

King County Flood Control District

2017 - 2022 Six-Year CIP Project Allocations  
Attachment H

11/2/16

New Flood Damage Repairs
Grant/External Funding
Cost Share
New Green R SWIF Projects
New Roads Division Projects

No.	Title	Flood Risk %	Implement %	Type of project	2015 Inception to Date Expenditure	2016 Revised Inception to Date Budget	2016 Available Budget	2017 Requested	2018 Projected	2019 Projected	2020 Projected	2021 Projected	2022 Projected	6-Year CIP Total	Project Life Total	Comments
1	WLFL0 MILLER R RD RVTMNT 2016 REPAIR	Repair	N/A	wlr	\$0	\$50,000	\$50,000	\$710,799	\$0	\$0	\$0	\$0	\$0	\$710,799	\$760,799	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 SKY W RVR DR FLOOD STUDY	63%	36%	wlr	\$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.
3	WLFL0 SF SKYKMSH REP LOSS MIT	74%	46%	acq	\$283,576	\$567,650	\$284,074	\$39,188	\$0	\$0	\$0	\$0	\$0	\$39,188	\$606,838	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 SKYKOMISH HOME BUYOUTS	66%	44%	acq	\$380	\$380	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$400,000	\$400,380	Acquisition of at-risk single family homes in the Town of Skykomish.
5	WLFL0 SKYKOMISH LB DOWN 2016 REPAIR	Repair	N/A	wlr	\$0	\$150,000	\$150,000	\$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	Repair	N/A	wlr	\$0	\$260,845	\$260,845	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$260,845	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	76%	46%	acq	\$1,267,483	\$2,354,445	\$1,086,962	\$232,068	\$656,729	\$0	\$0	\$0	\$0	\$888,797	\$3,243,242	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	Repair	N/A	wlr	\$0	\$52,500	\$52,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,500	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	FCD	FCD	wlr	\$3,369	\$300,000	\$296,631	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	FCD-requested project to reduce neighborhood isolation from flooding.
10	WLFL1 CIRCLE RVR RANCH RISK RED	N/A	N/A	wlr	\$64,225	\$150,000	\$85,775	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	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.
11	WLFL1 MASON THRSN EXT 2016 REPAIR	Repair	N/A	wlr	\$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.
12	WLFL1 MF SNO CORRIDOR IMP	76%	51%	wlr	\$0	\$1,100,000	\$1,100,000	\$0	\$508,830	\$391,776	\$1,244,138	\$3,325,350	\$0	\$5,470,094	\$6,570,094	Placeholder for corridor plan implementation project(s)
13	WLFL1 MF SNO CORRIDOR PLAN	76%	33%	wlr	\$1,303,295	\$1,824,912	\$521,617	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,824,912	Middle Fork Snoqualmie Corridor Planning, scheduled for completion in 2016.
14	WLFL1 N BEND RESID FLD MITGTN	76%	61%	acq	\$1,544,617	\$1,555,476	\$10,859	(\$10,859)	\$0	\$0	\$0	\$0	\$0	(\$10,859)	\$1,544,617	Project complete. Additional future mitigation work in the Upper Snoqualmie will be implemented under Upper Snoqualmie Residential Flood Mitigation project.
15	WLFL1 NORTH FORK BRIDGE 2016 REPAIR	Repair	N/A	wlr	\$0	\$385,000	\$385,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$385,000	The North Fork Bridge was originally built in 1951 and is extremely vulnerable to scour as the channel thalweg migrates. In order to keep the bridge safe and reliable during a flood, it is important to protect the piers and abutments from scour failure.
16	WLFL1 RECORD OFFCE 2011 REPAIR	Repair	N/A	wlr	\$302,452	\$302,452	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$302,452	Project complete. Requires minor budget adjustment to close out.
17	WLFL1 REIF RD 2016 REPAIR	Repair	N/A	wlr	\$0	\$50,000	\$50,000	\$179,950	\$0	\$0	\$0	\$0	\$0	\$179,950	\$229,950	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.
18	WLFL1 SHAKE MILL RB 2016 REPAIR	Repair	N/A	wlr	\$0	\$20,000	\$20,000	\$32,169	\$0	\$0	\$0	\$0	\$0	\$32,169	\$52,169	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).
19	WLFL1 SHAKE MILL LB 2016 REPAIR	Repair	N/A	wlr	\$0	\$100,000	\$100,000	\$700,000	\$0	\$0	\$0	\$0	\$0	\$700,000	\$800,000	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.
20	WLFL1 SF SNO CORR EARLY ACTION	95%	49%	wlr	\$1,199,706	\$3,562,744	\$2,363,038	\$2,000,000	\$2,433,511	\$8,098,380	\$150,000	\$0	\$0	\$12,681,891	\$16,244,635	Project identified by Board to alleviate potential flooding of I-90 in North Bend. Currently evaluating project alternatives, including levee setback and gravel removal.
21	WLFL1 SF SNO CORRIDOR IMP	95%	49%	wlr	\$0	\$130,771	\$130,771	\$0	\$1,946,796	\$2,608,109	\$2,289,843	\$383,693	\$0	\$7,228,441	\$7,359,212	Placeholder for corridor plan implementation project(s)
22	WLFL1 SF SNO CORRIDOR PLAN	79%	49%	wlr	\$2,336,181	\$2,621,454	\$285,273	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,621,454	SF Snoqualmie Corridor plan. Reallocate 2015 funding to corridor plan implementation project placeholders.
23	WLFL1 SR202 SF BRIDGE LENGTHEN	76%	26%	wlr	\$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.
24	WLFL1 UPPER SNOQ 2015 FLOOD REPAIR	Repair	N/A	wlr	\$0	\$700,000	\$700,000	\$0	\$302,981	\$0	\$0	\$0	\$0	\$302,981	\$1,002,981	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).
25	WLFL1 UPR SNO RES FLD MITGTN	89%	54%	acq	\$8,469,706	\$11,232,391	\$2,762,685	\$738,893	\$2,010,126	\$2,070,430	\$2,132,543	\$2,196,519	\$2,262,415	\$11,410,926	\$22,643,317	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.
26	WLFL2 DUTCHMAN RD REPAIR	Repair	N/A	wlr	\$0	\$0	\$0	\$209,914	\$355,136	\$0	\$0	\$0	\$0	\$565,050	\$565,050	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.
27	WLFL2 FARM FLOOD TSK FORCE IMP	58%	79%	wlr	\$555,159	\$720,937	\$165,778	\$42,822	\$102,000	\$104,040	\$106,121	\$108,243	\$110,408	\$573,634	\$1,294,571	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.
28	WLFL2 L SNO REP LOSS MITGTON	74%	21%	acq	\$1,268,702	\$1,712,699	\$443,997	\$0	\$222,862	\$0	\$0	\$0	\$0	\$222,862	\$1,935,561	Funding in out years intended as local match for FEMA grants.

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29	WLFL2 L SNO/ALDAIR CORRDR PLN	84%	97%	wlr	\$5,522,761	\$6,800,543	\$1,277,782	\$452,218	\$742,630	\$764,909	\$675,305	\$0	\$0	\$2,635,062	\$9,435,605	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.
30	<a href="#">WLFL2 LWR SNO RESDL FLD MITGTN</a>	FCD	FCD	acq	\$1,704,097	\$2,630,971	\$926,874	\$675,305	\$716,431	\$760,062	\$775,263	\$790,769	\$806,584	\$4,524,414	\$7,155,385	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.
31	WLFL2 SE 19TH WAY REVETMENT	FCD	FCD	wlr	\$78,787	\$623,588	\$544,801	\$1,082,706	\$150,000	\$0	\$0	\$0	\$0	\$1,232,706	\$1,856,294	Rebuild revetment to protect road access to high value agricultural operations and lands. Construction anticipated 2017.
32	WLFL2 SE DAVID POWELL RD DOWNSTREAM	FCD	FCD	wlr	\$12,081	\$1,000,000	\$987,919	\$36,456	\$0	\$0	\$0	\$0	\$0	\$36,456	\$1,036,456	FCD-requested project to reduce neighborhood isolation from flooding.
33	WLFL2 SE FISH HATCHERY RD	FCD	FCD	wlr	\$15,718	\$500,000	\$484,282	\$27,905	\$0	\$0	\$0	\$0	\$0	\$27,905	\$527,905	FCD-requested project to reduce neighborhood isolation from flooding.
34	WLFL2 DUVALL BRIDGE 1136A	FCD	FCD	wlr	\$0	\$0	\$0	\$30,000	\$120,000	\$0	\$0	\$0	\$0	\$150,000	\$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.
35	WLFL2 SE DAVID POWELL RD UPSTREAM	FCD	FCD	wlr	\$0	\$0	\$0	\$250,000	\$700,000	\$1,250,000	\$0	\$0	\$0	\$2,200,000	\$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.
36	WLFL2 SNOQUALMIE VALLEY FEASIBILITY	FCD	FCD	wlr	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000	\$250,000	\$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.
37	WLFL2 WOODINVILLE DUVALL BR 1136B/1136E	FCD	FCD	wlr	\$0	\$0	\$0	\$100,000	\$300,000	\$0	\$0	\$0	\$0	\$400,000	\$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 losing approaches during flooding. A similar repair was done on Woodinville-Duvall Bridge No. 1136D.
38	<a href="#">WLFL2 SINNEMA QUALE 2011 REPR</a>	100%	N/A	wlr	\$10,204,102	\$10,204,102	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,204,102	Large capital project to repair 1000 linear feet of the Sinnema Quale 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 2017.
39	<a href="#">WLFL2 TOLT PIPELINE PROTECTION</a>	84%	49%	wlr	\$1,096,776	\$2,630,998	\$1,534,222	\$6,140,378	\$42,436	\$0	\$0	\$0	\$0	\$6,182,814	\$8,813,812	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.
40	WLFL3 FREW LEVEE 2016 REPAIR	Repair	N/A	wlr	\$0	\$50,000	\$50,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$100,000	\$150,000	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.
41	WLFL3 GIRL SCOUT LEVEE 2016 REPAIR	Repair	N/A	wlr	\$0	\$20,000	\$20,000	\$40,000	\$0	\$0	\$0	\$0	\$0	\$40,000	\$60,000	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.
42	<a href="#">WLFL3 SAN SOUCI NBRHOOD BUYOUT</a>	82%	79%	acq	\$4,123,068	\$4,949,206	\$826,138	\$604,147	\$0	\$0	\$0	\$0	\$0	\$604,147	\$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.
43	WLFL3 TOLT 2015 FLOOD REPAIRS	Repair	N/A	wlr	\$19,397	\$900,000	\$880,603	\$0	\$22,419	\$0	\$0	\$0	\$0	\$22,419	\$922,419	Flood damage repairs from January 2015 flood event. Locations include Frew, Upper Frew, Remlinger, and Girl Scout Camp.
44	WLFL3 TOLT CORRIDOR IMPLMNTN	87%	82%	wlr	\$0	\$25,252	\$25,252	\$75,000	\$679,867	\$635,353	\$1,717,650	\$5,037,804	\$0	\$8,145,674	\$8,170,926	Placeholder for corridor plan implementation project(s). Assumes project initiation late 2017.
45	<a href="#">WLFL3 TOLT CORRIDOR PLAN</a>	87%	82%	wlr	\$836,125	\$958,560	\$122,435	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$958,560	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 2015-16.
46	WLFL3 TOLT R MILE 1.1 SETBACK	84%	79%	acq	\$4,069,360	\$5,699,606	\$1,630,246	(\$215,246)	\$318,270	\$546,363	\$0	\$0	\$0	\$649,387	\$6,348,993	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.
47	WLFL3 TOLT R NATURAL AREA ACQ	66%	64%	acq	\$1,138,843	\$1,639,503	\$500,660	\$30,107	\$530,450	\$546,363	\$562,754	\$466,156	\$0	\$2,135,830	\$3,775,333	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.
48	WLFL3 TOLT R RD ELEVATION FEASIBILITY	FCD	FCD	wlr	\$0	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000	FCD-requested project to reduce neighborhood isolation from flooding.
49	WLFL4 RAGING R BRIDGE 1008E	FCD	FCD	wlr	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$0	\$80,000	\$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.
50	WLFL4 ALPINE MANOR NEIGHBORHOOD BUYOU	76%	79%	acq	\$1,715,652	\$2,374,412	\$658,760	(\$93,760)	\$484,878	\$0	\$0	\$0	\$0	\$391,118	\$2,765,530	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.
51	<b>Snoqualmie-South Fork Skykomish Subtotal</b>				\$49,138,091	\$71,482,634	\$22,344,543	\$14,290,160	\$13,346,352	\$17,775,785	\$9,653,617	\$12,558,534	\$3,929,407	\$71,553,855	\$143,036,489	
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54	WLFL5 SAMMAMISH R BANK REPAIRS	Repair	N/A	wlr	\$15,070	\$400,000	\$384,930	\$19,895	\$0	\$0	\$0	\$0	\$0	\$19,895	\$419,895	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.
55	WLFL5 NE 8TH ST AT LAKE ALLEN OUTLET	FCD	FCD	wlr	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000	\$1,400,000	\$1,000,000	\$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.
56	<a href="#">WLFL5 WILLOWMOOR FLDPLAIN REST</a>	58%	8%	wlr	\$1,268,234	\$2,232,642	\$964,408	\$485,281	\$500,000	\$2,964,719	\$50,000	\$0	\$0	\$4,000,000	\$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.
57	<a href="#">WLFL6 LOWER COAL CRK PH I</a>	71%	49%	Agreement	\$737,768	\$1,503,576	\$765,808	\$2,275,000	\$2,457,000	\$2,311,000	\$10,000	\$10,000	\$0	\$7,063,000	\$8,566,576	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.

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58	<a href="#">WLFL6 MCALEER/LYON CHAN IMPRVM</a>	79%	77%	Agreement	\$1,034,720	\$1,050,000	\$15,281	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,050,000	Re-establish a more natural floodplain widening for Lyon Creek and upgrade undersized culverts in the project area. Project may include high-flow bypass alternatives. Funding is 25% local share for FEMA grant; implemented by City of Lake Forest Park. Project to be closed out in 2017.
59	WLFL7 CDR PRE-CONST STRTGC ACQ	84%	69%	acq	\$2,522,532	\$2,830,814	\$308,282	\$1,499,718	\$1,529,712	\$1,560,306	\$1,591,512	\$1,623,342	\$1,655,809	\$9,460,399	\$12,291,213	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 reduced pending Board action on the Cedar corridor planning effort and the District's acquisition policy.
60	WLFL7 CEDAR CORRIDOR IMPLMNTN	76%	44%	wlr	\$0	\$16,763	\$16,763	\$328,437	\$763,848	\$819,545	\$2,918,141	\$246,346	\$30,999	\$5,107,316	\$5,124,079	Placeholder for corridor plan implementation project(s)
61	<a href="#">WLFL7 CEDAR LEVEE SETBACK FEAS (Cedar Co</a>	84%	69%	wlr	\$1,078,763	\$1,987,587	\$908,824	\$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.
62	WLFL7 CEDAR R REP LOSS MITGATN	74%	8%	acq	\$3,147,951	\$3,788,422	\$640,471	\$58,679	\$323,574	\$333,282	\$343,280	\$353,579	\$364,186	\$1,776,580	\$5,565,002	Acquire frequently-flooded homes. Placeholder funding until District adopts acquisition policy.
63	<a href="#">WLFL7 CEDAR RVR GRAVEL REMOVAL</a>	89%	59%	Agreement	\$948,302	\$11,728,768	\$10,780,466	\$774,117	\$325,046	\$82,035	\$84,495	\$87,030	\$89,640	\$1,442,363	\$13,171,131	Project is scheduled for 2016-2017 construction. The project will ensure the minimum required 100-year flood conveyance capacity along the lower 1.25 miles of the Cedar River. The project will provide continued flood protection to densely developed downtown Renton, including: Boeing's 737 assembly plant, PACCAR's Kenworth Truck manufacturing facility, Renton Municipal Airport, residential areas and commercial properties such as The Landing. These businesses are cornerstones to the economic health of the City and the Region. Project is a required maintenance action for the Army Corps of Engineers 205 Flood Control Project. Project costs were updated in March 2016.
64	<a href="#">WLFL7 ELLIOTT BR LEVEE SETBACK</a>	79%	56%	wlr	\$2,164,884	\$2,425,408	\$260,524	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,425,408	Purpose of the project is to setback levees on both sides of the river below the Elliott/154th ST Bridge. Pending complete of Cedar River 6-year capital investment plan (Line 57), initiate feasibility study for potential levee setbacks in the Elliott Bridge reach.
65	WLFL7 FBD CORRIDOR IMPLEMENTATION	84%	69%	acq	\$0	\$2,150,000	\$2,150,000	\$3,555,500	\$806,284	\$0	\$0	\$0	\$0	\$4,361,784	\$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
66	WLFL7 SE 162ND AVE AT 266TH CT	FCD	FCD	wlr	\$0	\$0	\$0	\$150,000	\$250,000	\$400,000	\$700,000	\$0	\$0	\$1,500,000	\$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.
	WLFL7 SR 169 FEASIBILITY STUDY	FCD	FCD	wlr	\$0	\$0	\$0	\$260,000	\$0	\$0	\$0	\$0	\$0	\$260,000	\$260,000	
67	<a href="#">WLFL7 RAINBOW BEND LEVEE STBCK</a>	76%	79%	wlr	\$1,966,730	\$2,369,091	\$402,361	(\$264,906)	\$0	\$0	\$0	\$0	\$0	(\$264,906)	\$2,104,185	Project closeout. This project represents the Flood District contribution to a larger project to remove the Rainbow Bend levee in order to slow flood velocities and reduce flood elevations in this area of the river.
68	<a href="#">WLFL7 RIVERBEND MHP ACQ</a>	82%	46%	wlr	\$3,379,126	\$5,357,042	\$1,977,916	\$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.
69	<b>Cedar-Sammamish Subtotal</b>				\$18,264,078	\$37,840,113	\$19,576,035	\$9,141,721	\$6,955,464	\$8,470,887	\$6,097,428	\$3,720,297	\$3,140,634	\$37,526,431	\$75,366,544	
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72	WLFL8 BOEING LEVEE HT INCREASE	FCD	FCD	wlr	\$1,639	\$1,639	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,639	Project cancelled.
73	WLFL8 BOEING LEVEE USACE ERP	95%	77%	Agreement	\$6,751	\$6,751	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,751	Project cancelled.
74	<a href="#">WLFL8 BRISCOE LEVEE SETBACK</a>	82%	36%	Agreement	\$20,562,938	\$23,330,271	\$2,767,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,330,271	Floodwall construction implemented by the City of Kent. Reaches 2 and 3 mostly complete; reaches 1 and 4 under construction. Reimbursements will be complete and project closed out in 2017.
75	WLFL8 BRPS BLACK R PUMP STATION	100%	72%	wlr	\$2,853,284	\$5,374,203	\$2,520,919	\$0	\$36,060	\$0	\$0	\$0	\$0	\$36,060	\$5,410,263	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.
76	WLFL8 BRPS CONTROL BLDG RPLCMT	100%	72%	wlr	\$0	\$0	\$0	\$50,000	\$1,672,200	\$6,982,700	\$0	\$0	\$0	\$8,704,900	\$8,704,900	New project line; previously combined as part of Line 66.
77	WLFL8 BRPS FISH PASS IMPRVMNTS	100%	72%	wlr	\$0	\$0	\$0	\$0	\$0	\$10,000	\$25,000	\$692,000	\$1,863,500	\$2,590,500	\$2,590,500	New project line; previously combined as part of Line 66.
78	WLFL8 BRPS HIGH-USE ENGINES	100%	72%	wlr	\$0	\$0	\$0	\$252,900	\$1,292,500	\$0	\$0	\$0	\$0	\$1,545,400	\$1,545,400	New project line; previously combined as part of Line 66.
79	WLFL8 BRPS SUPPORT SYS UPGRADES	100%	72%	wlr	\$0	\$0	\$0	\$0	\$50,000	\$147,200	\$646,400	\$597,650	\$0	\$1,441,250	\$1,441,250	New project line; previously combined as part of Line 66.
80	WLFL8 PATTON BRIDGE 3015	FCD	FCD	wlr	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0	\$150,000	\$150,000	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.
81	WLFL8 SE 380 PL AT SR 164	FCD	FCD	wlr	\$0	\$0	\$0	\$0	\$90,000	\$100,000	\$400,000	\$100,000	\$0	\$690,000	\$690,000	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.
82	WLFL8 SE 384 ST @ 176 AVE SE	FCD	FCD	wlr	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$150,000	\$150,000	These two bridges are subject to having the roadway approach fill wash out during a flood. Excavate approaches and rebuild approaches to prevent losing approaches during flooding. A similar repair was done on Woodinville-Duvall Bridge No. 1136D.
83	<a href="#">WLFL8 DESIMONE USACE 2015</a>	100%	N/A	wlr	\$1,668,225	\$1,668,225	\$0	\$63,620	\$0	\$0	\$0	\$0	\$0	\$63,620	\$1,731,845	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
84	<a href="#">WLFL8 DYKSTRA USACE 2015</a>	100%	N/A	wlr	\$54,427	\$2,000,000	\$1,945,573	(\$1,295,068)	\$1,768	\$0	\$0	\$0	\$0	(\$1,293,300)	\$706,700	Cost-share flood damage repair from March 2014 high flows with Corps of Engineers. Construction in 2016.
85	<a href="#">WLFL8 GREEN R PL84-99 MITIGATN</a>	89%	72%	wlr	\$3,347,684	\$4,062,557	\$714,873	\$981,430	\$500,000	\$0	\$0	\$0	\$0	\$1,481,430	\$5,543,987	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.
86	WLFL8 HSB BREDA SETBACK	95%	41%	wlr	\$90,180	\$2,595,720	\$2,505,540	\$1,755,000	\$550,000	\$3,290,000	\$21,500	\$0	\$0	\$5,616,500	\$8,212,220	New project to implement interim SWIF adopted by Board of Supervisors.
87	WLFL8 HSB MCCOY REALIGNMENT	FCD	FCD	wlr	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$400,000	\$400,000	New project to implement interim SWIF adopted by Board of Supervisors.
88	WLFL8 HSB NURSING HOME SETBACK	FCD	FCD	wlr	\$0	\$38,806	\$38,806	(\$38,806)	\$0	\$0	\$0	\$0	\$200,000	\$161,194	\$200,000	New project to implement interim SWIF adopted by Board of Supervisors.
89	<a href="#">WLFL8 LWR RUSSELL LEVEE SETBACK</a>	76%	56%	wlr	\$1,421,859	\$7,020,860	\$5,599,001	\$5,056,270	\$6,833,935	\$22,126,512	\$4,644,089	\$0	\$0	\$38,660,806	\$45,681,666	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.
90	WLFL8 MILWAUKEE LEVEE #2-KENT	FCD	FCD	Agreement	\$0	\$8,500,000	\$8,500,000	\$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.

No.	Title	Flood Risk %	Implement %	Type of project	2015 Inception to Date Expenditure	2016 Revised Inception to Date Budget	2016 Available Budget	2017 Requested	2018 Projected	2019 Projected	2020 Projected	2021 Projected	2022 Projected	6-Year CIP Total	Project Life Total	Comments
91	<a href="#">WLFL8 PORTER LEVEE</a>	39%	41%	wlr	\$0	\$300,000	\$300,000	\$420,000	\$0	\$0	\$0	\$0	\$0	\$420,000	\$720,000	Contribute the cost of a repair (\$300,000) to a \$7 million levee setback project. By relocating the levee, future repair costs for the Flood Control District are reduced.
92	<a href="#">WLFL8 REDDINGTON REACH SETBACK</a>	68%	62%	wlr	\$16,404,101	\$16,889,083	\$484,982	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,889,083	Project expenditures will continue into 2017; closeout anticipated as part of mid-year 2017 budget revision.
93	WLFL8 RUSSELL RD UPPER KENT	92%	72%	Agreement	\$4,992,044	\$5,987,228	\$995,184	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,987,228	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.
94	<a href="#">KWFL8 SIGNATURE POINTE REVETMENT</a>	FCD	FCD	wlr	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$300,000	\$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.
95	WLFL8 S 277TH ST REVETMENT	FCD	FCD	wlr	\$5,058	\$300,000	\$294,942	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	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.
96	WLFL8 TUK-205 USACE GACO REPAIR	R	N/A	wlr		\$50,000	\$50,000	\$80,440	\$0	\$0	\$0	\$0	\$0	\$80,440	\$130,440	60 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.
97	WLFL8 TUK-205 RATOLO FLOODWALL	FCD	FCD	wlr	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100,000	\$1,100,000	\$1,100,000	New project to implement interim SWIF adopted by Board of Supervisors.
98	WLFL8 TUK-205 SEGALE FLOODWALL	FCD	FCD	wlr	\$0	\$0	\$0	\$5,640,000	\$2,750,000	\$1,300,000	\$650,000	\$4,500,000	\$45,000	\$14,885,000	\$14,885,000	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.
99	<a href="#">WLFL8 USACE SWIF</a>	FCD	FCD	wlr	\$2,195,837	\$2,287,724	\$91,887	(\$81,887)	\$0	\$0	\$0	\$0	\$0	(\$81,887)	\$2,205,837	Green River Corridor Planning (under System-Wide Improvement Framework agreement with Army Corps of Engineers)
100	WLFL8 LWR GRN R CORRIDOR PLAN/EIS	FCD	FCD	wlr	\$0	\$1,743,249	\$1,743,249	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,743,249	
<b>101</b>	<b>Green-Duwamish Subtotal</b>				<b>\$53,604,027</b>	<b>\$82,156,316</b>	<b>\$28,552,290</b>	<b>\$13,733,899</b>	<b>\$13,776,463</b>	<b>\$33,956,412</b>	<b>\$6,386,989</b>	<b>\$5,889,650</b>	<b>\$3,358,500</b>	<b>\$77,101,913</b>	<b>\$159,258,229</b>	
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104	<a href="#">WLFL9 COUNTYLINE TO A STREET</a>	87%	74%	wlr	\$7,033,411	\$15,569,196	\$8,535,785	\$5,212,688	\$0	\$0	\$0	\$0	\$0	\$5,212,688	\$20,781,884	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.
105	WLFL9 RED CREEK ACQUISITIONS	71%	41%	acq	\$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.
106	<a href="#">WLFL9 RIGHT BANK LEVEE SETBACK</a>	79%	64%	wlr	\$7,595,806	\$11,381,414	\$3,785,608	\$769,785	\$1,536,321	\$6,722,036	\$6,571,371	\$115,927	\$0	\$15,715,440	\$27,096,854	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.
107	WLFL9 WHITE - GREENWATER ACQ	66%	44%	acq	\$0	\$375,000	\$375,000	(\$375,000)	\$0	\$0	\$0	\$0	\$100,000	(\$275,000)	\$100,000	This project would acquire flood prone residence along the White River near the Greenwater River.
<b>108</b>	<b>White Subtotal</b>				<b>\$14,629,217</b>	<b>\$27,325,610</b>	<b>\$12,696,393</b>	<b>\$5,607,473</b>	<b>\$1,536,321</b>	<b>\$6,722,036</b>	<b>\$6,571,371</b>	<b>\$115,927</b>	<b>\$200,000</b>	<b>\$20,753,128</b>	<b>\$48,078,738</b>	
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111	<a href="#">WLFLS SOUTH PARK PUMPSTATION</a>	79%	64%	Agreement	\$1,563,910	\$2,690,575	\$1,126,665	\$3,310,756	\$504,244	\$0	\$0	\$0	\$0	\$3,815,000	\$6,505,575	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.
112	WLFLS S PARK DRAINAGE IMPROVEMENTS	FCD	FCD	Agreement	\$0	\$500,000	\$500,000	\$500,000	\$1,000,000	\$1,000,000	\$1,005,000	\$0	\$0	\$3,505,000	\$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.
<b>113</b>	<b>Seattle Subtotal</b>				<b>\$1,563,910</b>	<b>\$3,190,575</b>	<b>\$1,626,665</b>	<b>\$3,810,756</b>	<b>\$1,504,244</b>	<b>\$1,000,000</b>	<b>\$1,005,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,320,000</b>	<b>\$10,510,575</b>	
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116	WLFLX CORRIDOR PLN DESIGN/CONST PLACEH	N/A	N/A	wlr	\$0	\$142,610	\$142,610	\$0	\$2,489,775	\$2,452,537	\$11,213,074	\$9,430,286	\$2,010,077	\$27,595,749	\$27,738,359	Placeholder for corridor plan implementation project(s)
<b>117</b>	<b>Countywide Corridor Plan Imp Subtotal</b>				<b>\$0</b>	<b>\$142,610</b>	<b>\$142,610</b>	<b>\$0</b>	<b>\$2,489,775</b>	<b>\$2,452,537</b>	<b>\$11,213,074</b>	<b>\$9,430,286</b>	<b>\$2,010,077</b>	<b>\$27,595,749</b>	<b>\$27,738,359</b>	
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120	<a href="#">WLFLG FLOOD REDUCTION GRANTS</a>	FCD	FCD	grant	\$649,222	\$8,541,782	\$7,892,560	\$3,058,908	\$3,133,710	\$3,196,473	\$3,270,846	\$3,345,125	\$3,420,602	\$19,425,664	\$27,967,446	Competitive grant program for flood reduction projects. Increases as a proportion of total FCD tax revenue.
121	<a href="#">WLFLM EFFECTIVENESS MONITORING</a>	N/A	N/A	wlr	\$1,439,082	\$1,861,120	\$422,038	\$357,399	\$895,779	\$332,985	\$533,242	\$219,566	\$634,010	\$2,972,981	\$4,834,101	Evaluation of capital projects to determine effectiveness and identify project design improvements.
122	<a href="#">WLFLS SUBREGNL OPPRTNTY FUND</a>	FCD	FCD	grant	\$22,691,811	\$37,939,500	\$15,247,689	\$5,743,771	\$5,828,701	\$5,945,440	\$6,083,773	\$6,221,932	\$6,362,319	\$36,185,936	\$74,125,436	Allocation to all King County jurisdictions for flooding, water quality, or watershed management projects. Increases as a proportion of total FCD tax revenue.
123	WLFLX CENTRAL CHARGES	N/A	N/A	wlr	\$491,493	\$866,053	\$374,560	(\$284,560)	\$51,000	\$52,020	\$53,060	\$54,122	\$55,204	(\$19,154)	\$846,899	Central charges related to the FCD's capital fund.
124	WLFLX FLOOD EMERGENCY CONTGNCY	N/A	N/A	wlr	\$300,917	\$791,003	\$490,086	\$9,914	\$265,225	\$273,182	\$281,377	\$289,818	\$298,513	\$1,418,029	\$2,209,032	Contingency for emergency response actions during a flood event.
125	WLFLX WRIA GRANTS	FCD	FCD	grant	\$9,479,849	\$18,708,959	\$9,229,110	\$4,390,296	\$4,504,883	\$4,622,460	\$4,743,106	\$4,866,901	\$4,993,928	\$28,121,574	\$46,830,533	Cooperative Watershed Management Grant Program; priorities recommended by watershed groups. Increase based on assumed inflation rate.
<b>126</b>	<b>Countywide Subtotal</b>				<b>\$35,052,375</b>	<b>\$68,708,417</b>	<b>\$33,656,042</b>	<b>\$13,275,728</b>	<b>\$14,679,298</b>	<b>\$14,422,560</b>	<b>\$14,965,405</b>	<b>\$14,997,464</b>	<b>\$15,764,576</b>	<b>\$88,105,030</b>	<b>\$156,813,447</b>	
127																
<b>128</b>	<b>Grand Total</b>				<b>\$172,251,698</b>	<b>\$290,846,275</b>	<b>\$118,594,577</b>	<b>\$59,859,737</b>	<b>\$54,287,917</b>	<b>\$84,800,217</b>	<b>\$55,892,884</b>	<b>\$46,712,158</b>	<b>\$28,403,194</b>	<b>\$329,956,106</b>	<b>\$620,802,381</b>	