

**BELLEVUE UTILITIES**  
**2023-2029 CAPITAL INVESTMENT PROGRAM PLAN (CIP)**  
**WATER FUND**  
**PROPOSED BUDGET BY PROGRAM**



## WATER FUND 2023-2029 CIP Proposed Changes

(Updated March 2, 2022)

### Program Summary

Program Number	Description	Continued Program	2023-2029 Budget Request	New Proposed Program
W-16	Water Main Replacement	Yes	Yes	
W-67	PRV Rehabilitation	Yes	Yes	
W-69	Minor CIP	Yes	Yes	
W-85	Reservoir Rehabilitation	Yes	Yes	
W-91	Pump Station Rehabilitation	Yes	Yes	
W-98	Commercial Meter Vaults	Yes	Yes	
W-99	Service Saddles	Yes	Yes	
W-103	West Operating Storage Area	Yes	Yes	
W-110	Water Supply Inlet Rehabilitation	Yes	Yes	
W-111	Operations and Maintenance Yard	Yes	Yes	
W-112	Water System Capital Planning		Yes	Yes
W-115	SCADA Upgrades	Yes	No	
W-117	170 <sup>th</sup> PI SE Pressure Improvements	Yes	Yes	
W-118	Somerset Highlands Capacity Improvements		Yes	Yes
W-119	Groundwater Well Improvements		Yes	Yes

## W-16 Water Main Replacement

### Adopted Description and Scope

This program focuses on replacing water mains that have reached their useful life, with the goal of reducing risk. Additional benefits include increasing the firefighting flow available to neighborhoods, improve reliability with additional valves (to limit service shutdowns), and improving earthquake resiliency with more robust pipe. This investment funds pipeline replacement at a rate of 5 miles/year, adjusted with inflation. At that rate, water pipe will need to last on average 100-125 years to sustainably maintain the entire 608 mile water distribution system. Pipes are prioritized for replacement based on risk of failure (likelihood and consequence), break history, potential for cost savings or reduced neighborhood impacts by coordinating with other construction projects (e.g., planned street overlays), and opportunities to address level of service deficiencies (low flow or pressure) or vulnerable pipes in poor soils.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-16	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Miles	5.0	5.0	5.1	4.7	5.3	4.9	5.0	5.0	5.0	45
Adopted (\$M)	\$6.320	\$12.820	\$9.860	\$12.680	\$12.730	\$12.770	\$14.110	–	–	\$81.290
Proposed (\$M)	–	–	\$15.677	\$16.193	\$18.223	\$14.934	\$16.127	\$15.105	\$16.542	\$112.801
Difference (\$M)	\$(6.320)	\$(12.820)	\$5.817	\$3.513	\$5.493	\$2.164	\$2.017	\$15.105	\$16.542	\$31.511

### Proposed Changes

#### Cost

- The primary change is recent cost spikes caused by labor shortages and supply chain problems. The typical cost per foot to install water mains in Bellevue has increased roughly 40% from pre-COVID to early 2022.

#### Scope

- The overall target of 5 miles per year has not changed. Locations are identified based on the criteria above. Other, externally-driven projects proposed for 2023-2029 (as part of the overall 5 miles/year) include:
  - WSDOT Renton-to-Bellevue Express Lanes: Water main relocation invoicing will continue through 2026.
  - WSDOT Sunset Creek: Water main relocation is required in SE 36th St due to WSDOT's stream project.
  - Vasa Creek Mitigation: Relocation of impacted water mains is required for this stormwater project.

#### Schedule

- Kelsey Creek at Lake Hills Blvd "Ballfield" Project: This project was included in the 2021-2027 budget but has been accelerated due to a large recent main break, and combined with a culvert replacement.

## W-67 Pressure Reducing Valve (PRV) Station Rehabilitation

### **Adopted Description and Scope**

This ongoing program rehabilitates or replaces aging, obsolete pressure reducing valve (PRV) stations throughout the water service area. It will also add remote flow and pressure sensors to monitor these stations. The number of PRV stations that are rehabilitated varies from year to year based on the annual program budget and the rehabilitation costs, but over the long term should average about 3 PRVs per year to sustainably rehabilitate over 150 stations on a roughly 25-year cycle. Prioritization criteria include access requirements, safety, maintenance history, age, and efficiencies gained with overlapping or adjacent projects.

PROJECT NEED: System Renewal and Replacement

### **Proposed Budget (includes inflation)**

W-67	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$ .430	\$ .240	\$ .350	\$ .790	\$ 1.000	\$ 1.790	\$ 1.400	–	–	\$ 6.000
Proposed (\$M)	–	–	\$ 1.000	\$ 1.028	\$ 1.012	\$ 1.267	\$ 3.043	\$ .867	\$ .715	\$ 8.932
Difference (\$M)	\$ (.430)	\$ (.240)	\$ .650	\$ .238K	\$ .012	\$ (.523)	\$ 1.643	\$ .867	\$ .715	\$ 2.932

### **Proposed Changes**

#### Cost:

- Construction labor shortages and supply chain problems have increased cost estimates by roughly 30%.

#### Scope:

- Funding levels continue to include a sustained rate of three PRV replacements per year

#### Schedule:

- Two PRV stations impacted by the Horizon View 2 Pump Station replacement project have been accelerated to 2023.
- Implementation of new system-wide “Smart Water” remote flow and pressure sensors has been shifted from 2025-2026 to 2027. This allows time for emerging technologies and available options to improve.

## W-69 Minor (Small) Water Capital Improvement Projects

### Adopted Description and Scope

This ongoing program pays for small improvements to Bellevue's water system to resolve deficiencies, improve efficiencies, or resolve maintenance problems, often in conjunction with other programs such as the Transportation overlay program. Projects are prioritized based on criteria including public safety/property damage, maintenance frequency, operator safety, environmental risk, reliability and efficiency gains, coordination with other city projects or development activity, and level of service impact.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-69	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$ .700	\$ .270	\$ .130	–	–	–	\$ .190	–	–	\$1.290
Proposed (\$M)	–	–	\$ .080	\$ .201	\$ .062	\$ .017	\$ .327	\$ .102	\$ .420	\$1.209
Difference (\$M)	\$ (.700)	\$ (.270)	\$ (.050)	\$ .201	\$ .062	\$ .017	\$ .137	\$ .102	\$ .420	\$ (.081)

### Proposed Changes

#### Cost

- Recent inflation has been incorporated into project estimates.

#### Scope

- Two projects funded in 2021-2022 have been completed.
- The proposed installation of individual PRVs to increase pressure along West Lake Sammamish Pkwy per agreement with the City of Issaquah has been deferred indefinitely. Issaquah is proposing an alternative solution to address low fire flows that will be evaluated during 2022.
- Two leaking check valve stations in the Woodridge area are proposed to be replaced, concurrent with adjacent water main replacement already scheduled. This will address an operational problem and optimize efficiency with overlapping work.
- A project to install bypass piping around a PRV station in the Cougar Mountain area is proposed to improve operational flexibility, redundancy, and resiliency following a major earthquake.

#### Schedule

- Two projects proposed in 2021-2027 have been re-scheduled to fit available staffing resources:
  - Replacement of leaking check valve in the Somerset neighborhood.
  - New PRV station proposed to improve fire flow in the Pikes Peak neighborhood.

## W-85 Reservoir Rehabilitation or Replacement

### Adopted Description and Scope

This program funds recoating, rehabilitation, seismic retrofits and/or replacement of drinking water reservoirs to maintain these facilities for reliable operation. Bellevue operates and maintains 24 active drinking water reservoirs and shares partial ownership (and access to water) in 4 other reservoirs maintained and operated by neighboring utilities.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (Includes inflation)

W-85	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$7.680	\$3.250	\$2.570	\$ .890	\$ .600	\$2.880	\$5.510	–	–	\$23.380
Proposed (\$M)	–	–	\$2.938	\$4.360	\$ .197	\$1.086	\$ .794	\$3.633	\$ .710	\$13.718
Difference (\$M)	\$(7.680)	\$(3.250)	\$ .368	\$3.470	\$(.403)	\$(1.794)	\$(4.716)	\$3.633	\$ .710	\$(9.662)

### Proposed Changes

#### Cost

- A portion (\$1.0M) of increased cost estimate for Horizon View 2 Reservoir replacement reflects recent inflation.
- Seismic retrofit and re-coating of the 11 million gallon South Reservoir in Kirkland was delayed to 2023, while Bellevue’s share of estimated costs are reduced by \$0.5M. This reservoir is jointly owned with Redmond and Kirkland (Bellevue share 13.4%) per 1997 agreement dividing Rose Hill Water District into 3 municipalities.

#### Scope

- Pikes Peak reservoir construction is scheduled for completion in 2022. However, post-construction monitoring activities through 2026 are required by permits.
- A portion (\$1.6M) of increased costs for Horizon View 2 Reservoir is due to scope changes:
  - Larger reservoir size will optimize available land and improve operational flexibility
  - Change in reservoir material from steel to concrete provides lower long-term costs, with higher initial capital investment.
- To maximize efficiency of a 100-ft crane, the scope of Clyde Hill 465 reservoir vent repairs has been expanded to include other elevated work on the roof, including corrosion-protection system and coating repairs.
- Full decommissioning is proposed for Somerset 3 Reservoir, which is no longer in service. This will address nuisance and safety concerns since the site is no longer actively used by the City.
- A new study evaluating reservoir vulnerability, recent Code modifications and emerging earthquake science completed in 2020 identified new deficiencies. Two related projects are proposed in 2023-2029:
  - Clyde Hill 390 Reservoir Seismic Upgrades
  - NE 40th Reservoir Safety & Sanitary Improvements
  - Clyde Hill 340 Reservoirs Replacement

- Reservoir emergency response improvements are now re-prioritized to be addressed case-by-case during work at each reservoir, and not as one system-wide project. Recently completed seismic assessment found that these improvements do not provide as much benefit as water main and pump station replacement.

#### Schedule

- Interior inspections of Cougar Mountain 3, Factoria, and Crossroads South reservoirs in late 2021 showed better-than-expected coating condition in all three reservoirs, due to the performance of corrosion-protection systems. This allows for extended life and deferral of these re-coating projects until after 2030.
- Parksite Reservoir interior coating condition was found to be worse than anticipated, so re-coating has been accelerated to occur in 2023.
- Proactive coating of the concrete Cherry Crest Reservoir roof is proposed for long-term maintenance. This project has been deferred due to higher-priority and more urgent work.

## W-91 Water Pump Station Rehabilitation or Replacement

### Adopted Description and Scope

This program was established in 2005 to rehabilitate or replace drinking water pump stations. Bellevue operates and maintains 21 pump stations and shares partial ownership in a separate pump station operated by Coal Creek Utility District. Based on a needs assessment of each pump station, investments can range from basic improvements to complete reconstruction. The rehabilitation work may include capacity, safety and reliability improvements, new mechanical and electrical equipment, on-site emergency power generation, and seismic retrofits.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (Includes inflation)

W-91	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	–	–	\$1.460	\$2.780	\$ .980	\$ .790	\$1.030	–	–	\$7.040
Proposed (\$M)	–	–	\$5.578	\$3.352	–	\$ .410	\$ .422	–	\$ .418	\$10.180
Difference (\$M)	–	–	\$4.118M	\$ .572	\$(-.980)	\$(-.380)	\$(-.608)	–	\$ .418	\$3.140

### Proposed Changes

#### Cost

- Anticipated construction costs to replace Horizon View 2 Pump Station in 2023-2024 have increased substantially from \$2.4M to \$5.5M. This is primarily due to recent economic conditions, but also incorporates some added scope to improve post-earthquake resiliency and enhance operations and water quality.

#### Scope

- Scope has been reduced from rehabilitation of one pump station per year to an average of one pump station every other year..
- Cherry Crest Pump Station replacement and Pikes Peak Pump Station demolition are complete.
- A pump station condition assessment is added in 2026-2027 to assess and prioritize future needs.

#### Schedule

- Rehabilitation of Cougar Mountain 1 Pump Station has been accelerated due to re-prioritization. This station was identified as being critical to post-earthquake service recovery.
- Cougar Mountain 2 rehabilitation and Parksite Pump Station replacement are deferred beyond 2029.



## W-98 Replacement of Large Commercial Water Meter Vaults

### Adopted Description and Scope

This program systematically replaces aging, obsolete vaults housing high-volume commercial water meters (3" and larger). Due to their location and condition, these meters pose safety and access concerns and are generally beyond the ability of O&M crews to replace. Improved performance accuracy is a secondary benefit of the program. This ongoing program replaces approximately 4 commercial meter vaults each year.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-98	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$.040	\$.340	\$.570	\$.430	\$.700	\$.690	\$.580	–	–	\$3.350
Proposed (\$M)	–	–	\$.629	\$.486	\$.318	\$1.311	\$.045	\$.417	–	\$3.206
Difference (\$M)	\$(.040)	\$(.340)	\$.059	\$.056	\$(.382)	\$.621	\$(.535)	\$.417	–	\$(.144)

### Proposed Changes

#### Cost

- Budget assumes future replacement contracts are bundled into fewer, larger contracts to reduce risk and improve cost efficiency. This change mitigates recent inflationary impacts.

#### Scope

- Current backlog of deficiencies are primarily meters that could not be replaced during the Advanced Metering Infrastructure program (CIP W-108), because excavation was required or due to safety concerns.
- At Bellefield Office Park, replacement of 13 individual building meters with two master meters is proposed. This will consolidate metering and improve water auditing due to leakage in private water mains, which is currently unmetered (lost revenue for the City).

## W-99 Water Service Line and Saddle Replacement Program

### Adopted Description and Scope

This program replaces aging and deteriorating water service saddles (the component connecting the service line to the water main), and water service lines (the City-owned pipe between the main and the meter), in response to known deficiencies and/or in advance of planned street improvements. Annual expenditures can vary widely depending on the condition of saddles and service lines where street improvement projects are planned.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-99	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$ .240	\$ .280	\$ .120	–	–	–	–	–	–	\$ .640
Proposed (\$M)	–	–	\$ .690	\$ .995	–	–	–	\$ .019	\$ .153	\$ 1.857
Difference (\$M)	\$ (.240)	\$ (.280)	\$ .570	\$ .995	–	–	–	\$ .019	\$ .153	\$ 1.217

### Proposed Changes

#### Scope

- Current budget did not propose work beyond 2023 due a lack of identified locations. Four sites with excessive saddle and/or service line failures have since been identified and evaluated for the proposed budget:
  - Amherst neighborhood service line replacement is proposed for 2023-2024.
  - Inglebrook Condominiums service line replacement is proposed for 2030 (design in 2028-2029)
  - Yarrowood Condominiums service line replacement is proposed to occur after 2030.
  - Crossroads Condominiums is currently being evaluated. Due to pipe age and material, it is assumed that full replacement of all infrastructure (including water mains) will have lower life-cycle costs compared to service line replacement alone. Therefore it is proposed under CIP W-16 for construction in 2023-2024.

## W-103 Increase Drinking Water Storage Availability for West Operating Area

### **Adopted Description and Scope**

This CIP Plan increases the drinking water storage available for planned population growth in Downtown, Bel-Red, and Wilburton areas. System improvements in 2021 accommodated near-term growth, while upcoming projects will plan and design a new reservoir to provide for long-term growth. New reservoir completion is accelerated from 2034 to 2030 due to recent growth and pending rezones that will increase density further.

PROJECT NEED: Capacity for Growth

### **Proposed Budget (Includes inflation)**

W-103	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$1.100	\$.190	–	–	–	\$1.170	\$1.620	–	–	\$4.080
Proposed (\$M)	–	–	–	–	\$.400	\$1.099	\$1.755	\$.962	–	\$4.216
Difference (\$M)	\$(1.100)	\$(.190)	–	–	\$.400	\$(.071)	\$.135	\$.962	–	\$.136

### **Proposed Changes**

#### Cost

- Costs shown for 2025-2028 are design only, for the future West Operating Area Reservoir. Land acquisition and construction costs for the new reservoir (tentatively scheduled for completion in 2030) are not yet proposed, due to cost uncertainties prior to site selection. The reservoir siting study being conducted in 2022 will identify a site and allow for estimated construction costs in the 2025-2031 budget.

#### Scope

- The NE 8th St transmission main to access surplus reservoir volume in Lake Hills has been completed.
- West Operating Area Reservoir Siting Study is currently underway (no additional budget requested).

#### Schedule

- The start of new reservoir design has been accelerated to 2025.

## W-110

## Water Supply Inlet Rehabilitation

### Description and Scope

This program is for the renewal and replacement of water supply Inlet stations, where Bellevue draws water from the regional water transmission system. Bellevue manages 14 inlet stations, and shares ownership in 3 other inlet stations operated by adjacent utilities. Projects are proposed to maintain reliability, improve safety, reduce risk, and renew aging infrastructure.

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-110	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	-	-	-	-	-	-	-	-	-	-
Proposed (\$M)	-	-	\$.175	\$.129	-	-	-	-	-	\$.304
Difference (\$M)	-	-	\$.175	\$.129	-	-	-	-	-	\$.304

### Proposed Changes

#### Scope

- Replacement of Enatai Inlet Station was completed in 2021, using delayed funds from 2019-2020.
- At NE 40th Inlet, the City's operations staff replaced the failing master meter in the westbound lanes of NE 40th Street with a new insertion mag meter at the NE 40th Reservoir site. However, removal of the old meter and full abandonment of the existing meter vault in the NE 40th roadway is still necessary to reduce risk. This project is proposed for 2023-2024 and is being coordinated with the City of Redmond.
- Future rehabilitation at Eastgate Inlet was identified as a new project for CIP W-110, but scheduled after 2030 to correspond with the adjacent Parksite Pump Station replacement (CIP W-91)

**W-111****Maintenance and Operations Yard****Adopted Description and Scope**

As the City of Bellevue continues to grow, there is a critical need for long range operational facilities planning to ensure that the Utilities Department (Utilities) can meet the community’s current and future needs in an efficient and timely manner. The current service locations are functioning at or near capacity, and there is significant risk that they will not be sufficient to meet Utilities’ growing operational needs. To address this, Utilities developed a long range Operations and Maintenance (O&M) Facilities Plan.

Based on the recommendation of the O&M Facilities Plan, property acquisition, design, and construction were funded through the Council adopted 2019-2025 and 2021-2027 CIP budgets, with \$16M of funding split between the water and sewer funds (\$8M each).

PROJECT NEED: Operations & Maintenance/Service Enhancement

**Proposed Budget (includes inflation)**

W-111	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	–	–	\$1.334	\$1.334	–	–	–	–	–	\$2.668
Proposed (\$M)	–	–	–	–	\$2.466	\$1.401	–	–	–	\$3.867
Difference (\$M)	–	–	\$(1.334)	\$(1.334)	\$2.466	\$1.401	–	–	–	\$1.199

**Proposed Changes**

Due to delay in selecting a site, the construction funding has moved to 2025 and 2026. Additional funding is proposed to account for inflationary increases for the design/construction and original land acquisition.

## **W-112 (NEW) Water System Capital Planning**

### **Proposed Description and Scope**

This program funds early capital project planning, which is applicable to both existing CIP programs and future capital projects yet to be identified. The proposed budget includes a new Water System Plan, which is required every ten years by the Washington State Department of Health and Bellevue City Code. Also included is assistance preparing applications for Federal Emergency Management Agency grants for seismic mitigation projects.

PROPOSED SCHEDULE: 2024-2025

PROJECT NEED: Capacity for Growth

### **Proposed Budget (includes inflation)**

W-112 (NEW)	2023	2024	2025	2026	2027	2028	2029	Total
Proposed (\$M)	–	\$.286	\$.404	\$.200	–	–	–	\$.890

## W-115 (NEW) SCADA Upgrades

### Proposed Description and Scope

The City of Bellevue Utilities Department utilizes a supervisory control and data acquisition (SCADA) system to control and monitor the potable water, wastewater and storm water systems. Since the initial installation in the 1970s, this system has utilized leased copper telephone lines as the SCADA communications media. With age, the copper phone lines used for communicating vital control logic and retrieving precious data have become increasingly unreliable. As the telecommunication providers transition their core business away from copper telephone lines towards fiber-optic cable and cellular networks, the City faces increasing communications outages. Any break in communications within our SCADA network increases the risk and cost of providing essential Utility services to our customers. More than ever, it is incumbent upon the Utility to modernize our SCADA communications network to a more reliable medium.

The family of projects under the SCADA Infrastructure Upgrades program will improve the reliability and security of the SCADA system across 32 potable water sites, 48 wastewater sites and 11 storm water sites. These projects will install a private, secure cellular and fiber-optic communications network and optimize the operation of the cities three utilities. Additionally, these upgrades will allow SCADA operators to leverage cutting-edge technology to improve the quality of service and reduce risks to the environment.

PROPOSED SCHEDULE: 2022-2024

PROJECT NEED: System Renewal and Replacement

### Proposed Budget (includes inflation)

W-111	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	–	\$.080	\$1.000	\$.330	–	–	–	–	–	\$1.410
Proposed (\$M)	–	–	\$.767	\$.395	–	–	–	–	–	\$1.162
Difference (\$M)	–	\$(.080)	\$(.233)	\$.065	–	–	–	–	–	\$(.248)

### Proposed Changes

#### Cost

- Costs have been reduced due to savings gained from a more efficient contracting method.

#### Schedule

- Due to global supply chain shortages in the microprocessor industry, the SCADA projects have experienced schedule delays.

## W-117 170th PI SE Pressure Improvements

### Proposed Description and Scope

This project is the final phase of improvements to address low pressure deficiencies in the Sammamish 270 pressure zone (SA270), and specifically on 170th PI SE, as identified in the 2016 Water System Plan (p. 4-21). Water mains installed on 170th PI SE circa 1980 have never provided the minimum 30 psi pressure established by the City and required by the WA State Department of Health, due to high elevation relative to West Lake Sammamish Pkwy and SA270. As a solution, this project includes installation of water main and a pressure-reducing valve (PRV) station in an existing driveway across Weowna Park, to provide higher-pressure water on 170th PI SE.

PROPOSED SCHEDULE: 2021-2023

PROJECT NEED: Level of Service Deficiency/ System Renewal and Replacement

### Proposed Budget (includes inflation)

W-117	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Adopted (\$M)	\$ .220	\$ .530	\$ .330	–	–	–	–	–	–	\$1.080
Proposed (\$M)	–	–	\$ .771	\$ .596	–	–	–	–	–	\$1.367
Difference (\$M)	\$(-.220)	\$(-.530)	\$ .441	\$ .596	–	–	–	–	–	\$ .287

### Proposed Changes

#### Cost

- Costs have increased due to labor shortages and supply chain challenges.

#### Scope

- Pipeline size through Weowna Park is increased from 4" (domestic-only) to 8", to also supply fire flow. This change, combined with other actions, allowed the City to cancel a much costlier project to add flow by increasing pressure along West Lake Sammamish Pkwy (net decrease in cost to the City).
- Replacement and abandonment of pipe in 170th PI SE is added to optimize efficiency, avoid future impacts to the neighborhood, and reduce the risk of pipeline failure in steep slopes.



## W-118 (NEW) Somerset Highlands Pressure & Flow Improvements

### Proposed Description and Scope

This program is proposed to address level of service deficiencies identified in the 2016 Water System Plan. During a fire event in Somerset Highlands, when high flows are drawn from local hydrants, customers at high elevations are likely to lose water service due to capacity bottlenecks. This loss of pressure would also create water quality risks, which may require boil water orders over a larger area to avoid contamination. Existing capacity was acceptable during original construction (late 1960s), but the flow available is inadequate based on City policy and current Washington State Department of Health minimum requirements. The proposed improvements will add capacity to meet the minimum level of service and resolve these deficiencies.

PROPOSED SCHEDULE: 2023-2025

PROJECT NEED: Service Enhancement

### Proposed Budget (includes inflation)

W-118 (NEW)	2023	2024	2025	2026	2027	2028	2029	Total
Proposed (\$M)	\$ .440	\$ .906	\$4.435	–	–	–	–	\$5.781

## W-119 (NEW) Groundwater Well Improvements

### Proposed Description and Scope

Bellevue Utilities maintains four groundwater wells for municipal water purposes, including non-potable or potable uses, and emergency water supplies. These wells were the sole supply of water to the Lake Hills and Crossroads neighborhoods in the 1950s and 1960s, before purchasing water from Seattle. This program is proposed to fund projects that maintain readiness, protect water quality, and optimize use of groundwater. Well assessment and rehabilitation work will restore and maintain well condition and yield. Improvements at the Crossroads site will increase access to groundwater for irrigation and tanker truck filling, improve well head protection measures, and improve response time and capacity to augment normal supplies in an emergency. An emergency well siting study will evaluate option to install additional, emergency-only wells throughout the service area, as recommended by the City's Water Distribution System Seismic Vulnerability Assessment.

PROPOSED SCHEDULE: 2025-2029

PROJECT NEED: Service Enhancement

### Proposed Budget (includes inflation)

W-119 (NEW)	2023	2024	2025	2026	2027	2028	2029	Total
Proposed (\$M)	–	–	\$.360	\$1.919	\$.923	\$1.734	\$7.899	\$12.835