

**BELLEVUE UTILITIES**  
**2021-2027 CAPITAL INVESTMENT PLAN (CIP)**  
**STORM AND SURFACE WATER FUND**  
**PROPOSED BUDGET BY PROGRAM**



## D-59 Minor (Small) Storm and Surface Water Capital Improvement Projects

### Description and Scope

This program is for minor (small) improvements to Bellevue’s surface water system to resolve deficiencies, improve efficiencies, or resolve maintenance problems.

**Project Need:** System Renewal and Replacement

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

<b>D-64</b>	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$70,000	\$173,000							
Proposed			\$194,000	\$0	\$0	\$0	\$0	\$0	\$0

### **Types of Projects and Program Highlights**

- Proposed budget to complete existing projects in the program.
- It is recommended that this program be retired. All future identified small capital improvements can be managed in one of the existing or proposed (new) programs.

## D-64 Storm Water System Conveyance Infrastructure Rehabilitation

### Description and Scope

This ongoing program repairs defective storm drainage pipelines, culverts and ditches identified as part of the Utility's condition assessment program or other means. The majority of the projects involve lining or replacing substandard pipes. Projects are prioritized based on the severity of deterioration, the risk and consequence of failure, and coordination with planned street improvement projects. As the system ages, costs are expected to increase. The Utilities' Asset Management Program is evaluating when system replacement will require significant increases to the budget.

**Project Need:** System Renewal and Replacement

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

D-64	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$773,000	\$1,372,000							
Proposed			\$2,364,000	\$1,422,000	\$1,528,000	\$1,642,000	\$2,014,000	\$2,053,000	\$2,093,000

### **Types of Projects and Program Highlights**

- Increased the 2021 budget request by approx. \$1 M in 2021 to complete 2019/2020 emergency repair project on West Lake Sammamish Parkway.
- Storm pipe repairs are identified throughout the city on an annual basis; repair methods include lining and replacing pipes dependent upon depth of the pipe and assessment of pipe length to repair.

## D-81 Fish Passage Improvement Program

### Description and Scope

This ongoing program provides funding to remove fish passage barriers such as impassable culverts, debris jams, or accumulated sediment, allowing access to critical spawning and rearing habitat for salmon populations. Typical projects include culvert replacement or modification, debris removal, or installation of logs and boulders to improve access at low stream flows. Grant money is pursued to supplement Bellevue's investment whenever possible.

**Project Need:** Environmental Preservation

### Proposed Budget (includes Inflation)

D-81	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$365,000	\$18,000							
Proposed			--	\$350,000	\$100,000	\$190,000	\$610,000	\$500,000	\$50,000

### Types of Projects and Program Highlights

- Kelsey Creek at 140<sup>th</sup> Ave NW Low Flow Barrier project was deferred until 2025 due to prioritization and staff resource
- Coal Creek I-405 Weirs, Fish Passage Removal was identified as a higher priority project; preliminary engineering is proposed to start in 2022.

## D-86 Stream Channel Modification Program

### Description and Scope

This ongoing program resolves unstable stream sections that reduce salmon spawning or rearing habitat or increase Bellevue Utilities maintenance requirements. Stream stability problems include stream sections with excessive erosion or sediment deposition. This program also improves habitat complexity by planting coniferous trees to reduce willow mono-culture or invasive weed species. Stabilizing the stream channel consists primarily of placing large woody debris and boulders in the stream channel, and re-vegetating stream banks, commonly called bioengineering.

**Project Need:** Environmental Preservation

### Proposed Budget (includes Inflation)

D-86	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$737,000	\$164,000							
Proposed			\$1,390,000	\$ 160,000	\$180,000	\$0	\$ 80,000	\$440,000	\$ 990,000

### Types of Projects and Program Highlights

- Kelsey Creek Glendale project scope change for a more stable channel moved out to 2021 for construction.
- New projects added for stream work on Coal Creek and Sunset Creek proposed for the out years.
- Other stream projects deferred until completion of the Watershed Management Plan in 2023. This plan will prioritize investments to improve stream health that will be the basis for future CIPs.

## D-94 Flood Control Program

### Description and Scope

This ongoing program constructs improvements to reduce or eliminate flooding caused by insufficient public drainage system capacity. Projects involve enlarging pipes or culverts to convey more stormwater, re-routing drainage to pipes with more capacity, adding detention or infiltration facilities, or other runoff control strategies.

This program is funded in part by King County Flood Control District sub-regional opportunity fund dollars at approximately \$600,000 per year.

**Project Need:** Environmental Preservation/ Flood Hazard Reduction

### Proposed Budget (includes Inflation)

D-94	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$1,527,000	\$49,000							
Proposed			\$2,950,000	\$2,450,000	\$2,070,000	\$520,000	\$500,000	\$500,000	\$500,000

### Types of Projects and Program Highlights

- The Richards/Fact Blvd Conveyance Improvement project has been moved to its own new program (D-114) since it has the majority of its funding from the King County Flood control District (in process). The Richards/Fact Blvd project was not budgeted in the 2019-2025 CIP.
- Projects in-progress include a Valley Creek/NE 21<sup>st</sup> Flood Control Project, North Sammamish Flood Improvements, and the Meydenbauer Basin/NE 8th at 100<sup>th</sup> NE Conveyance Improvements.
- Costs have been updated based on revised engineering estimates for the Valley Creek / NE 21<sup>st</sup> project, due to the potential for property issues on an adjacent parcel and for the Meydenbauer Basin/NE 8th at 100<sup>th</sup> NE Conveyance Improvements project near Bellevue Square (NE 8<sup>th</sup> & 100<sup>th</sup> Ave NE)
- New projects added in 2021-2024 to address flooding in the Lake Hills neighborhood.

## D-103      Replace Coal Creek Parkway Culvert at Coal Creek

### Description and Scope

This project replaced a 96-inch diameter, 110-foot-long corrugated metal pipe built in the 1980s that carries Coal Creek beneath Coal Creek Parkway. The old culvert impeded fish passage and was in poor condition. The metal pipe was replaced in 2015 with a 39' wide box culvert that will also accommodate a new walking path under the roadway adjacent to the stream.

**Project Need:** System Renewal and Replacement/Environmental Preservation

### Proposed Budget (includes inflation)

D-103	2019 (Adopted)	2020 (Adopted)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Adopted	\$26,000	\$0							
Proposed			\$50,000						

### Program Highlights

- Construction is complete.
- Proposed budget is to complete permit required monitoring.
- Program will sunset in 2021.

## D-109      Stormwater Quality Retrofit Program

### Description and Scope

This program formerly entitled “Stormwater Quality Retrofits in Kelsey Creek” will focus on improving water quality in the storm system and ultimately Bellevue’s streams and lakes. One pilot project was completed in the Kelsey Creek basin in 2020. This Program will expand once more projects are identified in the City’ on-going Watershed Management Plan effort (expect to be completed in 2023).

**Project Need:** Environmental Preservation

### Proposed Budget (includes Inflation)

D-109	2019	2020	2021	2022	2023	2024	2025	2026	2027
Adopted	\$326,000	\$26,000	\$0	\$0	\$0	\$0	\$0		
Proposed	0	0	\$0	\$750,000	\$0	\$0	\$0	\$0	\$0

### **Type of Projects and Program Highlights**

- Program is now City-wide instead of only in the Kelsey Creek Basin.
- Projects include addressing polluted runoff from I-405 that affects Sturtevant Creek



## D-112 Storm and Surface Water Planning Program (*Proposed – New*)

### Description and Scope

This program is for storm and surface water system planning projects, condition assessments of the storm and surface water system, alternatives analyses and programmatic planning for the overall storm and surface water system, including watershed and stream health.

**Project Need:** Environmental Preservation/System Renewal and Replacement

### Proposed Budget (*includes inflation*)

D-112	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
	\$590,000	\$600,000	\$240,000	\$0	\$0	\$280,000	\$290,000

### Program Details

- The program includes a Watershed Management Plan (WMP) that has the goal of improving the health of Bellevue’s streams. This effort is scheduled to be completed by 2023. It will prioritize investments to improve stream health that will be the basis for future CIPs. The WMP is scheduled to produce some early action projects in 2021.
- A culvert assessment study is included in this Program. This study will evaluate up to 300 stream culverts for fish passage barriers and physical condition. It will also develop a prioritization process for selecting culverts for replacement need it the most. Existing culvert condition data will be included in the study.
- This Program also includes a structural and operational study of the six regional detention facilities on Kelsey Creek. These facilities were constructed in the mid-1980s. Their condition needs to be comprehensively evaluated as well as a review of their current operation practices. The results of this study will likely lead to capital projects that upgrade/modify these facilities.

## D-114 Richards/Fact Blvd Conveyance Improvements (*Proposed – New*)

### Description and Scope

This new program pulls out this current project from the D-94 (Flood Control) program. This large project is designed to reduce the frequency of flood on Factoria Blvd between I-90 and SE 38<sup>th</sup> St. The vast majority of the funding for this project is through an agreement from the King County Flood Control District (in process).

**Project Need:** Environmental Preservation/Flood Hazard Reduction

### Proposed Budget (includes inflation)

D-114	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Proposed	\$5,220,000	\$4,100,000	\$0	\$0	\$0	\$0	\$0

### Project Details

- Preliminary cost estimates are driven by permitting, design of larger drainage system on a major arterial (traffic control and large underground utilities), and right-of-way issues (i.e., easements)
- Construction tentatively scheduled for 2022-2023
- The project will be partially funded (\$6.8M) by the King County Flood District.

## D-115 Stormwater SCADA Upgrades (*Proposed – New*)

### **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 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.

**Project Need:** System Renewal and Replacement

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

D-115	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Proposed	\$0	\$600,000	\$200,000	\$20,000	\$0	\$630,000	\$0

## D-116 Post-Construction Monitoring and Maintenance Program *(Proposed – New)*

### **Proposed Description and Scope**

This program is for projects that are constructed in critical areas (streams, wetland, steep slopes or floodplains) or critical area buffers. The projects require, by permit from a variety of natural resource agencies, re-planting of native vegetation after construction and monitoring of capital projects to ensure the vegetation survives. Some stream projects require monitoring of the streambed after construction.

This new program consolidates 11 active and 5 proposed projects from 8 different current CIP programs into one program; this allows for more efficient management of similar type projects and associated budgets.

**Project Need:** Environmental Preservation

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

D-116	2020 (Proposed)	2021 (Proposed)	2022 (Proposed)	2023 (Proposed)	2024 (Proposed)	2025 (Proposed)	2026 (Proposed)	2027 (Proposed)
Proposed	\$0	\$220,000	\$210,000	\$270,000	\$160,000	\$110,000	\$40,000	\$40,000