
King County Flood Control District Semi-Annual 2012 Performance Report

October 2012



King County

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**King County Flood Control District
Semi-Annual 2012 Performance Report (April–September)**

I. Purpose

The purpose of this report is to provide the King County Flood Control District's (District) Board of Supervisors with the implementation status of each element of the District's annual work program.

II. Scope of Services

The District's work program is comprised of two major components:

1. A capital improvement program to rehabilitate flood protection facilities and other projects to protect structures at high risk of flooding; and
2. Operational and programmatic activities, such as identifying flood risks, communicating those risks to the public, preparing for and responding to flood events, maintaining over 500 facilities in King County's flood protection system, and coordinating the District Advisory Committee and Basin Technical Committees (BTCs).

Capital Improvement Program Implementation

Projects proposed in the District's capital program reduce risks to public health, safety, and critical public infrastructure from flooding, erosion, and rapid channel migration. A detailed description of flood hazard management conditions and objectives for each major river system is available in the adopted 2006 King County Flood Hazard Management Plan, which serves as the District's Comprehensive Plan. The District's capital program fulfills one or more of the following flood hazard management objectives:

- Repair, rehabilitate, and improve flood facility protection throughout major commercial, industrial and residential areas;
- Reduce hazards by removing flood, erosion, and landslide prone residential structures;
- Improve flood water conveyance and capacity; and
- Provide safe access to homes and businesses by protecting key transportation routes.

The District's 2012 revised capital program includes \$83.95 million in appropriations (including carryover from 2011). Of this amount, approximately \$11.46 million is backed by external grant revenue in 2012, and another \$3 million is projected to be revenue-backed in 2013. \$11 million is dedicated to the Subregional Opportunity Fund, and \$3 million is dedicated to the Collaborative Watershed Management Grant Program to fund habitat projects proposed in the Snoqualmie, Cedar-Sammamish, and Green River watersheds.

The 2012 capital program included the following types of activities:

- Acquisitions to reduce flood risk;
- Elevations to minimize flood risk;
- Technical studies and design work to guide flood risk reduction projects;
- Repairs to flood facilities damaged in the January 2011 flood event; and
- Levee rehabilitation and reconstruction.

Highlights of capital program implementation to date in 2012 include:

- **Acquisition and Elevation of At-Risk Structures:** Nine acquisitions and three elevations of at-risk residential structures were completed along the Tolt, Raging, Upper Snoqualmie, and Lower Snoqualmie Rivers. Acquisitions total \$1.25 million for nine homes on 10.3 acres in the Snoqualmie basin. Three homes have been elevated to date in 2012, including one farm house in the Lower Snoqualmie Agriculture Production District (APD).
- **Agricultural Flood Mitigation:** A pilot project to elevate one barn and one agricultural platform in the Lower Snoqualmie APD was completed, and technical support was provided for six farm pads.
- **Acquisitions for levee or revetment projects:** \$2.2 million was spent to acquire 18.7 acres to support capital projects such as the Reddington Levee (Green River), the Countyline to A Street levee and the Pacific Right Bank berm (White River), and the RM 1.1 levee setback (Tolt River).
- **Major Levee Rehabilitation Engineering Design:** Engineering design work supporting feasibility and key design milestones was completed for 180th-200th (Green River), Middle Fork Snoqualmie, South Fork Levee System Improvements, Rainbow Bend (Cedar River), and two projects in the Pacific reach of the White River (Countyline to A Street and the Right Bank Berm). These projects are scheduled for construction between 2013 and 2015.
- **Cedar Rapids Repair, Cedar River:** During the summer of 2012, construction was completed to set back a short section of levee and provide permanent stabilization for the right bank of the site. This will provide a permanent repair of the right bank levee resulting from flood damage during the January 2011 flood and tie into the downstream revetment. The left bank construction is scheduled for summer 2013.
- **Flood Damage Repairs:** Flood damage repairs were completed along the Upper Snoqualmie (Record Office revetment) and South Fork Snoqualmie (Si View Levee). Repairs on the Belmondo revetment (Cedar River) were initiated in 2012 and will be completed during the 2013 construction season.
- **Engineering Design and Construction Contracts:** Consultant contracts are a significant resource for capital project planning, design, and implementation. At the

end of this reporting period there are 16 contracts with 39 work orders valued at over \$18 million.

- **Sub-Regional Opportunity Fund:** The Opportunity Fund is comprised of 10 percent of the District's tax revenues collected each year, which are allocated to jurisdictions based on prorated assessed value for approved projects. The revised adopted budget for 2012 is just over \$11 million, including \$7.5 million in carryforward from 2011. During the reporting period, reimbursements totaling \$1.95 million were paid to multiple jurisdictions to support stormwater and flood-related projects. A request for 2012 project proposals for an additional \$4 million was distributed in July, and these proposals are included in the 2013 budget proposal.
- **Green River Sandbag Removal:** Following Board direction in May 2012, the capital program included \$5.8 million to cost-share removal of the Green River sandbags. The District is funding 75 percent of the cost, and the cities are providing 25 percent. The District contribution was made possible by deferring capital construction projects in the Green River basin.
- **Water Resource Inventory Area (WRIA) Funding:** Following Board direction in May 2012, initiated distribution of \$3 million to fund habitat protection and restoration projects recommended by the WRIs.

Flood Preparedness, Regional Flood Warning Center and Post Flood Recovery Program

The District's operational work program includes a comprehensive approach to preparing and educating citizens for flood events, coordinating emergency response and regional flood warning center operations during flood events, and ensuring consistency across basins for post-flood recovery actions.

Activities during this period were focused on preparation for the 2012-2013 flood season. This included multiple improvements to the database and software used for the flood alert system. These improvements are intended to increase the reliability and functionality of the emergency information system in advance of flood season. A new mobile phone application was developed, providing an additional tool for the public to track flood conditions on major rivers in King County.

Flood Hazard Studies, Mapping, and Technical Services Program

During the first quarter of 2011, FEMA's administrator announced, in response to requests from several members of Congress, that FEMA would delay issuance of final flood insurance maps pending development of a new risk-based analytical approach intended to incorporate levees that are unaccredited but may still provide some level of risk reduction. King County provided written comments to FEMA in the first quarter of 2012; it remains unclear how FEMA will revise its "without levee" analytical approach to establishing flood insurance maps, and the timeline is similarly uncertain.

Public Outreach, Flood Hazard Planning and Grants, and Repetitive Loss Mitigation

Significant outreach efforts included development of a new video on the home elevation program which provides introductory information as well as testimonials for past participants, creation of a Facebook page for river and floodplain management efforts, and annual flood season inter-agency coordination and outreach preparation including participation in the regional Take Winter by Storm media effort.

Community Rating System

In July, FEMA verified King County's Class 2 rating for its flood risk reduction program. The result is flood insurance discounts of up to 40 percent under the National Flood Insurance Program, saving the average flood insurance policyholder in unincorporated King County more than \$340 per year on their premium.

Leveraging External Resources through Grants and Partnerships

Following receipt of a FEMA Severe Repetitive Loss grant to elevate six homes in the Snoqualmie basin in the first quarter of 2012, King County received a FEMA Pre-Disaster Mitigation Grant that provides over \$700,000 in federal funds to cost-share elevation of an additional nine homes, mainly in the Kimball Creek area of the Snoqualmie basin. Staff have also been working with homeowners to prepare a FEMA grant to elevate another 8-10 homes in the Snoqualmie basin.

In May, the Water and Land Resources Division (WLRD) and the US Forest Service signed a participating agreement to implement the South Fork Skykomish River Restoration Feasibility Study. WLRD has received \$200,000 of Forest Service funds to develop river restoration strategies and identify potential capital projects in the South Fork Skykomish Watershed. District cost-share is \$50,000, leveraging \$4 for every \$1 invested by the District.

2006 King County Flood Hazard Management Plan Update

Staff organized and facilitated six citizen committee meetings to discuss issue papers and proposed basin action plans related to the King County Flood Plan Update. A public review draft of the updated Plan is scheduled to be released in early December, and three public meetings will be set up around the County.

The citizen committee agendas, issue papers, and meeting notes are available here:

<http://www.kingcounty.gov/environment/waterandland/flooding/documents/flood-hazard-management-plan-update/plan-update-citizen-committee.aspx>

National Flood Insurance Program (NFIP) Biological Opinion

In December 2011, King County submitted its final Programmatic Habitat Assessment, which evaluates the impact of development within unincorporated King County's mapped floodplains, to the FEMA for review. The assessment was done to comply with the National Marine Fisheries Service's (NMFS) 2008 Biological Opinion regarding the effect of the National Flood Insurance Program (NFIP) on Puget Sound salmon and orca whales, which are listed under the Endangered Species Act (ESA). In the Biological Opinion, NMFS recognizes that King County's regulations already go beyond the minimum requirements of the NFIP in ways that are likely to reduce habitat degradation for listed species. The assessment supplemented King County's 2010 checklist that was prepared to demonstrate compliance with the ESA as a participating

community in the NFIP. In July, FEMA completed its review of King County's Programmatic Habitat Assessment, and determined that King County's development regulations, policies, and programs are in compliance with the NFIP Biological Opinion.

Levee Vegetation and U.S. Army Corps of Engineers PL 84-99 Eligibility

King County has been working with a team of state and federal partners (including the U.S. Army Corps of Engineers (Corps) - Seattle District) to achieve the following goals for levee vegetation management in Western Washington:

1. *Safe and Effective Levees*: resilient structures that can be accessed and inspected during floods.
2. *Functional Habitat*: in many densely developed locations our levees are our riverbanks.
3. *Cost-Effective*: use limited resources to address the worst problems first.
4. *Science-Based*: responsive to new information and research.

With these goals in mind, staff have been pursuing a science-based federal policy that reflects regional conditions and provides flexibility from uniform national standards, support for other federal habitat and clean water goals, appropriate prioritization of levee vegetation alongside other known levee safety risks, and a commitment to future research.

King County provided written comments to the Corps regarding its proposed changes to the policies that govern levee vegetation variances, and continued to partner with the Puget Sound Partnership and others to determine how a System-Wide Improvement Framework, or "SWIF," might provide opportunities to collaboratively prioritize levee safety risks and ensure that limited public funds are targeted on the highest priority needs. A letter of intent will be sent to the Corps in the fourth quarter to initiate the SWIF development process.

Natural Wood Policy

WLRD is updating its policies and procedures for managing naturally-occurring large wood in rivers and streams. WLRD staff reconvened the 2009 Large Wood Stakeholder Committee during the reporting period to present a draft update of King County's policies and procedures for managing naturally-occurring large wood in rivers and streams. The meeting was used to discuss how King County is responding to the group's 2009 recommendations and solicit feedback on the draft update.

King County Flood Control District Implementation

The Advisory Committee and Basin Technical Committees provided recommendations on the 2012 capital budget revision to fund sandbag removal along the Green River, as well as funding for the 2012 WRIA watershed management grants that have previously been funded by the King Conservation District. The Advisory Committee discussed issue papers related to the Plan Update, and provided recommendations for the 2013 proposed budget. The Advisory Committee's Annual Report was transmitted to the Board by the King County Executive in August. The report is available online at www.kingcounty.gov/environment/waterandland/flooding/flood-control-zone-District/governance/advisory-committee.aspx.

Resource Management, Annual Maintenance, and Facility Assessment Program

This element of the District's work program includes maintenance of approximately 500 flood protection facilities along 119 linear miles of riverbank; approximately 530 acres of flood buyout properties; as well as pump stations and related flood protection infrastructure.

During the reporting period, staff completed maintenance work to remove the rock weir in the Lake Sammamish Transition Zone channel, trim the willow buffer, and mow the high flow channel. This work was completed as part of the commitment made in the April 2011 Lake Sammamish Flood Reduction Plan to address residential concerns around high water levels in Lake Sammamish in relation to the Transition Zone channel.

Repairs to temporary flood protection barriers in the City of Pacific that were damaged by vandals were completed to ensure the integrity of the flood protection barrier.

Program Management and Supervision; Finance, Budget and General Administration

Major activities during the reporting period included preparation of budget materials for the Board and the Executive, grant billings and closeouts, Flood District billings, financial management and reporting, and internal contract audits. This includes working with homeowners to provide accurate records of reimbursable home elevation costs.