King County Flood Control District
Chair's Preliminary Working Draft for Discussion Purposes Only
2020 - 2025 Six-Year CIP Project Allocations - DRAFT
Attachment H
7/10/2019

Capital Investment Strategy Project
Grant/External Revenue Awarded
Cost Share Contribution to Others
Added in 2019
Proposed New Add in 2020

No.	Title	Basin	Type of project	2018 Inception to Date Expenditure	2019 Inception to Date Budget	2019 Available Budget	2020 Requested	2021 Forecasted	2022 Forecasted	2023 Forecasted	2024 Forecasted	2025 Forecasted	6-Year CIP Total	CIS Year 7-10	CIS 10+ Year	Project Life Total	Comments
1	WLFL0 SF SKYKMSH REP LOSS MIT	SF Skykomish	FCD Acqu/Elev	$638,668	$1,145,404	$506,736	$0	$0	$0	$0	$0	$115,927	$115,927			$1,261,331	Baring. This project will elevate or buyout individual structures in the South Fork Skykomish Basin to eliminate the risk of flooding or erosion damage during future flood events.
2	WLFL0 SKY W RVR DR FLOOD STUDY	SF Skykomish	FCD Const	$2,856	$81,237	$78,381	($78,381)	$78,381	$0	$0	$0	$0	$0			$81,237	Skykomish. This project would improve infrastructure at the mouth of Maloney Creek and on the SF Skykomish River to reduce the frequency of flooding of homes and property within the Town of Skykomish.
3	WLFL0 SKYKOMISH LB DOWN 2016 REPAIR	SF Skykomish	FCD Const	$85,402	$150,000	$64,599	$0	$0	$0	$0	$0	$0	$0			$150,000	Skykomish. Approximately 50-foot-long section of missing armor rock immediately downstream of the bridge. Further flooding may compromise or severely damage facility.
4	WLFL0 TIMBER LN EROSN BUYOUTS	SF Skykomish	FCD Acqu/Elev	$1,959,242	$2,409,874	$450,632	($365,632)	$0	$765,632	$0	$0	$0	$400,000			$2,809,874	Skykomish. This project will continue to acquire and remove homes along a stretch of the Skykomish River that are endangered by erosive forces as well as inundation in some places.
5	WLFL0 TIMBERLANE 2016 REPAIR	SF Skykomish	FCD Const	$11,115	$16,040	$4,925	$0	$0	$0	$0	$0	$0	$0			$16,040	Skykomish. Project will lay back the privately-built rockery to reconstruct rock wall into stable revetment geometry. Will likely be implemented by the Strike Team.
6	WLFL0 TIMBERLANE 2019 REPAIR	SF Skykomish	FCD Const	$0	$600,000	$600,000	$0	$0	$0	$0	$0	$0	$0			$600,000	Skykomish. Revetment is approximately 300 LF along left bank of South Fork Skykomish River. Unstable section of vertical stacked rock is approximately 150 LF (needs verification). Failure has occurred previously in this section of revetment.
7	WLFL1 428TH AVE SE BR FEASIBILITY	Upper Snoq	FCD Const	$309,028	$309,028	$0	$0	$0	$0	$0	$0	$0	$0			$309,028	North Bend. Reduce neighborhood isolation from flooding. Develop a set of alternatives for improvements to 428th Avenue SE, SE 92nd Street, and Reinig Road to reduce the frequency of community isolation caused by floodwaters overtopping these roadways.
8	WLFL1 CIRCLE RVR RANCH RISK RED	Upper Snoq	FCD Const	$127,225	$540,165	$412,940	$133,524	$238,175	$4,052,588	$4,560	$0	$0	$4,428,848			$4,969,013	North Bend. This project will determine a preferred action to reduce long term risks from channel migration in the Circle River Ranch Neighborhood on the South Fork Snoqualmie River. Being conducted concurrent with South Fork Snoqualmie Corridor Plan.
9	WLFL1 MF SNO CORRIDOR IMP	Upper Snoq	FCD Const	$954	$954	$0	$0	$1,162,249	$1,196,980	$1,232,889	$377,890	$0	$3,970,008			$3,970,962	North Bend. Placeholder for corridor plan implementation project(s)
10	WLFL1 MF SNO CORRIDOR PLAN	Upper Snoq	FCD Const	$1,502,409	$1,824,912	$322,503	$27,585	$0	$0	$0	$0	$0	$27,585			$1,852,497	North Bend. Middle Fork Snoqualmie Corridor Planning, scheduled for completion in 2018.
11	WLFL1 NORMAN CREEK DS CULV	Upper Snoq	Agreement	$722,582	$724,000	$1,418	$0	$0	$0	$0	$0	$0	$0			$724,000	North Bend. Replace two existing rusted out 48" corrugated metal pipes on Norman Creek under 428th Ave SE with a new precast concrete box culvert. The new culvert will reduce the time it takes to drain the flood waters off of private property by increasing the capacity of the crossing. Currently when the North Fork Snoqualmie River overflows water backs up against 428th and impedes use of the roadway as the Norman Creek crossing is the normal outflow for this flood water once the North Fork has overtopped the adjacent levees.
12	WLFL1 NORMAN CREEK US 2024 CULV	Upper Snoq	Agreement	$0	$0	$0	$0	$0	$0	$350,000	$750,000	$0	$1,100,000			$1,100,000	North Bend. Improve SE 92nd Street, east of 428th Street, and alleviate roadway flooding by installing a new box culvert.
13	WLFL1 NORTH FORK BRIDGE 2016 REPAIR	Upper Snoq	Agreement	$177,742	$177,742	$0	$0	$0	$0	$0	$0	$0	$0			$177,742	North Bend. The North Fork Bridge was originally built in 1951 and is extremely vulnerable to scour as the channel thalweg migrates. In order to keep the bridge safe and reliable during a flood, it is important to protect the piers and abutments from scour failure.
14	WLFL1 NORTH FORK BRIDGE FEASIBILITY	Upper Snoq	Agreement	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0			$200,000	North Bend. Initiate feasibility study to mitigate the risk of scour damage to the North Fork Bridge by retrofitting the existing structure with deep foundations or alternative risk mitigation strategies.
15	WLFL1 RECORD OFFICE 2016 REPAIR	Upper Snoq	FCD Const	$29,181	$987,835	$958,654	$0	$0	$0	$0	$0	$0	$0			$987,835	Snoqualmie. Repair downstream 200 lineal feet of facility which is missing face rock and toe rock. A significant scour hole has formed around a City of Snoqualmie stormwater outfall pipe at the downstream end of facility. Potential erosion impact to Park Ave SE in City of Snoqualmie, an area included in the City's planned "Riverwalk" park and trail project. Project implemented by City of Snoqualmie as part of Riverwalk project, construction is scheduled for 2020.
16	WLFL1 REIF RD LEVEE IMPROVEMENTS	Upper Snoq	FCD Const	$0	$0	$0	$0	$0	$265,438	$318,421	$385,937	$457,218	$1,427,014			$1,427,014	North Bend. Conduct a feasibility study to determine ways of preventing the overtopping of the Reif Rd Levee. Potential solutions include: repair and/or raise levee in place / setback levee / gravel removal / home elevations.
17	WLFL1 BENDIGO UPR SETBACK NORTH BEND	Upper Snoq	Agreement	$0	$50,000	$50,000	$0	$0	$0	$0	$0	$4,200,000	$4,200,000			$4,250,000	North Bend. Cost-share of $8.4M levee setback project. The overtops at a 20-year or greater flood, inundating undeveloped property, railway lines and roadways. Project would reconnect 25 acres of floodplain and construct a new levee that meets current engineering guidelines. City has submitted grant application for the remaining $4.2 million
18	WLFL1 REINIG RD ELEVATION	Upper Snoq	Agreement	$0	$0	$0	$0	$0	$0	$0	$50,000	$100,000	$150,000			$150,000	Snoqualmie. Elevate low section of Reinig Rd to alleviate flooding that blocks roadway.
19	WLFL1 REINIG RD RVTMNT 2016 REPAIR	Upper Snoq	FCD Const	$391,568	$1,200,000	$808,432	$4,057,657	$25,462	$0	$0	$0	$0	$4,083,119			$5,283,119	North Bend. Repair three primary damage sites just upstream and directly across from the South Fork Snoqualmie confluence totaling ~285 lineal feet. Construction is anticipated in 2020.
20	WLFL1 RIBARY CREEK	Upper Snoq	FCD Const	$0	$36,492	$36,492	$150,000	$450,000	$2,338,618	$3,223,883	$0	$0	$6,162,501			$6,198,993	North Bend. Address flooding from Ribary Creek at Bendigo Blvd in North Bend as the Snoqualmie levees prevent drainage to the river during high flows.
21	WLFL1 SF CIS MED TERM	Upper Snoq	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$43,000,000		$43,000,000	North Bend. Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
22	WLFL1 SF CIS LONG TERM	Upper Snoq	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$57,100,000	$57,100,000	North Bend. Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
23	WLFL1 SF SNO CORRIDOR PLAN	Upper Snoq	FCD Const	$2,573,493	$2,573,493	$0	$0	$0	$0	$0	$0	$0	$0			$2,573,493	North Bend. SF Snoqualmie Corridor planning process and development of capital investment strategy.
24	WLFL1 SF SNO LEVEE REMEDIATION	Upper Snoq	FCD Const	$173,977	$388,000	$214,023	$0	$727,790	$1,031,736	$0	$0	$0	$1,759,526			$2,147,526	North Bend. Six levee deficiencies have been identified in this leveed segment. The project will design and reconstruct the impaired segment of levee in place.
25	WLFL1 SHAKE MILL LB 2016 REPAIR	Upper Snoq	FCD Const	$388,601	$3,550,000	$3,161,399	$0	$0	$0	$0	$0	$0	$0			$3,550,000	North Bend. Total breach of levee - erosion and lateral channel migration is ongoing. No immediately adjacent private property or infrastructure. Continued erosion could threaten 428th Ave embankment or bridge.

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26	WLFL1 SHAKE MILL RB 2016 REPAIR	Upper Snoq	FCD Const	$1,090	$51,090	$50,000	$100,000	$360,910	$0	$0	$0	$0	$460,910			$512,000	North Bend. Between 428th St Bridge and Tate Creek, several locations on levee where toe-rock dislodged and corresponding minor bank erosion along 50-60 feet of river bank. Actual gaps range between 6-10 feet. Missing toe rock compromises levee integrity, increasing its vulnerability to further scour and potential failure. Failure of this facility could result in damage to a heavily used county road (428th Ave SE). Scheduled for 2018 construction.
27	WLFL1 SI VIEW RM4 2017 REPAIR	Upper Snoq	FCD Const	$136,754	$396,754	$260,000	$0	$0	$0	$0	$0	$0	$0			$396,754	North Bend. Repair approximately 25 lineal feet of the facility with missing toe rock and shallow scour scallop into bank that is approximately 1-2 feet deep. Si View Levee is a relatively short flood containment levee that protects 50+ homes in the Si View Park Neighborhood of North Bend from flooding. Project scheduled for 2018 construction.
28	WLFL1 SR202 SF BRIDGE LENGTHEN	Upper Snoq	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000			$100,000	North Bend. Placeholder funding to partner with WSDOT to expand bridge SR202 opening over South Fork Snoqualmie and Ribary Creek to improve conveyance and reduce upstream flood impacts. Supported by North Bend. Requires state or federal funding. Relative contribution of this project is being evaluated in the SF Snoqualmie Corridor Plan.
29	WLFL1 TATE CR SCOUR FEASIBILITY	Upper Snoq	Agreement	$0	$0	$0	$0	$0	$0	$150,000	$0	$0	$150,000			$150,000	North Bend. Prepare a Concept Development Report (CDR) to analyze and select best span/alignment replacement bridge and road-raising option as the current bridge does not provide enough hydraulic opening due to the transport of sediments and water overtops the approaches during floods.
30	WLFL1 UPPER SNOQ 2015 FLOOD REPAIR	Upper Snoq	FCD Const	$555,771	$556,781	$1,009	$0	$0	$0	$0	$0	$0	$0			$556,781	North Bend. Flood damage repairs from January 2015 flood event. Locations include Mason-Thorson Ells and Mason-Thorson Extension (Middle Fork Snoqualmie); North Park (North Fork Snoqualmie); and Record Office, Meadowbrook, and Railroad (Snoqualmie mainstem).
31	WLFL1 UPR SNO RES FLD MITIGTN	Upper Snoq	FCD Acqu/Elev	$11,411,570	$12,717,550	$1,305,980	$1,756,037	$2,295,755	$2,364,628	$2,435,567	$2,508,634	$2,583,893	$13,944,513			$26,662,063	Snoqualmie. This project will continue to acquire or elevate flood-prone structures in the Upper Snoqualmie basin to reduce the risk of flood, erosion, and channel migration damage. Partnership with City of Snoqualmie to elevate homes and cost-share acquisition of homes where City is planning to construct the Riverwalk project.
32	WLFL1 USACE PL 84-99 SF SNO	Upper Snoq	FCD Const	$4,769	$333,377	$328,608	$0	$352,868	$363,454	$0	$0	$0	$716,322			$1,049,699	North Bend. Ensure eleven South Fork Snoqualmie River levees meet the standards of the US Army Corps of Engineers PL 84-99 program in order to receive future assistance from the Corps in the event of flood damage to the levees..
33	WLFL2 264TH AVE NE AT SR 202 FLD IMPRVMNT	Lower Snoq	Agreement	$0	$0	$0	$0	$0	$0	$0	$0	$540,000	$540,000			$540,000	Redmond. Alleviate flooding on this sole access road by replacing the existing culverts and raising the roadway to elminate over-topping.
34	WLFL2 334TH AVE SE & SE 43RD PL FLD IMPRVMNT	Lower Snoq	Agreement	$0	$0	$0	$0	$0	$0	$0	$0	$500,000	$500,000			$500,000	Improve drainage to alleviate neighborhood flooding by constructing a drainage system to flow to the Snoqualmie River.
35	WLFL2 DUTCHMAN RD REPAIR	Lower Snoq	FCD Const	$0	$48,593	$48,593	$0	$200,000	$500,000	$0	$0	$0	$700,000			$748,593	Duvall. Repair approximately 200 feet of revetment. Dutchman Road in this location provides the sole access to residences and business on the west side of the Snoqualmie Valley downstream of Duvall. Continued erosion of the revetment could result in erosion of the road (West Snoqualmie Valley Road NE) which would severely limit access to the downstream property owners during or following a flood event.
36	WLFL2 L SNO SCOUR REPAIR 2017	Lower Snoq	Agreement	$143,386	$150,000	$6,614	$0	$0	$0	$0	$0	$0	$0			$150,000	Fall City. The foundation of the main-span pier is exposed and is vulnerable to destabilization during a flood. Add scour mitigation measures to protect footing. Bridge crosses the Snoqualmie River at Duvall and is the city's primary route.
37	WLFL2 FARM PAD PROGRAM	Lower Snoq	FCD Acqu/Elev	$805,446	$979,803	$174,357	$0	$115,214	$118,670	$122,230	$125,897	$129,674	$611,685			$1,591,488	Carnation. This project provides technical and cost-sharing assistance to agricultural landowners in the Lower Snoqualmie floodplain to help them better withstand the impacts of flooding. Specific project actions include farm pads and elevation or flood proofing of agricultural structures.
38	WLFL2 L SNO REP LOSS MITGTION	Lower Snoq	FCD Acqu/Elev	$1,269,231	$1,695,671	$426,440	$0	$0	$0	$0	$0	$0	$0			$1,695,671	Carnation. Funding as possible local match for FEMA grants to elevate or acquire at-risk structures.
39	WLFL2 L SNO/ALDAIR CORRDOR PLN	Lower Snoq	FCD Const	$6,326,158	$7,365,814	$1,039,656	$0	$0	$0	$0	$0	$0	$0			$7,365,814	Fall City. Cost-shared contribution to multiple levee setbacks and high priority flood risk reduction acquisitions in the Fall City reach of the Lower Snoqualmie. Projects reduce flood and erosion risk to revetments, roads, and landowners. FCD expenditure leverages habitat restoration funding from other sources.
40	WLFL2 LWR SNO RESDL FLD MITGTN	Lower Snoq	FCD Acqu/Elev	$2,201,472	$3,043,609	$842,137	$272,863	$530,450	$546,363	$562,754	$579,637	$0	$2,492,068			$5,535,677	Carnation. This project provides technical and cost-sharing assistance to residential and agricultural landowners in the Lower Snoqualmie floodplain to help them better withstand the impacts of flooding. Specific project actions include farm pads, elevations of homes, and elevation or flood proofing of agricultural structures.
41	WLFL2 SE 19TH WAY REVETMENT	Lower Snoq	FCD Const	$1,643,036	$1,916,294	$273,258	$0	$0	$0	$0	$0	$0	$0			$1,916,294	Fall City. Rebuild revetment to protect road access to high value agricultural operations and lands. Construction is complete.
42	WLFL2 SE DAVID POWELL RD DOWNSTREAM	Lower Snoq	Agreement	$594,807	$595,098	$291	$0	$0	$0	$0	$0	$0	$0			$595,098	Fall City. Reduce neighborhood isolation from flooding. Prevent slope failure of sole access roadway that would isolate 150 homes.
43	WLFL2 L SNO 2019 BANK REPAIR	Lower Snoq	Agreement	$226,149	$2,200,000	$1,973,851	$0	$0	$0	$0	$0	$0	$0			$2,200,000	Fall City. The river is scouring the road away and David Powell Road is collapsing into the river. This project will repair an existing failing revetment and extend MSE wall to prevent undercutting of the riverbank and roadway.
44	WLFL2 SE FISH HATCHERY RD	Lower Snoq	Agreement	$496,163	$496,163	$0	$0	$0	$0	$0	$0	$0	$0			$496,163	Fall City. Reduce neighborhood isolation from flooding. Prevent slope failure of sole access roadway that would isolate 20-30 homes.
45	WLFL2 FISH HATCHERY RD BR #61B REPAIR	Lower Snoq	Agreement	$0	$0	$0	$80,000	$620,000	$0	$0	$0	$0	$700,000			$700,000	Duvall. Strengthen the bridge structure to stabilize it after the most recent flood event, rebuild the east approach roadway to address the current issue and to protect it against major flood events in the future, and restore the eroded creek bed and riverbank profile to buffer the bridge against scour.
45	WLFL2 SINNEMA QUAALE 2011 REPR	Lower Snoq	FCD Const	$12,439,513	$12,508,516	$69,003	$0	$0	$0	$0	$0	$0	$0			$12,508,516	Duvall. Large capital project to repair 1000 linear feet of the Sinnema Quaale Upper revetment. Protects SR 203, two regional fiber optic lines, and Snoqualmie Valley Trail. Construction is complete.
46	WLFL2 SNOQUALMIE VALLEY FEAS	Lower Snoq	Agreement	$0	$0	$0	$0	$250,000	$250,000	$0	$0	$0	$500,000			$500,000	Duvall. Regional flooding in the Snoqualmie Valley cuts off access to eastern cities. Determine which major roadway(s) that cross the Snoqualmie Valley would be the most cost effective to improve in the valley with chronic flood issues impacting over 25,000 daily drivers.
47	WLFL2 STOSSEL RB 2018 REPAIR	Lower Snoq	FCD Const	$907,886	$1,107,886	$200,000	$0	$0	$0	$0	$0	$0	$0			$1,107,886	Carnation. This completed project repaired approximately 250 feet of damage identified in late March 2018 to a section of the Stossel Bridge Right Bank Revetment on the Snoqualmie River, downstream of the City of Carnation.
48	WLFL2 STOSSEL LONG TERM REPAIR	Lower Snoq	FCD Const	$0	$0	$0	$50,000	$150,000	$170,000	$500,000	$2,500,000	$0	$3,370,000			$3,370,000	CarnationPlaceholder costs for long-term facility improvement project to prevent erosion undermining 310th Ave NE.
49	WLFL2 TOLT PIPELINE PROTECTION	Lower Snoq	FCD Const	$10,342,073	$10,778,068	$435,995	$0	$0	$0	$0	$0	$0	$0			$10,778,068	Carnation. This project will repair approximately 800 linear feet of the Winkelman (formerly RM 13.5) revetment. Erosion along the right bank of the Snoqualmie River channel threatens to undermine the Seattle Public Utilities water supply line at this location south of Duvall. Construction is complete.

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50	WLFL2 DUVALL SLOUGH 2017 IMPRV	Lower Snoq	Agreement	$277,937	$400,000	$122,063	$0	$0	$0	$0	$0	$0	$0			$400,000	Duvall. These two bridges are subject to having the roadway approach fill wash out during a flood. Excavate approaches and rebuild approaches to prevent loosing approaches during flooding. A similar repair was done on Woodinville-Duvall Bridge No. 1136D.
51	WLFL3 FREW LEVEE 2016 REPAIR	Tolt	FCD Const	$164,558	$360,360	$195,802	$0	$0	$0	$0	$0	$0	$0			$360,360	Carnation. Face rock displaced along approximately 50 feet of levee face. Some core material appears to have been lost, resulting in an over steepened bank relative to upstream and downstream undamaged levee sections. Top of damaged face approximately 6 feet from edge of gravel trail. Continued erosion will cut off popular riverside trail. Potential impact to highway if facility breaches during a major flood. Construction is complete.
52	WLFL3 GIRL SCOUT LEVEE 2016 REPAIR	Tolt	FCD Const	$160,096	$311,000	$150,904	$0	$0	$0	$0	$0	$0	$0			$311,000	Carnation. Repair approximately 20 feet of face and toe rock dislodged from Girl Scout Camp levee revetment below side channel confluence with mainstem. Missing face and toe rock compromises levee integrity, increasing its vulnerability to further scour and potential failure. Scheduled for 2018 construction.
53	WLFL3 HOLBERG 2019 REPAIR	Tolt	FCD Const	$0	$25,000	$25,000	$25,000	$450,000	$0	$0	$0	$0	$475,000			$500,000	Carnation. Facility failure has consequences for property owners immediately landward of facility. Potential for high flows and erosive damage to residences and property.
54	WLFL3 HOLBERG FEASIBILITY	Tolt	FCD Const	$62,156	$263,969	$201,813	$84,222	$0	$0	$0	$0	$0	$84,222			$348,191	Carnation. Feasibility study to determine the nature and extent of levee improvements necessary to remove four homes in unincorporated King County from the regulatory Channel Migration Zone as mapped in the March 2017 Draft Tolt River Channel Migration study
55	WLFL3 LOWER FREW LEVEE SETBACK	Tolt	FCD Const	$237	$478,664	$478,427	$100,000	$700,000	$850,000	$700,000	$14,650,000	$100,000	$17,100,000			$17,578,664	Carnation. Capital Investment Strategy: Design, based on level of service analysis, the highest priority levee setback for flood risk reduction. Phase 2 construction estimated in CIS at $14.5M-$16.7M
56	WLFL3 LOWER TOLT RIVER ACQUISITION	Tolt	FCD Acqu/Elev	$529,475	$744,475	$215,000	($190,000)	$0	$0	$0	$0	$0	($190,000)			$554,475	Carnation. Acquisition between the Swiftwater development and the river for the future setback of the Upper Frew Levee
57	WLFL3 REMLINGER LEVEE 2017 REPAIR	Tolt	FCD Const	$139,912	$311,000	$171,088	$0	$0	$0	$0	$0	$0	$0			$311,000	Carnation. Damage is approximately 60 lineal feet of the facility with missing toe rock and undermined face rock near the Snoqualmie Valley Trail. The damage is at the downstream end of Remlinger facility and a breach or continued erosion would increase flooding impacts on portions of the Remlinger property. Construction complete.
58	WLFL3 RIO VISTA PROPERTY ACQ	Tolt	FCD Acqu/Elev	$203	$500,000	$499,797	($449,797)	$0	$449,797	$0	$0	$0	$0			$500,000	Carnation. Capital Investment Strategy: Acquire 2 at-risk homes from willing sellers; acquire remaining 14 homes as funds become available.
59	WLFL3 SAN SOUCI NBRHOOD BUYOUT	Tolt	FCD Acqu/Elev	$4,359,533	$4,953,353	$593,820	$0	$0	$0	$0	$0	$0	$0			$4,953,353	Carnation. This project will buyout remaining properties and remove all homes and privately-constructed rubble levee at upstream end of the community access road, ultimately completing project initiated 20 years ago by others. Approximately 20 homes removed from high hazard areas within and just upstream and downstream of San Souci neighborhood.
60	WLFL3 SAN SOUCI REACH IMPRVMNTS	Tolt	FCD Const	$0	$160,000	$160,000	$25,000	$90,000	$700,000	$700,000	$825,000	$0	$2,340,000			$2,500,000	Carnation. Capital Investment Strategy: Construct Tolt Road NE road elevation in one location. Remove illegal revetment and roads in San Souci neighborhood.
61	WLFL3 SEDIMENT MGMT FEAS	Tolt	FCD Const	$6,499	$402,805	$396,306	$38,553	$15,648	$0	$0	$0	$0	$54,201			$457,006	Carnation. Capital Investment Strategy: Conduct sediment management feasibility study and develop a plan. Update and include upper watershed sediment production estimates
62	WLFL3 SR 203 BR IMPRVMNTS FEAS	Tolt	FCD Const	$1,104	$395,900	$394,796	$0	$0	$0	$0	$0	$0	$0			$395,900	Carnation. Capital Investment Strategy: Initiate study (with potential future design and construct) to add bridge span(s), raise the highway and relocate King County Parks parking area.
63	WLFL3 TOLT 2015 FLOOD REPAIRS	Tolt	FCD Const	$46,909	$46,909	$0	$0	$0	$0	$0	$0	$0	$0			$46,909	Carnation. Flood damage repairs from January 2015 flood event. Locations include Frew, Upper Frew, Remlinger, and Girl Scout Camp.
64	WLFL3 TOLT CIS MED TERM	Tolt	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$56,250,000		$56,250,000	Carnation. Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
65	WLFL3 TOLT CIS LONG TERM	Tolt	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$28,800,000	$28,800,000	Carnation. Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
66	WLFL3 TOLT CORRIDOR PLAN	Tolt	FCD Const	$1,138,802	$1,153,657	$14,855	$0	$0	$0	$0	$0	$0	$0			$1,153,657	Carnation. The corridor plan for the lower 6 miles of the Tolt River will develop a prioritized implementation strategy for near-term and long-term floodplain management actions. Scheduled for adoption in 2017.
67	WLFL3 TOLT R LEVEE L.O.S. ANALYSIS	Tolt	FCD Const	$156,769	$413,484	$256,715	$278,651	$31,031	$0	$0	$0	$0	$309,682			$723,166	Carnation. Capital Investment Strategy: Conduct a detailed hydraulic analysis to optimize the elevation of new levees to maximize flood risk reduction benefits
68	WLFL3 TOLT R MILE 1.1 ACQ	Tolt	FCD Acqu/Elev	$4,120,326	$4,306,106	$185,781	($50,781)	$850,781	$0	$0	$0	$0	$800,000			$5,106,106	Carnation. Acquisition funding for high risk properties in levee setback project area. Project priorities will be determined by the Board through adoption of the Tolt Corridor Plan.
69	WLFL3 TOLT R NATURAL AREA ACQ	Tolt	FCD Acqu/Elev	$2,550,314	$2,605,067	$54,753	$1,350,247	$0	$685,000	$0	$0	$0	$2,035,247			$4,640,314	Carnation. Capital investment strategy: acquire at-risk homes from willing sellers.
70	WLFL3 TOLT R RD ELEVATION FEASIBILITY	Tolt	FCD Const	$49,508	$250,000	$200,492	$0	$0	$0	$0	$0	$0	$0			$250,000	Carnation. Reduce neighborhood isolation from flooding. Evaluate feasibility of elevating sections of Tolt River Road.
71	WLFL3 TOLT R RD NE IMPROVEMENTS	Tolt	FCD Const	$0	$0	$0	$0	$53,045	$109,273	$225,102	$1,043,347	$1,432,863	$2,863,628			$2,863,628	Carnation. Capital Investment Strategy: Initiate design for elevation of one road location to reduce or eliminate isolation. Implement additional road elevations as funds become available.
72	WLFL3 UPPER FREW LEVEE SETBACK	Tolt	FCD Const	$0	$0	$0	$50,000	$159,090	$175,099	$1,200,000	$1,500,000	$14,800,000	$17,884,189			$17,884,189	Carnation. Capital Investment Strategy: Initiate the levee setback design in order to apply for grant funding. Levee setback to increase sediment storage and floodwater conveyance; protect adjacent development; reduce damage to trail bridge.
73	WLFL4 ALPINE MANOR NEIGHBORHOOD BUYOUTS	Raging	FCD Acqu/Elev	$1,753,659	$1,853,460	$99,801	$0	$0	$0	$0	$0	$0	$0			$1,853,460	Fall City. Acquisition of single-family homes and future acquisition of mobile home park at risk of channel migration along the Raging River in the Alpine Manor neighborhood.
74	WLFL4 RAGING MOUTH TO BR 2017 REPAIR	Raging	FCD Const	$257,426	$500,000	$242,574	$0	$0	$0	$0	$0	$0	$0			$500,000	Fall City. Repair 150 lineal feet of discontinuous damage and missing toe rock. The levee protects the landward area from flooding and serves as the road embankment for Dike Rd, an access road to the Fall City boat launch. The damaged levee section is immediately adjacent to the Twin Rivers golf course barn, which would experience greater flooding if the levee were breached. Scheduled for 2018 construction.
75	WLFL4 RAGING SCOUR REPAIR 2017	Raging	Agreement	$25,062	$80,000	$54,938	$0	$0	$0	$0	$0	$0	$0			$80,000	Fall City. This bridge has a history of scour damage. One of the arch foundations is exposed. Repair scour mitigation measures to protect the footing. It serves only one house but is a designated King County Landmark.
76	**Snoqualmie-South Fork Skykomish Subtotal**			$74,399,800	$94,421,452	$19,821,651	$7,444,748	$9,906,849	$16,933,277	$11,725,407	$25,296,341	$25,059,575	$96,366,196	$99,250,000	$85,900,000	$375,937,648	
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79	WLFL5 ALLEN LK OUTLET IMPRVMNT	Sammamish	Agreement	$0	$0	$0	$400,000	$1,400,000	$1,000,000	$0	$0	$0	$2,800,000			$2,800,000	Sammamish. To address chronic flooding on this sole access roadway with approximately 200 properties, look at upstream and downstream retention/detention options; study road-raining options; prepare Concept Development Report, analyze and select best options.

No.	Title	Basin	Type of project	2018 Inception to Date Expenditure	2019 Inception to Date Budget	2019 Available Budget	2020 Requested	2021 Forecasted	2022 Forecasted	2023 Forecasted	2024 Forecasted	2025 Forecasted	6-Year CIP Total	CIS Year 7-10	CIS 10+ Year	Project Life Total	Comments
80	WLFL5 SAMMAMISH R BANK REPAIRS	Sammamish	FCD Const	$1,632,936	$1,180,065	($452,871)	$0	$0	$0	$0	$0	$0	$0			$1,180,065	Woodinville. Repair and stabilize two short sections of the right riverbank near I-405 to protect the regional Sammamish River trail. Work is being coordinated with Parks. Full permitting will be required as work will be below OHW, plus an updated easement will be required from WSDOT and FHWA due to I-405 proximity. Construction is targeted for summer 2016 and will likely require detouring trail users to adjacent roads.
81	WLFL5 WILLOWMOOR FLDPLAIN REST	Sammamish	FCD Const	$2,255,441	$3,520,977	$1,265,536	$0	$0	$0	$0	$0	$0	$0			$3,520,977	Redmond. Willowmoor Floodplain Restoration Project seeks to reduce the frequency and duration of high lake levels in Lake Sammamish while maintaining downstream Sammamish River flood control performance and enhancing habitat. The project will reconfigure the Sammamish transition zone to ensure ongoing flow conveyance, downstream flood control, potential extreme lake level reduction, habitat conditions improvement, and reduction of maintenance impacts and costs. In June 2016 the Executive Committee approved a motion (2016-04) authorizing 30% design of the split-channel alternative including various design elements such as variable depth pools, cold water supplementation, and other elements itemized in the motion. Project costs will be updated when the 30% design is complete in December 2018.
82	WLFL6 ISSAQUAH TRIB FEAS	Lk Wash Tribs	Agreement	$150,000	$350,000	$200,000	$0	$0	$0	$0	$0	$0	$0			$350,000	Issaquah. Prepare a feasibility analysis report which will include, but is not limited to, surveying, geotechnical analysis, traffic analysis, and hydraulic analysis to idenify potential solutions to bridge deficiencies, including a constructed hydraulic opening with piles that collect debris and pose risks to the stability of the bridge.
83	WLFL6 LOWER COAL CRK PH I	Lk Wash Tribs	Agreement	$5,401,669	$10,461,592	$5,059,923	$2,385,377	$114,800	$90,500	$63,800	$1,472,881	$0	$4,127,358			$14,588,950	Bellevue. Increase conveyance capacity at the five box culvert crossings. Disconnect local storm drainage outfall from Coal Creek and redirect them to Lake Washington. Implemented by City of Bellevue. Expenditure forecast to be updated based on current project schedule.
84	WLFL6 MAY VALLEY DRAINAGE IMPRVMNT	Lk Wash Tribs	FCD Const	$0	$380,000	$380,000	$0	$0	$0	$0	$0	$0	$0			$380,000	Newcastle. As recommended in the May Creek Basin Plan, two sediment trap facilities will be constructed on May Creek tributaries (Cabbage and Country Creeks) to limit sediment loading. FCD funding is for initial feasibility analysis, landowner outreach, and acquisition of property from willing sellers for a future sediment facility.
85	WLFL7 CDR PRE-CONST STRTGC ACQ	Cedar	FCD Acqu/Elev	$2,611,789	$4,330,532	$1,718,743	$0	$0	$0	$0	$0	$1,200,000	$1,200,000			$5,530,532	Renton. This project will acquire strategic real estate upon which several large Flood Control District capital projects are dependent, namely the levee setback projects at the Herzman, Jan Rd, Rhode, Getchman, and Rutledge-Johnson Lower Jones Rd levee segments. Acquisition funding related to these projects is now included in the individual capital projects.
86	WLFL7 CEDAR LEVEE SETBACK FEAS (Cedar Corridor	Cedar	FCD Const	$1,850,907	$1,987,587	$136,680	$0	$0	$0	$0	$0	$0	$0			$1,987,587	Renton. This six-year flood risk reduction capital investment strategy will cover the Cedar River valley from Landsburg Road SE (River Mile 22) to Lake Washington. Project complete. Closeout in 2020.
87	WLFL7 CEDAR CIS MED TERM	Cedar	FCD Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,000,000		$22,000,000	Renton. Elevate or acquire highest risk and repetitive loss properties from willing sellers. Elevate or purchase approximately 2 homes each year.
88	WLFL7 CEDAR CIS LONG TERM	Cedar	FCD Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$35,400,000	$35,400,000	Renton.Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
89	WLFL7 CEDAR RES FLOOD MITIGATION	Cedar	FCD Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$800,000	$800,000			$800,000	Renton. Implement projects identified in the Capital Investment Strategy, approved as policy direction by the Executive Committee.
90	WLFL7 CEDAR R REP LOSS MITGATN	Cedar	FCD Acqu/Elev	$3,182,200	$3,182,200	$0	$0	$0	$0	$0	$0	$0	$0			$3,182,200	Renton. Acquire frequently-flooded homes. Placeholder funding until District adopts acquisition policy.
91	WLFL7 CRT SITE A BANK	Cedar	FCD Const	$92	$290,000	$289,908	$68,302	$0	$0	$0	$0	$0	$68,302			$358,302	Renton. Capital Investment Strategy: Repair eroded section of left bank with bioengineered revetment to stabilize toe of bank and to prevent large scale bank failure.
92	WLFL7 CEDAR RVR GRAVEL REMOVAL	Cedar	Agreement	$9,829,478	$12,065,498	$2,236,020	$501,051	$445,679	$111,267	$114,605	$0		$1,172,602			$13,238,100	Renton. The project will ensure the minimum required 100-year flood conveyance capacity along the lower 1.25 miles of the Cedar River. Project is a required maintenance action for the Army Corps of Engineers 205 Flood Control Project. Project costs were updated in March 2016.
93	WLFL7 CEDAR R DWNSTREAM 2024 IMPV	Cedar	Agreement	$0	$0	$0	$0	$0	$0	$0	$100,000	$0	$100,000			$100,000	Renton. Improve Cedar Grove Road near Byers Road SE and alleviate roadway flooding by raising the road through the application of a thick layer of overlay.
94	WLFL7 CITY OF RENTON LEVEE CERTIFICATION	Cedar	Agreement	$0	$3,750,000	$3,750,000	$1,250,000	$0	$0	$0	$0	$0	$1,250,000			$5,000,000	Renton. Levee improvements necessary to satisfy levee certification engineering recommendations.
95	WLFL7 FBD CORRIDOR IMPLEMENTATION	Cedar	FCD Acqu/Elev	$5,224,475	$5,311,784	$87,309	$0	$0	$0	$0	$0	$0	$0			$5,311,784	Renton. Washington State Floodplains by Design grant from the Department of Ecology. The project will buyout residents in high risk areas, increase the capacity for flood storage, and provide corresponding environmental improvements. The project has cost-share funding from the City of Seattle. Also funds design elements of the Herzman project and Riverbend.
96	WLFL7 HERZMAN LEVEE SETBACK	Cedar	FCD Const	$346,270	$1,266,476	$920,206	$287,337	$3,828,982	$66,818	$0	$0	$0	$4,183,137			$5,449,613	Renton. Capital Investment Strategy: Setback levee; excavate side-channel to reduce pressure on revetment; reconstruct, reinforce and/or extend revetment; acquire up to 5 properties.
97	WLFL7 JAN ROAD NEIGHBORHOOD	Cedar	FCD Const	$34,384	$1,484,731	$1,450,347	$622,137	$4,845,422	$828,271	$0	$0	$0	$6,295,830			$7,780,561	Renton. Capital Investment Strategy: Suite of solutions to be determined as part of feasibility study. Includes raise road, partial removal of Jan Road levee, construction of side channel, and mitigation of at-risk properties. Construction phased for mitigation in 2021 and other improvements in 2023.
98	WLFL7 LOWER CEDAR FEASIBILITY STUDY	Cedar	FCD Const	$342	$400,000	$399,658	$0	$100,000	$0	$0	$0	$0	$100,000			$500,000	Renton. Capital Investment Strategy: Conduct feasibility study of Lower Cedar reach in City of Renton to 1) quantity economic damage potential 2) determine infrastructure modifications to improve flood resiliency and sediment storage potential, and 30 conduct cost-benefit analysis.
99	WLFL7 LOWER JONES ROAD NEIGHBORHOOD	Cedar	FCD Const	$608,558	$1,898,466	$1,289,908	$0	$681,352	$235,089	$4,540,762	$1,631,720	$0	$7,088,924			$8,987,390	Renton. Capital Investment Strategy: Raise in place or setback Jones Road; excavate and stabilize right bank to increase conveyance capacity; reinforce one revetment; remove portion of another revetment; acquire 8 at risk properties Construction delayed to 2024 to accommodate Jan Rd construction in 2021 or 2022.
100	WLFL7 MADSEN CR RENTON	Cedar	Agreement	$0	$635,000	$635,000	$0	$0	$0	$0	$0	$0	$0			$635,000	Renton. Design and implement phase I improvements to Madsen Creek to achieve 100-year level flood protection for properties south of SR 169 and 25-year level flood protection for properties north of SR 169.
101	WLFL7 MAPLEWOOD FEASIBILITY STUDY	Cedar	FCD Const	$179,145	$490,246	$311,101	$0	$0	$0	$0	$0	$0	$0			$490,246	Renton. Capital Investment Strategy: Conduct site specific landslide risk assessment study; conduct a feasibility study to evaluate opportunities to modify the Erickson Levee. Pending results of landslide hazard analysis, FCD will consider options for a project.
102	WLFL7 ISSAQUAH MAY VALLEY IMPV	Cedar	Agreement	$0	$100,000	$100,000	$0	$0	$0	$0	$0	$0	$0			$100,000	Issaquah. Construct intersection improvements which could be either a roundabout or additional travel lanes with a travel signal at the intersection of Issaquah Hobart Road SE and SE May Valley Road.

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103	WLFL7 RIVERBEND MHP ACQ	Cedar	FCD Acqu/Elev	$4,362,885	$5,231,042	$868,157	$0	$0	$0	$0	$0	$0	$0			$5,231,042	Renton. This project represents the Flood District contribution to a larger project that relocates mobile home park tenants and initiates preliminary engineering design for potential levee setback / realignment to reduce flood heights, velocities and channel migration risk in this reach. Disappropriate remainder after FCD portion of scope is complete.
104	WLFL7 MADSEN CR CULVERT 2017	Cedar	Agreement	$206,205	$1,100,000	$893,795	$1,430,000	$0	$0	$0	$0	$0	$1,430,000			$2,530,000	Renton. To address a culvert failure affecting approximately 10 properties, prepare Concept Development Report to analyze and select best culvert replacement and road-raising option; and analyze upstream and downstream retention/detention impacts.
105	WLFL7 SR 169 FEASIBILITY STUDY	Cedar	FCD Const	$170,603	$646,800	$476,197	$138,203	$0	$0	$0	$0	$0	$138,203			$785,003	Renton. Conduct feasibility study in coordination with WSDOT to evaluate flood risk reduction opportunities, such as elevating SR 169, upgrading the local drainage infrastructure, and / or installation of back flow prevention gates. Funding added in 2019 pending FCD decision to move forward with preliminary design.
106	**Cedar-Sammamish Subtotal**			$38,047,379	$60,062,996	$22,015,617	$7,082,407	$11,416,235	$2,331,945	$4,719,167	$3,204,601	$2,000,000	$30,754,355	$22,000,000	$35,400,000	$148,217,351	
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109	WLFL8 212TH AVE SE @ SR 164 FLD IMPRVMNT	Green	Agreement	$0	$0	$0	$0	$0	$0	$0	$0	$190,000	$190,000			$190,000	Enumclaw. Improve the drainage system to alleviate neighborhood flooding. May require improvements outside of the road right-of-way.
110	WLFL8 BRISCOE LEVEE SETBACK	Green	Agreement	$21,072,606	$23,330,271	$2,257,665	$0	$0	$0	$0	$0	$0	$0			$23,330,271	Kent. Floodwall construction at four locations completed by the City of Kent. Final expenditures for the remainder of 2017 will include reimbursement for property acquisition and riparian plantings. The revised 2017 financial plan includes revenue of $4.1 million for the sale of the Rivers Edge Business Park. Per FCD 2016-20 Section 6, this revenue makes expenditure authority available for the Lower Russell Levee Setback project. The Briscoe project will be closed out once the District's ILA with Kent expires in 2018.
111	WLFL8 BRPS CONTROL BLDG RPLCMT	Green	FCD Const	$106	$380,506	$380,400	$1,926,876	$7,813,278	$13,241,331	$9,647	$0	$0	$22,991,133			$23,371,639	Renton. This project will design and build the second phase of renovations to the Black River pump station. Major components include replacement of the control building, replacement of the trash rake system, and replacement of the screen spray system.
112	WLFL8 BRPS FISH PASS IMPRVMNTS	Green	FCD Const	$0	$0	$0	$0	$992,079	$3,782,881	$4,107,257	$3,453,157	$92,073	$12,427,447			$12,427,447	Renton. This project will design and build the fourth phase of renovations to the Black River pump station, revising and replacing the obsolete fish passage systems.
113	WLFL8 BRPS HIGH-USE ENGINES	Green	FCD Const	$215,646	$1,484,646	$1,269,000	$1,949,130	$33,949	$0	$0	$0	$0	$1,983,079			$3,467,725	Renton. This project will design and build the first phase of renovations to the Black River pump station, replacing the three smaller pump engines which run much more frequently than the other, larger pump engines.
114	WLFL8 BRPS SUPPORT SYS UPGRADES	Green	FCD Const	$0	$0	$0	$1,149	$183,181	$940,317	$876,479	$12,074	$0	$2,013,200			$2,013,200	Renton. This project will design and build the third phase of renovations to the Black River pump station, replacing support systems such as engine control panels, cooling systems, oilers and hoists.
115	WLFL8 GALLI-DYKSTRA FEASIBILITY	Green	FCD Const	$0	$330,000	$330,000	$2,430	$0	$0	$0	$0	$0	$2,430			$332,430	Auburn. Conduct a feasibility study to raise the levee providing 100-year flood protection plus 3 feet of freeboard.
116	WLFL8 GALLI-DYKSTRA 2020 REPAIR	Green	FCD Const	$0	$200,000	$200,000	$407,314	$1,550,783	$0	$0	$0	$0	$1,958,097			$2,158,097	Auburn. Complete Phase 1 repair per a request from the City of Auburn. Elevate 3500 feet levee reach to meet FEMA levee certification requirements.
117	WLFL8 GREEN PRE-CONST ACQ	Green	FCD Acqu/Elev	$393,751	$10,368,856	$9,975,105	$0	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$25,000,000			$35,368,856	Tukwila. This project will acquire strategic real estate upon which future large Flood Control District capital projects are dependent, thereby reducing risks to construction schedules for those projects.
118	WLFL8 GREEN R PL84-99 MITIGATN	Green	FCD Const	$5,173,981	$5,660,542	$486,561	$0	$0	$0	$0	$0	$0	$0			$5,660,542	Auburn. This project will result in actions to mitigate environmental damage from tree cutting during 2008-9 (as required by permitting agencies) to maintain eligibility for US Army Corps of Engineers PL84-99 program. The current mitigation effort is the Teufel project scheduled for 2018 construction.
119	WLFL8 HSB BREDA SETBACK KENT	Green	Agreement	$834,330	$4,758,953	$3,924,623	$2,431,377	$8,381,110	$43,709	$0	$0	$0	$10,856,196			$15,615,149	Kent. New project to implement interim SWIF adopted by Board of Supervisors. This project will reconstruct the Horseshoe Bend Levee at the Breda reach (RM 24.46-24.72) to a more stable configuration in order to reduce flood risk to the surrounding areas. The project will also raise levee crest elevations to contain the 500-year (0.2% annual chance) flood. This segment of the levee has the lowest factor of safety rating of the Horseshoe Bend levee.
120	WLFL8 HSB MCCOY REALIGNMENT KENT	Green	Agreement	$4,138	$400,000	$395,862	$116,138	$2,333,980	$764,909	$0	$0	$0	$3,215,027			$3,615,027	Kent. New project to implement interim SWIF adopted by Board of Supervisors. This PL 84-99 levee segment contains a 'Minimally acceptable' rating by the USACE due to a slope deficiency at RM 24.3 (over steepened slopes from 1.3 to 1.7H:1V for 500 feet). The City of Kent constructed a secondary containment levee in this reach, set back from the river's edge, which is currently not part of the federal levee. The only remaining structure between the two levees is a Puget Sound Energy facility. The Horseshoe Bend Levee Certification Report calculated Factor of Safety (FOS) values for rapid drawdown of 1.08 and 1.55 at about RM 24.3 and RM 24.4, respectively. River bed scour in this reach between 1986 and 2011 is 2.7 feet at RM 24.24. Funding of $400,000 covers the cost of major modification to the federal levee so that the City of Kent's secondary containment levee can be incorporated into the federal levee project.
121	WLFL8 HSB NURSING HOME SETBACK	Green	FCD Const	$0	$0	$0	$0	$100,000	$2,000,000	$500,000	$0	$0	$2,600,000			$2,600,000	Kent. New project to implement interim SWIF adopted by Board of Supervisors. The Nursing Home levee is over-steepened and does not meet current engineering standards. The economic consequence of levee failure or overtopping to the lower Green River valley is extensive and could cause tens of millions of dollars in damage. This capital project area contains a 'Minimally Acceptable' deficiency by the US Army Corps of Engineers at RM 25. 5 (over steepened slopes from 1. 25 to 1. 7H:1V for 225 feet). The Horseshoe Bend Levee Certification Report calculated a Factor of Safety (FOS) value for rapid drawdown of 1. 01 at RM 25. 57 (Section F). This is barely above the minimum FOS (1. 0) from the US Army Corps of Engineers manual.
122	WLFL8 INTERIM SWIF IMPLEMENTATION	Green	FCD Const	$66,887	$85,000	$18,113	$0	$0	$0	$0	$0	$0	$0			$85,000	Kent. Coordination and planning activities to implement recommendations of interim SWIF. Maintenance work associated with the interim SWIF is included in the operating budget.
123	WLFL8 LOWER RUSSELL ACQ KENT	Green	Agreement	$1,059,834	$1,023,656	($36,178)	$0	$0	$0	$0	$0	$0	$0			$1,023,656	Kent. Acquisitions by the City of Kent for the Lower Russell levee setback project.
124	WLFL8 LWR GRN R CORRIDOR PLAN/EIS	Green	FCD Const	$233,117	$1,743,249	$1,510,132	$0	$0	$0	$0	$0	$0	$0			$1,743,249	Kent. Lower Green River Corridor Planning and Environmental Impact Statement.

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125	WLFL8 LWR RUSSELL LEVEE SETBACK	Green	FCD Const	$12,147,579	$17,462,534	$5,314,955	$26,447,505	$4,116,794	$6,358,982	$12,710	$0	$0	$36,935,991			$54,398,525	Kent. Remove and replace the existing flood containment system of levee and revetments along the right (east) bank of the Green River between river mile 17.85 (S 212th St) and river mile 19.25 (S 231st Way) in the City of Kent to provide long-term flood protection and improve riparian and aquatic habitat. Increased expenditure authority to match interim SWIF adopted by Board of Supervisors.
126	WLFL8 MILWAUKEE LEVEE #2-KENT	Green	Agreement	$296,589	$19,400,000	$19,103,411	$0	$0	$0	$0	$0	$0	$0			$19,400,000	Kent. Prepare an analysis and study of design and construction alternatives to provide flood protection, scour protection, enable levee certification and secure necessary land rights.
127	WLFL8 OLD JEFFS FARM REVETMENT	Green	FCD Const	$221,298	$826,802	$605,504	$50,525	$3,040,810	$81,863	$0	$0	$0	$3,173,198			$4,000,000	Auburn. This project will conduct a feasibility analysis of channel migration hazards from river mile 21.1 to 21.7. Alternative selection is pending; alternative 1 is assumed as a placeholder.
128	WLFL8 GREEN SCOUR REPAIR 2017	Green	Agreement	$47,524	$150,000	$102,476	$0	$0	$0	$0	$0	$0	$0			$150,000	Auburn. This project will address scour damage to the bridge, which is on the primary through route of the Green River Valley Rd. The bridge is also a King County landmark.
129	WLFL8 GREEN R IMPROVEMENT 2024	Green	Agreement	$0	$0	$0	$0	$0	$0	$0	$100,000	$0	$100,000			$100,000	Auburn. Improve SE Green Valley Road near SE Auburn Black Diamond Road and alleviate roadway flooding by raising the road through the application of a thick layer of overlay.
130	WLFL8 PORTER LEVEE	Green	FCD Const	$720,000	$720,000	$0	$0	$0	$0	$0	$0	$0	$0			$720,000	Auburn. Contribute the cost of a repair ($720,000) to a $7 million levee setback project. By relocating the levee, flood risks as well as future repair costs for the Flood Control District are reduced. In response to community concerns, the project also includes funding to elevate the road so that the school bus serving this neighborhood does not have to drive in the oncoming lane to avoid floodwaters.
131	WLFL8 RUSSELL RD UPPER KENT	Green	Agreement	$6,054,711	$6,082,173	$27,462	$0	$0	$0	$0	$0	$0	$0			$6,082,173	Kent. Project is to improve the levee by providing a minimum of 3 feet of freeboard above the predicted 500-year flood event and improve slope stability. These segments of the Russell Road Upper Levee have over-steepened slopes and therefore lack adequate structural stability to provide adequate safety.
132	WLFL8 S 180TH ST BRIDGE FLOODWALL EXT	Green	Agreement	$0	$65,378	$65,378	$0	$0	$0	$0	$0	$0	$0			$65,378	Tukwila. The project will increase the height of a flood wall to provide approximately 30" of additional flood protection.
133	WLFL8 SIGNATURE PT REVETMENT KENT	Green	Agreement	$89,843	$300,000	$210,157	$0	$0	$0	$0	$0	$0	$0			$300,000	Kent. Signature Pointe is a revetment/levee on the Green River between river mile 22.06 and 23.18 that does not meet the FEMA requirements for accreditation due to inadequate freeboard. This project includes development of a project charter and an alternatives analysis to select an alternative to achieve increased flood protection, embankment and toe protection in a manner that can be certified and accredited.
134	WLFL8 TITUS PIT RVTMNT 2018 REPAIR	Green	Agreement	$167,738	$250,000	$82,262	$0	$0	$0	$0	$0	$0	$0			$250,000	Kent. Repair of the recent damage to the Titus Pit RB revetment is needed to prevent a potential revetment failure and Green River road collapse. The revetment protects an adjacent King County arterial road and utilities (such as water, natural gas, telecommunication and power) under the road.
135	WLFL8 TUK-205 RATOLO FLOODWALL	Green	FCD Const	$0	$0	$0	$0	$0	$1,500,000	$300,000	$0	$0	$1,800,000			$1,800,000	Tukwila. New project to implement interim SWIF adopted by Board of Supervisors. This project will construct a 0.15 mile floodwall and sloped embankment to protect adjacent businesses from flooding. The floodwall alignment (including embankment slope, factors of safety, and necessary real estate) will be finalized during the project design phase.
136	WLFL8 TUK-205 USACE GACO-SEGALE	Green	FCD Const	$762,960	$15,732,418	$14,969,458	$0	$0	$0	$0	$0	$0	$0			$15,732,418	Tukwila. US Army Corps led project to replace 3500 ft. of Tukwila 205 levee in-place replacement to bring up to 500-year level of protection per the adopted interim SWIF. The USACE will share remaining 2/3 of the cost; this allocation is the local share of 1/3 of total cost. Requires cooperation agreement.
137	WLFLS SOUTH PARK PUMPSTATION	Seattle	Agreement	$1,819,777	$1,787,004	($32,773)	$4,717,996	$0	$0	$0	$0	$0	$4,717,996			$6,505,000	Seattle. Cost-share construction of pump station to reduce flooding in industrial area. Allocation of funds by year may be revised based on updated project schedule. Implemented by the City of Seattle. Expenditure forecast to be updated based on current project schedule.
138	WLFLS PUGET WAY CULVERT	Seattle	Agreement	$0	$1,800,000	$1,800,000	$0	$0	$0	$0	$0	$0	$0			$1,800,000	Seattle. This project will replace an aging and undersized creek culvert under Puget Way SW in Seattle.
139	WLFLS S PARK DRAINAGE IMPROVEMENTS	Seattle	Agreement	$412,995	$1,000,000	$587,005	$9,075,000	$7,030,000	$0	$0	$0	$0	$16,105,000			$17,105,000	Seattle. The South Park Drainage Conveyance Improvements Project will install a formal conveyance system in the streets, to get flows to the pump station. The conveyance improvements will work in conjunction with the Pump Station.
140	WLFL8 TUKWILA RVTMT 2019 REPAIR	Green	FCD Const	$0	$500,000	$500,000	$0	$0	$0	$0	$0	$0	$0			$500,000	Tukwila. Erosion and slumping of Tukwila Trail revetment caused by the recent Green River flood resulted in approximately 200 feet of damage to the revetment.
141	**Green-Duwamish Subtotal**			$51,795,409	$115,841,988	$64,046,578	$47,125,440	$40,575,963	$33,713,992	$10,806,094	$8,565,231	$5,282,073	$146,068,793	$0	$0	$261,910,782	
142																	
143																	
144	WLFL9 ANDERSON PARK ACQUISITION	White	FCD Acqu/Elev	$0	$100,000	$100,000	$0	$0	$0	$0	$0	$0	$0			$100,000	Enumclaw. Park is split by the White River; acquire undevelopable and inaccessible southern portion of park in Pierce County from the City of Enumclaw.
145	WLFL9 BUTTE AVE FLOOD MITIGATION	White	Agreement	$194,089	$470,000	$275,911	$0	$0	$0	$0	$0	$0	$0			$470,000	Pacific. This project will reduce flood risks to residences and businesses in the Cities of Pacific and Algona by addressing backwatering and drainage problems in Government Canal from high river flows. The project will design and permit a stormwater pump station which will significantly reduce flood risks to approximately five hundred homes and businesses. The completed project will also reduce long-term road closures that have occurred in the past due to flooding.
146	WLFL9 COUNTYLINE TO A STREET	White	FCD Const	$23,828,084	$24,004,419	$176,335	$0	$0	$0	$0	$0	$0	$0			$24,004,419	Tukwila. Reduces flood elevations that impact residential neighborhoods in the City of Pacific (200 homes, with $52 million of assessed and $13 million content value), improves sediment storage and enhances habitat.
147	WLFL9 RIGHT BANK LEVEE SETBACK	White	FCD Const	$12,234,992	$13,843,157	$1,608,165	$1,098,045	$1,513,904	$7,112,559	$7,213,385	$149,546	$0	$17,087,440			$30,930,597	Pacific. Construct a new levee setback in the City of Pacific, extending from BNSF railroad bridge embankment to endpoint at Butte Ave. by White River Estates neighborhood.
148	WLFL9 SLIPPERY CREEK ACQ	White	FCD Acqu/Elev	$10,377	$180,000	$0	$0	$0	$0	$0	$0	$0	$0			$180,000	Greenwater. In mid-2018 budget reallocation, funding was authorized to acquire a vacant property located outside flood hazard area on the north side of Highway 410. Subsequent site visits identified multiple unpermitted structures and a well; additional funding necessary to complete demolition and asbestos abatement at a remote and inaccessible location.
149	WLFL9 CHARLIE JONES US CULVERT	White	Agreement	$84,413	$190,000	$105,587	$400,000	$100,000	$0	$0	$0	$0	$500,000			$690,000	Auburn. This project will analyze culvert replacement and road-raising options and implement the preferred option.
150	WLFL9 CHARLIE JONES DS CULVERT	White	Agreement	$0	$0	$0	$0	$150,000	$1,500,000	$0	$0	$0	$1,650,000			$1,650,000	Auburn. This project will analyze culvert replacement and road-raising options and implement the preferred option.

No.	Title	Basin	Type of project	2018 Inception to Date Expenditure	2019 Inception to Date Budget	2019 Available Budget	2020 Requested	2021 Forecasted	2022 Forecasted	2023 Forecasted	2024 Forecasted	2025 Forecasted	6-Year CIP Total	CIS Year 7-10	CIS 10+ Year	Project Life Total	Comments
151	WLFL9 STUCK R DR 2019 REPAIR	White	FCD Const	$0	$200,000	$200,000	$446,374	$0	$0	$0	$0	$0	$446,374			$646,374	Auburn. Loss of facing rock along 130' of the lower half of the embankment. Some of the gravel fill under the rock has eroded as well, leaving a near-vertical face supporting the rock remaining on the upper slope. The rock that slid down is currently providing scour protection at the toe.
152	**White Subtotal**			$36,351,955	$38,987,576	$2,465,998	$1,944,419	$1,763,904	$8,612,559	$7,213,385	$149,546	$0	$19,683,814	$0	$0	$58,671,390	
153																	
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155	WLFLX CORRIDOR PLN DESIGN/CONST PLACEHOLD	Countywide	FCD Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0			$0	Placeholder for corridor plan implementation project(s)
156	**Countywide Corridor Plan Imp Subtotal**			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
157																	
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159	WLFLG FLOOD REDUCTION GRANTS	Countywide	Grant	$8,993,154	$17,852,257	$8,859,103	$3,267,286	$3,347,552	$3,425,509	$3,502,154	$3,578,980	$3,588,460	$20,709,941			$38,562,198	Competitive grant program for flood reduction projects. Increases as a proportion of total FCD tax revenue.
160	WLFLG WRIA GRANTS	Countywide	Grant	$20,647,848	$32,303,948	$11,656,100	$4,684,168	$4,818,604	$4,956,898	$5,099,161	$5,245,506	$5,396,052	$30,200,389			$62,504,337	Cooperative Watershed Management Grant Program; priorities recommended by watershed groups. Increase based on assumed inflation rate.
161	WLFLM EFFECTIVENESS MONITORING	Countywide	FCD Const	$2,385,821	$2,929,221	$543,400	$330,232	$890,956	$834,056	$892,524	$804,751	$585,512	$4,338,030			$7,267,251	Evaluation of capital projects to determine effectiveness and identify project design improvements.
162	WLFLO SUBREGNL OPPRTNTY FUND	Countywide	Grant	$34,916,901	$55,311,183	$20,394,282	$6,077,152	$6,226,447	$6,371,447	$6,514,006	$6,656,903	$6,674,535	$38,520,490			$93,831,673	Allocation to all King County jurisdictions for flooding, water quality, or watershed management projects. Increases as a proportion of total FCD tax revenue.
163	WLFLX CONST MATERIALS STOCKPILE	Countywide	FCD Const	$0	$500,000	$500,000	$0	$0	$0	$0	$0	$0	$0			$500,000	Stockpile role for future flood damage repairs.
164	WLFLX CENTRAL CHARGES	Countywide	FCD Const	$748,397	$1,011,493	$263,096	$100,000	$142,592	$146,870	$151,276	$155,815	$160,489	$857,042			$1,868,535	Central charges related to the FCD's capital fund.
165	WLFLX FLOOD EMERGENCY CONTGNCY	Countywide	FCD Const	$419,042	$1,050,917	$631,875	$0	$250,000	$250,000	$250,000	$250,000	$250,000	$1,250,000			$2,300,917	Contingency for emergency response actions during a flood event.
166	**Countywide Subtotal**			$68,111,164	$110,959,019	$42,847,856	$14,458,838	$15,676,151	$15,984,779	$16,409,120	$16,691,955	$16,655,048	$95,875,892	$0	$0	$206,834,911	
167																	
168	**Grand Total**			**$268,705,708**	**$420,273,031**	**$151,197,700**	**$78,055,852**	**$79,339,102**	**$77,576,552**	**$50,873,174**	**$53,907,675**	**$48,996,696**	**$388,749,051**	**$121,250,000**	**$121,300,000**	**$1,051,572,082**	