1

November 13, 2017
Replace Attachments B, C, D,
E, F, G and H

JMCD → passed

Sponsor: ____________________

Proposed No.: FCD 2017-07.2

AMENDMENT TO PROPOSED RESOLUTION FCD17-02.1

Delete Attachment B, King County Flood Control Zone District 2017 Annual Budget, dated 10/26/2017, and insert Attachment B, King County Flood Control 2018 Annual District Budget dated 11/8/17.

Delete Attachment C, King County Flood Control District 2017 Annual Operating Budget, dated 10/26/2017, and insert Attachment C, King County Flood Control District 2018 Annual Operating Budget, dated 11/8/17.

Delete Attachment D, King County Flood Control District 2017 Annual Capital Budget, and insert Attachment D, King County Flood Control District 2018 Annual Capital Budget, dated 11/8/17.

Delete Attachment E, King County Flood Control District 2017-2023 Six-Year CIP, dated 10/26/2017, and insert Attachment E, King County Flood Control District 2018-2023 Six-Year CIP, dated 11/8/17.

Delete Attachment F, King County Flood Control District 2017 Annual District Oversight Budget, dated 10/26/2017, and insert Attachment F, King County Flood Control District 2018 Annual District oversight Budget, dated 11/8/17.

Delete Attachment G, King County Flood Control District 2017 Subregional Opportunity Fund Allocations, dated 10/26/2017, and insert Attachment G, King County Flood Control District 2018 Subregional Opportunity Fund Allocations, dated 11/8/17.

Delete Attachment H, King County Flood Control District 2018-2023 Six-year CIP Project Allocations, dated 10/26/2017, and insert Attachment H, King County Flood Control District 2018-2023 Six-Year CIP Project Allocations, dated 11/8/17.

EFFECT: Technical amendment to reflect the correct year in the titles.

King County Flood Control District

2018 Annual Budget

Attachment B

11/8/17

Program	2016 Actuals	2017 Approved	2017 Revised	2018 Requested
Flood District Administration	666,522	692,090	692,090	792,853
Maintenance and Operation	8,247,988	10,912,177	11,159,377	11,333,238
Construction and Improvements	42,256,253	59,859,737	142,472,126	53,496,926
Bond Retirement and Interest	$0	$0	$0	$0
Total	51,170,763	71,464,004	154,323,593	65,623,017
Projected Capital Reserves - Cash Fund Balance [1]	62,497,312	56,604,639	63,289,626	65,835,760
Projected Capital Reserves - Budgetary Fund Balance [2]	(14,355,272)	(9,642,000)	(27,992,874)	(31,676,700)

[1] The cash fund balance assumes an expenditure rate of 39% of the capital budget in 2017, informed by prior year actuals.

[2] The budgetary fund balance assumes 100% expenditure of all budgeted amounts and is used to understand budgetary commitment.

King County Flood Control District

2018 Annual Operating Budget

Attachment C

11/8/17

	2016 Actuals	2017 Approved	2017 Revised	2018 Requested
Annual Maintenance	$1,739,316	$2,589,281	$2,686,481	$3,386,766
Flood Hazards Plan, Grants, Outreach	$285,536	$318,123	$318,123	$718,898
Flood Hazard Studies, Maps, Technical Services	$1,140,460	$1,304,619	$1,454,619	$1,414,741
Flood Preparation, Flood Warning Center	$335,073	$863,033	$863,033	1,417,463
Program Management, Supervision, Finance, Budget	$937,136	$951,992	$951,992	$1,283,543
Program Implementation	$1,931,768	$1,165,633	$1,165,633	($106,434)
Overhead / Central Costs	$1,878,700	$3,327,496	$3,327,496	3,218,261
District Planning, Outreach, Policy Technical Services		$392,000	$392,000	
Total	**$8,247,988**	**$10,912,177**	**$11,159,377**	**$11,333,238**

King County Flood Control District

2018 Annual Capital Budget

Attachment D

11/8/17

Basin	Acquisition	Design	Construction	Contingency	Total
Snoqualmie River Basin	$1,065,862	$3,433,478	$7,466,841	$0	$11,966,181
Cedar River Basin	$1,373,207	$4,016,541	$7,938,939	$0	$13,328,687
Green River Basin	$10,057,917	$4,531,692	$2,196,968	$0	$16,786,577
White River Basin	$0	$1,079,358	$0	$0	$1,079,358
Seattle	$0	$0	($4,215,112)	$0	($4,215,112)
Effectiveness Monitoring	$0	$1,076,734	$0	$0	$1,076,734
Countywide Corridor Plan Implementation	$0	$0	$0	$0	$0
Countywide Miscellaneous	$0	$0	$0	$130,000	$130,000
Opportunity Fund	$0	$0	$5,738,670	$0	$5,738,670
Grant Fund	$0	$0	$3,085,306	$0	$3,085,306
WRIA Grant Funding	$0	$0	$4,520,525	$0	$4,520,525
Total	**$12,496,986**	**$14,137,803**	**$26,732,137**	**$130,000**	**$53,496,926**

King County Flood Control District

2018 - 2023 Six-Year CIP

Attachment E

11/8/17

Name	2016 Actual	2017 Adopted	2017 Revised	2018 Proposed	2019	2020	2021	2022	2023	2018 - 2023 Total
Snoqualmie River Basin	$4,657,372	$14,290,160	31,329,613	11,966,181	14,808,594	9,598,805	10,670,673	6,936,434	1,626,623	55,607,311
Cedar River Basin	$10,326,041	$9,141,721	17,105,947	13,328,687	12,471,379	13,360,453	3,789,266	1,822,991	264,189	45,036,965
Green River Basin	$9,930,760	$13,733,899	36,652,024	16,786,577	24,240,873	35,235,873	8,470,123	14,106,122	16,900,298	115,739,866
White River Basin	$8,611,198	$5,607,473	13,385,203	1,079,358	1,989,187	7,887,849	5,797,495	69,556	200,000	17,023,445
Seattle Projects	$223,029	$3,810,756	5,214,392	(4,215,112)	1,550,000	6,173,781	-	-	-	3,508,669
Effectiveness Monitoring	$177,652	$357,399	601,785	1,076,734	702,778	830,323	813,940	767,476	510,698	4,701,949
Countywide Corridor Plan Imp	$0	$0	142,610	-	-	-	-	-	27,000,000	27,000,000
Countywide Miscellaneous	$178,231	($274,646)	630,192	130,000	382,600	385,252	387,957	390,716	393,531	2,070,056
Subregional Opportunity Fund	$4,346,649	$5,743,771	16,644,808	5,738,670	5,879,852	6,012,856	6,144,060	6,275,827	6,408,245	36,459,510
Flood Reduction Grants	$1,936,697	$3,058,908	9,014,771	3,085,306	3,161,211	3,232,718	3,303,258	3,374,100	3,445,293	19,601,886
WRIA Grants	$1,868,625	$4,390,296	11,750,781	4,520,525	4,654,617	4,792,687	4,934,853	5,081,235	5,231,960	29,215,878
Total	$42,256,253	59,859,737	142,472,126	53,496,926	69,841,091	87,510,597	44,311,625	38,824,458	61,980,837	355,965,534

King County Flood Control District

2018 Annual District Oversight Budget

Attachment F

11/8/17

	2017 Adopted	2017 Revised	2018 Proposed
Management & Support	$273,645	$273,645	$281,855
Rent and Equipment	$11,593	$11,593	$11,940
Legal Services	$95,061	$95,061	$97,913
Accounting	$97,718	$97,718	$100,650
State Auditor	$19,570	$19,570	$20,157
Other Professional Services	$92,700	$92,700	$175,481
Expenses	$17,389	$17,389	$17,911
Insurance	$84,414	$84,414	$86,946
Total	**$692,090**	**$692,090**	**$792,853**

King County Flood Control District

2018 Subregional Opportunity Fund Allocations

Attachment G

11/8/17

Jurisdiction	Opportunity Fund Allocation	Project Name	Project Description
Algona	$10,000	Algona Stormwater System Repair	Replacing rotted out stormwater pipe where needed
Auburn	$94,016	DEFERRING	
Beaux Arts	$10,000	DEFERRING	
Bellevue	$603,506	Meydenbauer Basin/NE 8th St. & 100th Ave Conveyance Improvement	Amendment adding budget to project that will reduce the flooding frequency at this intersection.
Black Diamond	$10,000	DEFERRING	
Bothell	$58,737	Blythe Park Sediment Reduction and Source Control for Blythe Creek Phase II	Complete 90% design and obtain needed permits for a sediment catchment pond and up stream sediment control measures.
Burien	$69,268	DEFERRING	
Carnation	$10,000	DEFERRING	
Clyde Hill	$28,639	Storm Drainage Retrofits	Amendment adding budget to complete four storm drainage improvement projects in the City.
Covington	$27,174	Timberlane-Jenkins Stormwater LID	Retrofit of stormwater facilities in drainage easement areas within Timberlane Estates.
Des Moines	$39,355	DEFERRING	
Duvall	$12,980	DEFERRING	
Enumclaw	$15,030	Battersby Avenue Culvert Replacement	Replace failing culvert that crosses under Battersby Avenue (SE 440th St.)
Federal Way	$115,813	DEFERRING	
Hunts Point	$13,095	2018 Operation & Maintenance	Cleaning and cameraing of existing storm system.
Issaquah	$109,676	DEFERRING	
Kenmore	$47,964	DEFERRING	
Kent	$190,352	Lake Fenwick Aerator Upgrade	Complete design and construction of an upgraded aerator to reduce hazardous algae blooms in the lake.
King County	$487,648	Fairwood Park 11 Pipe Replacement	Remove existing conveyance system of a stormwater facility and replace with a concrete box culvert that will provide fish passage.
Kirkland	$276,229	DEFERRING	
Lake Forest Park	$33,090	DEFERRING	
Maple Valley	$40,775	DEFERRING	
Medina	$45,695	Medina Park Stormwater Pond Improvements	Amendment adding budget to complete permitting, removing organic sediment, and installing outlet control device in upper pond.
Mercer Island	$152,234	Lincoln Landing Stormwater & Park Improvements	Construct stormwater, shoreline and park improvements currently in design at Lincoln Landing, a street end park on the north shore of Mercer Island.
Milton	$10,000	DEFERRING	
Newcastle	$33,298	DEFERRING	
Normandy Park	$18,103	Phase 4 Stormwater Management Control	Map existing stormwater conveyance system conditions into GIS database. This will include researching existing utility easements.
North Bend	$14,358	DEFERRING	
Pacific	$10,000	DEFERRING	
Redmond	$211,556	1. Overlake Regional Infiltration Vault 2. Bear Creek Modeling and Avondale Embankment Protection	1. Install infiltration vault to fully retrofit the Overlake urban center with flow control that will reduce or eliminate flooding downstream. 2. Create an updated HEC-RAS model of Bear Creek and conduct an alternatives analysis for embankment protection along Avondale Road.
Renton	$177,949	Cedar River Gravel Removal	Implement Maintenance and Monitoring Plan.
Sammamish	$161,741	Zackuse Creek Fish Passage	Amendment adding budget to replace an undersized culvert and restore and realign 200 feet of Zackuse Creek.
SeaTac	$38,619	DEFERRING	
Seattle	$2,278,511	Thornton Creek Natural Drainage System Stormwater Conveyance	Provide conveyance improvements, stormwater controls, and water quality treatment to improve the Thornton Creek watershed and provide needed drainage infrastructure.
Shoreline	$111,004	Pump Stations 26 and 30 Improvements (Pre-Design)	Evaluate options to replace City of Shoreline Stormwater Pump Stations.
Skykomish	$10,000	DEFERRING	
Snoqualmie	$29,818	DEFERRING	
Tukwila	$60,070	Tukwila 205 Levee Certification - Phase 3	Perform the third phase of a levee certification study for the Tukwila 205 Levee.
Woodinville	$38,586	DEFERRING	
Yarrow Point	$13,780	2016 Operation & Maintenance	Cleaning and cameraing of existing storm system and installation of ~300 linear feet of thickened edge.
Jurisdiction Totals	**$5,738,669**		

Deferrals	$1,053,845
Projects	$4,684,824

King County Flood Control District

2018 - 2023 Six-Year CIP Project Allocations
Attachment H
11/6/17

2015-2016 Flood Damage Repairs
Grant/External Funding
Cost Share
2017 Mid-Year Revision
King County Road Services Division Projects

No.	Title	Basin	Type of project	2018 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
1	WLFL0 MILLER R RD RVTMNT 2016 REPAIR	SF Skykomish	WLR Const	$1,409	$760,799	$759,390	($334,425)	$0	$0	$0	$0	$0	($334,425)	$426,374	Damage to revetment. Very large rock removed from revetment, vertical banks and exposed subgrade in several locations totaling approximately 350 feet of damage. If not repaired, Miller River Road could be severely damaged.
2	WLFL0 SKYKOMISH HOME BUYOUTS	SF Skykomish	WLR Acqu/Elev	$380	$380	$0	$0	$0	$0	$0	$0	$0	$0	$380	Acquisition of at-risk single family homes in the Town of Skykomish.
3	WLFL0 SF SKYKMSH REP LOSS MIT	SF Skykomish	WLR Acqu/Elev	$295,404	$690,838	$395,434	$54,566	$0	$0	$0	$0	$119,405	$173,971	$864,809	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.
4	WLFL0 SKY W RVR DR FLOOD STUDY	SF Skykomish	WLR Const	$2,475	$81,237	$78,762	$0	$0	$0	$0	$0	$0	$0	$81,237	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.
5	WLFL0 SKYKOMISH LB DOWN 2016 REPAIR	SF Skykomish	WLR Const	$61,767	$150,000	$88,233	$0	$0	$0	$0	$0	$0	$0	$150,000	Approximately 50-foot-long section of missing armor rock immediately downstream of the bridge. Further flooding may compromise or severly damage facility.
6	WLFL0 SKYKOMISH LB UP 2016 REPAIR	SF Skykomish	WLR Const	$7,658	$309,433	$301,775	$0	$0	$0	$0	$0	$0	$0	$309,433	Three pockets of missing armor rock: 15, 10 and 75 feet wide and eroded topsoil from upper sections of levee. Further flooding may compromise or severely damage facility.
7	WLFL0 TIMBER LN EROSN BUYOUTS	SF Skykomish	WLR Acqu/Elev	$1,571,273	$2,586,513	$1,015,240	$223,361	$0	$0	$0	$0	$0	$223,361	$2,809,874	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.
8	WLFL0 TIMBERLANE 2016 REPAIR	SF Skykomish	WLR Const	$11,040	$52,500	$41,460	($36,460)	$20,000	$20,000	$20,000	$20,000	$0	$43,540	$98,040	Old privately built facility in Timberlane Village on County property. Riverside rockery walls continue to oversteepen, settle and fall into the river.
9	WLFL1 428TH AVE SE BR FEASIBILITY	Upper Snoq	WLR Const	$168,614	$300,000	$131,386	($31,386)	$0	$0	$0	$0	$0	($31,386)	$268,614	FCD-requested project to 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.
10	WLFL1 USACE PL 84-99 SF SNO	Upper Snoq	WLR Const	$0	$0	$0	$150,223	$183,154	$352,868	$363,454	$0	$0	$1,049,698	$1,049,698	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.
11	WLFL1 SF SNO LEVEE REMEDIATION	Upper Snoq	WLR Const	$0	$0	$0	$295,673	$374,439	$727,790	$749,623	$0	$0	$2,147,526	$2,147,526	Six levee deficiencies have been identified in this leveed segment. The project will design and reconstruct the impaired segment of levee in place.
12	WLFL1 RIBARY CREEK	Upper Snoq	WLR Const	$0	$0	$0	$0	$636,492	$815,106	$2,338,618	$2,408,777	$0	$6,198,993	$6,198,993	Address flooding from Ribary Creek at Bendigo Blvd in North Bend as the Snoqualmie levees prevent drainage to the river during high flows.
13	WLFL1 REIF RD LEVEE IMPROVEMENTS	Upper Snoq	WLR Const	$0	$0	$0	$0	$0	$265,438	$318,421	$385,937	$457,218	$1,427,015	$1,427,015	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.
14	WLFL1 CIRCLE RVR RANCH RISK RED	Upper Snoq	WLR Const	$64,225	$150,000	$85,775	$278,505	$513,426	$1,608,159	$1,738,003	$0	$0	$4,138,093	$4,288,093	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.
15	WLFL1 MASON THRSN EXT 2016 REPAIR	Upper Snoq	WLR Const	$0	$240,000	$240,000	$0	$0	$0	$0	$0	$0	$0	$240,000	Large scour hole in bank at upstream end of Mason Thorson Extension rock-faced levee. Significant settlement and displacement of face rock at upstream end of facility. Scour hole in bank threatens to end-run facility and damage adjacent private property. Damage to levee face-rock compromises levee integrity and may lead to progressive failure, especially at upstream end.
16	WLFL1 MF SNO CORRIDOR IMP	Upper Snoq	WLR Const	$954	$1,100,000	$1,099,046	$0	$2,243,361	$1,591,350	$1,311,272	$0	$0	$5,145,983	$6,245,983	Placeholder for corridor plan implementation project(s)
17	WLFL1 MF SNO CORRIDOR PLAN	Upper Snoq	WLR Const	$1,310,605	$1,824,912	$514,307	$0	$0	$0	$0	$0	$0	$0	$1,824,912	Middle Fork Snoqualmie Corridor Planning, scheduled for completion in 2018.
18	WLFL1 NORTH FORK BRIDGE 2016 REPAIR	Upper Snoq	WLR Const	$111	$385,000	$384,889	$0	$0	$0	$0	$0	$0	$0	$385,000	The North Fork Bridge was originally built in 1951 and is extreamely 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.
19	WLFL1 REIF RD 2016 REPAIR	Upper Snoq	WLR Const	$0	$253,000	$253,000	$0	$0	$0	$0	$0	$0	$0	$253,000	Length 50-80 feet. Face rock has appeared to have settled 1-2 feet exposing core material above near upper part of levee face. Larger face rock missing in pockets upstream end of this damage site. Continued damage could compromise facility which provides flood protection for several residences landward of the facility.
20	WLFL1 REINIG RD RVTMNT 2016 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$1,500,000	$0	$0	$0	$0	$0	$1,500,000	$1,500,000	Repair three primary damage sites just upstream and directly across from the South Fork Snoqualmie confluence totaling ~285 lineal feet.
21	WLFL1 RECORD OFFICE 2016 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$350,000	$421,000	$0	$0	$0	$0	$771,000	$771,000	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.
22	WLFL1 SF SNO CORR EARLY ACTION	Upper Snoq	WLR Const	$1,373,089	$5,562,744	$4,189,655	($4,039,655)	$0	$0	$0	$0	$0	($4,039,655)	$1,523,089	Project identified by Board to alleviate potential flooding of I-90 in North Bend. Currently evaluating project alternatives, including levee setback and gravel removal.
23	WLFL1 SF SNO CORRIDOR IMP	Upper Snoq	WLR Const	$0	$130,771	$130,771	($57,971)	$0	$0	$0	$0	$0	($57,971)	$72,800	Placeholder for corridor plan implementation project(s)
24	WLFL1 SF SNO CORRIDOR PLAN	Upper Snoq	WLR Const	$2,472,914	$2,682,914	$210,000	$0	$0	$0	$0	$0	$0	$0	$2,682,914	SF Snoqualmie Corridor planning process and development of capital investment strategy.
25	WLFL1 SHAKE MILL LB 2016 REPAIR	Upper Snoq	WLR Const	$0	$800,000	$800,000	($200,000)	$923,239	$0	$0	$0	$0	$723,239	$1,523,239	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.
26	WLFL1 SHAKE MILL RB 2016 REPAIR	Upper Snoq	WLR Const	$0	$197,500	$197,500	$172,899	$447,676	$0	$0	$0	$0	$620,575	$818,075	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).
27	WLFL1 SI VIEW RM4 2017 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$209,000	$0	$0	$0	$0	$0	$209,000	$209,000	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.
28	WLFL1 SR202 SF BRIDGE LENGTHEN	Upper Snoq	WLR Const	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	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 CRK BRIDGE FEASIBILITY	Upper Snoq	Agreement	$0	$0	$0	$0	$0	$0	$0	$0	$150,000	$150,000	$150,000	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	WLR Const	$5,673	$1,465,673	$1,460,000	$15,450	$0	$0	$0	$0	$0	$15,450	$1,481,123	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	WLR Acqu/Elev	$9,163,547	$11,971,284	$2,807,737	$1,454,158	$2,412,151	$2,484,516	$2,559,051	$2,635,823	$0	$11,545,699	$23,516,983	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 Cities of Snoqualmie and North Bend. As of May 2016 260 remain to be elevated or acquired. This amount assumes 10-12 home elevations per year.
32	WLFL2 DUTCHMAN RD REPAIR	Lower Snoq	WLR Const	$0	$209,914	$209,914	$338,679	$0	$0	$0	$0	$0	$338,679	$548,593	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.
33	WLFL2 DUVALL BRIDGE 1136A	Lower Snoq	Agreement	$0	$30,000	$30,000	$120,000	$0	$0	$0	$0	$0	$120,000	$150,000	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.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
34	WLFL2 FARM FLOOD TSK FORCE IMP	Lower Snoq	WLR Const	$668,348	$763,759	$95,411	$111,858	$115,214	$118,670	$122,230	$125,897	$0	$593,869	$1,357,628	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.
35	WLFL2 L SNO REP LOSS MITGTION	Lower Snoq	WLR Acqu/Elev	$1,269,231	$1,712,899	$443,468	($17,028)	$0	$0	$0	$0	$0	($17,028)	$1,695,671	Funding as possible local match for FEMA grants to elevate or acquire at-risk structures.
36	WLFL2 L SNO/ALDAIR CORRIDOR PLN	Lower Snoq	WLR Const	$5,644,814	$7,252,761	$1,607,947	$113,053	$742,630	$655,636	$0	$0	$0	$1,511,319	$8,764,080	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.
37	WLFL2 LWR SNO RESDL FLD MITGTN	Lower Snoq	WLR Acqu/Elev	$1,927,117	$3,306,276	$1,379,159	($27,959)	$737,924	$0	$0	$0	$0	$709,965	$4,018,241	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.
38	WLFL2 SE 19TH WAY REVETMENT	Lower Snoq	WLR Const	$292,549	$1,706,294	$1,413,745	$0	$0	$0	$0	$0	$0	$0	$1,706,294	Rebuild revetment to protect road access to high value agricultural operations and lands. Construction of road anticipated 2017; bank repair anticipated in 2018.
39	WLFL2 SE DAVID POWELL RD DOWNSTREAM	Lower Snoq	WLR Const	$149,535	$1,036,456	$886,921	$0	$0	$0	$0	$0	$0	$0	$1,036,456	FCD-requested project to reduce neighborhood isolation from flooding. Prevent slope failure of sole access roadway that would isolate 150 homes.
40	WLFL2 SE DAVID POWELL RD UPSTREAM	Lower Snoq	Agreement	$0	$250,000	$250,000	$700,000	$1,250,000	$0	$0	$0	$0	$1,950,000	$2,200,000	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.
41	WLFL2 SE FISH HATCHERY RD	Lower Snoq	WLR Const	$124,843	$527,905	$403,062	$0	$0	$0	$0	$0	$0	$0	$527,905	FCD-requested project to reduce neighborhood isolation from flooding. Prevent slope failure of sole access roadway that would isolate 20-30 homes.
42	WLFL2 SINNEMA QUAALE 2011 REPR	Lower Snoq	WLR Const	$11,974,543	$12,508,516	$533,973	$0	$0	$0	$0	$0	$0	$0	$12,508,516	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 to be completed in 2017; project anticipated to be closed out in 2018.
43	WLFL2 SNOQUALMIE VALLEY FEASIBILITY	Lower Snoq	Agreement	$0	$0	$0	$0	$0	$0	$250,000	$250,000	$0	$500,000	$500,000	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.
44	WLFL2 TOLT PIPELINE PROTECTION	Lower Snoq	WLR Const	$1,515,788	$3,271,375	$1,755,587	$6,162,541	$42,436	$0	$0	$0	$0	$6,204,977	$9,478,352	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 anticipated 2017.
45	WLFL2 WOODINVILLE-DUVALL BR 1136B/1136E	Lower Snoq	Agreement	$0	$100,000	$100,000	$300,000	$0	$0	$0	$0	$0	$300,000	$400,000	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.
46	WLFL3 FREW LEVEE 2016 REPAIR	Tolt	WLR Const	$0	$150,000	$150,000	$102,000	$0	$0	$0	$0	$0	$102,000	$252,000	Face rock displaced along approximately 50 feet of levee face. Some core material appears to have been lost, resulting in an oversteepened 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.
47	WLFL3 GIRL SCOUT LEVEE 2016 REPAIR	Tolt	WLR Const	$0	$60,000	$60,000	$251,000	$0	$0	$0	$0	$0	$251,000	$311,000	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.
48	WLFL3 HOLBERG FEASIBILITY	Tolt	WLR Const	$0	$200,000	$200,000	$0	$0	$0	$0	$0	$0	$0	$200,000	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
49	WLFL3 LOWER FREW LEVEE SETBACK	Tolt	WLR Const	$0	$175,000	$175,000	$1,236,000	$1,823,962	$0	$0	$0	$0	$3,059,962	$3,234,962	Capital Investment Strategy: Design, based on level of service analysis, the highest priority levee setback for flood risk reduction. FCD 6-year includes funds needed for grant match for future grant applications.
50	WLFL3 LOWER TOLT RIVER ACQUISITION	Tolt	WLR Acqu/Elev	$529,475	$744,475	$215,000	$0	$0	$0	$0	$0	$0	$0	$744,475	Acquisition between the Swiftwater development and the river for the future setback of the Upper Frew Levee
51	WLFL3 RIO VISTA PROPERTY ACQ	Tolt	WLR Acqu/Elev	$0	$0	$0	$500,000	$0	$0	$0	$0	$0	$500,000	$500,000	Capital Investment Strategy: Acquire 2 at-risk homes from willing sellers; acquire remaining 14 homes as funds become available
52	WLFL3 SAN SOUCI NBRHOOD BUYOUT	Tolt	WLR Acqu/Elev	$4,127,691	$5,553,353	$1,425,662	$0	$0	$0	$0	$0	$0	$0	$5,553,353	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. When completed, will result in removing approximately 20 homes from high hazard areas within and just upstream and downstream of San Souci neighborhood.
53	WLFL3 SAN SOUCI REACH IMPRVMNTS	Tolt	WLR Const	$0	$0	$0	$100,000	$250,000	$700,000	$700,000	$750,000	$0	$2,500,000	$2,500,000	Capital Investment Strategy: Construct Tolt Road NE road elevation in one location. Remove illegal revetment and roads in San Souci neighborhood.
54	WLFL3 SEDIMENT MGMT FEAS	Tolt	WLR Const	$0	$0	$0	$209,605	$205,284	$0	$0	$0	$0	$414,889	$414,889	Capital Investment Strategy: Conduct sediment management feasibility study and develop a plan. Update and include upper watershed sediment production estimates
55	WLFL3 SR 203 BR IMPRVMNTS FEAS	Tolt	WLR Const	$0	$0	$0	$205,743	$181,306	$0	$0	$0	$0	$387,049	$387,049	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.
56	WLFL3 REMLINGER LEVEE 2017 REPAIR	Tolt	WLR Const	$0	$0	$0	$311,000	$0	$0	$0	$0	$0	$311,000	$311,000	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.
57	WLFL3 TOLT 2015 FLOOD REPAIRS	Tolt	WLR Const	$46,790	$900,000	$853,210	$0	$0	$0	$0	$0	$0	$0	$900,000	Flood damage repairs from January 2015 flood event. Locations include Frew, Upper Frew, Remlinger, and Girl Scout Camp.
58	WLFL3 TOLT CORRIDOR IMPLMNTN	Tolt	WLR Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Placeholder for corridor plan implementation project(s).
59	WLFL3 TOLT CORRIDOR PLAN	Tolt	WLR Const	$958,717	$1,153,657	$194,940	$0	$0	$0	$0	$0	$0	$0	$1,153,657	The corridor plan for the lower 5 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.
60	WLFL3 TOLT R LEVEE L.O.S. ANALYSIS	Tolt	WLR Const	$0	$150,000	$150,000	$403,250	$150,000	$0	$0	$0	$0	$553,250	$703,250	Capital Investment Strategy: Conduct a detailed hydraulic analysis to optimize the elevation of new levees to maximize flood risk reduction benefits.
61	WLFL3 TOLT R MILE 1.1 SETBACK	Tolt	WLR Acqu/Elev	$4,097,106	$5,484,360	$1,387,254	($578,254)	$530,450	$0	$0	$0	$0	($47,804)	$5,436,556	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.
62	WLFL3 TOLT R NATURAL AREA ACQ	Tolt	WLR Acqu/Elev	$1,140,067	$2,470,067	$1,330,000	$515,000	$530,450	$109,273	$0	$0	$0	$1,154,723	$3,624,790	Capital investment strategy: acquire at-risk homes from willing sellers.
63	WLFL3 TOLT R RD ELEVATION FEASIBILITY	Tolt	WLR Const	$0	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$0	$250,000	FCD-requested project to reduce neighborhood isolation from flooding. Evaluate feasibility of elevating sections of Tolt River Road.
64	WLFL3 TOLT R RD NE IMPROVEMENTS	Tolt	WLR Const	$0	$0	$0	$0	$0	$50,000	$100,000	$210,000	$800,000	$1,160,000	$1,160,000	Capital Investment Strategy: Initiate design for elevation of one road location to reduce or eliminate isolation. Implement additional road elevations as funds become available.
65	WLFL3 UPPER FREW LEVEE SETBACK	Tolt	WLR Const	$0	$0	$0	$0	$0	$100,000	$100,000	$150,000	$0	$350,000	$350,000	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.
66	WLFL4 ALPINE MANOR NEIGHBORHOOD BUYOUTS	Raging	WLR Acqu/Elev	$1,715,652	$2,280,652	$565,000	$405,755	$0	$0	$0	$0	$0	$405,755	$2,686,407	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.
67	WLFL4 RAGING MOUTH TO BR 2017 REPAIR	Raging	WLR Const	$0	$0	$0	$500,000	$74,000	$0	$0	$0	$0	$574,000	$574,000	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.
68	WLFL4 RAGING R BRIDGE 1008E	Raging	Agreement	$0	$80,000	$80,000	$0	$0	$0	$0	$0	$0	$0	$80,000	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.
69	Snoqualmie-South Fork Skykomish [illegible] Subtotal			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
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72	WLFL5 NE 8TH ST AT LAKE ALLEN OUTLET	Sammamish	Agreement	$0	$0	$0	$0	$0	$400,000	$1,400,000	$1,000,000	$0	$2,800,000	$2,800,000	To address chronic flooding on this sole access roadway with approximately 200 properties, look at upstream and downstream retention/detention options; study road-raising options; prepare Concept Development Report, analyze and select best options.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
73	WLFL5 SAMMAMISH R BANK REPAIRS	Sammamish	WLR Const	$106,050	$419,895	$313,845	$721,929	$0	$0	$0	$0	$0	$721,929	$1,141,824	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.
74	WLFL6 WILLOWMOOR FLDPLAIN REST	Sammamish	WLR Const	$1,405,468	$2,717,923	$1,312,455	($181,655)	$1,684,709	$2,011,665	$0	$0	$0	$3,514,719	$6,232,642	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.
75	WLFL6 LOWER COAL CRK PH I	Lk Wash Tribs	Agreement	$1,504,751	$3,958,751	$2,454,000	$5,595,000	$4,159,000	$145,000	$120,000	$100,000	$66,000	$10,185,000	$14,143,751	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.
76	WLFL6 MAY VALLEY DRAINAGE IMPRVMNT	Lk Wash Tribs	WLR Const	$0	$0	$0	$80,000	$0	$0	$0	$0	$0	$80,000	$80,000	As recommended in the May Creek Basin Plan, two sediment trap facilities will be evaluated to limit sediment loading from two May Creek tributaries. Both projects would require land acquisition, whether easement or property purchase.
77	WLFL6 FIFTEENMILE CRK BRIDGE 493C	Lk Wash Tribs	Agreement	$0	$0	$0	$150,000	$0	$0	$0	$0	$0	$150,000	$150,000	Feasibility analysis to identify potential solutions to bank erosion and backwatering problems at bridge.
78	WLFL7 CDR PRE-CONST STRTGC ACQ	Cedar	WLR Acqu/Elev	$2,532,848	$4,330,532	$1,797,684	$0	$0	$0	$0	$0	$0	$0	$4,330,532	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.
79	WLFL7 CEDAR LEVEE SETBACK FEAS (Cedar Corridor Plan)	Cedar	WLR Const	$1,624,424	$1,987,587	$363,163	$0	$0	$0	$0	$0	$0	$0	$1,987,587	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. Completion of this plan is expected in September 2016.
80	WLFL7 CEDAR R REP LOSS MITGATN	Cedar	WLR Acqu/Elev	$3,182,250	$3,788,422	$606,172	$0	$0	$0	$0	$0	$0	$0	$3,788,422	Acquire frequently-flooded homes. Placeholder funding until District adopts acquisition policy.
81	WLFL7 CEDAR RIVER TRAIL SITE A BANK	Cedar	WLR Const	$0	$0	$0	$0	$100,000	$100,000	$200,000	$480,000	$0	$880,000	$880,000	Capital Investment Strategy: Repair eroded section of left bank with bioengineered revetment to stabilize toe of bank and to prevent large scale bank failure.
82	WLFL7 CEDAR RVR GRAVEL REMOVAL	Cedar	Agreement	$8,480,221	$11,102,885	$2,622,664	$0	$962,613	$104,880	$445,679	$111,267	$114,605	$1,739,044	$12,841,929	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.
83	WLFL7 CITY OF RENTON LEVEE CERTIFICATION	Cedar	Agreement	$0	$0	$0	$750,000	$3,000,000	$1,250,000	$0	$0	$0	$5,000,000	$5,000,000	Placeholder for Renton levee certification projects.
84	WLFL7 ELLIOTT BR LEVEE SETBACK	Cedar	WLR Const	$2,168,073	$2,175,408	$7,335	($7,335)	$0	$0	$0	$0	$0	($7,335)	$2,168,073	Purpose of the project is to setback levees on both sides of the river below the Elliott/154th ST Bridge. Based on the Cedar Capital Investment Strategy this project is no longer scheduled for the near-term 6-year timeframe.
85	WLFL7 FBD CORRIDOR IMPLEMENTATION	Cedar	WLR Acqu/Elev	$932,547	$5,705,500	$4,772,953	$806,284	$0	$0	$0	$0	$0	$806,284	$6,511,784	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.
86	WLFL7 HERZMAN LEVEE SETBACK AND TRAIL	Cedar	WLR Const	$0	$0	$0	$944,872	$226,184	$3,979,360	$78,766	$81,149	$83,584	$5,393,935	$5,393,935	Capital Investment Strategy: Setback levee; excavate side-channel to reduce pressure on revetment; reconstruct, reinforce and/or extend revetment; acquire up to 5 properties.
87	WLFL7 JAN ROAD NEIGHBORHOOD	Cedar	WLR Const	$0	$0	$0	$900,000	$0	$0	$0	$0	$0	$900,000	$900,000	Capital Investment Strategy: Suite of solutions to be determined as part of feasibility study. Includes raise road, partial removal of Jan Road levee, contruction of side channel, and mitigation of at-risk properties.
88	WLFL7 RAINBOW BEND LEVEE STBCK	Cedar	WLR Const	$2,104,185	$2,213,285	$109,100	$0	$0	$0	$0	$0	$0	$0	$2,213,285	This project represents the Flood District contribution to a larger project to remove the Rainbow Bend levee in order to slow flood velocities
89	WLFL7 LOWER CEDAR FEASIBILITY STUDY	Cedar	WLR Const	$0	$0	$0	$200,000	$200,000	$100,000	$0	$0	$0	$500,000	$500,000	Capital Investment Strategy: Conduct feasibility study of Lower Cedar reach in City of Renton to 1) quantify economic damage potential 2) determine infrastructure modifications to improve flood resiliency and sediment storage potential, and 3) conduct cost-benefit analysis
90	WLFL7 LOWER JONES ROAD NEIGHBORHOOD	Cedar	WLR Const	$0	$36,000	$36,000	$3,057,792	$1,738,873	$4,569,548	$1,544,801	$40,575	$0	$10,951,589	$10,987,589	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
91	WLFL7 MAPLEWOOD FEASIBILITY STUDY	Cedar	WLR Const	$0	$440,000	$440,000	$0	$0	$0	$0	$0	$0	$0	$440,000	Capital Investment Strategy: Conduct site specific landslide risk assessment study; conduct a feasibility study to evaluate opportunities to modify the Erickson Levee.
92	WLFL7 RIVERBEND MHP ACQ	Cedar	WLR Const	$3,496,466	$5,357,042	$1,860,576	$0	$0	$0	$0	$0	$0	$0	$5,357,042	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.
93	WLFL7 SE 192ND AVE AT 266TH CT	Cedar	Agreement	$0	$150,000	$150,000	$250,000	$400,000	$700,000	$0	$0	$0	$1,350,000	$1,500,000	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.
94	WLFL7 SR 169 FEASIBILITY STUDY	Cedar	WLR Const	$0	$260,000	$260,000	$61,800	$0	$0	$0	$0	$0	$61,800	$321,800	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.
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98	WLFL8 BRISCOE LEVEE SETBACK	Green	Agreement	$21,361,073	$23,330,271	$1,969,198	$0	$0	$0	$0	$0	$0	$0	$23,330,271	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.
99	WLFL8 BRPS BLACK R PUMP STATION	Green	WLR Const	$5,134,042	$5,374,203	$240,161	($229,161)	$0	$0	$0	$0	$0	($229,161)	$5,145,042	Expenditures here include sediment removal, fuel system upgrades, life-cycle efficiency analysis to inform future upgrades, and priority items from recently completed needs assessment (2015). New line items established below to account for discrete project elements.
100	WLFL8 BRPS CONTROL BLDG RPLCMT	Green	WLR Const	$0	$50,000	$50,000	$480,368	$1,554,622	$7,577,624	$25,887	$0	$0	$9,638,501	$9,688,501	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.
101	WLFL8 BRPS FISH PASS IMPRVMNTS	Green	WLR Const	$0	$0	$0	$0	$0	$0	$831,751	$2,241,456	$6,316,655	$9,389,862	$9,389,862	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.
102	WLFL8 BRPS HIGH-USE ENGINES	Green	WLR Const	$0	$252,900	$252,900	$221,179	$1,414,074	$25,133	$0	$0	$0	$1,660,386	$1,913,286	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.
103	WLFL8 BRPS SUPPORT SYS UPGRADES	Green	WLR Const	$0	$0	$0	$0	$175,261	$822,168	$779,584	$26,663	$0	$1,803,676	$1,803,676	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.
104	WLFL8 DESIMONE USACE 2015	Green	Agreement	$1,634,698	$2,563,620	$928,922	($923,922)	$0	$0	$0	$0	$0	($923,922)	$1,639,698	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
105	WLFL8 DYKSTRA USACE 2015	Green	Agreement	$638,356	$692,856	$54,500	$6,695	$0	$0	$0	$0	$0	$6,695	$699,551	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
106	WLFL8 GREEN R PL84-99 MITIGATN	Green	WLR Const	$3,868,478	$4,043,988	$375,510	$1,616,554	$52,000	$25,000	$25,000	$0	$0	$1,718,554	$5,762,542	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.
107	WLFL8 GREEN PRE-CONST ACQ	Green	WLR Acqu/Elev	$0	$0	$0	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$30,000,000	$30,000,000	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.
108	WLFL8 HSB BREDA SETBACK	Green	WLR Const	$0	$1,755,000	$1,755,000	$2,522,674	$590,285	$2,427,138	$982,118	$0	$0	$6,522,214	$8,277,214	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.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
109	WLFL8 HSB MCCOY REALIGNMENT	Green	WLR Const	$0	$400,000	$400,000	$0	$0	$0	$0	$0	$0	$0	$400,000	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 (oversteepened 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 1985 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.
110	WLFL8 HSB NURSING HOME SETBACK	Green	WLR Const	$0	$0	$0	$0	$0	$0	$100,000	$2,000,000	$500,000	$2,600,000	$2,600,000	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.
111	WLFL8 INTERIM SWIF IMPLEMENTATION	Green	WLR Const	$0	$30,000	$30,000	$0	$0	$0	$0	$0	$0	$0	$30,000	Coordination and planning activities to implement recommendations of interim SWIF. Maintenance work associated with the interim SWIF is included in the operating budget.
112	WLFL8 LOWER RUSSELL ACQ KENT	Green	Agreement	$0	$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$1,000,000	Acquisitions by the City of Kent for the Lower Russell levee setback project.
113	WLFL8 LWR GRN R CORRIDOR PLAN/EIS	Green	WLR Const	$0	$1,743,249	$1,743,249	$0	$0	$0	$0	$0	$0	$0	$1,743,249	Lower Green River Corridor Planning and Environmental Impact Statement.
114	WLFL8 LWR RUSSELL LEVEE SETBACK	Green	WLR Const	$6,041,888	$12,077,130	$6,035,242	$2,478,808	$13,910,520	$18,357,812	$63,028	$0	$0	$34,810,168	$46,887,298	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.
115	WLFL8 MILWAUKEE LEVEE #2-KENT	Green	Agreement	$10,768	$8,500,000	$8,489,232	$0	$0	$0	$0	$0	$0	$0	$8,500,000	Prepare an analysis and study of design and construction alternatives to provide flood protection, scour protection, enable levee certification and secure necessary land rights. Current ILA with Kent for this first phase is $3.65 million, the ILA assumes that the total project cost is $8.5 million. .
116	WLFL8 PATTON BRIDGE 2015	Green	Agreement	$0	$150,000	$150,000	$0	$0	$0	$0	$0	$0	$0	$150,000	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.
117	WLFL8 PORTER LEVEE	Green	WLR Const	$0	$720,000	$720,000	$0	$0	$0	$0	$0	$0	$0	$720,000	Contribute the cost of a repair ($720,000) to a $7 million levee setback project. By relocating the levee, 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.
118	WLFL8 REDDINGTON REACH SETBACK	Green	WLR Const	$16,564,851	$16,889,083	$324,232	$0	$0	$0	$0	$0	$0	$0	$16,889,083	Project expenditures will continue into 2017; closeout anticipated in 2018.
119	WLFL8 RUSSELL RD UPPER KENT	Green	Agreement	$6,020,673	$6,072,173	$51,500	$0	$0	$0	$0	$0	$0	$0	$6,072,173	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.
120	WLFL8 S 180TH ST BRIDGE FLOODWALL EXT	Green	Agreement	$0	$65,378	$65,378	$0	$0	$0	$0	$0	$0	$0	$65,378	The project will increase the height of a flood wall to provide approximately 30" of additional flood protection.
121	WLFL8 S 277TH ST REVETMENT	Green	WLR Const	$90,528	$300,000	$209,472	$1,728,802	$1,428,198	$0	$0	$0	$0	$3,155,000	$3,455,000	This project will conduct a feasibility analysis of channel migration hazards from river mile 21.1 to 21.7. No design or construction funding at this time.
122	WLFL8 SE 380 PL AT SR 164	Green	Agreement	$0	$0	$0	$90,000	$100,000	$400,000	$100,000	$0	$0	$690,000	$690,000	This project will analyze culvert replacement and road-raising options and implement the preferred option.
123	WLFL8 SE 384 ST @ 178 AVE SE	Green	Agreement	$0	$0	$0	$0	$0	$0	$0	$150,000	$1,500,000	$1,650,000	$1,650,000	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.
124	WLFL8 SIGNATURE POINTE REVETMENT	Green	WLR Const	$0	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$0	$300,000	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.
125	WLFL8 TUK-205 RATOLO FLOODWALL	Green	WLR Const	$0	$0	$0	$0	$0	$0	$0	$1,500,000	$300,000	$1,800,000	$1,800,000	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.
126	WLFL8 TUK-205 SEGALE FLOODWALL	Green	WLR Const	$0	$0	$0	$0	$0	$601,000	$582,754	$3,188,003	$3,263,643	$7,635,400	$7,635,400	New project to implement interim SWIF adopted by Board of Supervisors. The Gaco portion of the Tukwila-205 levee between river mile 15.75 and 15.88 is over-steepened and damaged and cannot be adequately repaired using the existing easements. This project would acquire properties landward of the damaged levee to enable a levee setback and repair of the embankment and toe scour at this outside bend, in coordination with the Army Corps of Engineers PL 84-99 rehabilitation program.
127	WLFL8 TUK-205 USACE GACO REPAIR	Green	WLR Const	$44,248	$9,064,053	$9,019,807	$3,796,580	$15,813	$0	$0	$0	$0	$3,812,493	$12,876,546	600 feet of scour has exposed rock armor. No sign of armor loss. Interim SWIF capital project is for 0.33 miles of floodwall and toe/scour protection. Increased vulnerability to further scour and damage to facility.
128	WLFL8 USACE SWIF	Green	WLR Const	$2,209,817	$2,209,817	$0	$0	$0	$0	$0	$0	$0	$0	$2,209,817	Green River Corridor Planning (under System-Wide Improvement Framework agreement with Army Corps of Engineers)
129	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
130															
131															
132	WLFL9 BUTTE AVE FLOOD MITIGATION	White	Agreement	$0	$470,000	$470,000	$0	$0	$0	$0	$0	$0	$0	$470,000	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.
133	WLFL9 COUNTYLINE TO A STREET	White	WLR Const	$12,662,360	$24,004,419	$11,342,059	$0	$0	$0	$0	$0	$0	$0	$24,004,419	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.
134	WLFL9 RED CREEK ACQUISITIONS	White	WLR Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	Permanently eliminate the risk to public safety along this reach by acquiring and removing residential structure. Placeholder funding for appraisal and/or grant match dependent on landowner willingness.
135	WLFL9 RIGHT BANK LEVEE SETBACK	White	WLR Const	$10,578,055	$12,151,199	$1,573,144	$1,079,358	$1,988,187	$7,887,849	$5,797,495	$69,556	$0	$16,823,445	$28,974,644	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.
136	WLFL9 WHITE - GREENWATER ACQ	White	WLR Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	This project would acquire flood prone residence along the White River near the Greenwater River.
137	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
138															
139															
140	WLFL8 SOUTH PARK PUMPSTATION	Seattle	Agreement	$1,786,219	$6,001,331	$4,215,112	($4,215,112)	$0	$4,718,781	$0	$0	$0	$503,669	$6,505,000	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.
141	WLFL8 S PARK DRAINAGE IMPROVEMENTS	Seattle	Agreement	$720	$1,000,000	$999,280	$0	$1,550,000	$1,455,000	$0	$0	$0	$3,005,000	$4,005,000	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.
142	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	$1,550,000	[illegible]	$0	$0	$0	[illegible]	[illegible]	
143															
144															
145	WLFLX CORRIDOR PLN DESIGN/CONST PLACEHOLDER	Countywide	WLR Const	$0	$142,610	$142,610	$0	$0	$0	$0	$0	$27,000,000	$27,000,000	$27,142,610	Placeholder for corridor plan implementation project(s)
146	[illegible]			$0	$142,610	$142,610	$0	$0	$0	$0	$0	$27,000,000	$27,000,000	$27,142,610	

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
147															
148															
149	WLFLG FLOOD REDUCTION GRANTS	Countywide	Grant	$2,585,919	$11,600,690	$9,014,771	$3,085,306	$3,161,211	$3,232,718	$3,303,258	$3,374,100	$3,445,293	$19,601,886	$31,202,576	Competitive grant program for flood reduction projects. Increases as a proportion of total FCD tax revenue.
150	WLFLG WRIA GRANTS	Countywide	Grant	$11,348,474	$23,099,255	$11,750,781	$4,520,525	$4,654,617	$4,792,687	$4,934,853	$5,081,235	$5,231,960	$29,215,878	$52,315,133	Cooperative Watershed Management Grant Program; priorities recommended by watershed groups. Increase based on assumed inflation rate.
151	WLFLM EFFECTIVENESS MONITORING	Countywide	WLR Const	$1,616,734	$2,218,519	$601,785	$1,076,734	$702,778	$830,323	$813,940	$767,478	$510,698	$4,701,949	$6,920,468	Evaluation of capital projects to determine effectiveness and identify project design improvements.
152	WLFLO SUBREGNL OPPRTNTY FUND	Countywide	Grant	$27,038,460	$43,683,268	$16,644,808	$5,738,670	$5,879,852	$6,012,856	$6,144,060	$6,275,827	$6,408,245	$36,459,510	$80,142,778	Allocation to all King County jurisdictions for flooding, water quality, or watershed management projects. Increases as a proportion of total FCD tax revenue.
153	WLFLX CENTRAL CHARGES	Countywide	WLR Const	$652,217	$781,493	$129,276	$130,000	$132,000	$135,252	$137,957	$140,716	$143,531	$820,056	$1,601,549	Central charges related to the FCD's capital fund.
154	WLFLX FLOOD EMERGENCY CONTGNCY	Countywide	WLR Const	$300,001	$800,917	$500,916	$0	$250,000	$250,000	$250,000	$250,000	$250,000	$1,250,000	$2,050,917	Contingency for emergency response actions during a flood event.
155	Countywide Subtotal			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
156															
157	Grand Total			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

King County Flood Control District

2018 Annual Budget

Attachment B

11/8/17

Program	2016 Actuals	2017 Approved	2017 Revised	2018 Requested
Flood District Administration	666,522	692,090	692,090	792,853
Maintenance and Operation	8,247,988	10,912,177	11,159,377	11,333,238
Construction and Improvements	42,256,253	59,859,737	142,472,126	53,496,926
Bond Retirement and Interest	$0	$0	$0	$0
Total	51,170,763	71,464,004	154,323,593	65,623,017
Projected Capital Reserves - Cash Fund Balance [1]	62,497,312	56,604,639	63,289,626	65,835,760
Projected Capital Reserves - Budgetary Fund Balance [2]	(14,355,272)	(9,642,000)	(27,992,874)	(31,676,700)

[1] The cash fund balance assumes an expenditure rate of 39% of the capital budget in 2017, informed by prior year actuals.

[2] The budgetary fund balance assumes 100% expenditure of all budgeted amounts and is used to understand budgetary commitment.

King County Flood Control District

2018 Annual Operating Budget

Attachment C

11/8/17

	2016 Actuals	2017 Approved	2017 Revised	2018 Requested
Annual Maintenance	$1,739,316	$2,589,281	$2,686,481	$3,386,766
Flood Hazards Plan, Grants, Outreach	$285,536	$318,123	$318,123	$718,898
Flood Hazard Studies, Maps, Technical Services	$1,140,460	$1,304,619	$1,454,619	$1,414,741
Flood Preparation, Flood Warning Center	$335,073	$863,033	$863,033	1,417,463
Program Management, Supervision, Finance, Budget	$937,136	$951,992	$951,992	$1,283,543
Program Implementation	$1,931,768	$1,165,633	$1,165,633	($106,434)
Overhead / Central Costs	$1,878,700	$3,327,496	$3,327,496	3,218,261
District Planning, Outreach, Policy Technical Services		$392,000	$392,000	
Total	**$8,247,988**	**$10,912,177**	**$11,159,377**	**$11,333,238**

King County Flood Control District

2018 Annual Capital Budget

Attachment D

11/8/17

Basin	Acquisition	Design	Construction	Contingency	Total
Snoqualmie River Basin	$1,065,862	$3,433,478	$7,466,841	$0	$11,966,181
Cedar River Basin	$1,373,207	$4,016,541	$7,938,939	$0	$13,328,687
Green River Basin	$10,057,917	$4,531,692	$2,196,968	$0	$16,786,577
White River Basin	$0	$1,079,358	$0	$0	$1,079,358
Seattle	$0	$0	($4,215,112)	$0	($4,215,112)
Effectiveness Monitoring	$0	$1,076,734	$0	$0	$1,076,734
Countywide Corridor Plan Implementation	$0	$0	$0	$0	$0
Countywide Miscellaneous	$0	$0	$0	$130,000	$130,000
Opportunity Fund	$0	$0	$5,738,670	$0	$5,738,670
Grant Fund	$0	$0	$3,085,306	$0	$3,085,306
WRIA Grant Funding	$0	$0	$4,520,525	$0	$4,520,525
Total	**$12,496,986**	**$14,137,803**	**$26,732,137**	**$130,000**	**$53,496,926**

King County Flood Control District

2018 - 2023 Six-Year CIP

Attachment E

11/8/17

Name	2016 Actual	2017 Adopted	2017 Revised	2018 Proposed	2019	2020	2021	2022	2023	2018 - 2023 Total
Snoqualmie River Basin	$4,657,372	$14,290,160	31,329,613	11,966,181	14,808,594	9,598,805	10,670,673	6,936,434	1,626,623	55,607,311
Cedar River Basin	$10,326,041	$9,141,721	17,105,947	13,328,687	12,471,379	13,360,453	3,789,266	1,822,991	264,189	45,036,965
Green River Basin	$9,930,760	$13,733,899	36,652,024	16,786,577	24,240,873	35,235,873	8,470,123	14,106,122	16,900,298	115,739,866
White River Basin	$8,611,198	$5,607,473	13,385,203	1,079,358	1,989,187	7,887,849	5,797,495	69,556	200,000	17,023,445
Seattle Projects	$223,029	$3,810,756	5,214,392	(4,215,112)	1,550,000	6,173,781	-	-	-	3,508,669
Effectiveness Monitoring	$177,652	$357,399	601,785	1,076,734	702,778	830,323	813,940	767,476	510,698	4,701,949
Countywide Corridor Plan Imp	$0	$0	142,610	-	-	-	-	-	27,000,000	27,000,000
Countywide Miscellaneous	$178,231	($274,646)	630,192	130,000	382,600	385,252	387,957	390,716	393,531	2,070,056
Subregional Opportunity Func	$4,346,649	$5,743,771	16,644,808	5,738,670	5,879,852	6,012,856	6,144,060	6,275,827	6,408,245	36,459,510
Flood Reduction Grants	$1,936,697	$3,058,908	9,014,771	3,085,306	3,161,211	3,232,718	3,303,258	3,374,100	3,445,293	19,601,886
WRIA Grants	$1,868,625	$4,390,296	11,750,781	4,520,525	4,654,617	4,792,687	4,934,853	5,081,235	5,231,960	29,215,878
Total	$42,256,253	59,859,737	142,472,126	53,496,926	69,841,091	87,510,597	44,311,625	38,824,458	61,980,837	355,965,534

King County Flood Control District

2018 Annual District Oversight Budget

Attachment F

11/8/17

	2017 Adopted	2017 Revised	2018 Proposed
Management & Support	$273,645	$273,645	$281,855
Rent and Equipment	$11,593	$11,593	$11,940
Legal Services	$95,061	$95,061	$97,913
Accounting	$97,718	$97,718	$100,650
State Auditor	$19,570	$19,570	$20,157
Other Professional Services	$92,700	$92,700	$175,481
Expenses	$17,389	$17,389	$17,911
Insurance	$84,414	$84,414	$86,946
Total	**$692,090**	**$692,090**	**$792,853**

King County Flood Control District

2018 Subregional Opportunity Fund Allocations

Attachment G

11/8/17

Jurisdiction	Opportunity Fund Allocation	Project Name	Project Description
Algona	$10,000	Algona Stormwater System Repair	Replacing rotted out stormwater pipe where needed
Auburn	$94,016	DEFERRING	
Beaux Arts	$10,000	DEFERRING	
Bellevue	$603,506	Meydenbauer Basin/NE 8th St. & 100th Ave Conveyance Improvement	Amendment adding budget to project that will reduce the flooding frequency at this intersection.
Black Diamond	$10,000	DEFERRING	
Bothell	$58,737	Blythe Park Sediment Reduction and Source Control for Blythe Creek Phase II	Complete 90% design and obtain needed permits for a sediment catchment pond and up stream sediment control measures.
Burien	$69,268	DEFERRING	
Carnation	$10,000	DEFERRING	
Clyde Hill	$28,639	Storm Drainage Retrofits	Amendment adding budget to complete four storm drainage improvement projects in the City.
Covington	$27,174	Timberlane-Jenkins Stormwater LID	Retrofit of stormwater facilities in drainage easement areas within Timberlane Estates.
Des Moines	$39,355	DEFERRING	
Duvall	$12,980	DEFERRING	
Enumclaw	$15,030	Battersby Avenue Culvert Replacement	Replace failing culvert that crosses under Battersby Avenue (SE 440th St.)
Federal Way	$115,813	DEFERRING	
Hunts Point	$13,095	2018 Operation & Maintenance	Cleaning and cameraing of existing storm system.
Issaquah	$109,676	DEFERRING	
Kenmore	$47,964	DEFERRING	
Kent	$190,352	Lake Fenwick Aerator Upgrade	Complete design and construction of an upgraded aerator to reduce hazardous algae blooms in the lake.
King County	$487,648	Fairwood Park 11 Pipe Replacement	Remove existing conveyance system of a stormwater facility and replace with a concrete box culvert that will provide fish passage.
Kirkland	$276,229	DEFERRING	
Lake Forest Park	$33,090	DEFERRING	
Maple Valley	$40,775	DEFERRING	
Medina	$45,695	Medina Park Stormwater Pond Improvements	Amendment adding budget to complete permitting, removing organic sediment, and installing outlet control device in upper pond.
Mercer Island	$152,234	Lincoln Landing Stormwater & Park Improvements	Construct stormwater, shoreline and park improvements currently in design at Lincoln Landing, a street end park on the north shore of Mercer Island.
Milton	$10,000	DEFERRING	
Newcastle	$33,298	DEFERRING	
Normandy Park	$18,103	Phase 4 Stormwater Management Control	Map existing stormwater conveyance system conditions into GIS database. This will include researching existing utility easements.
North Bend	$14,358	DEFERRING	
Pacific	$10,000	DEFERRING	
Redmond	$211,556	1. Overlake Regional Infiltration Vault 2. Bear Creek Modeling and Avondale Embankment Protection	1. Install infiltration vault to fully retrofit the Overlake urban center with flow control that will reduce or eliminate flooding downstream. 2. Create an updated HEC-RAS model of Bear Creek and conduct an alternatives analysis for embankment protection along Avondale Road.
Renton	$177,949	Cedar River Gravel Removal	Implement Maintenance and Monitoring Plan.
Sammamish	$181,741	Zackuse Creek Fish Passage	Amendment adding budget to replace an undersized culvert and restore and realign 200 feet of Zackuse Creek.
SeaTac	$38,619	DEFERRING	
Seattle	$2,278,511	Thornton Creek Natural Drainage System Stormwater Conveyance	Provide conveyance improvements, stormwater controls, and water quality treatment to improve the Thornton Creek watershed and provide needed drainage infrastructure.
Shoreline	$111,004	Pump Stations 26 and 30 Improvements (Pre-Design)	Evaluate options to replace City of Shoreline Stormwater Pump Stations.
Skykomish	$10,000	DEFERRING	
Snoqualmie	$29,818	DEFERRING	
Tukwila	$60,070	Tukwila 205 Levee Certification - Phase 3	Perform the third phase of a levee certification study for the Tukwila 205 Levee.
Woodinville	$38,586	DEFERRING	
Yarrow Point	$13,780	2018 Operation & Maintenance	Cleaning and cameraing of existing storm system and installation of ~300 linear feet of thickened edge.
Jurisdiction Totals	$5,738,669		

Deferrals	$1,053,845
Projects	$4,684,824

King County Flood Control District

2018 - 2023 Six-Year CIP Project Allocations
Attachment H
11/8/17

2015-2016 Flood Damage Repairs
Grant/External Funding
Cost Share
2017 Mid-Year Revision
King County Road Services Division Projects

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
1	WLFL0 MILLER R RD RVTMNT 2016 REPAIR	SF Skykomish	WLR Const	$1,409	$760,799	$759,390	($334,425)	$0	$0	$0	$0	$0	($334,425)	$426,374	Damage to revetment. Very large rock removed from revetment, vertical banks and exposed subgrade in several locations totaling approximately 350 feet of damage. If not repaired, Miller River Road could be severely damaged.
2	WLFL0 SKYKOMISH HOME BUYOUTS	SF Skykomish	WLR Acqu/Elev	$380	$380	$0	$0	$0	$0	$0	$0	$0	$0	$380	Acquisition of at-risk single family homes in the Town of Skykomish.
3	WLFL0 SF SKYKMSH REP LOSS MIT	SF Skykomish	WLR Acqu/Elev	$295,404	$690,838	$395,434	$54,566	$0	$0	$0	$0	$119,405	$173,971	$864,809	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.
4	WLFL0 SKY W RVR DR FLOOD STUDY	SF Skykomish	WLR Const	$2,475	$81,237	$78,762	$0	$0	$0	$0	$0	$0	$0	$81,237	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.
5	WLFL0 SKYKOMISH LB DOWN 2016 REPAIR	SF Skykomish	WLR Const	$61,767	$150,000	$88,233	$0	$0	$0	$0	$0	$0	$0	$150,000	Approximately 50-foot-long section of missing armor rock immediately downstream of the bridge. Further flooding may compromise or severely damage facility.
6	WLFL0 SKYKOMISH LB UP 2016 REPAIR	SF Skykomish	WLR Const	$7,658	$309,433	$301,775	$0	$0	$0	$0	$0	$0	$0	$309,433	Three pockets of missing armor rock: 15, 10 and 75 feet wide and eroded topsoil from upper sections of levee. Further flooding may compromise or severely damage facility.
7	WLFL0 TIMBER LN EROSN BUYOUTS	SF Skykomish	WLR Acqu/Elev	$1,571,273	$2,586,513	$1,015,240	$223,361	$0	$0	$0	$0	$0	$223,361	$2,809,874	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.
8	WLFL0 TIMBERLANE 2016 REPAIR	SF Skykomish	WLR Const	$11,040	$52,500	$41,460	($36,460)	$20,000	$20,000	$20,000	$20,000	$0	$43,540	$96,040	Old privately built facility in Timberlane Village on County property. Riverside rockery walls continue to oversteepen, settle and fall into the river.
9	WLFL1 428TH AVE SE BR FEASIBILITY	Upper Snoq	WLR Const	$169,614	$300,000	$131,386	($31,386)	$0	$0	$0	$0	$0	($31,386)	$268,614	FCD-requested project to 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.
10	WLFL1 USACE PL 84-99 SF SNO	Upper Snoq	WLR Const	$0	$0	$0	$150,223	$183,154	$352,868	$363,454	$0	$0	$1,049,698	$1,049,698	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.
11	WLFL1 SF SNO LEVEE REMEDIATION	Upper Snoq	WLR Const	$0	$0	$0	$295,673	$374,439	$727,790	$749,623	$0	$0	$2,147,526	$2,147,526	Six levee deficiencies have been identified in this leveed segment. The project will design and reconstruct the impaired segment of levee in place.
12	WLFL1 RIBARY CREEK	Upper Snoq	WLR Const	$0	$0	$0	$0	$636,492	$815,106	$2,338,618	$2,408,777	$0	$6,198,993	$6,198,993	Address flooding from Ribary Creek at Bendigo Blvd in North Bend as the Snoqualmie levees prevent drainage to the river during high flows.
13	WLFL1 REIF RD LEVEE IMPROVEMENTS	Upper Snoq	WLR Const	$0	$0	$0	$0	$0	$265,438	$318,421	$385,937	$457,218	$1,427,015	$1,427,015	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.
14	WLFL1 CIRCLE RVR RANCH RISK RED	Upper Snoq	WLR Const	$64,225	$150,000	$85,775	$278,505	$513,429	$1,608,159	$1,738,003	$0	$0	$4,138,093	$4,288,093	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.
15	WLFL1 MASON THRSN EXT 2016 REPAIR	Upper Snoq	WLR Const	$0	$240,000	$240,000	$0	$0	$0	$0	$0	$0	$0	$240,000	Large scour hole in bank at upstream end of Mason Thorson Extension rock-faced levee. Significant settlement and displacement of face rock at upstream end of facility. Scour hole in bank threatens to end-run facility and damage adjacent private property. Damage to levee face-rock compromises levee integrity and may lead to progressive failure, especially at upstream end.
16	WLFL1 MF SNO CORRIDOR IMP	Upper Snoq	WLR Const	$954	$1,100,000	$1,099,046	$0	$2,243,361	$1,591,350	$1,311,272	$0	$0	$5,145,983	$6,245,983	Placeholder for corridor plan implementation project(s)
17	WLFL1 MF SNO CORRIDOR PLAN	Upper Snoq	WLR Const	$1,310,605	$1,824,912	$514,307	$0	$0	$0	$0	$0	$0	$0	$1,824,912	Middle Fork Snoqualmie Corridor Planning, scheduled for completion in 2018.
18	WLFL1 NORTH FORK BRIDGE 2016 REPAIR	Upper Snoq	WLR Const	$111	$385,000	$384,889	$0	$0	$0	$0	$0	$0	$0	$385,000	The North Fork Bridge was originally built in 1951 and is extreamely 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.
19	WLFL1 REIF RD 2016 REPAIR	Upper Snoq	WLR Const	$0	$253,000	$253,000	$0	$0	$0	$0	$0	$0	$0	$253,000	Length 50-60 feet. Face rock has appeared to have settled 1-2 feet exposing core material above near upper part of levee face. Larger face rock missing in pockets upstream end of this damage site. Continued damage could compromise facility which provides flood protection for several residences landward of the facility.
20	WLFL1 REINIG RD RVTMNT 2016 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$1,500,000	$0	$0	$0	$0	$0	$1,500,000	$1,500,000	Repair three primary damage sites just upstream and directly across from the South Fork Snoqualmie confluence totalling ~285 lineal feet.
21	WLFL1 RECORD OFFICE 2016 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$350,000	$421,000	$0	$0	$0	$0	$771,000	$771,000	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.
22	WLFL1 SF SNO CORR EARLY ACTION	Upper Snoq	WLR Const	$1,373,089	$5,562,744	$4,189,655	($4,039,655)	$0	$0	$0	$0	$0	($4,039,655)	$1,523,089	Project identified by Board to alleviate potential flooding of I-90 in North Bend. Currently evaluating project alternatives, including levee setback and gravel removal.
23	WLFL1 SF SNO CORRIDOR IMP	Upper Snoq	WLR Const	$0	$130,771	$130,771	($57,971)	$0	$0	$0	$0	$0	($57,971)	$72,800	Placeholder for corridor plan implementation project(s)
24	WLFL1 SF SNO CORRIDOR PLAN	Upper Snoq	WLR Const	$2,472,914	$2,682,914	$210,000	$0	$0	$0	$0	$0	$0	$0	$2,682,914	SF Snoqualmie Corridor planning process and development of capital investment strategy.
25	WLFL1 SHAKE MILL LB 2016 REPAIR	Upper Snoq	WLR Const	$0	$800,000	$800,000	($200,000)	$923,239	$0	$0	$0	$0	$723,239	$1,523,239	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.
26	WLFL1 SHAKE MILL RB 2016 REPAIR	Upper Snoq	WLR Const	$0	$197,500	$197,500	$172,899	$447,676	$0	$0	$0	$0	$620,575	$818,075	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 5-10 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).
27	WLFL1 SI VIEW RM4 2017 REPAIR	Upper Snoq	WLR Const	$0	$0	$0	$209,000	$0	$0	$0	$0	$0	$209,000	$209,000	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.
28	WLFL1 SR202 SF BRIDGE LENGTHEN	Upper Snoq	WLR Const	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	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 CRK BRIDGE FEASIBILITY	Upper Snoq	Agreement	$0	$0	$0	$0	$0	$0	$0	$0	$150,000	$150,000	$150,000	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	WLR Const	$5,673	$1,465,673	$1,460,000	$15,450	$0	$0	$0	$0	$0	$15,450	$1,481,123	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	WLR Acqu/Elev	$9,163,547	$11,971,284	$2,807,737	$1,454,155	$2,412,151	$2,484,516	$2,559,051	$2,635,823	$0	$11,545,699	$23,516,983	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 Cities of Snoqualmie and North Bend. As of May 2016 260 remain to be elevated or acquired. This amount assumes 10-12 home elevations per year.
32	WLFL2 DUTCHMAN RD REPAIR	Lower Snoq	WLR Const	$0	$209,914	$209,914	$338,679	$0	$0	$0	$0	$0	$338,679	$548,593	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.
33	WLFL2 DUVALL BRIDGE 1136A	Lower Snoq	Agreement	$0	$30,000	$30,000	$120,000	$0	$0	$0	$0	$0	$120,000	$150,000	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.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
34	WLFL2 FARM FLOOD TSK FORCE IMP	Lower Snoq	WLR Const	$668,348	$763,759	$95,411	$111,658	$115,214	$118,870	$122,230	$125,897	$0	$593,869	$1,357,628	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.
35	WLFL2 L SNO REP LOSS MITGTION	Lower Snoq	WLR Acqu/Elev	$1,269,231	$1,712,699	$443,468	($17,028)	$0	$0	$0	$0	$0	($17,028)	$1,695,671	Funding as possible local match for FEMA grants to elevate or acquire at-risk structures.
36	WLFL2 L SNO/ALDAIR CORRIDOR PLN	Lower Snoq	WLR Const	$5,644,814	$7,252,761	$1,607,947	$113,053	$742,630	$655,636	$0	$0	$0	$1,511,319	$8,764,080	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.
37	WLFL2 LWR SNO RESDL FLD MITGTN	Lower Snoq	WLR Acqu/Elev	$1,927,117	$3,306,276	$1,379,159	($27,959)	$737,924	$0	$0	$0	$0	$709,965	$4,016,241	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.
38	WLFL2 SE 19TH WAY REVETMENT	Lower Snoq	WLR Const	$292,549	$1,706,294	$1,413,745	$0	$0	$0	$0	$0	$0	$0	$1,706,294	Rebuild revetment to protect road access to high value agricultural operations and lands. Construction of road anticipated 2017; bank repair anticipated in 2018.
39	WLFL2 SE DAVID POWELL RD DOWNSTREAM	Lower Snoq	WLR Const	$149,535	$1,036,456	$886,921	$0	$0	$0	$0	$0	$0	$0	$1,036,456	FCD-requested project to reduce neighborhood isolation from flooding. Prevent slope failure of sole access roadway that would isolate 150 homes.
40	WLFL2 SE DAVID POWELL RD UPSTREAM	Lower Snoq	Agreement	$0	$250,000	$250,000	$700,000	$1,250,000	$0	$0	$0	$0	$1,950,000	$2,200,000	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.
41	WLFL2 SE FISH HATCHERY RD	Lower Snoq	WLR Const	$124,843	$527,905	$403,062	$0	$0	$0	$0	$0	$0	$0	$527,905	FCD-requested project to reduce neighborhood isolation from flooding. Prevent slope failure of sole acces roadway that would isolate 20-30 homes.
42	WLFL2 SINNEMA QUAALE 2011 REPR	Lower Snoq	WLR Const	$11,974,543	$12,508,516	$533,973	$0	$0	$0	$0	$0	$0	$0	$12,508,516	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 to be completed in 2017; project anticipated to be closed out in 2018.
43	WLFL2 SNOQUALMIE VALLEY FEASIBILITY	Lower Snoq	Agreement	$0	$0	$0	$0	$0	$0	$250,000	$250,000	$0	$500,000	$500,000	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.
44	WLFL2 TOLT PIPELINE PROTECTION	Lower Snoq	WLR Const	$1,515,788	$3,271,375	$1,755,587	$6,162,541	$42,436	$0	$0	$0	$0	$6,204,977	$9,476,352	This project will repair approximately 600 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 anticipated 2017.
45	WLFL2 WOODINVILLE-DUVALL BR 1136B/1136E	Lower Snoq	Agreement	$0	$100,000	$100,000	$300,000	$0	$0	$0	$0	$0	$300,000	$400,000	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.
46	WLFL3 FREW LEVEE 2016 REPAIR	Tolt	WLR Const	$0	$150,000	$150,000	$102,000	$0	$0	$0	$0	$0	$102,000	$252,000	Face rock displaced along approximately 50 feet of levee face. Some core material appears to have been lost, resulting in an oversteepened 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.
47	WLFL3 GIRL SCOUT LEVEE 2016 REPAIR	Tolt	WLR Const	$0	$60,000	$60,000	$251,000	$0	$0	$0	$0	$0	$251,000	$311,000	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.
48	WLFL3 HOLBERG FEASIBILITY	Tolt	WLR Const	$0	$200,000	$200,000	$0	$0	$0	$0	$0	$0	$0	$200,000	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
49	WLFL3 LOWER FREW LEVEE SETBACK	Tolt	WLR Const	$0	$175,000	$175,000	$1,236,000	$1,823,962	$0	$0	$0	$0	$3,059,962	$3,234,962	Capital Investment Strategy: Design, based on level of service analysis, the highest priority levee setback for flood risk reduction. FCD 6-year includes funds needed for grant match for future grant applications.
50	WLFL3 LOWER TOLT RIVER ACQUISITION	Tolt	WLR Acqu/Elev	$529,475	$744,475	$215,000	$0	$0	$0	$0	$0	$0	$0	$744,475	Acquisition between the Swiftwater development and the river for the future setback of the Upper Frew Levee.
51	WLFL3 RIO VISTA PROPERTY ACQ	Tolt	WLR Acqu/Elev	$0	$0	$0	$500,000	$0	$0	$0	$0	$0	$500,000	$500,000	Capital Investment Strategy: Acquire 2 at-risk homes from willing sellers; acquire remaining 14 homes as funds become available.
52	WLFL3 SAN SOUCI NBRHOOD BUYOUT	Tolt	WLR Acqu/Elev	$4,127,591	$5,553,253	$1,425,662	$0	$0	$0	$0	$0	$0	$0	$5,553,253	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. When completed, will result in removing approximately 20 homes from high hazard areas within and just upstream and downstream of San Souci neighborhood.
53	WLFL3 SAN SOUCI REACH IMPRVMNTS	Tolt	WLR Const	$0	$0	$0	$100,000	$250,000	$700,000	$700,000	$750,000	$0	$2,500,000	$2,500,000	Capital Investment Strategy: Construct Tolt Road NE road elevation in one location. Remove illegal revetment and roads in San Souci neighborhood.
54	WLFL3 SEDIMENT MGMT FEAS	Tolt	WLR Const	$0	$0	$0	$209,605	$205,284	$0	$0	$0	$0	$414,889	$414,889	Capital Investment Strategy: Conduct sediment management feasibility study and develop a plan. Update and include upper watershed sediment production estimates.
55	WLFL3 SR 203 BR IMPRVMNTS FEAS	Tolt	WLR Const	$0	$0	$0	$205,743	$181,306	$0	$0	$0	$0	$387,049	$387,049	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.
56	WLFL3 REMLINGER LEVEE 2017 REPAIR	Tolt	WLR Const	$0	$0	$0	$311,000	$0	$0	$0	$0	$0	$311,000	$311,000	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.
57	WLFL3 TOLT 2015 FLOOD REPAIRS	Tolt	WLR Const	$46,790	$900,000	$853,210	$0	$0	$0	$0	$0	$0	$0	$900,000	Flood damage repairs from January 2015 flood event. Locations include Frew, Upper Frew, Remlinger, and Girl Scout Camp.
58	WLFL3 TOLT CORRIDOR IMPLMNTN	Tolt	WLR Const	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Placeholder for corridor plan implementation project(s).
59	WLFL3 TOLT CORRIDOR PLAN	Tolt	WLR Const	$958,717	$1,153,657	$194,940	$0	$0	$0	$0	$0	$0	$0	$1,153,657	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.
60	WLFL3 TOLT R LEVEE LOS ANALYSIS	Tolt	WLR Const	$0	$150,000	$150,000	$403,250	$150,000	$0	$0	$0	$0	$553,250	$703,250	Capital Investment Strategy: Conduct a detailed hydraulic analysis to optimize the elevation of new levees to maximize flood risk reduction benefits.
61	WLFL3 TOLT R MILE 1.1 SETBACK	Tolt	WLR Acqu/Elev	$4,097,106	$5,484,360	$1,387,254	($578,254)	$530,450	$0	$0	$0	$0	($47,804)	$5,436,556	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.
62	WLFL3 TOLT R NATURAL AREA ACQ	Tolt	WLR Acqu/Elev	$1,140,067	$2,470,067	$1,330,000	$515,000	$530,450	$109,273	$0	$0	$0	$1,154,723	$3,624,790	Capital investment strategy: acquire at-risk homes from willing sellers.
63	WLFL3 TOLT R RD ELEVATION FEASIBILITY	Tolt	WLR Const	$0	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$0	$250,000	FCD-requested project to reduce neighborhood isolation from flooding. Evaluate feasibility of elevating sections of Tolt River Road.
64	WLFL3 TOLT R RD NE IMPROVEMENTS	Tolt	WLR Const	$0	$0	$0	$0	$0	$50,000	$100,000	$210,000	$800,000	$1,160,000	$1,160,000	Capital Investment Strategy: Initiate design for elevation of one road location to reduce or eliminate isolation. Implement additional road elevations as funds become available.
65	WLFL3 UPPER FREW LEVEE SETBACK	Tolt	WLR Const	$0	$0	$0	$0	$0	$100,000	$100,000	$150,000	$0	$350,000	$350,000	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.
66	WLFL4 ALPINE MANOR NEIGHBORHOOD BUYOUTS	Raging	WLR Acqu/Elev	$1,715,652	$2,280,652	$565,000	$405,755	$0	$0	$0	$0	$0	$405,755	$2,686,407	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.
67	WLFL4 RAGING MOUTH TO BR 2017 REPAIR	Raging	WLR Const	$0	$0	$0	$500,000	$74,000	$0	$0	$0	$0	$574,000	$574,000	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.
68	WLFL4 RAGING R BRIDGE 1008E	Raging	Agreement	$0	$80,000	$80,000	$0	$0	$0	$0	$0	$0	$0	$80,000	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.
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72	WLFL5 NE 8TH ST AT LAKE ALLEN OUTLET	Sammamish	Agreement	$0	$0	$0	$0	$0	$400,000	$1,400,000	$1,000,000	$0	$2,800,000	$2,800,000	To address chronic flooding on this sole access roadway with approximately 200 properties, look at upstream and downstream retention/detention options; study road-raising options; prepare Concept Development Report, analyze and select best options.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
73	WLFL5 SAMMAMISH R BANK REPAIRS	Sammamish	WLR Const	$106,050	$419,895	$313,845	$721,929	$0	$0	$0	$0	$0	$721,929	$1,141,824	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.
74	WLFL5 WILLOWMOOR FLDPLAIN REST	Sammamish	WLR Const	$1,405,468	$2,717,923	$1,312,455	($181,655)	$1,684,709	$2,011,665	$0	$0	$0	$3,514,719	$6,232,642	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.
75	WLFL6 LOWER COAL CRK PH I	Lk Wash Tribs	Agreement	$1,504,751	$3,958,751	$2,454,000	$5,595,000	$4,159,000	$145,000	$120,000	$100,000	$66,000	$10,185,000	$14,143,751	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.
76	WLFL6 MAY VALLEY DRAINAGE IMPRVMNT	Lk Wash Tribs	WLR Const	$0	$0	$0	$80,000	$0	$0	$0	$0	$0	$80,000	$80,000	As recommended in the May Creek Basin Plan, two sediment trap facilities will be evaluated to limit sediment loading from two May Creek tributaries. Both projects would require land acquisition, whether easement or property purchase.
77	WLFL6 FIFTEENMILE CRK BRIDGE 493C	Lk Wash Tribs	Agreement	$0	$0	$0	$150,000	$0	$0	$0	$0	$0	$150,000	$150,000	Feasibility analysis to identify potential solutions to bank erosion and backwatering problems at bridge.
78	WLFL7 CDR PRE-CONST STRTGC ACQ	Cedar	WLR Acqu/Elev	$2,532,848	$4,330,532	$1,797,684	$0	$0	$0	$0	$0	$0	$0	$4,330,532	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.
79	WLFL7 CEDAR LEVEE SETBACK FEAS (Cedar Corridor Plan)	Cedar	WLR Const	$1,624,424	$1,987,587	$363,163	$0	$0	$0	$0	$0	$0	$0	$1,987,587	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. Completion of this plan is expected in September 2016.
80	WLFL7 CEDAR R REP LOSS MITGATN	Cedar	WLR Acqu/Elev	$3,182,250	$3,788,422	$606,172	$0	$0	$0	$0	$0	$0	$0	$3,788,422	Acquire frequently-flooded homes. Placeholder funding until District adopts acquisition policy.
81	WLFL7 CEDAR RIVER TRAIL SITE A BANK	Cedar	WLR Const	$0	$0	$0	$0	$100,000	$100,000	$200,000	$490,000	$0	$890,000	$890,000	Capital Investment Strategy: Repair eroded section of left bank with bioengineered revetment to stabilize toe of bank and to prevent large scale bank failure.
82	WLFL7 CEDAR RVR GRAVEL REMOVAL	Cedar	Agreement	$8,480,221	$11,102,885	$2,622,664	$0	$962,613	$104,880	$445,679	$111,267	$114,605	$1,739,044	$12,841,929	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.
83	WLFL7 CITY OF RENTON LEVEE CERTIFICATION	Cedar	Agreement	$0	$0	$0	$750,000	$3,000,000	$1,250,000	$0	$0	$0	$5,000,000	$5,000,000	Placeholder for Renton levee certification projects.
84	WLFL7 ELLIOTT BR LEVEE SETBACK	Cedar	WLR Const	$2,168,073	$2,175,408	$7,335	($7,335)	$0	$0	$0	$0	$0	($7,335)	$2,168,073	Purpose of the project is to setback levees on both sides of the river below the Elliott/154th ST Bridge. Based on the Cedar Capital Investment Strategy this project is no longer scheduled for the near-term 6-year timeframe.
85	WLFL7 FBD CORRIDOR IMPLEMENTATION	Cedar	WLR Acqu/Elev	$932,547	$5,705,500	$4,772,953	$806,284	$0	$0	$0	$0	$0	$806,284	$6,511,784	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
86	WLFL7 HERZMAN LEVEE SETBACK AND TRAIL	Cedar	WLR Const	$0	$0	$0	$944,872	$226,184	$3,979,360	$78,786	$81,148	$83,584	$5,393,935	$5,393,935	Capital Investment Strategy: Setback levee; excavate side-channel to reduce pressure on revetment; reconstruct, reinforce and/or extend revetment; acquire up to 5 properties.
87	WLFL7 JAN ROAD NEIGHBORHOOD	Cedar	WLR Const	$0	$0	$0	$900,000	$0	$0	$0	$0	$0	$900,000	$900,000	Capital Investment Strategy: Suite of solutions to be determined as part of feasibility study. Includes raise road, partial removal of Jan Road levee, contruction of side channel, and mitigation of at-risk properties.
88	WLFL7 RAINBOW BEND LEVEE STBCK	Cedar	WLR Const	$2,104,185	$2,213,285	$109,100	$0	$0	$0	$0	$0	$0	$0	$2,213,285	This project represents the Flood District contribution to a larger project to remove the Rainbow Bend levee in order to slow flood velocities
89	WLFL7 LOWER CEDAR FEASIBILITY STUDY	Cedar	WLR Const	$0	$0	$0	$200,000	$200,000	$100,000	$0	$0	$0	$500,000	$500,000	Capital Investment Strategy: Conduct feasibility study of Lower Cedar reach in City of Renton to 1) quantify economic damage potential 2) determine infrastructure modifications to improve flood resiliency and sediment storage potential, and 30 conduct cost-benefit analysis.
90	WLFL7 LOWER JONES ROAD NEIGHBORHOOD	Cedar	WLR Const	$0	$36,000	$36,000	$3,057,792	$1,738,873	$4,569,548	$1,544,801	$40,575	$0	$10,951,589	$10,987,589	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
91	WLFL7 MAPLEWOOD FEASIBILITY STUDY	Cedar	WLR Const	$0	$440,000	$440,000	$0	$0	$0	$0	$0	$0	$0	$440,000	Capital Investment Strategy: Conduct site specific landslide risk assessment study; conduct a feasibility study to evaluate opportunities to modify the Erickson Levee.
92	WLFL7 RIVERBEND MHP ACQ	Cedar	WLR Const	$3,496,466	$5,357,042	$1,860,576	$0	$0	$0	$0	$0	$0	$0	$5,357,042	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.
93	WLFL7 SE 162ND AVE AT 208TH CT	Cedar	Agreement	$0	$150,000	$150,000	$250,000	$400,000	$700,000	$0	$0	$0	$1,350,000	$1,500,000	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.
94	WLFL7 SR 169 FEASIBILITY STUDY	Cedar	WLR Const	$0	$260,000	$260,000	$61,800	$0	$0	$0	$0	$0	$61,800	$321,800	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.
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98	WLFL8 BRISCOE LEVEE SETBACK	Green	Agreement	$21,361,073	$23,330,271	$1,969,198	$0	$0	$0	$0	$0	$0	$0	$23,330,271	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.
99	WLFL8 BRPS BLACK R PUMP STATION	Green	WLR Const	$5,134,042	$5,374,203	$240,161	($229,161)	$0	$0	$0	$0	$0	($229,161)	$5,145,042	Expenditures here include sediment removal, fuel system upgrades, life-cycle efficiency analysis to inform future upgrades, and priority items from recently completed needs assessment (2015). New line items established below to account for discrete project elements
100	WLFL8 BRPS CONTROL BLDG RPLCMT	Green	WLR Const	$0	$50,000	$50,000	$480,368	$1,554,622	$7,577,624	$25,887	$0	$0	$9,638,501	$9,688,501	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.
101	WLFL8 BRPS FISH PASS IMPRVMNTS	Green	WLR Const	$0	$0	$0	$0	$0	$0	$831,751	$2,241,456	$6,316,655	$9,389,862	$9,389,862	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.
102	WLFL8 BRPS HIGH-USE ENGINES	Green	WLR Const	$0	$252,900	$252,900	$221,179	$1,414,074	$25,133	$0	$0	$0	$1,660,386	$1,913,286	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.
103	WLFL8 BRPS SUPPORT SYS UPGRADES	Green	WLR Const	$0	$0	$0	$0	$175,261	$822,168	$779,584	$26,663	$0	$1,803,676	$1,803,676	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.
104	WLFL8 DESIMONE USACE 2015	Green	Agreement	$1,634,698	$2,563,620	$928,922	($923,922)	$0	$0	$0	$0	$0	($923,922)	$1,639,698	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
105	WLFL8 DYKSTRA USACE 2015	Green	Agreement	$638,356	$692,856	$54,500	$6,695	$0	$0	$0	$0	$0	$6,695	$699,551	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
106	WLFL8 GREEN R PL84-99 MITIGATN	Green	WLR Const	$3,668,478	$4,043,988	$375,510	$1,616,554	$52,000	$25,000	$25,000	$0	$0	$1,718,554	$5,762,542	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.
107	WLFL8 GREEN PRE-CONST ACQ	Green	WLR Acqu/Elev	$0	$0	$0	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$30,000,000	$30,000,000	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.
108	WLFL8 HSB BREDA SETBACK	Green	WLR Const	$0	$1,755,000	$1,755,000	$2,522,674	$590,285	$2,427,136	$982,119	$0	$0	$6,522,214	$8,277,214	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.

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
109	WLFL8 HSB MCCOY REALIGNMENT	Green	WLR Const	$0	$400,000	$400,000	$0	$0	$0	$0	$0	$0	$0	$400,000	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 (oversteepened 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 1985 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.
110	WLFL8 HSB NURSING HOME SETBACK	Green	WLR Const	$0	$0	$0	$0	$0	$0	$100,000	$2,000,000	$500,000	$2,600,000	$2,600,000	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.
111	WLFL8 INTERIM SWIF IMPLEMENTATION	Green	WLR Const	$0	$30,000	$30,000	$0	$0	$0	$0	$0	$0	$0	$30,000	Coordination and planning activities to implement recommendations of interim SWIF. Maintenance work associated with the interim SWIF is included in the operating budget.
112	WLFL8 LOWER RUSSELL ACQ KENT	Green	Agreement	$0	$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$1,000,000	Acquisitions by the City of Kent for the Lower Russell levee setback project.
113	WLFL8 LWR GRN R CORRIDOR PLAN/EIS	Green	WLR Const	$0	$1,743,249	$1,743,249	$0	$0	$0	$0	$0	$0	$0	$1,743,249	Lower Green River Corridor Planning and Environmental Impact Statement.
114	WLFL8 LWR RUSSELL LEVEE SETBACK	Green	WLR Const	$6,041,888	$12,077,130	$6,035,242	$2,478,808	$13,910,520	$18,357,812	$63,028	$0	$0	$34,810,168	$46,887,298	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.
115	WLFL8 MILWAUKEE LEVEE #2-KENT	Green	Agreement	$10,768	$8,500,000	$8,489,232	$0	$0	$0	$0	$0	$0	$0	$8,500,000	Prepare an analysis and study of design and construction alternatives to provide flood protection, scour protection, enable levee certification and secure necessary land rights. Current ILA with Kent for this first phase is $3.65 million, the ILA assumes that the total project cost is $8.5 million. .
116	WLFL8 PATTON BRIDGE 2015	Green	Agreement	$0	$150,000	$150,000	$0	$0	$0	$0	$0	$0	$0	$150,000	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.
117	WLFL8 PORTER LEVEE	Green	WLR Const	$0	$720,000	$720,000	$0	$0	$0	$0	$0	$0	$0	$720,000	Contribute the cost of a repair ($720,000) to a $7 million levee setback project. By relocating the levee, 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.
118	WLFL8 REDDINGTON REACH SETBACK	Green	WLR Const	$16,564,851	$16,889,083	$324,232	$0	$0	$0	$0	$0	$0	$0	$16,889,083	Project expenditures will continue into 2017; closeout anticipated in 2018.
119	WLFL8 RUSSELL RD UPPER KENT	Green	Agreement	$8,020,673	$8,072,173	$51,500	$0	$0	$0	$0	$0	$0	$0	$8,072,173	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. Three segments of the Russell Road Upper Levee have over-steepened slopes and therefore lack adequate structural stability to provide adequate safety.
120	WLFL8 S 180TH ST BRIDGE FLOODWALL EXT	Green	Agreement	$0	$65,378	$65,378	$0	$0	$0	$0	$0	$0	$0	$65,378	The project will increase the height of a flood wall to provide approximately 30" of additional flood protection
121	WLFL8 S 277TH ST REVETMENT	Green	WLR Const	$90,528	$300,000	$209,472	$1,726,802	$1,428,198	$0	$0	$0	$0	$3,155,000	$3,455,000	This project will conduct a feasibility analysis of channel migration hazards from river mile 21.1 to 21.7. No design or construction funding at this time.
122	WLFL8 SE 360 PL AT SR 164	Green	Agreement	$0	$0	$0	$90,000	$100,000	$400,000	$100,000	$0	$0	$690,000	$690,000	This project will analyze culvert replacement and road-raising options and implement the preferred option.
123	WLFL8 SE 384 ST @ 178 AVE SE	Green	Agreement	$0	$0	$0	$0	$0	$0	$0	$150,000	$1,500,000	$1,650,000	$1,650,000	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.
124	WLFL8 SIGNATURE POINTE REVETMENT	Green	WLR Const	$0	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$0	$300,000	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.
125	WLFL8 TUK-205 RATOLO FLOODWALL	Green	WLR Const	$0	$0	$0	$0	$0	$0	$0	$1,500,000	$300,000	$1,800,000	$1,800,000	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.
126	WLFL8 TUK-205 SEGALE FLOODWALL	Green	WLR Const	$0	$0	$0	$0	$0	$801,000	$562,754	$3,188,003	$3,283,643	$7,835,400	$7,835,400	New project to implement interim SWIF adopted by Board of Supervisors. The Gaco portion of the Tukwila-205 levee between river mile 15.75 and 15.88 is over-steepened and damaged and cannot be adequately repaired using the existing easements. This project would acquire properties landward of the damaged levee to enable a levee setback and repair of the embankment and toe scour at this outside bend, in coordination with the Army Corps of Engineers PL 84-99 rehabilitation program.
127	WLFL8 TUK-205 USACE GACO REPAIR	Green	WLR Const	$44,246	$9,064,053	$9,019,807	$3,796,580	$15,913	$0	$0	$0	$0	$3,812,493	$12,876,546	500 feet of scour has exposed rock armor. No sign of armor loss. Interim SWIF capital project is for 0.33 miles of floodwall and toe/scour protection. Increased vulnerability to further scour and damage to facility.
128	WLFL8 USACE SWIF	Green	WLR Const	$2,209,817	$2,209,817	$0	$0	$0	$0	$0	$0	$0	$0	$2,209,817	Green River Corridor Planning (under System-Wide Improvement Framework agreement with Army Corps of Engineers)
129	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
130															
131															
132	WLFL9 BUTTE AVE FLOOD MITIGATION	White	Agreement	$0	$470,000	$470,000	$0	$0	$0	$0	$0	$0	$0	$470,000	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.
133	WLFL9 COUNTYLINE TO A STREET	White	WLR Const	$12,662,360	$24,004,419	$11,342,059	$0	$0	$0	$0	$0	$0	$0	$24,004,419	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.
134	WLFL9 RED CREEK ACQUISITIONS	White	WLR Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	Permanently eliminate the risk to public safety along this reach by acquiring and removing residential structure. Placeholder funding for appraisal and/or grant match dependent on landowner willingness.
135	WLFL9 RIGHT BANK LEVEE SETBACK	White	WLR Const	$10,578,055	$12,151,199	$1,573,144	$1,079,358	$1,989,167	$7,887,849	$5,797,495	$69,556	$0	$16,823,445	$28,974,644	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.
136	WLFL9 WHITE - GREENWATER ACQ	White	WLR Acqu/Elev	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	This project would acquire flood prone residence along the White River near the Greenwater River.
137	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
138															
139															
140	WLFL9 SOUTH PARK PUMPSTATION	Seattle	Agreement	$1,786,219	$6,001,331	$4,215,112	($4,215,112)	$0	$4,718,781	$0	$0	$0	$503,669	$6,505,000	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.
141	WLFL9 S PARK DRAINAGE IMPROVEMENTS	Seattle	Agreement	$720	$1,000,000	$999,280	$0	$1,550,000	$1,455,000	$0	$0	$0	$3,005,000	$4,005,000	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.
142	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0	$0	$0	[illegible]	[illegible]	
143															
144															
145	WLFLX CORRIDOR PLN DESIGN/CONST PLACEHOLDER	Countywide	WLR Const	$0	$142,610	$142,610	$0	$0	$0	$0	$0	$27,000,000	$27,000,000	$27,142,610	Placeholder for corridor plan implementation project(s)
146	[illegible]			$0	$142,610	$142,610	$0	$0	$0	$0	$0	$27,000,000	$27,000,000	$27,142,610	

No.	Title	Basin	Type of project	2016 Inception to Date Expenditure	2017 Revised Inception to Date Budget	2017 Available Budget	2018 Requested	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	6-Year CIP Total	Project Life Total	Comments
147															
148															
149	WLFLG FLOOD REDUCTION GRANTS	Countywide	Grant	$2,585,919	$11,600,690	$9,014,771	$3,085,306	$3,161,211	$3,232,716	$3,303,258	$3,374,100	$3,445,293	$19,601,886	$31,202,576	Competitive grant program for flood reduction projects. Increases as a proportion of total FCD tax revenue.
150	WLFLG WRIA GRANTS	Countywide	Grant	$11,348,474	$23,099,255	$11,750,781	$4,520,525	$4,654,617	$4,792,687	$4,934,853	$5,081,235	$5,231,960	$29,215,878	$52,315,133	Cooperative Watershed Management Grant Program; priorities recommended by watershed groups. Increase based on assumed inflation rate.
151	WLFLM EFFECTIVENESS MONITORING	Countywide	WLR Const	$1,616,734	$2,218,519	$601,785	$1,076,734	$702,778	$830,323	$813,940	$767,476	$510,698	$4,701,949	$6,920,468	Evaluation of capital projects to determine effectiveness and identify project design improvements.
152	WLFLO SUBREGNL OPPRTNTY FUND	Countywide	Grant	$27,038,460	$43,683,268	$16,644,808	$5,738,670	$5,879,852	$6,012,856	$6,144,060	$6,275,827	$6,408,245	$36,459,510	$80,142,778	Allocation to all King County jurisdictions for flooding, water quality, or watershed management projects. Increases as a proportion of total FCD tax revenue.
153	WLFLX CENTRAL CHARGES	Countywide	WLR Const	$652,217	$781,493	$129,276	$130,000	$132,800	$135,252	$137,957	$140,716	$143,531	$820,056	$1,601,549	Central charges related to the FCD's capital fund.
154	WLFLX FLOOD EMERGENCY CONTGNCY	Countywide	WLR Const	$300,001	$800,917	$500,916	$0	$250,000	$250,000	$250,000	$250,000	$250,000	$1,250,000	$2,050,917	Contingency for emergency response actions during a flood event.
155	Countywide Subtotal			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
156															
157	Grand Total			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	