City of Bellevue Utilities Department 2021-2027 Proposed Capital Investment Program Proposal Descriptions

Proposal: #140.02. Replacement of Aging Water Infrastructure

<u>Description:</u> This proposal funds replacement or rehabilitation of drinking water system infrastructure. Bellevue's water system is a complex network of pipes, reservoirs, pump stations, supply inlets, valves and meters that together deliver roughly 6 billion gallons of drinking water to our customers annually. System replacement value is estimated at \$1.6 billion construction cost plus engineering and administration, and most of the system is more than halfway through its useful life. Failure trends and obsolete equipment provides evidence that system components are rapidly approaching the end of their service life and must be replaced. This proposal implements Utilities' long term water system renewal and replacement strategy by funding CIP programs for each major type of water system component, right-sized for proactive, sustainable water system management, to maintain acceptable service levels at the lowest life-cycle cost.

									2021-2027
Plan#	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
W-16	Asbestos Cement Wtr Main Repla	6,320,000	12,820,000	9,860,000	12,680,000	12,730,000	12,770,000	14,110,000	81,290,000
W-67	Press Reduc Valve	430,000	240,000	350,000	790,000	1,000,000	1,790,000	1,400,000	6,000,000
W-69	Minor Capital Improvement Proj	700,000	270,000	130,000	-	-	-	190,000	1,290,000
W-85	Reservoir Rehab or Replacement	7,680,000	3,250,000	2,570,000	890,000	600,000	2,880,000	5,510,000	23,380,000
W-91	Wtr Pump Stat Rehab or Replace	-	-	1,460,000	2,780,000	980,000	790,000	1,030,000	7,040,000
W-98	Large Commercial Meter Vault Replacement	40,000	340,000	570,000	430,000	700,000	690,000	580,000	3,350,000
W-99	Service Lines & Saddle Replcmt	240,000	280,000	120,000	-	-	-	-	640,000
W-115	SCADA Upgrade - Water	-	80,000	1,000,000	330,000	-	-	-	1,410,000
W-117	170th PI Pressure Improvements	220,000	530,000	330,000	-	-	-	-	1,080,000
140.02NA Tota	l	15,630,000	17,810,000	16,390,000	17,900,000	16,010,000	18,920,000	22,820,000	125,480,000

Proposal: #140.03. Replacement of Aging Sewer Infrastructure

<u>Description</u>: This proposal funds replacement or rehabilitation of sanitary sewer system infrastructure. Bellevue's wastewater system is comprised of pipes and pump stations that remove 11 million gallons of sewage from homes and businesses every day, and convey it safely to King County's regional system for treatment and disposal. System replacement value is estimated at \$1.4 Billion, and most of the system is more than halfway through its useful life. Ongoing inspection of sewer asset condition and claims experience trends provide evidence that much of the system requires significant repair or will soon need to be replaced. This proposal implements Utilities' long term sanitary sewer renewal and replacement strategy by funding CIP programs for each type of major sewer system component, each right-sized for proactive, sustainable wastewater system management to maintain acceptable service levels at the lowest life-cycle cost.

									2021-2027
Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
S-16	Sewage Pump Station Improv	5,260,000	2,010,000	600,000	1,800,000	3,340,000	1,230,000	1,060,000	15,300,000
S-24	Sewer System Trunk Rehab	2,720,000	3,310,000	3,480,000	3,310,000	3,180,000	4,540,000	5,170,000	25,710,000
S-32	Minor Capital Improvement Proj	40,000	-	-	-	-	-	20,000	60,000
S-58	Sewer Lake Line Replcemt Progm	250,000	-	-	-	-	-	-	250,000
S-66	Sewer System Pipeline Repl Pgm	2,920,000	650,000	1,030,000	1,120,000	-	-	-	5,720,000
S-67	I&I Investigations and Flow Mo	-	-	-	-	-	-	-	-
S-112	Sewer Planning Program	-	-	360,000	370,000	-	-	-	730,000
S-115	SCADA Upgrade - Sewer	1,500,000	210,000	1,000,000	-	1,200,000	950,000	-	4,860,000
140.03NA Tot	al	12,690,000	6,180,000	6,470,000	6,600,000	7,720,000	6,720,000	6,250,000	52,630,000

City of Bellevue Utilities Department 2021-2027 Proposed Capital Investment Program Proposal Descriptions

Proposal: #140.04. Replacement of Aging Storm Infrastructure

<u>Description:</u> This proposal funds replacement or rehabilitation of aging stormwater system infrastructure. Bellevue's stormwater system is comprised of regional detention facilities, pipes, culverts and open streams that convey stormwater runoff to eventual outfall into Lake Washington or Lake Sammamish. The constructed portions of the system, estimated replacement value \$1 Billion, are managed to prevent failures that cause flooding, erosion and traffic disruption, and to protect streams, lakes and wetlands as much as practicable from high velocity, erosive stream flows and pollution. Replacement of infrastructure prior to failure precludes property and environmental damage. This proposal implements Utilities' long term stormwater management strategy by funding CIP programs for the replacement and rehabilitation of Storm infrastructure at the least life-cycle cost, while maintaining acceptable service levels, for sustainable storm system management.

									2021-2027
Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
D-59	Minor Capital Improvement Proj	190,000	-	-	-	-	-	-	190,000
D-64	Infrastructure Rehab Program (2,360,000	1,420,000	1,530,000	1,640,000	2,010,000	2,050,000	2,090,000	13,100,000
D-103	Repl. Coal Creek Pkwy Culvert	50,000	-	-	-	-	-	-	50,000
D-105	Replace NE 8th St Culvert at K	-	-	-	-	-	-	-	-
D-107	Storm Water Video Inspection E	-	-	-	-	-	-	-	-
D-115	SCADA Upgrade - Storm	-	600,000	200,000	20,000	-	630,000	-	1,450,000
140.04NA Tota	al	2,600,000	2,020,000	1,730,000	1,660,000	2,010,000	2,680,000	2,090,000	14,790,000

Proposal: #140.05. Utility Capacity for Growth

<u>Description:</u> This proposal funds construction of additional utility system capacity so that development and re-development projects are not delayed. Planned population growth of residents and workers in downtown, the Bel-Red Corridor, and the Wilburton Area will require more drinking water storage, more water from our regional system supplier, more sewer pump station capacity, and added water and sewer pipe capacity to meet state minimum requirements. Existing facilities are at or near capacity to serve the current population. The initial cost of growth-driven projects will be recovered via capital recovery charges and via direct facilities connection charges to benefited properties.

									2021-2027
Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
S-60	Wilburton Sewr Capacity Upgrad	-	20,000	-	-	-	-	-	20,000
S-61	Midlakes Pump Station Impvs	50,000	-	-	-	-	-	-	50,000
W-103	Reservoir Storage for Dwntwn	1,100,000	190,000	-	-	-	1,170,000	1,620,000	4,080,000
140.05NA Tota	al	1,150,000	210,000	-	-	-	1,170,000	1,620,000	4,150,000

City of Bellevue Utilities Department 2021-2027 Proposed Capital Investment Program Proposal Descriptions

Proposal: #140.08. Environmental Preservation

<u>Description:</u> This proposal funds Utility CIP projects focused on environmental preservation or restoration. It includes on-going programs and one-time projects intended to restore stream health and environmental habitat, or to prevent pollution of stream and habitat resources. These projects guard against harmful environmental impacts from City operations or repair environmental damage on public lands or lands with public responsibilities.

									2021-2027
Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
D-81	Fish Passage Improvement Proj	-	350,000	100,000	190,000	610,000	500,000	50,000	1,800,000
D-86	Stream Channel Modific Prog	1,390,000	160,000	180,000	-	80,000	440,000	990,000	3,240,000
D-94	Flood Control Program	2,950,000	2,450,000	2,070,000	520,000	500,000	500,000	500,000	9,490,000
D-104	Stream Restoration for M & I	-	-	-	-	-	-	-	-
D-106	Lower Coal Creek Flood Hazard	-	-	-	-	-	-	-	-
D-109	Strm Wtr Qlty Retroft Klsy Crk	-	750,000	-	-	-	-	-	750,000
D-112	Storm & Surface Water Planning Program	590,000	600,000	240,000	-	-	280,000	290,000	2,000,000
D-114	Factoria Blvd Conveyance Improvement	5,220,000	4,100,000	-	-	-	-	-	9,320,000
D-116	Post Construction Compliance Monitoring & Maintenar	220,000	210,000	270,000	160,000	110,000	40,000	40,000	1,050,000
140.08NA Total		10,370,000	8,620,000	2,860,000	870,000	1,300,000	1,760,000	1,870,000	27,650,000

Proposal: #140.54. Water Facilities for NE Spring Blvd Multi-Modal Corridor

<u>Description:</u> This proposal is for design and construction of new water pipes under the new NE Spring Boulevard Multi Modal Corridor, to provide water service for the redevelopment of the Bel-Red Corridor. This proposal is required as a result of Transportation's ongoing, phased development of the Spring Blvd right-of-way. No new sewer pipes are needed in this section of the corridor.

									2021-2027
Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
W-105	NE 15th Multi Modal Corridor	-	-	-	1,600,000	1,250,000	-	-	2,850,000
140.54DA Tota	al	-	-	-	1,600,000	1,250,000	-	-	2,850,000

City of Bellevue Utilities Department 2021-2027 Proposed Capital Investment Program Proposal Descriptions

Proposal: #140.70. Maintenance and Operations Facility Land Acquisition and Development

<u>Description:</u> 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 initiated the development of a long-range Operations and Maintenance (O&M) Facilities Plan.

Based on the alternatives analysis within the O&M Facilities Plan, property acquisition and site development is being recommended in the 2021-2027 CIP for the maintenance facility.

										2021-2027
	Plan #	Plan Description	2021	2022	2023	2024	2025	2026	2027	Total
	W-111	Maintenance and Operations Facility Land Acquisition a	-	-	1,333,500	1,333,500	-	-	-	2,667,000
	S-111	Maintenance and Operations Facility Land Acquisition a	-	-	2,666,500	2,666,500	-	-	-	5,333,000
140	.69NA Total		-	-	4,000,000	4,000,000	-	=	=	8,000,000

Grand Total	42,440,000	34,840,000	31,450,000	32,630,000	28,290,000	31,250,000	34,650,000	235,550,000
Totals by Utility								
Water utility subtotal	16,730,000	18,000,000	17,723,500	20,833,500	17,260,000	20,090,000	24,440,000	135,077,000
Sewer utility subtotal	12,740,000	6,200,000	9,136,500	9,266,500	7,720,000	6,720,000	6,250,000	58,033,000
Storm utility subtotal	12,970,000	10,640,000	4,590,000	2,530,000	3,310,000	4,440,000	3,960,000	42,440,000
Total	42,440,000	34,840,000	31,450,000	32,630,000	28,290,000	31,250,000	34,650,000	235,550,000

2021-2027 Proposed Capital Investment Program \$235.6M





