D-59 Minor (Small) Storm Capital Improvment Projects

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **Storm Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
5,474,286	3,422,286	70,000	173,000	559,000	457,000	261,000	263,000	269,000

Description and Scope

This ongoing program is for minor (small) improvements to Bellevue's surface water system to resolve deficiencies, improve efficiencies, or resolve maintenance problems, often in conjunction with other Bellevue programs such as the Transportation overlay program. Examples of projects include pipeline outfall improvements at Meydenbauer Bay; small stormwater pipe extensions to resolve drainage problems; and modifications of catch basins in concert with street projects. Projects are prioritized based on criteria including public safety/property damage, maintenance frequency, flooding history, operator safety, environmental risk, coordination with other city or development activity, and level of service impact.

Rationale

Storm infrastructure rehabilitation and replacement is based on asset criticality and business risk, per industry best practices. In the short term, this program reduces the likelihood of catastrophic system failures; traffic disruption due to failed culverts under streets; damage claims to the city; and utility rate spikes to respond to system failures rather than proactively managing the system. In the long term, timely replacement or repair of stormwater facilities keeps customer rates as low as practical by managing the system at the lowest life-cycle cost, while maintaining service levels and meeting regulatory requirements.

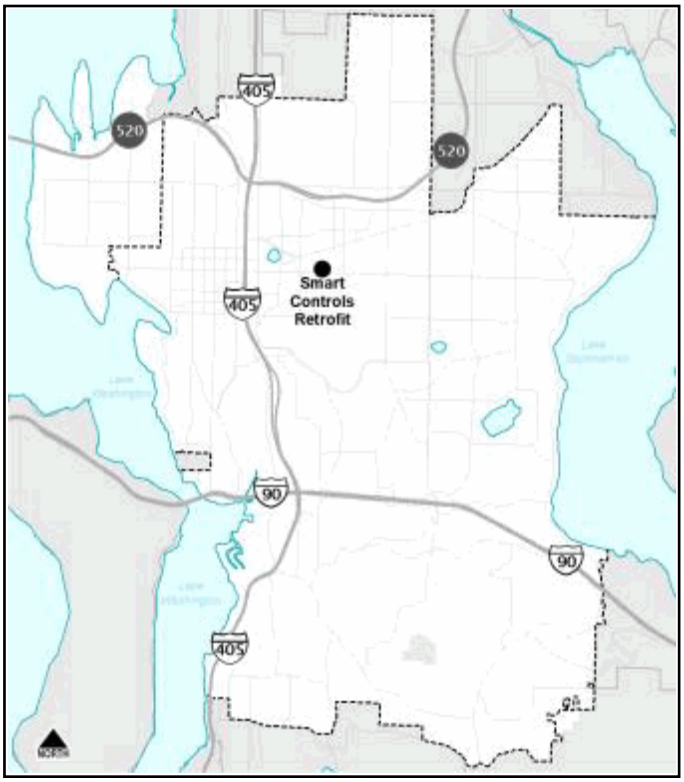
Environmental Impacts

A reliable stormwater system controls stormwater runoff to minimize flood and erosion damage to public and private property and the environment.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	5,474,286
Total Budgetary Cost Estimate:		5,474,286

Means of Financing

Funding Source	Amount
Utility Rates/Fees	5,474,286
Total Programmed Funding:	5,474,286
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-64 Storm System Conveyance Repairs and Replacement

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **Storm Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
27,637,231	17,180,231	773,000	1,372,000	1,517,000	1,527,000	1,635,000	1,753,000	1,880,000

Description and Scope

This ongoing program repairs defective storm drainage pipelines, culverts and ditches identified in the Utility's condition assessment program or other means. 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.

Rationale

Storm infrastructure rehabilitation and replacement is based on asset criticality and business risk, per industry best practices. In the short term, this program reduces the likelihood of catastrophic system failures; traffic disruption due to failed culverts under streets; damage claims to the city; and utility rate spikes to respond to system failures rather than proactively managing the system. In the long term, timely replacement or repair of stormwater facilities keeps customer rates as low as practical by managing the system at the lowest life-cycle cost, while maintaining service levels and meeting regulatory requirements.

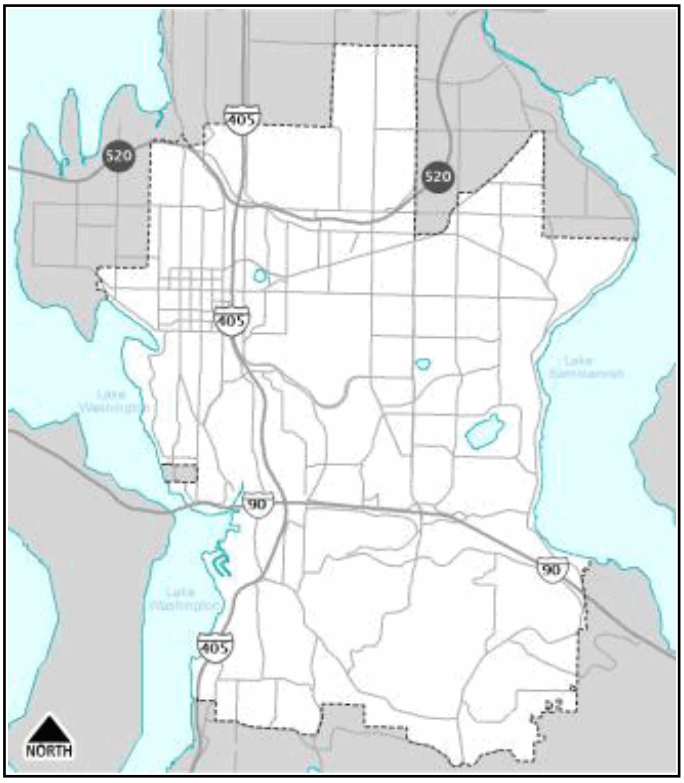
Environmental Impacts

A reliable stormwater system controls stormwater runoff to minimize flood and erosion damage to public and private property and the environment.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	27,637,231
Total Budgetary Cost Estimate:		27,637,231

Means of Financing

Funding Source	Amount
Utility Rates/Fees	27,637,231
Total Programmed Funding:	27,637,231
Future Funding Requirements:	

Comments

D-81 Fish Passage Improvement Program

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
8,195,895	5,662,895	365,000	18,000	18,000	254,000	684,000	649,000	545,000

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. Projects planned for this CIP window are on Kelsey Creek at 140th Ave NE; on Yarrow West Tributary; on Newport Creek; at Mercer/Alcove Creek, and on Yarrow East Tributary.

Rationale

This program along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

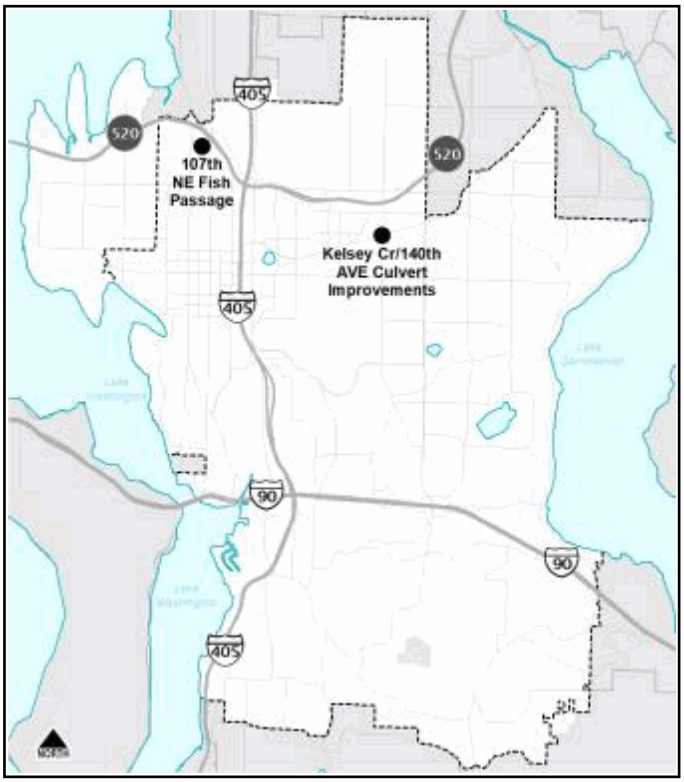
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	8,195,895
Total Budgetary Cost Estimate:		8,195,895

Means of Financing

Funding Source	Amount
Utility Rates/Fees	8,195,895
Total Programmed Funding:	8,195,895
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-86 Stream Channel Modification Program

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
9,019,568	5,377,568	737,000	164,000	192,000	404,000	483,000	980,000	682,000

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. Projects planned in this CIP window include projects on Lower Kelsey Creek, at the Coal Creek Channel, and erosion control in the Sunset Creek ravine.

Rationale

This program along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

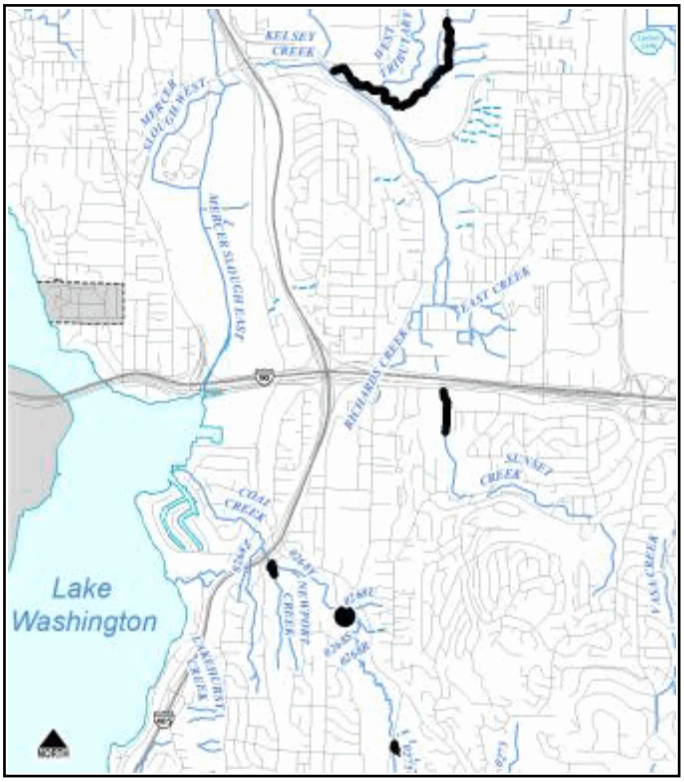
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	9,019,568
Total Budgetary Cost Estimate:		9,019,568

Means of Financing

Funding Source	Amount
Utility Rates/Fees	9,019,568
Total Programmed Funding:	9,019,568
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-94 Flood Control Program

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
17,064,973	11,274,973	1,527,000	49,000	326,000	675,000	1,876,000	662,000	675,000

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. Candidate sites are wherever levels of service (LOS) for flood protection are not met. The following sites have projects in progress or have been identified for future improvements, and are presented in priority order. They will be prioritized for implementation with any others that become apparent as a result of storm or system analysis: 1. Valley Creek / NE 21st Flood control (in progress); 2. Post construction monitoring on Coal Creek Upper Reach; 3. Factoria Boulevard Conveyance Improvements; 4. Meydenbauer Basin / CBD Conveyance Improvements; 5.Wolverine Drive Flood Control Project; 6. North Sammamish Flood Improvements; 7. Overlake Overflow / NE 20th Street Improvements. Lower Coal Creek Sed. Pond, Sunset / SE 30th St Flood Control; 8. Sunset Creek / Garden Brook; 9. 156th Ave SE & SE 4th St. Storm Drainage Improvements; 10. Phantom / Larson Lake Channel Regrade. The SE Newport Way Culvert Replacement Project previously on this list has been deleted. King County completed repairs at the site prior to Bellevue's annexation of the area. Kelsey Creek/SE 7th Street Flood Control was also removed from the list. Field investigation suggests that enhanced maintenance at that site may result in significant improvement. If further channel or culvert work is needed, it will be considered for addition to the project list during a future CIP update.

Rationale

This program along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

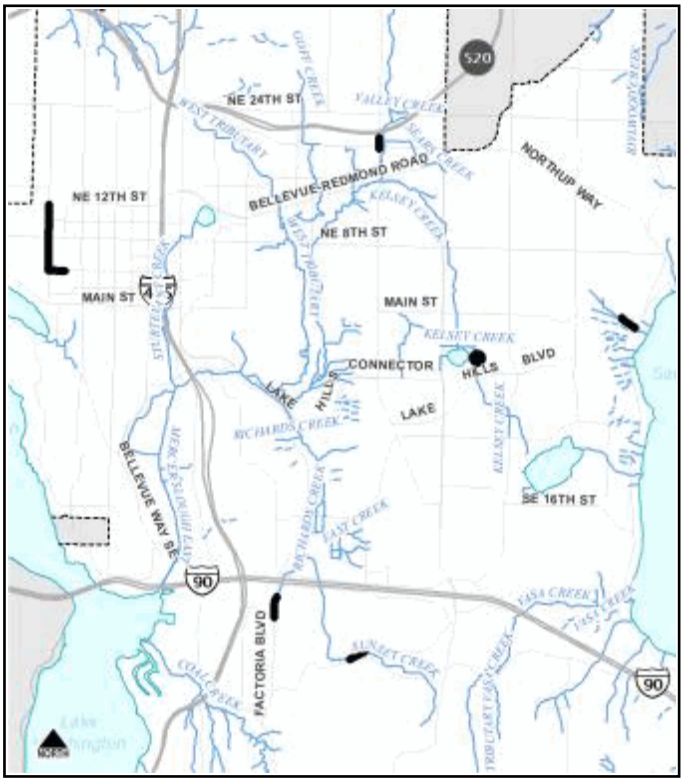
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	17,064,973
Total Budgetary Cost Estimate:		17,064,973

Means of Financing

Funding Source	Amount
Interlocal Contributions	4,800,000
Utility Rates/Fees	12,264,973
Total Programmed Funding:	17,064,973
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-103 Replace Coal Creek Pkwy Culvert at Coal Creek

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
5,287,250	5,261,250	26,000	-	-	-	-	-	-

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. Remaining costs are for permit-required post-construction monitoring for ten years after project completion.

Rationale

Storm infrastructure rehabilitation and replacement is based on asset criticality and business risk, per industry best practices. In the short term, this project reduces the likelihood of catastrophic system failures; traffic disruption due to failed culverts under streets; damage claims to the city; and utility rate spikes to respond to system failures rather than proactively managing the system. In the long term, timely replacement or repair of stormwater facilities keeps customer rates as low as practical by managing the system at the lowest life-cycle cost, while maintaining service levels and meeting regulatory requirements.

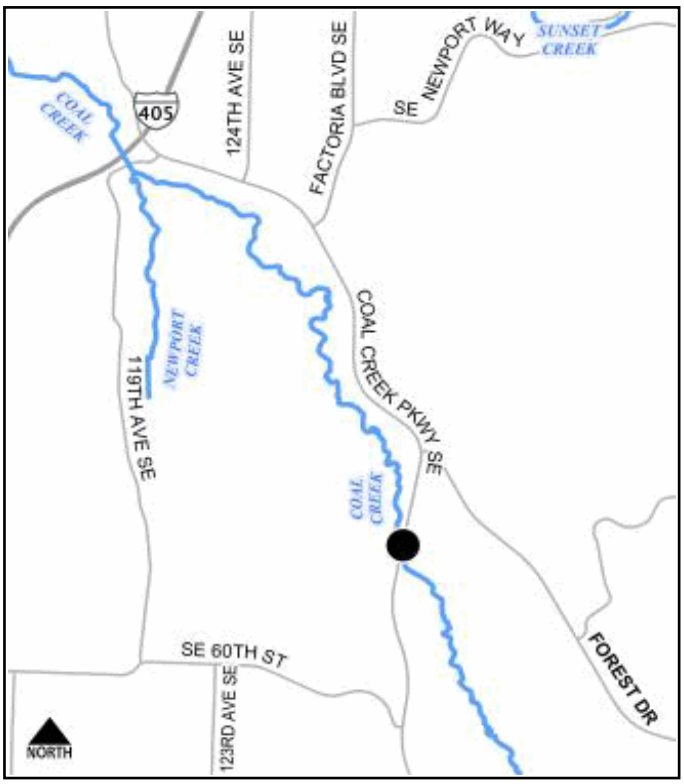
Environmental Impacts

A reliable stormwater system controls stormwater runoff to minimize flood and erosion damage to public and private property and the environment.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2009 - 2019	5,287,250
Total Budgetary Cost Estimate:		5,287,250

Means of Financing

Funding Source	Amount
Utility Rates/Fees	5,287,250
Total Programmed Funding:	5,287,250
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-104 Stream Restoration for Mobility & Infrastructure Initiative

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
330,000	222,000	26,000	27,000	27,000	28,000	-	-	-

Description and Scope

This ongoing program is for stormwater improvements associated with the Mobility and Infrastructure Initiative (which seeks to address high priority mobility and infrastructure needs in Downtown Bellevue and in the BelRed Corridor). These funds are to restore streams for recreation and environmental health through the BelRed corridor, and to encourage redevelopment of the area. These funds will be allocated to specific stormwater-related projects pending further Council direction. Two projects are proposed for implementation in 2014-2016: Channel Restoration pre-design studies on the West Tributary downstream of the West Trib. Regional Pond, and Native Plant Restoration at the West Tributary Regional Pond. The projects will need to be constructed to coordinate with Sound Transit wetland and stream mitigation, and 124th Phase 1 project, respectively.

Rationale

This project along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

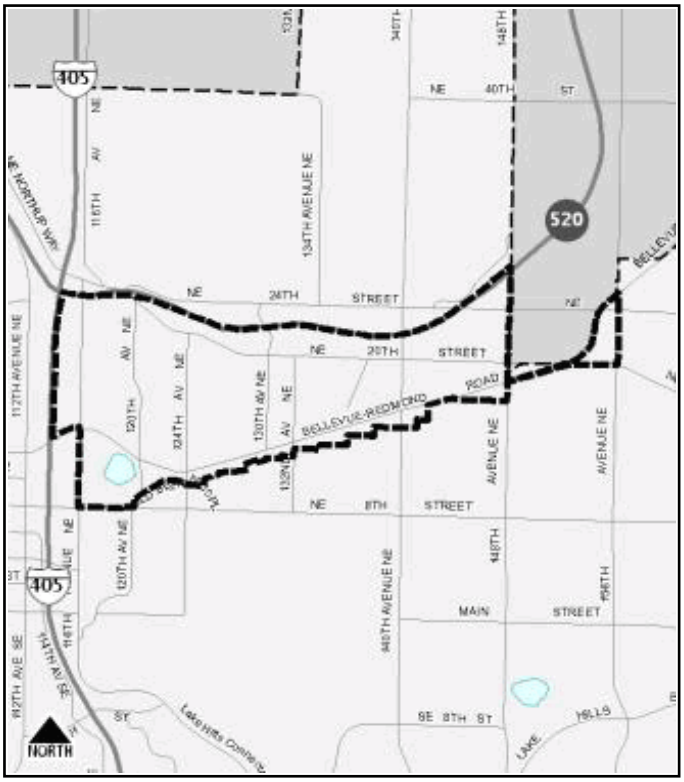
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2017 - 2022	330,000
Total Budgetary Cost Estimate:		330,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	330,000
Total Programmed Funding:	330,000
Future Funding Requirements:	

Comments

D-104-B Stream Restoration for Mobility & Infrastructure Initiative Bank

Category: **Storm Drainage**
Department: **Utilities**
Status: **Ongoing**
Location **City Hall**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
162,132,418	18,215,989	10,775,441	13,409,608	18,677,942	21,312,109	23,946,276	26,580,443	29,214,610

Description and Scope

This project maintains reserve funds for project D-104, for stormwater improvements associated with the Mobility and Infrastructure Initiative (which seeks to address high priority mobility and infrastructure needs in Downtown Bellevue and in the BelRed Corridor).

Rationale

N/A

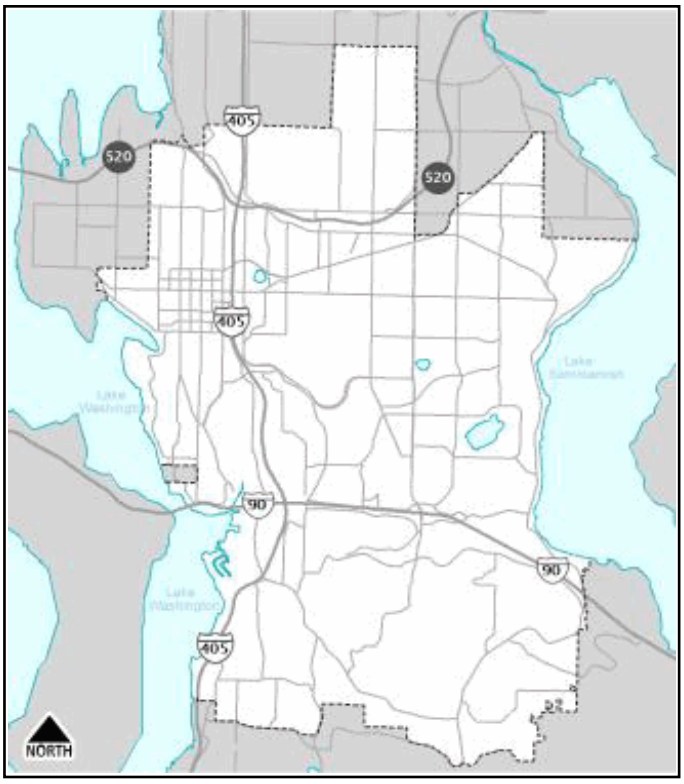
Environmental Impacts

N/A

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	162,132,418
Total Budgetary Cost Estimate:		162,132,418

Means of Financing

Funding Source	Amount
Utility Rates/Fees	162,132,418
Total Programmed Funding:	162,132,418
Future Funding Requirements:	

Comments

D-105 Replace NE 8th St Culvert at Kelsey Creek

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
3,983,000	3,847,000	26,000	27,000	27,000	28,000	28,000	-	-

Description and Scope

This project will replace the existing 10' wide by 7' tall, 110-foot long corrugated metal culvert built in the early 1980s that carries Kelsey Creek beneath NE 8th Street. To meet flood and fish passage requirements, the culvert will be replaced with a bridge which spans the creek channel, or a three-sided concrete box culvert with an approximate 15 foot span. The design will be determined by permit requirements.

Rationale

Storm infrastructure rehabilitation and replacement is based on asset criticality and business risk, per industry best practices. In the short term, this project reduces the likelihood of catastrophic system failures; traffic disruption due to failed culverts under streets; damage claims to the city; and utility rate spikes to respond to system failures rather than proactively managing the system. In the long term, timely replacement or repair of stormwater facilities keeps customer rates as low as practical by managing the system at the lowest life-cycle cost, while maintaining service levels and meeting regulatory requirements.

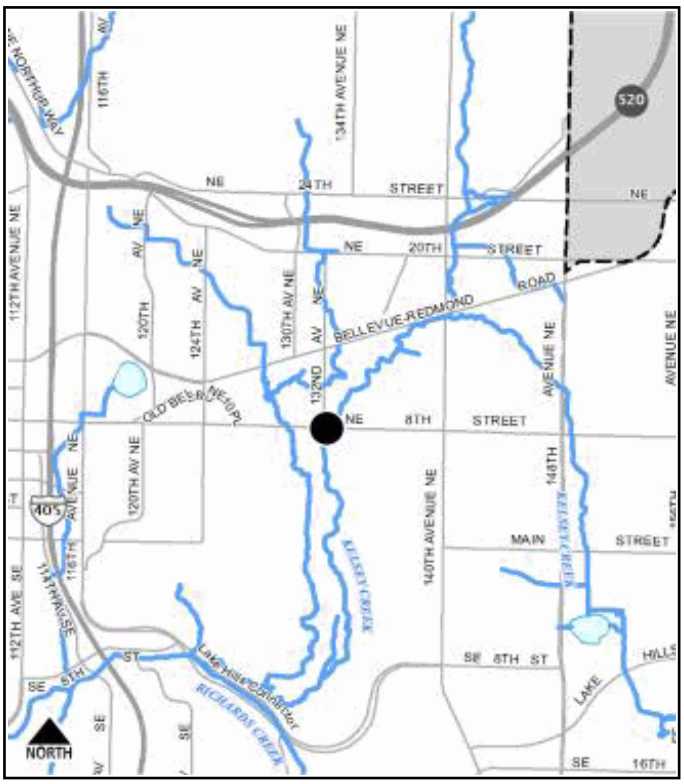
Environmental Impacts

A reliable stormwater system controls stormwater runoff to minimize flood and erosion damage to public and private property and the environment.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2014 - 2023	3,983,000
Total Budgetary Cost Estimate:		3,983,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	3,983,000
Total Programmed Funding:	3,983,000
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-106 Lower Coal Creek Flood Hazard Reduction Phase 1

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
12,484,889	6,356,889	5,559,000	206,000	134,000	100,000	79,000	50,000	-

Description and Scope

This project will design and construct project(s) to reduce flooding from the Newport Shores reach of Coal Creek, located between I-405 and Lake Washington. A preliminary engineering study to identify and assess alternatives is underway, to establish how best to reduce flooding during storm events. The project budget includes one or more of the following: increased storage capacity at the I-405 regional pond, replacement of the five existing culverts downstream of the pond, targeted stream bank erosion protection, and improvements to the local storm drainage network. The schedule has been revised to reflect design in 2015-16; permitting in 2016-17, and construction of improvements between 2018 and 2020.

Rationale

This project along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

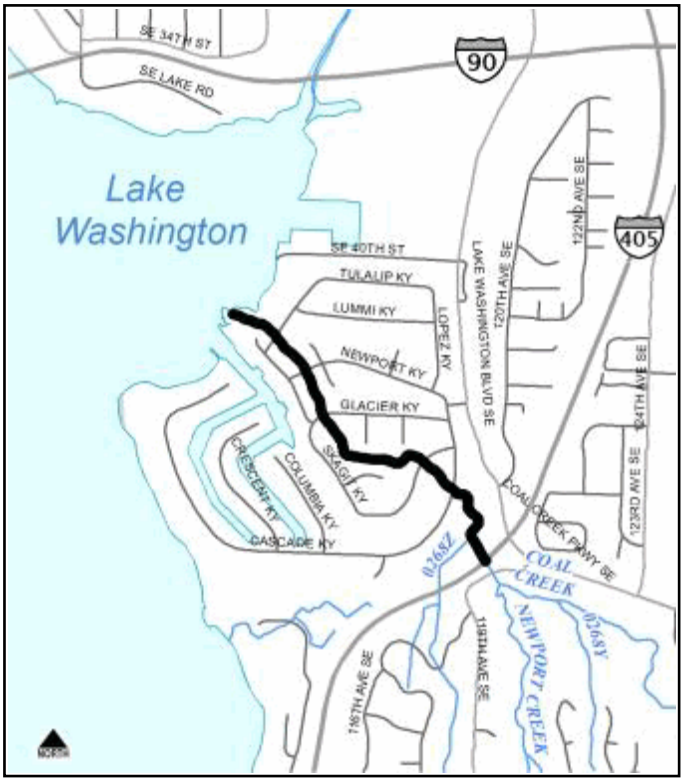
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2013 - 2024	12,484,889
Total Budgetary Cost Estimate:		12,484,889

Means of Financing

Funding Source	Amount
Interlocal Contributions	12,484,889
Total Programmed Funding:	12,484,889
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-107 Storm Water Video Inspection Enhancement

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
2,581,000	2,335,000	246,000	-	-	-	-	-	-

Description and Scope

This project will video-inspect the most critical 25 percent of stormwater pipes to assess their condition over a five year period. Pipes to be inspected will be selected based on their likelihood and consequence of failure (risk). The video condition assessment results will be used to help evaluate the overall stormwater pipeline condition so that short- and long-term renewal and replacement needs can be more accurately estimated. The project will also be used to evaluate how much of the stormwater system should be video-inspected each year on an ongoing basis. The project funds four years of contracted services, plus start up time in the first year. It will video-inspect 10-15 miles in 2015, 25 miles each in 2016, 2017, and 2018, and 10-15 miles in the first half of 2019.

Rationale

Storm infrastructure rehabilitation and replacement is based on asset criticality and business risk, per industry best practices. In the short term, this project reduces the likelihood of catastrophic system failures; traffic disruption due to failed culverts under streets; damage claims to the city; and utility rate spikes to respond to system failures rather than proactively managing the system. In the long term, timely replacement or repair of stormwater facilities keeps customer rates as low as practical by managing the system at the lowest life-cycle cost, while maintaining service levels and meeting regulatory requirements.

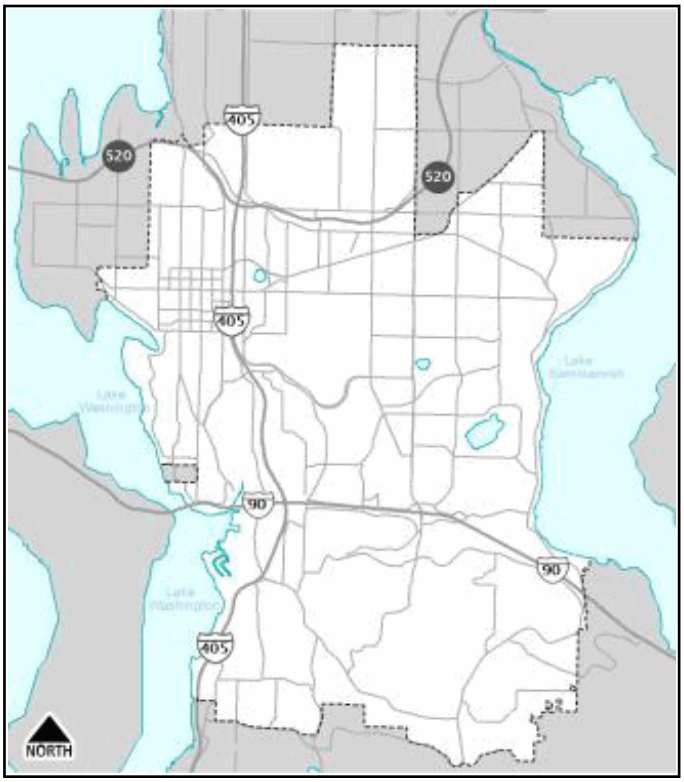
Environmental Impacts

A reliable stormwater system controls stormwater runoff to minimize flood and erosion damage to public and private property and the environment.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2015 - 2019	2,581,000
Total Budgetary Cost Estimate:		2,581,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	2,581,000
Total Programmed Funding:	2,581,000
Future Funding Requirements:	

Comments

FY2019-2025 Capital Investment Program

D-109 Storm Retrofit in Kelsey Creek

Category: **Storm Drainage**
Department: **Utilities**
Status: **Approved Prior**
Location **Storm and Sewer Service Area**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	FY 2024 Budget	FY 2025 Budget
657,000	315,000	326,000	16,000	-	-	-	-	-

Description and Scope

This project will design and install three water quality retrofit improvements using biofiltration and rain garden techniques within city rights-of-way, where it will improve water quality from street runoff to Kelsey Creek. The Storm and Surface Water System Plan reported that over 38 percent of the city was developed without water quality treatment of stormwater. When stormwater management regulations were first established, they focused largely on flood control. Recent studies have demonstrated that roadway stormwater runoff kills Coho salmon. In 2014 there was 100 percent mortality of hatchery Coho salmon transplanted to Kelsey Creek. Studies show that filtering stormwater runoff through bio-retention soil mixes will clean the stormwater sufficiently to result in salmon survival. This project will improve stormwater quality, and improve fish survival. It lays the foundation for an ongoing program that Bellevue could use to meet water quality retrofit requirements. It aligns with many resource agency goals for water quality retrofit and low impact development BMPs, and positions Bellevue to be successful with grant applications from those agencies.

Rationale

This project along with others in this proposal open salmon access to existing functional habitat, one of the quickest methods to increase salmon populations; helps stabilize streams and improve habitat consistent with Council-approved Lake Washington/Cedar/Sammamish Chinook Salmon Recovery Plan; improves water quality that limits fish viability; protects properties from flooding of structures, flooding which restricts access to residences or businesses, and street flooding that impacts primary emergency routes; restores streams for recreation and environmental health in the redeveloping Bel-Red Corridor; and reduce the potential for sewage overflow to surface water bodies.

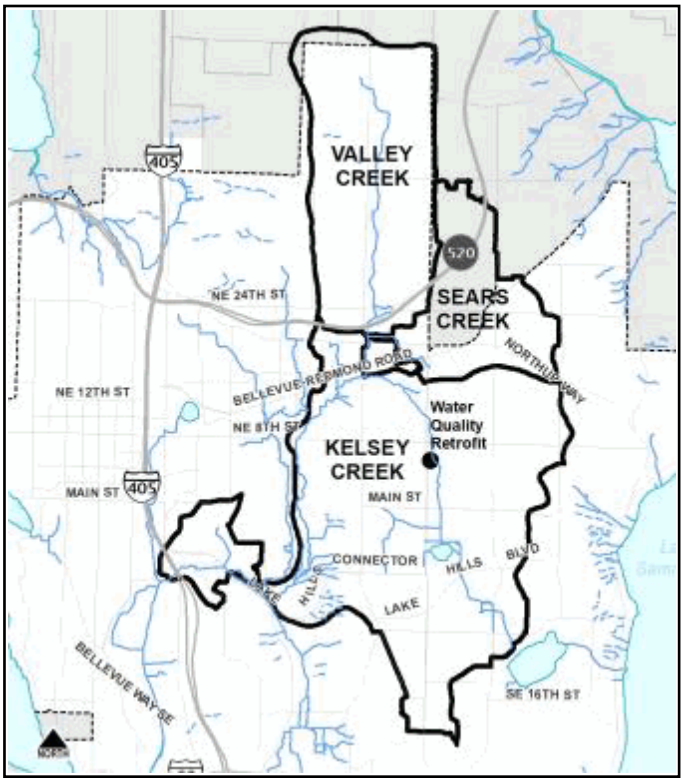
Environmental Impacts

The long term environmental impacts of each program/project are positive in that they improve or protect stream health and habitat, or eliminate environmental damage caused by flooding. Projects may increase the potential for erosion or siltation during construction. Appropriate environmental review (SEPA) and permits (Critical Areas, Hydraulic Project Approval, US Army Corps) are required for most projects.

Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2017 - 2020	657,000
Total Budgetary Cost Estimate:		657,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	657,000
Total Programmed Funding:	657,000
Future Funding Requirements:	

Comments