Capital Improvement Projects | 60 |
| S-58 | Sewer Lake Line Replacement Program | 250 |
| S-60 | Wilburton Sewer Capacity Upgrade | 20 |
| S-61 | Midlakes Pump Station Improvements | 50 |
| S-66 | Sewer System Pipeline Replacement Program | 5,720 |
| S-111 | Operations and Maintenance Land Acquisition - Sewer | 5,333 |
| S-112 | Sewer Planning Program | 730 |
| S-115 | SCADA Upgrades - Sewer | 4,860 |
| **Sewer Utility CIP Total** | | **$58,033** |

## Storm and Surface Water System

Bellevue's storm and surface water system is comprised of over 400 miles of pipes, 81 miles of open streams, over 20,000 storm water catch basins, culverts, local detention facilities, and large regional detention and water quality facilities. Because much of the infrastructure was built by King County and private developers before the Storm and Surface Water Utility was created in 1974, information is limited regarding the system's condition. The Storm Water Utility is unique in that drainage is a combination of publicly and privately-owned system components working together to manage storm water, prevent flooding, improve water quality, and carry this water to streams, wetlands, and lakes.

Annual capital investment increases will be needed to replace infrastructure prior to failure to prevent property damage and protect the environment. To date, infrastructure investment has consisted primarily of storm pipe repairs and replacing some major culverts in danger of failure and known to be barriers to fish migration. Additional information is being collected to determine asset inventory and condition, which will result in a more complete and accurate forecast for predicting appropriate timing for asset replacement. Preventing flood damage from storms is integral to the Storm Water Utility's mission. Flood protection and projects to restore stream health and environmental habitat are key components of the Storm & Surface Water Utility CIP program.

**2021-2027 Storm and Surface Water Utility CIP: $42.4 million**
(Approximately $9.9 million will be funded in this time period through the King County Flood Control Zone District.)

## What types of projects are needed and why?

- Flood control is a vital component of Bellevue Utilities stormwater management work. The Factoria Boulevard Conveyance Improvement Project is a $9.3 million project, of which $5.7 million is funded by the King County Flood Control District. It will mitigate flooding in the Factoria business corridor by increasing flow capacity and improving collection and distribution of stormwater. In addition to the Factoria project, $9.5 million is budgeted for other flood control projects in the next 7 years, of which $4.2 million is funded by the King County Flood Control District.

- Utilities rehabilitates or replaces defective drainage pipelines and rehabilitates roadside ditches annually. With close to 400 miles of piped system alone, this is an ongoing program that will continue into the future. The 7-year CIP planning horizon allocates $13.1 million toward this effort.

- The stream channel modification program includes work on public land to stabilize stream banks, improve stream channels, in-stream habitat, and sediment movement. The budget for this work is $3.2 million.

- Nine critical publicly owned culverts remain as full or partial fish passage barriers. Bellevue Utilities works closely with State Department of Fish and Wildlife regulators to replace these culverts with new designs that allow for fish passage. The budget for this effort is $1.8 million.

The following table is a list of the Storm & Surface Water Utility CIP Plans included in the 2021-2027 Budget:

**Figure 10-4**
**Storm and Surface Water CIP Overview**

| CIP Plan Number | Description | 2021-2027 Adopted Budget ($000) |
|---|---|---|
| D-59 | Minor Capital Improvement Projects | 190 |
| D-64 | Infrastructure Rehabilitation Program | 13,100 |
| D-81 | Fish Passage Improvement Projects | 1,800 |
| D-86 | Stream Channel Modification Program | 3,240 |
| D-94 | Flood Control Program | 9,490 |
| D-103 | Replace Coal Creek Pkwy Culvert | 50 |
| D-109 | Storm Water Quality Retrofit Kelsey Creek | 750 |
| D-112 | Storm and Surface Water Planning Program | 2,000 |
| D-114 | Factoria/Richard Creek Flood Reduction | 9,320 |
| D-115 | SCADA Upgrades – Storm | 1,450 |
| D-116 | Post-Construction Monitoring and Maintenance Program | 1,050 |
| **Storm & Surface Water Utility CIP Total** | | **$42,440** |

# 2021-2027 Utilities CIP Project Expenditures

City of Bellevue 2021-2022 Adopted Budget

| CIP Plan No. | Project Name | 2020 Approp. To Date | 2021 Budget | 2022 Budget | 2023 Budget | 2024 Budget | 2025 Budget | 2026 Budget | 2027 Budget | 2021-2027 Total | Total Project Budget |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WATER CIP** | | | | | | | | | | | |
| W-16 | Small Diameter Water Main Replacement | 108,396,885 | 6,320,000 | 12,820,000 | 9,860,000 | 12,680,000 | 12,730,000 | 12,770,000 | 14,110,000 | 81,290,000 | 189,686,885 |
| W-67 | Pressure Reducing Valve (PRV) Rehabilitation | 9,401,971 | 430,000 | 240,000 | 350,000 | 790,000 | 1,000,000 | 1,790,000 | 1,400,000 | 6,000,000 | 15,401,971 |
| W-69 | Minor (Small) Water Capital Improvement Projects | 7,751,619 | 700,000 | 270,000 | 130,000 | - | - | - | 190,000 | 1,290,000 | 9,041,619 |
| W-82 | Fire Hydrant Standardization | 1,877,497 | - | - | - | - | - | - | - | - | 1,877,497 |
| W-85 | Reservoir Rehabilitation or Replacement | 17,819,477 | 7,680,000 | 3,250,000 | 2,570,000 | 890,000 | 600,000 | 2,880,000 | 5,510,000 | 23,380,000 | 41,199,477 |
| W-91 | Water Pump Station Rehabilitation or Replacement | 18,781,473 | - | - | 1,460,000 | 2,780,000 | 980,000 | 790,000 | 1,030,000 | 7,040,000 | 25,821,473 |
| W-98 | Replacement of Large Commercial Water Meters | 3,769,163 | 40,000 | 340,000 | 570,000 | 430,000 | 700,000 | 690,000 | 580,000 | 3,350,000 | 7,119,163 |
| W-99 | Water Service Line and Saddle Replacement | 3,005,500 | 240,000 | 280,000 | 120,000 | - | - | - | - | 640,000 | 3,645,500 |
| W-103 | Increase Drinking Water Storage Availability for West Op Area | 3,939,086 | 1,100,000 | 190,000 | - | - | - | 1,170,000 | 1,620,000 | 4,080,000 | 8,019,086 |
| W-104 | New Water Inlet Station | 5,229,000 | - | - | - | - | - | - | - | - | 5,229,000 |
| W-105 | Water Facilities for NE 15th Multi Modal Corridor | 1,513,822 | - | - | - | 1,600,000 | 1,250,000 | - | - | 2,850,000 | 4,363,822 |
| W-105-B | Water Facilities for NE 15th Multi Modal Corridor (Bank) | 1,517,135 | - | - | - | - | - | - | - | - | 1,517,135 |
| W-108 | Advanced Metering Infrastructure (AMI) Implementation (Water) | 16,161,800 | - | - | - | - | - | - | - | - | 16,161,800 |
| W-109 | Richards Road Inlet Supply Saturation Improvements (Carry forward) | 500,000 | - | - | - | - | - | - | - | - | 500,000 |
| W-110 | NE 40th and Enatai Inlet Water Station | 2,314,000 | - | - | - | - | - | - | - | - | 2,314,000 |
| W-111 | Operations and Maintenance Land Acquisition - Water | 5,333,000 | - | - | 1,333,500 | 1,333,500 | - | - | - | 2,667,000 | 8,000,000 |
| W-115 | SCADA Upgrades - Water | - | - | 80,000 | 1,000,000 | 330,000 | - | - | - | 1,410,000 | 1,410,000 |
| W-117 | 170th PI Pressure Improvements | - | 220,000 | 530,000 | 330,000 | - | - | - | - | 1,080,000 | 1,080,000 |
| **TOTAL WATER CIP** | | **207,311,428** | **16,730,000** | **18,000,000** | **17,723,500** | **20,833,500** | **17,260,000** | **20,090,000** | **24,440,000** | **135,077,000** | **342,388,428** |
| **SEWER CIP** | | | | | | | | | | | |
| S-16 | Sewage Pump Station Improvements | 16,826,155 | 5,260,000 | 2,010,000 | 600,000 | 1,800,000 | 3,340,000 | 1,230,000 | 1,060,000 | 15,300,000 | 32,126,155 |
| S-24 | Sewer System Pipeline Major Repairs | 25,545,785 | 2,720,000 | 3,310,000 | 3,480,000 | 3,310,000 | 3,180,000 | 4,540,000 | 5,170,000 | 25,710,000 | 51,255,785 |
| S-32 | Minor (Small) Sewer Capital Improvement Projects | 3,838,530 | 40,000 | - | - | - | - | - | 20,000 | 60,000 | 3,898,530 |
| S-58 | Lake Washington Sewer Lake Line Assessment Program | 2,074,955 | 250,000 | - | - | - | - | - | - | 250,000 | 2,324,955 |
| S-59 | Add on-site Power at Sewer Pump Station (Carry Forward) | 302,994 | - | - | - | - | - | - | - | - | 302,994 |
| S-60 | Wilburton Sewer Capacity Upgrade | 10,700,599 | - | 20,000 | - | - | - | - | - | 20,000 | 10,720,599 |
| S-61 | Midlakes Pump Station Capacity Improvements | 8,432,695 | 50,000 | - | - | - | - | - | - | 50,000 | 8,482,695 |
| S-66 | Sewer System Pipeline Replacement | 12,350,889 | 2,920,000 | 650,000 | 1,030,000 | 1,120,000 | - | - | - | 5,720,000 | 18,070,889 |
| S-67 | I&I Investigations and Flow Monitoring | 1,272,382 | - | - | - | - | - | - | - | - | 1,272,382 |
| S-68 | Sewer Force Main Condition Assessment (Carry Forward) | 778,879 | - | - | - | - | - | - | - | - | 778,879 |
| S-69 | Meydenbauer Bay Park Sewer Line Replacement (Carry Forward) | 4,780,000 | - | - | - | - | - | - | - | - | 4,780,000 |
| S-71 | Lakeline Sewer Replacement | 419,000 | - | - | - | - | - | - | - | - | 419,000 |
| S-108 | Advanced Metering Infrastructure (AMI) Implementation (Sewer) | 6,927,200 | - | - | - | - | - | - | - | - | 6,927,200 |
| S-111 | Operations and Maintenance Land Acquisition - Sewer | 2,667,000 | - | - | 2,666,500 | 2,666,500 | - | - | - | 5,333,000 | 8,000,000 |
| S-112 | Sewer Planning Program | - | - | - | 360,000 | 370,000 | - | - | - | 730,000 | 730,000 |
| S-115 | SCADA Upgrades - Sewer | - | 1,500,000 | 210,000 | 1,000,000 | - | 1,200,000 | 950,000 | - | 4,860,000 | 4,860,000 |
| **TOTAL SEWER CIP** | | **96,917,063** | **12,740,000** | **6,200,000** | **9,136,500** | **9,266,500** | **7,720,000** | **6,720,000** | **6,250,000** | **58,033,000** | **154,950,063** |
| **STORM & SURFACE WATER CIP** | | | | | | | | | | | |
| D-59 | Minor (Small) Storm Capital Improvement Projects | 3,665,286 | 190,000 | - | - | - | - | - | - | 190,000 | 3,855,286 |
| D-64 | Storm System Conveyance Repairs and Replacement | 19,325,231 | 2,360,000 | 1,420,000 | 1,530,000 | 1,640,000 | 2,010,000 | 2,050,000 | 2,090,000 | 13,100,000 | 32,425,231 |
| D-81 | Fish Passage Improvement Program | 6,045,895 | - | 350,000 | 100,000 | 190,000 | 610,000 | 500,000 | 50,000 | 1,800,000 | 7,845,895 |
| D-86 | Stream Channel Modification Program | 6,278,568 | 1,390,000 | 160,000 | 180,000 | - | 80,000 | 440,000 | 990,000 | 3,240,000 | 9,518,568 |
| D-94 | Flood Control Program | 12,850,973 | 2,950,000 | 2,450,000 | 2,070,000 | 520,000 | 500,000 | 500,000 | 500,000 | 9,490,000 | 22,340,973 |
| D-103 | Replace Coal Creek Pkwy Culvert at Coal Creek | 5,287,250 | 50,000 | - | - | - | - | - | - | 50,000 | 5,337,250 |
| D-104 | Stream Restoration for Mobility & Infrastructure Initiative | 2,630,559 | - | - | - | - | - | - | - | - | 2,630,559 |
| D-105 | Replace NE 8th St Culvert at Kelsey Creek | 4,376,000 | - | - | - | - | - | - | - | - | 4,376,000 |
| D-106 | Lower Coal Creek Flood Hazard Reduction Phase I | 14,349,889 | - | - | - | - | - | - | - | - | 14,349,889 |
| D-107 | Storm Water Video Inspection Enhancement | 2,581,000 | - | - | - | - | - | - | - | - | 2,581,000 |
| D-109 | Water Quality Retrofit Program | 657,000 | - | 750,000 | - | - | - | - | - | 750,000 | 1,407,000 |
| D-112 | Storm and Surface Water Planning Program | - | 590,000 | 600,000 | 240,000 | - | - | 280,000 | 290,000 | 2,000,000 | 2,000,000 |
| D-114 | Factoria/Richard Creek Flood Reduction | - | 5,220,000 | 4,100,000 | - | - | - | - | - | 9,320,000 | 9,320,000 |
| D-115 | SCADA Upgrade - Storm | - | - | 600,000 | 200,000 | 20,000 | - | 630,000 | - | 1,450,000 | 1,450,000 |
| D-116 | Post-Construction Monitoring and Maintenance Program | - | 220,000 | 210,000 | 270,000 | 160,000 | 110,000 | 40,000 | 40,000 | 1,050,000 | 1,050,000 |
| **TOTAL STORM & SURFACE WATER CIP** | | **78,047,651** | **12,970,000** | **10,640,000** | **4,590,000** | **2,530,000** | **3,310,000** | **4,440,000** | **3,960,000** | **42,440,000** | **120,487,651** |
| **TOTAL UTILITIES CIP** | | **382,276,142** | **42,440,000** | **34,840,000** | **31,450,000** | **32,630,000** | **28,290,000** | **31,250,000** | **34,650,000** | **235,550,000** | **617,826,142** |

**Reserves are excluded from the table above.**

# 2021-2027 Capital Investment Program Plan

## Water

The Water Utility owns and operates over 600 miles of water distribution and transmission mains, 24 reservoirs with 41.5 million gallons of storage, and 22 pump stations. Water is supplied by the Cascade Water Alliance by contractual arrangement with the City of Seattle through the Tolt and Cedar River supply systems. Bellevue's Water Utility serves all of Bellevue as well as the adjacent communities of Clyde Hill, Hunts Point, Medina, Yarrow Point, and sections of the city of Kirkland.

Capital improvements for the Water Utility are generally based on Bellevue's 2016 Water System Plan and are informed by ongoing asset management analyses and other emerging system operational needs. The System Plan identifies system improvements needed to continue to meet the demands of population growth and system aging, and to provide for orderly system expansion and improvements which increase system reliability, efficiency, and maintain desired levels of service. The water system continues to be analyzed on an ongoing basis to identify pressure, capacity, and storage needs to inform future capital projects.

The 2021-2027 CIP Plan recognizes that significant investments are needed to maintain aging systems and replace components that are reaching the end of their useful life. The Water CIP also includes investments that are necessary to meet system capacity needs in response to growth and demand in the system.

## 2021-2027 Adopted CIP: Healthy and Sustainable Environment - Water

### Funded CIP Projects

| CIP Plan Number | Project Title | $ in 000s 2021-2027 Project Cost | Total Estimated Cost |
|---|---|---|---|
| W-16 | Small Diameter Water Main Replacement | $ 81,290 | $ 189,687 |
| W-67 | Pressure Reducing Valve (PRV) Rehabilitation | 6,000 | 15,402 |
| W-69 | Minor (Small) Water Capital Improvement Projects | 1,290 | 9,042 |
| W-82 | Fire Hydrant Standardization | - | 1,877 |
| W-85 | Resevoir Rehabilitation or Replacement | 23,380 | 41,199 |
| W-91 | Water Pump Station Rehabilitation or Replacement | 7,040 | 25,821 |
| W-98 | Replacement of Large Commercial Water Meters | 3,350 | 7,119 |
| W-99 | Water Service Line and Saddle Replacement | 640 | 3,646 |
| W-103 | Increase Drinking Water Storage Availability for West Op Area | 4,080 | 8,019 |
| W-104 | New Water Inlet Station | - | 5,229 |
| W-105 | Water Facilities for NE 15th Multi Modal Corridor | 2,850 | 4,364 |
| W-105-B | Water Facilities for NE 15th Multi Modal Corridor (Bank) | - | 1,517 |
| W-108 | Advanced Metering Infrastructure (AMI) Implementation (Water) | - | 16,162 |
| W-109 | Richards Road Inlet Supply Saturation Improvements | - | 500 |
| W-110 | NE 40th and Enatai Inlet Water Station | - | 2,314 |
| W-111 | Operations and Maintenance Land Acquisition - Water | 2,667 | 8,000 |
| W-115 | SCADA Upgrades - Water | 1,410 | 1,410 |
| W-117 | 170th PI Pressure Improvements | 1,080 | 1,080 |
| | | **$ 135,077** | **$ 342,388** |

## 2021-2027 Adopted CIP: Healthy and Sustainable Environment - Water

### Combined, Completed Projects

| CIP Plan Number | Project Title | $ in 000s Total Estimated Cost |
|---|---|---|
| NONE | | |
| | **Total Combined, Completed Projects** | **-** |