

**Preliminary Proposed 2010 Capital Work Program Overview**  
**King County Flood Control District Advisory Committee**  
**May 6, 2009**

The proposed capital program continues to focus on high priority flood risk reduction needs through rehabilitation of flood facilities and the acquisition and removal of floodprone structures throughout King County. New projects proposed for the District's capital program are responsive to the 2009 flood event, in the form of either high priority repairs (6.7% of combined 2009 and 2010 expenditures) or new projects that address flood hazards identified during the flood or through updated flood hazard maps. The addition of these new projects does not result in the removal of any project adopted in the 2009 6-year project list – rather, the costs for several large projects with a sizable acquisition component are spread more evenly over several years, moving some costs outside the 6-year window. In some cases this more accurately captures how acquisition work is actually implemented, but it does delay completion of some large projects with significant acquisition components outside the 6-year window.

Proposed projects were reviewed and prioritized with the Basin Technical Committees, along with a discussion of project sequencing over the 6-year CIP. As in previous years, project prioritization and sequencing was guided by the policies contained in the District's adopted comprehensive plan (the 2006 Flood Hazard Management Plan). Projects were reviewed and scored against flood risk reduction factors (consequence, severity, and urgency) to prioritize projects across the county; implementation factors such as readiness and leveraging were then evaluated to determine how to sequence high-priority projects over the 6-year CIP timeframe. By evaluating flood risk reduction and implementation factors, appropriate strategies can be developed to ensure that high priority projects are implemented and any constraints are identified and addressed.

This memo describes how the proposed 2010 capital projects support flood risk reduction objectives in each basin. Project descriptions, costs, and project evaluation results are provided on separate handouts.

*Green-Duwamish Basin*

The potential for reduced storage capacity at Howard Hanson Dam underscores the need to rehabilitate the system of levees throughout the Lower Green River valley. For 2010 projects in the Green continue to focus on levee rehabilitations initiated in 2009 in the Lower Green. A phased approach is employed, with right-of-way acquisition and design initiation in 2009 followed by levee setbacks in 2010 (the most critical step for flood risk reduction), and then the construction of flood benches and finally in-water work to reconstruct the toe of each facility. As noted during 2008, landowner willingness may pose constraints to our ability to implement some of these rehabilitations. An additional project continuing into 2010 is the South Park Duwamish Backwater Inundation, which will install a pump station to alleviate backwater flooding in an industrial and commercial

neighborhood of Seattle. Land acquisition in 2009 will be followed by construction in 2010.

New projects proposed for 2010 include an extension to the downstream end of the Reddington levee to reduce flood risks to the Auburn area. Additional projects proposed in this area during the remainder of the 6-year window include rehabilitation of the Brannon Park levee and an extension to the Lone's Levee, both of which would reduce flood risks to the Auburn area. Rehabilitation of the three Russell Road levees and the Boeing levee were identified on the 10-year planning list but were not sequenced within the 6-year window. These projects are proposed to be implemented in partnership with the Corps of Engineers through the Ecosystem Restoration Program (ERP), and the proposed sequencing reflects this partnership, with Russell Upper going to construction in 2010, Russell Lower in design in 2010, and Boeing initiated in 2013. Finally, the Nursing Home Levee rehabilitation (a section of the Horseshoe Bend levee protecting Kent) is proposed to be combined into a larger, long-term rehabilitation of three miles of the Horseshoe Bend levee. Funds previously appropriated toward the Nursing Home project are proposed to be allocated toward right-of-way acquisitions necessary to setback the full length of the Horseshoe Bend levee. Flood District contributions to this project will leverage \$10 million in state funds recently appropriated for this project.

King County staff are currently working with the Corps of Engineers to discuss options for cooperative projects at several sites, including several levees in the Auburn area identified through recent flood plain mapping as a hazard area (Reddington, Brannon Park, Lone's Addition). Partnerships with the Corps may result in revised sequencing and/or costs for these projects.

#### *Cedar-Sammamish Basin*

In the Cedar-Sammamish basin, the objective is to focus on two types of activities:

- (1) Reducing flood velocities and volumes that threaten critical public infrastructure (SR-169, regional fiberoptic lines, and the Cedar River Trail), residential dwellings, and limit access for residents and first-responders.
- (2) Reducing public safety risks associated with neighborhood-scale flooding and channel migration.

Several projects continue from 2008 and 2009 to address both objectives, including the Rainbow Bend Levee Setback, Elliott Bridge Acquisition and Levee Setback, and the Jan Road and Herzman levee setbacks. In 2010, new projects include a flood damage repair from January 2009 at the Herzman levee upstream of the proposed setback, and initiation of the Rhode Levee Floodplain reconnection, building on increased landowner willingness after the January 2009 flood.

Finally, several projects proposed on the Cedar during the 6-year CIP require acquisition of multiple properties before levee setbacks can proceed. Acquisition costs for these projects (Dorre Don/Byers Bend Phase 2, Maplewood Phase 2, Lower Jones Road, Riverbend, and Rhode) are proposed to be combined in a Cedar River Pre-Construction Strategic Acquisition project, with costs spread over the 6-year CIP to act on landowner interest across projects as it arises.

#### *Snoqualmie, Tolt, Raging, and South Fork Skykomish Rivers*

The basic flood risk reduction strategy in the Snoqualmie basin is to strengthen and rehabilitate flood containment facilities while using non-structural solutions (elevations and buyouts) to reduce or eliminate risks. During 2010 work will continue on several multi-year projects to support this strategy. Based on a recommendation from city staff, the North Bend Residential Flood Mitigation project (adopted 2008) and the City of Snoqualmie Residential Flood Mitigation project (adopted in 2009) are proposed to be combined into one project to support buyout and elevation of floodprone residences in the Upper Snoqualmie Basin. This recommendation does not change the lifetime cost of the project. Work also continues on the Tolt River Mile 1.1 acquisition and setback project, site of the Tolt River levee breach in January 2009. This project was originally scheduled for 2013 but was re-scheduled as both the flood risk and implementation scores increased following the flood.

New projects include several high priority flood damage repairs, and the initiation of the McElhoe Person levee setback. This facility was damaged in both the 2006 and 2009 floods, and a more comprehensive setback and rehabilitation (leveraging grant funding for construction) will help to address the cycle of flood damage and repairs.

#### *White River Basin*

During 2010 work continues on the Countyline to A Street Floodplain Reconnection with the scheduled construction of a setback berm and revetment. Removal of the existing levee is scheduled for 2011.

As a result of the January 2009 flood, the 2009 capital program was amended to include an acquisition necessary to increase flood storage and conveyance capacity on the White River through the City of Pacific. This project is proposed to continue in 2010 with additional acquisitions and the construction of an earthen berm in Pacific to help protect residential areas from inundation.

King County and City of Pacific staff met with the Army Corps of Engineers to discuss potential federal partnerships. As a result of this meeting, King County submitted a Letter of Intent requesting that the Corps initiate a project under the Corps' Section 205 or Section 206 authorities to construct a setback berm project on the right bank. Should the Corps agree to initiate this project with King County, it would include a feasibility analysis and the evaluation of a range of flood risk reduction alternatives such as construction of a setback berm,

acquisition of flood prone structures, improved floodplain and bridge conveyance areas and in-channel gravel bar scalping. The feasibility study would begin in October 2010, and would rely on data currently being collected by King County, the USGS and the Corps to better understand flood hazards and sediment transport in this reach of the White River.