

WATER AND LAND RESOURCES DIVISION KING COUNTY FLOOD CONTROL CAPITAL CONTRACT PROGRAM

Introduction to Program, Goals, and Highlights

The capital work program of the King County Flood Control Zone District is contracted with the River and Floodplain Management Unit (RFMU) within the Water and Land Resources Division of King County. This body of work is guided by the following goals:

- To reduce the risks to public safety and financial losses from flood and channel migration hazards.
- To avoid or minimize the environmental impacts of flood hazard management.
- To reduce the long-term costs of flood hazard management.

The program is based primarily on the *2006 King County Flood Hazard Management Plan* which recommends regional policies, programs, and projects to reduce the risk to people and property from river flooding and channel migration in King County. The purpose of this plan is to create a long-term vision for flood hazard management for King County's floodplains, with an emphasis on major river systems, and recommends specific near-term actions consistent with that vision to reduce flood and channel migration risks and to protect, restore or enhance riparian and aquatic ecosystems.

There are four significant changes between the 2008 and 2009 proposed six-year plans. The first two are the result of decisions made by the King County Council when adopting the 2008 capital budget. One is the elimination of the River Improvement Fund levy as a revenue source for the flood district work program. This removes approximately \$30 million from the ten-year capital program, requiring that it be extended by an additional year in order to achieve the same result.

The second is the establishment of the "subregional" flood project allocation, which designates 10 percent of the flood district levy proceeds towards projects that alleviate flooding in areas other than along mainstem rivers. This also would require extending the program by an additional year to achieve the same result as the initial ten year proposal developed for the 2008 budget.

The third change involves a re-phasing of costs within individual projects. The 2008 plan was developed with an inexact cost model that placed acquisition costs towards the end of each project. This has since been corrected and acquisition costs now appear in the initial years of each project, increasing the requested budget authority in the near term.

The final change concerns the federal assistance with the flood damage repair projects King County is receiving from the US Army Corps of Engineers. As negotiated during the spring of 2008, the Corps will assume lead on several of the individual subprojects, requiring only a small cost-share from King County. This translates into a \$20 million savings for the county, allowing additional flood projects to be scheduled for 2009.

Prioritization Criteria and Asset Management

Prioritization: Capital projects are prioritized primarily by considering the degree of flood risk addressed by the project. The level of risk is assessed by considering the following parameters.

1. Consequences: What would happen if no action were taken? Would there be an impact to critical facilities and residential areas, or just to undeveloped land?
2. Severity: How serious is the impact? Is it likely to result in human injury or death, or would there be little or no damage?
3. Extent of Impact: What is the scale of the problem? Would the impacts be felt beyond the immediate area of flooding?
4. Urgency: How soon will the impacts occur? Are they likely to occur during the next high flow event or much later?

The priority is then adjusted by considering a set of opportunity factors that represent valuable, pragmatic benefits to county taxpayers. Example factors are the degree to which the project is ready for implementation; whether the project can leverage external grant funding or be accomplished in partnership with another agency; whether the project addresses other objectives in addition to the mitigation of flood risks; and the degree to which the project considered cost-effective.

Asset Condition Assessment: The River and Floodplain Management Unit capital maintenance conducts recurring inspections of river levees and revetments to guide expenditures of the Rivers Major Maintenance program. Nearly all of the 500 river protection facilities in the Water and Land Resources inventory are at least 40 years old, with some dating back to the early 1900's. These facilities are not assets to which the standard concept of "asset life cycle" applies. In general, they are constructed of soil and rock and can function indefinitely as long as they are maintained to their intended functioning condition and design capacity, or level of protection. Without proper maintenance, the risks of facility failure, damages to public and private property, and threats to public safety increase.

Growth Management and Comprehensive Plan Issues

The capital improvement work program for the King County Flood Control Zone District is based on the *2006 King County Flood Hazard Management Plan*, which is itself a requirement of the Growth Management Act and the King County Comprehensive Plan (KCCP). Policy E-151 of the KCCP states that King County's floodplain land use and floodplain management activities shall be carried out in accordance with the *King County Flood Hazard Reduction Plan*.

Several policies within KCCP are represented by the King County Flood Control Zone District capital program, such as the policy that King County shall serve as a regional service provider for flood hazard mitigation, that floodways should be protected as critical areas, and to recognize the existing flood storage, conveyance functions, and ecological values of floodplains

Financial Planning and Policies

The King County Flood Control Zone District capital program is implemented by contract with King County WLR capital fund 3571. The primary revenue source is proceeds from the King County Flood Control Zone District tax levy, assessed for the purpose of implementing flood hazard reduction programs and projects. Restrictions on the use of the levy are governed by

RCW 86.15. The levy revenue is supplemented by external grants, assumed to be equal to approximately 5% of total revenue.

The 2009 Executive Proposed Budget totals \$39.2 million in expenditure authority. The total 2009-14 King County Flood Control Capital Contract Program appropriation request is \$196.2 million.

The most significant CIP project requests for 2009 are highlighted below:

Significant Projects Flood Control Contract Capital Program	2009 Executive Proposed Budget	Continuation of Existing Project
Upper Snoqualmie River Flood Protection	\$3,375,489	X
Lower Snoqualmie River Flood Protection	\$2,324,955	X
Tolt River Flood Protection	\$3,344,211	X
Cedar River Flood Protection	\$5,927,446	X
Green River Flood Protection	\$11,956,179	X
White River Flood Protection	\$4,363,755	X

Upper Snoqualmie River Flood Protection: \$3,375,489

Projects approved for 2009 will make significant improvements to the South Fork levee system as well as acquisition and elevations of flood-prone homes in the North Bend Area.

Lower Snoqualmie River Flood Protection: \$2,324,955

The requested appropriation will primarily be used to purchase and remove flood-prone homes from the low-lying area immediately behind the Aldair Levee.

Tolt River Flood Protection: \$3,344,211

The requested appropriation is primarily intended for purchasing numerous flood-prone properties, most importantly the San Souci neighborhood. In addition, numerous smaller repairs will be made to various flood protection facilities.

Cedar River Flood Protection: \$5,927,446

The primary actions will be to relocate the residents from the Cedar Grove mobile home park purchased in 2008 and demolish the remaining structures in order to restore the floodplain and increase flood storage capacity. Actions will also target the Elliott Bridge Levee in order to purchase flood prone homes and reconstruct the levee farther back from the river.

Green River Flood Protection: \$11,956,179

The requested appropriation will launch a major reconstruction of the Green River levee system, beginning with the Desimone and Briscoe levee segments near the Kent-Tukwila border. Additional funding will target backwater flooding from the Duwamish in the South Park neighborhood as well as a feasibility and design analysis for replacing the deteriorating Alaskan Way seawall in Seattle.

White River Flood Protection: \$4,363,755

The projects in this river basin will primarily reduce flood-related risk to a residential area near the border with Pierce County by purchasing flood-prone property and providing conveyance

through an existing levee into adjacent floodplain and wetlands. Additional acquisitions will acquire flood-prone properties near the confluence with the Greenwater River.

Subproject Relationships

The following subprojects are scheduled for implementation in 2009 with the appropriation requested under the individual parent projects.

Master and Sub-Project	Project Name	2009 Executive Proposed Budget
FL0000	Skykomish/Miller River Flood Protection	
FL0001	Miller River Home Buyout	(\$750,000)
FL0002	Miller River Road Protection	\$110,748
FL0004	Timber Lane Village Home Erosion Buyouts	\$1,350,000
FL1000	Upper Snoqualmie River Flood Protection	
FL1002	North Bend Area Residential Flood Mitigation	\$892,660
FL1003	South Fork Levee System Improvements	\$1,143,700
FL1004	South Fork Snoqualmie Flood Damage Repairs	\$158,997
FL1005	Upper Snoqualmie River Flood Damage Repairs	\$161,179
FL1017	Kimball Creek and Snoqualmie Basin	\$543,109
FL1018	City of Snoqualmie Natural Area Acquisitions	\$236,928
FL1019	Middle Fork Levee System Capacity Improvements	\$238,916
FL2000	Lower Snoqualmie River Flood Protection	
FL2001	Aldair Buyout	\$2,387,943
FL2002	Lower Snoqualmie River Flood Damage Repairs	(\$97,604)
FL2003	Neal Road Relocation	\$34,616
FL3000	Tolt River Flood Protection	
FL3001	Tolt River Flood Damage Repairs	\$200,000
FL3002	Tolt River Supplemental Study	\$111,688
FL3003	Tolt River Road Shoulder Protection	\$434,548
FL3004	Lower Tolt River Acquisition	\$893,122
FL3005	San Souci Neighborhood Buyout	\$1,003,845
FL3010	Tolt River Mouth to SR 203 Floodplain Reconnection	\$701,008
FL4000	Raging River Flood Protection	
FL4001	Alpine Manor Mobile Home Park Neighborhood Buyout	\$824,379
FL4002	Raging River Flood Damage Repairs	(\$98,487)
FL5000	Sammamish River Flood Protection	
FL5001	Willowmoor Floodplain Restoration	\$421,049
FL6000	Issaquah Creek Flood Protection	
FL6001	Issaquah Creek Streambank Stabilization	\$154,686
FL7000	Cedar River Flood Protection	
FL7001	Cedar Grove Mobile Home Park Acquisition	\$2,053,624
FL7003	Cedar River Flood Damage Repairs	\$858,246
FL7004	Cedar River Repetitive Loss Mitigation	\$741,338
FL7005	Elliott Bridge Levee Setback and Acquisition	\$1,200,000

Master and Sub-Project	Project Name	2009 Executive Proposed Budget
FL7006	Rainbow Bend Levee Setback & Floodplain Reconnect	\$337,541
FL7014	Dorre Don Meanders- Phase 1	\$232,893
FL7015	Herzman Levee Setback & Floodplain Reconnection	\$149,845
FL7016	Jan Road-Rutledge Johnson Levee Setbacks	\$237,513
FL7017	Maplewood Acquisition and Levee Setback Phase 1	\$116,446
FL8000	Green River Flood Protection	
FL8002	Alaskan Way Seawall Replacement	\$1,679,702
FL8003	Green River 2006 Flood Damage Repairs	\$14,405
FL8005	Nursing Home Levee	\$785,308
FL8011	Kent Shops-Narita	\$1,422,858
FL8016	Briscoe Levee #1-#3, #5-#8	\$2,702,419
FL8017	Desimone Levee #1	\$152,730
FL8018	Desimone Levee #2	\$190,728
FL8019	Desimone Levee #3	\$114,825
FL8020	Desimone Levee #4	\$628,706
FL8021	Riverside Estates/Reddington	\$789,486
FL8022	Segale Levee #2 & #3	\$858,776
FL8023	Segale Levee #4	\$343,509
FL8024	South Park Duwamish Backwater Trenton Storm Drain	\$2,272,727
FL9000	White River Flood Protection	
FL9001	County line to A-Street Flood Conveyance	\$2,487,634
FL9002	Red Creek Acquisitions	\$910,939
FL9004	White-Greenwater Acquisition	\$965,182
FLM000	Flood CIP Monitoring/Maintenance	(\$79,033)
FLS000	Subregional Opportunity Fund	\$6,835,235
FLX100	Flood District Capital Contingency	(\$860,000)

CIP Project Accomplishments and Completion Lists

Projects Completed in 2007

None

Projects to be Completed in 2008

E47111	Fenster Levee Setback
FL1007	Mason Thorson Ells
FL1008	Mason Thorson Extension
FL1009	MF Sno Large Wood Mtgtn
FL1012	Allen Revetment
FL1014	Riverbend
FL2006	McElhoe Pearson
FL2007	Aldair

FL4004	Arruda Revetment
FL4005	Bryce Bump Levee Revetment
FL4008	Raging Br to Mouth Right
FL4009	Waring Revetment
FL7002	Ceder Rapids Levee Setback
FL7008	Banchero-Barnes Revetment
FL7009	Belmondo Revetment
FL7010	Cedar RiverTr Site 2 Revetment
FL7011	Dorre Don
FL8011	Kent Shops Narita
FL8013	Tukwila 205
FL8012	Myer's Golf Levee Flood Repair
FL8007	Dykstra Revetment Flood Repair
FL8008	Foster Golf Revetment Flood Repair
FL8009	Galli's Section Flood Repair

Projects to be Completed in 2009

FL1011	Sno 205 Left Revetment
FL1013	O'bert Levee
FL1015	Si View Park
FL1023	City of Snoqualmie Natural Area Acquisitions
FL3002	Tolt River Supplemental Study
FL3004	Lower Tolt River Acquisition
FL4006	Preston Fall City Low Revetment
FL4007	Raging Br to Br Left
FL8010	Horseshoe Bend 205
FL0001	Miller River Home Buyout
FL1017	Kimball Creek Drainage
FL2001	Aldair Buyout
FL2003	Neal Road Relocation
FL2008	Sinnera Quale Upper Revetment
FL3001	Tolt River Flood Repairs
FL3003	Tolt River Road Shoulder Protection
FL4001	Alpine Manor Mob Prk Acquisition
FL7001	Cedar Grove Mobile Acquisition
FL7004	Cedar River Repetitive Loss Mitigation
FL7017	Maplewood Acq & Levee Setback Phase 1
FL8002	Ak Wy Seawall Feasibility & Design
FL8017	Desimone Levee #1
FL9002	Red Creek Acquisitions
FL9004	White-Greenwater Acquisition
FL9006	Stuck River Drive