



King County

An aerial photograph showing a wide, winding river with muddy brown water. The river is surrounded by green fields and dense forests. The water has overflowed its banks in several places, creating large, irregularly shaped flooded areas. The sky is clear and blue.

King County Flood Control District Advisory Committee
August 6, 2012

Protecting public safety, the regional economy and critical infrastructure.

Presentation Overview

- Proposed Expenditures
 - District Administration
 - Operating Programs
 - Capital Strategy and Projects by Basin
- Financial Plan and Capital Program Adjustments
- Questions? More information or analysis needed?

Flood Control District Administration

Flood Control District is a separate Special Purpose Government:

- Executive Services, Legal, Communications, Accounting
- Scope and budget determined by Board
- 2013 proposal includes 3% increase plus \$75,000 insurance cost increase
- 2014-2018 costs assume 3% annual increase

Flood Control District Operating Programs

Flood Risk Reduction

Approach:

- Identify hazards
- Assess risk and vulnerabilities
- Build awareness of hazards
- Develop a plan and strategy to reduce risks
- Actions to avoid risk
- Actions to reduce or mitigate risk
- Evaluation and adaptation

Flood District Work Program

- Flood Preparedness, Regional Flood Warning Center, and Post Flood Recovery
- Planning, Grants, Mitigation, and Public Outreach
- Flood Hazard Assessments, Mapping, and Technical Studies
- Resource Management, Annual Maintenance, and Facility Monitoring

2013-4 Proposed Operating Changes (\$1.75M increase from \$8.3M to \$10.1M)

- No proposed change to FTE count (40)
- Corps PL 84-99 Levee Vegetation Compliance (2013-4 only) \$500,000
- Sammamish River channel maintenance (2013 only) \$450,000
- Green River Pump Station fuel increase (2013 only) \$185,000
- Green River Pump Station operations costs \$300,000
- Levee Vegetation Tree Root Strength study, Recreational Use Study (2013 only) \$160,000
- Communications for capital projects (MWH report) \$75,000
- Capital Project Recreational Safety Support (MWH report) \$75,000



Sammamish Transition Zone

Black River Pump Station



Evaluating Capital Projects

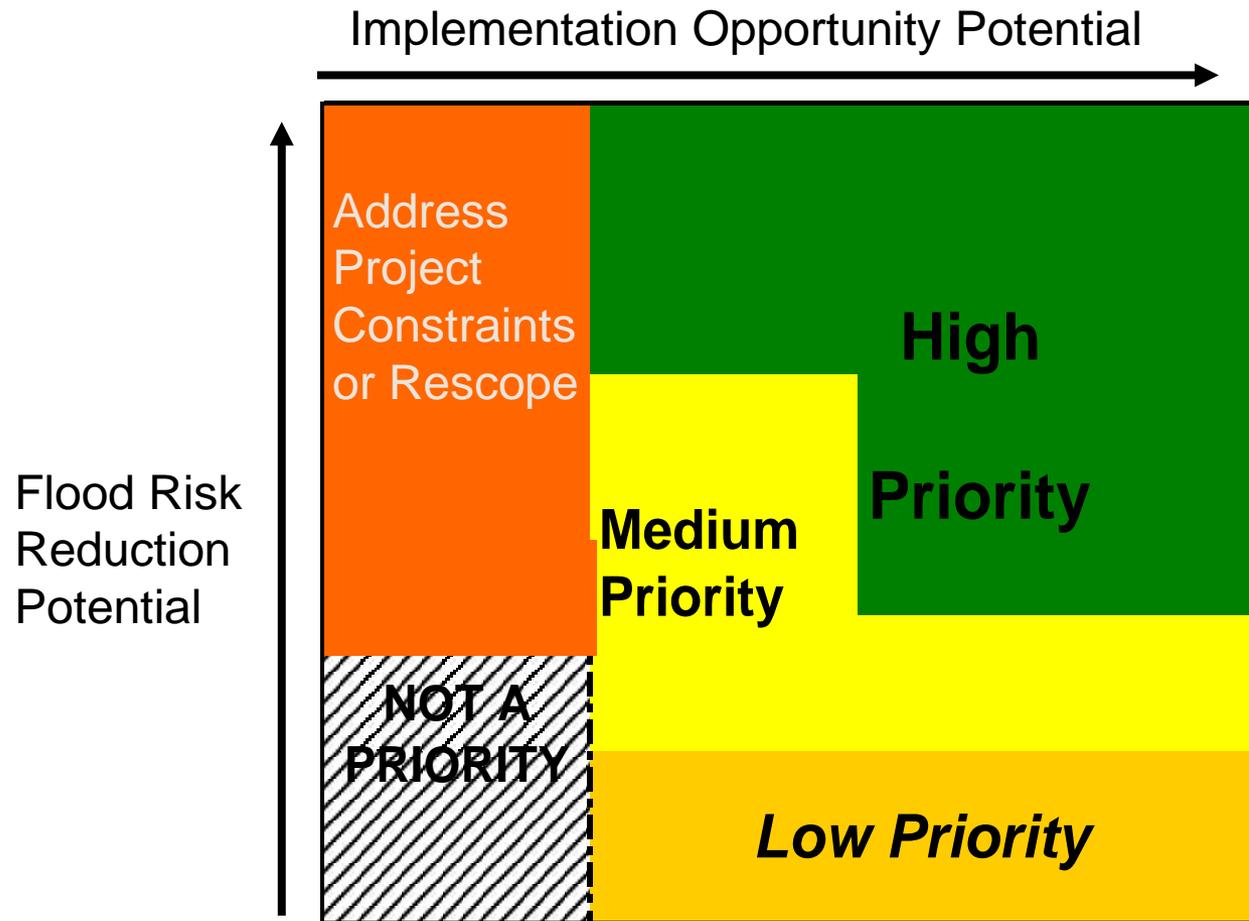
Flood Risk Reduction Score

- Consequences: What would happen if no action were taken?
 - Types of land use impacted; Regional Economic Benefit
- Severity: How serious is the impact?
 - Human injury or death *vs* little or no damage
- Extent of Impact: What is the scale of the problem?
 - Impacts beyond the area of flooding *vs.* localized
- Urgency: How soon will the impacts occur?
 - Next high flow event *vs.* Risks are not rapidly increasing

Implementation Score

- Project Readiness
- Partnerships / Leverages Funds
- Supports multiple objectives
- Long-Term Maintenance Costs
- Programmatic Activities
 - Community Rating System
 - Meet or exceed NFIP
 - Active CIP program
 - Active O&M program

Evaluation Criteria: Project Evaluation Approach

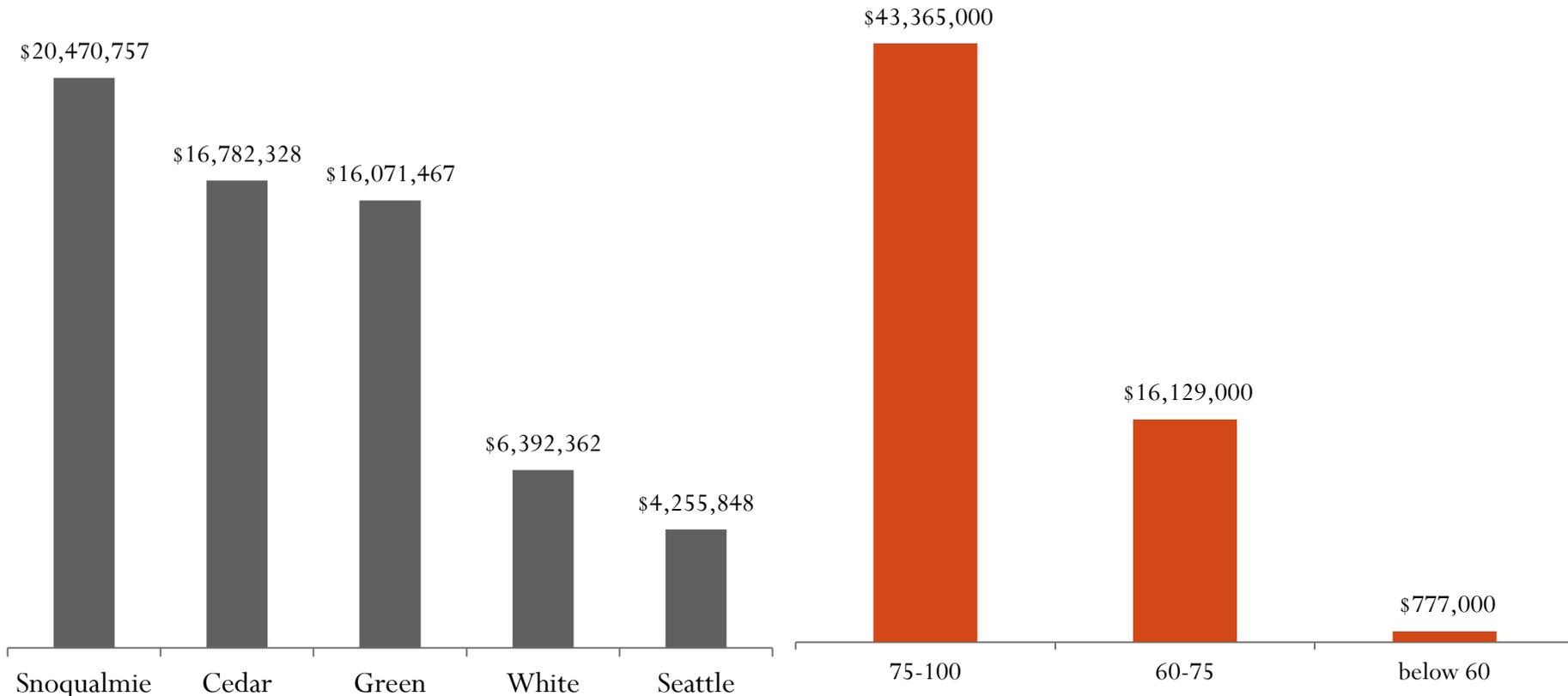


NOTE: This is a conceptual diagram and is not intended to imply clear and distinct thresholds between these categories.

Expenditures to date (2008-2011)

- By basin

- By project score



FCD Expenditures Only (does not include \$25M in USACE projects)

Actions to Reduce Flood Risks

- 90 parcels and 178 acres acquired since 2008. Over 175 residents relocated to safer housing
- 65 homes elevated or in progress
- 25 farm pads constructed or in progress, 2 barn elevations
- 60+ levee projects completed
- Several major levee rehabilitations scheduled for construction in 2013



Cedar River (top)

Lower Green River Corps Repair (bottom)



Snoqualmie/ South Fork Skykomish Basin

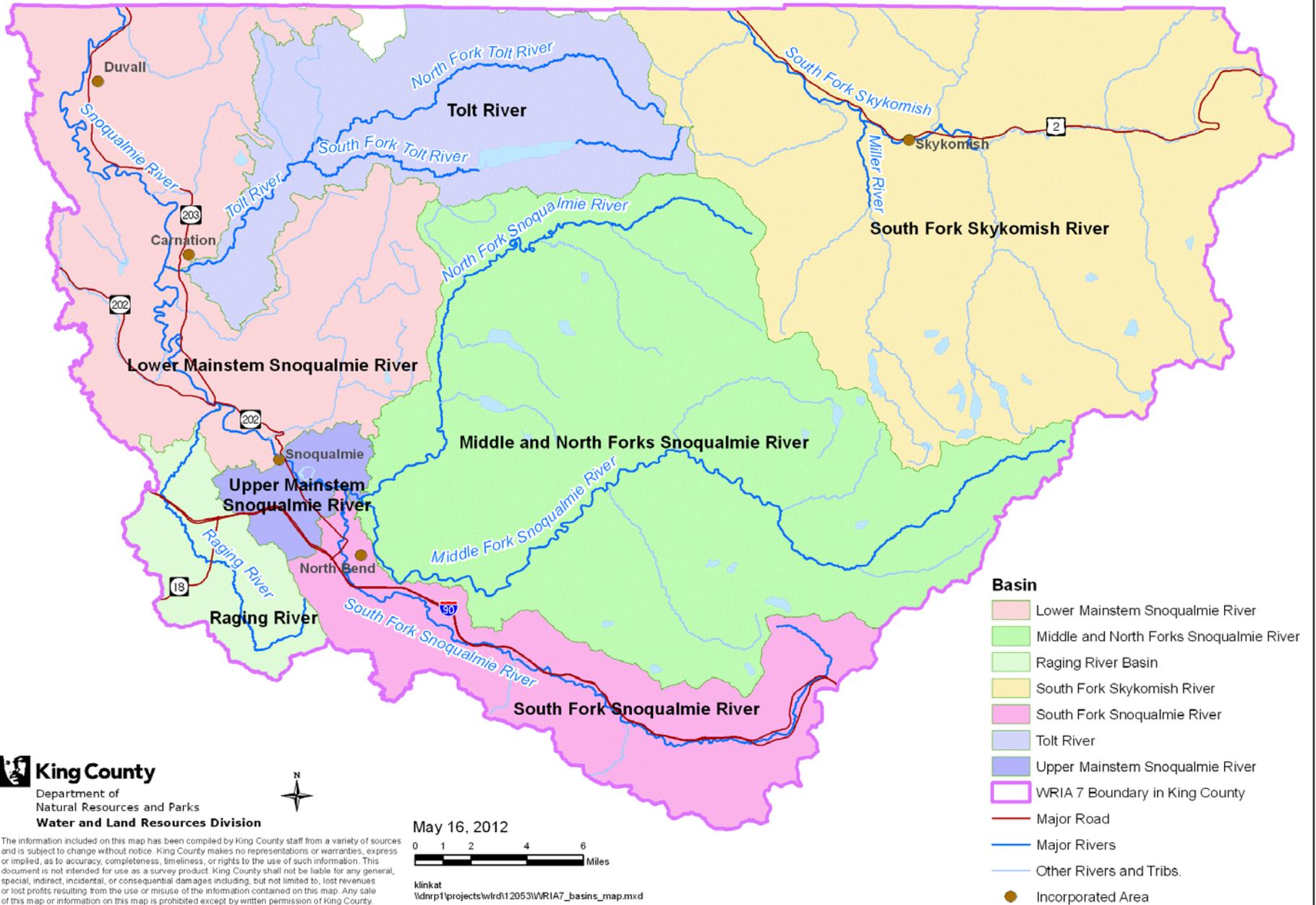
-  River/Stream
-  Other Basin Boundaries
-  Lake
-  Incorporated Area
-  Snoqualmie/S. Fork Skykomish Basin



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WRIA 7 Snohomish - Snoqualmie: King County Portion



King County
Department of
Natural Resources and Parks
Water and Land Resources Division



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Snoqualmie Flood Risks



Flood inundation



Channel migration



Bank erosion



Alluvial fan hazards

Accomplishments

- Over 39 flood buyouts
- 48 homes elevated above flood height
- 45 home elevations in progress (FCD and Snoqualmie)
- 24 farm pads
- 2 barn elevations in pilot project
- 21 separate flood events 06, 08, 09, 11
- 25 repair projects completed
- 8 major projects in 6-year CIP



Looking Ahead: Overall Approach and Strategy

- Multi-objective
- Sustainable and cost-effective
- Typical approaches include...

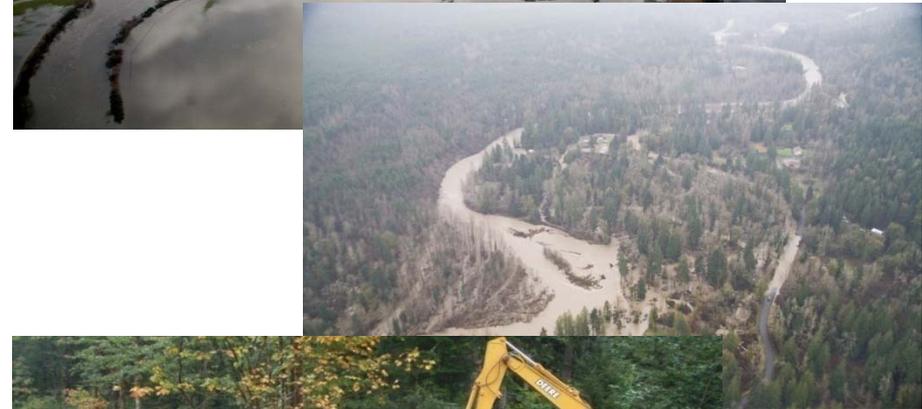
Non-structural approaches where feasible

- Buyouts
- Home elevations
- Farm pads

Levees and revetments where significant public safety risk

- Retrofits and relocations
- Repairs when needed

Allow room for natural river and floodplain processes



Middle & North Forks Snoqualmie: Conditions

- Dynamic alluvial fan
- High channel migration and erosion risks
- Facilities require frequent and costly repairs



Middle and North Forks: CIP Highlights

Middle Fork Conveyance Improvements

- Corridor Management Project
- Improve alignment and functioning of levees
- Combination of levee retrofits and buyouts



South Fork Snoqualmie: Conditions

Levees through North Bend

- Provide 30-year flood protection
- Have geotechnical and seepage problems
- Frequently damaged

Below North Bend

- Dynamic alluvial fan
- High channel migration and erosion risk to developed properties (Circle River Ranch)



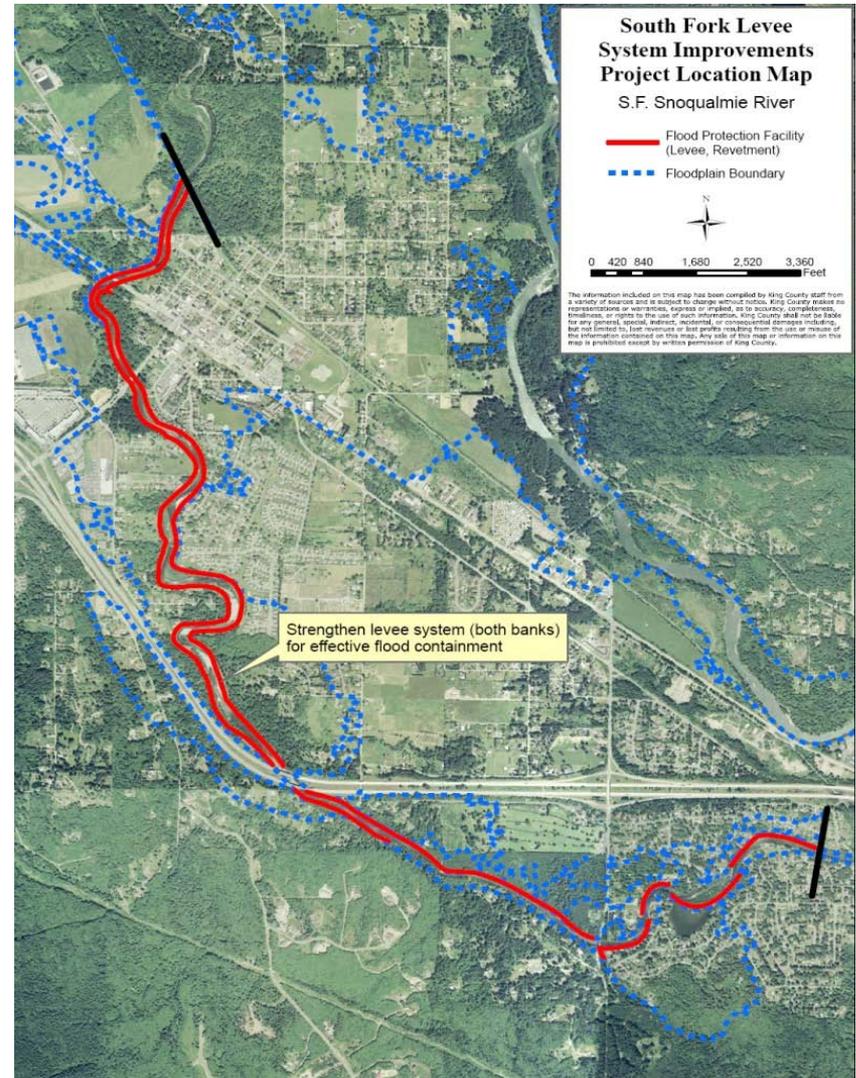
South Fork: CIP Highlights

South Fork Levee Improvements

- Rebuild highest priority levee segments to address geotechnical and flooding concerns

Si View Repair

- 2012 Flood damage repair



Upper Snoqualmie Mainstem: Conditions

- Broad deep floodplain
- More than 300 homes and businesses inundated
- Infrastructure also at risk
- Highest number of flood damage claims in Washington State



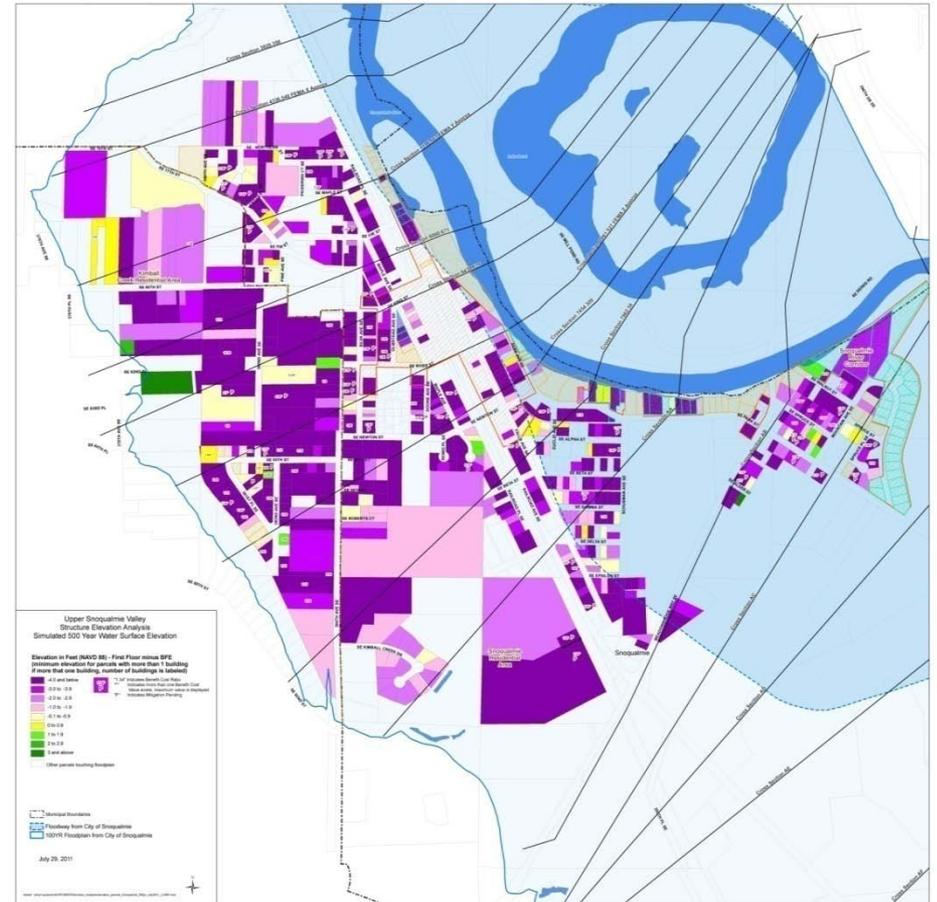
Upper Snoqualmie: CIP Highlights

Residential Flood Mitigation

- Home elevation cost sharing and priority buyouts
- Partnership with Snoqualmie and North Bend

Record Office Repair

- 2012 Flood Damage Repair



500 Year Flood

Raging and Tolt Rivers: Conditions

- Narrow, steep tributaries
- Very high channel migration rates threaten homes, neighborhoods
- Raging: Toe of slope along Preston-Fall City Road at risk
- Lower end of both rivers leveed



Damaged home along Raging

Raging and Tolt Rivers: CIP Highlights

Several buyout projects

- Alpine Manor (Raging)
- San Souci (Tolt)

Tolt River “Supplemental Study”

- Corridor plan to determine highest priority levee retrofit and property acquisition needs
- Partnership with WRIA 7 as high priority salmon river

**Initiate highest priority
levee retrofit (tentatively
Tolt 1.1)**



Lower Snoqualmie: Conditions

- Deep, broad floodplain; levees do not limit flooding
- Homes and farms impacted
- Important salmon habitat
- Near Tolt and Raging confluences
 - Steeper gradient, more gravel
 - Increased risks of channel migration, fast/erosive flows
- Other areas
 - Less channel migration
 - Deep flood inundation



Lower Snoqualmie: CIP Highlights

Projects to mitigate flood impacts on farmlands

- Farm pads, barn elevations
- Home elevations



Aldair/ Fall City Area Buyouts

Large revetment

retrofits/ repairs

- Sinnema Quaale Upper
- Winkelman (Tolt Pipeline Protection)



S. Fork Skykomish: Conditions

- Homes in Town of Skykomish & unincorporated King Co. at inundation and erosion risk
- Recent avulsion closed Old Cascade Hwy over Miller River
- Steep gradient, swift water, white water
- Channel migration hazards throughout but not yet mapped



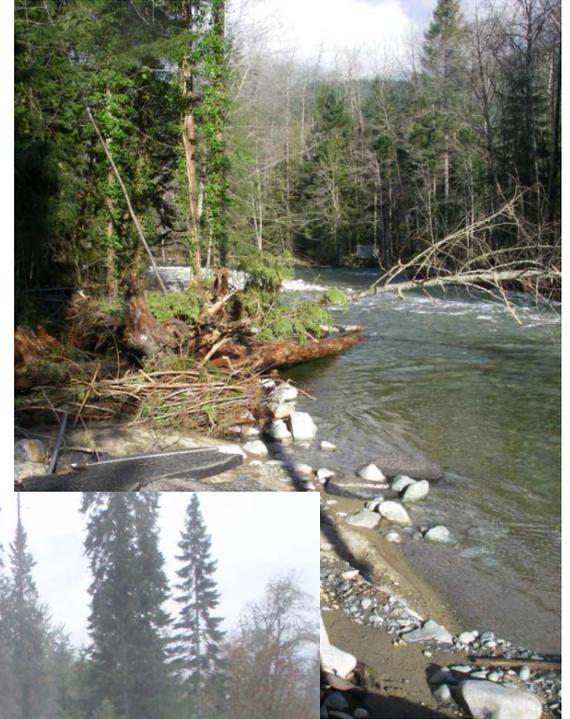
*Old Cascade Hwy
washout (Miller River)*

S. Fork Skykomish : CIP Highlights

Timberlane Village Buyouts

Miller River Road Protection

- Coordinate river facility maintenance or removal with King County Roads decision on Old Cascade washout





White River Basin

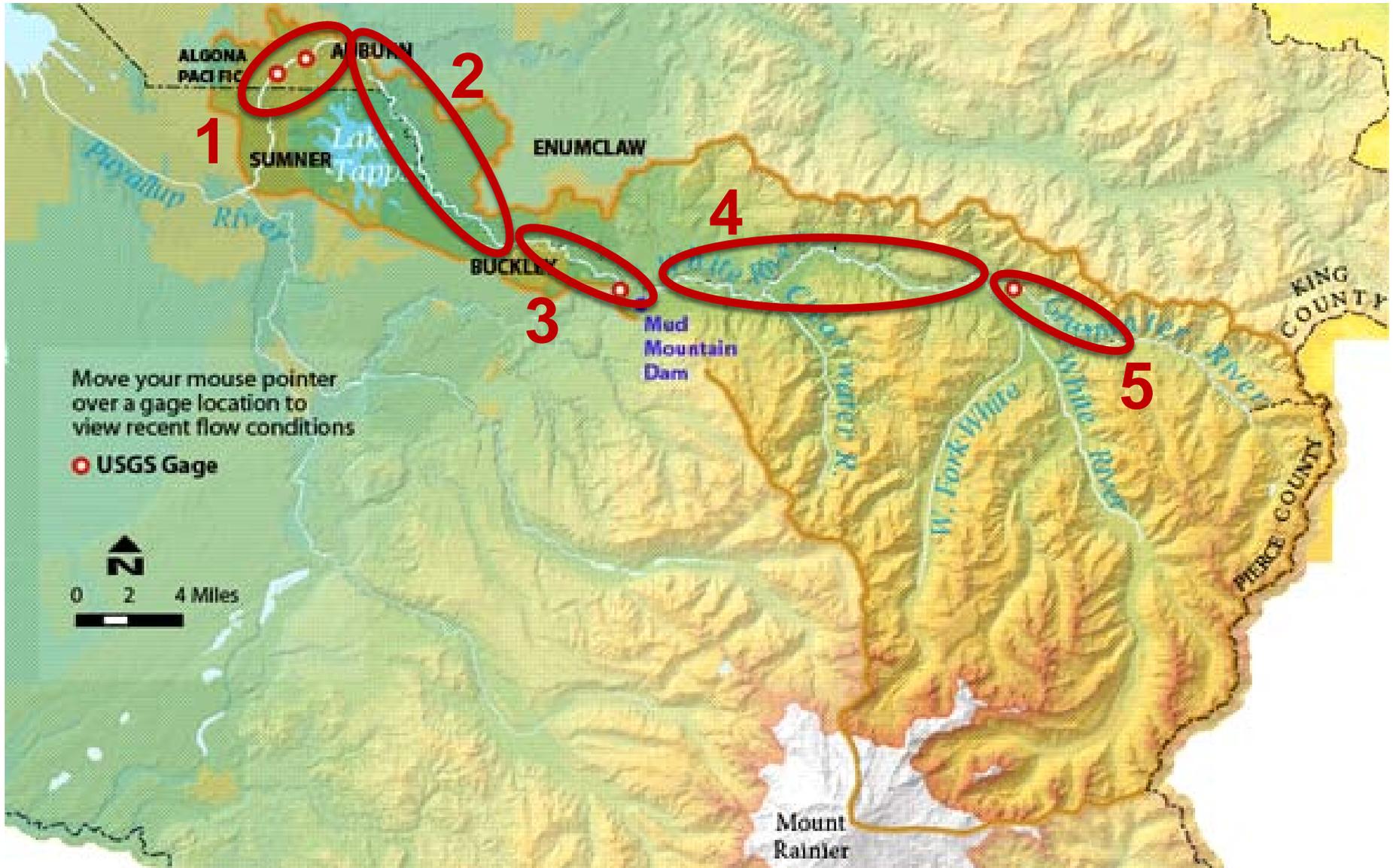
-  River/Stream
-  Other Basin Boundaries
-  Lake
-  Incorporated Area
-  White River Basin



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White River Basin



Lower White River 2009 Flooding

- Depositional reach in sediment-rich basin
- January 2009 flooding
 - Right (east) bank areas in City of Pacific
 - Left (west) bank into City of Sumner
- Flooding was exacerbated by sedimentation



Strategy to reduce flood risk

Segment 1: 8th Street – RM 10

- Improve flow conveyance
- Remove artificial fill
- Build setback levees
- Continue to monitor channel conditions

Accomplishments Overview

Segment 1: 8th Street - RM 10

- Technical studies (2006 – present)
 - Directly supports capital project design development*
- Stuck River Drive revetment repair (2008)
- Temporary HESCO flood barrier (2009)
- TransCanada Levee Setback Feasibility (2011)
- Capital Project Design and Implementation
 - *Right Bank levee setback*
 - *Countyline levee setback*
- Installation of USGS Radar gages (2012)

Accomplishments

Segment 1: 8th Street - RM 10

Right Bank levee setback progress

- Temporary HESCOs installed
- 7 acre agricultural property
- 2 residential parcels along 3rd Place SE
- 5 relocations & 6 demolitions White River Estates
- 1 pending acquisition in WR Estates
- Setback levee construction start 2016

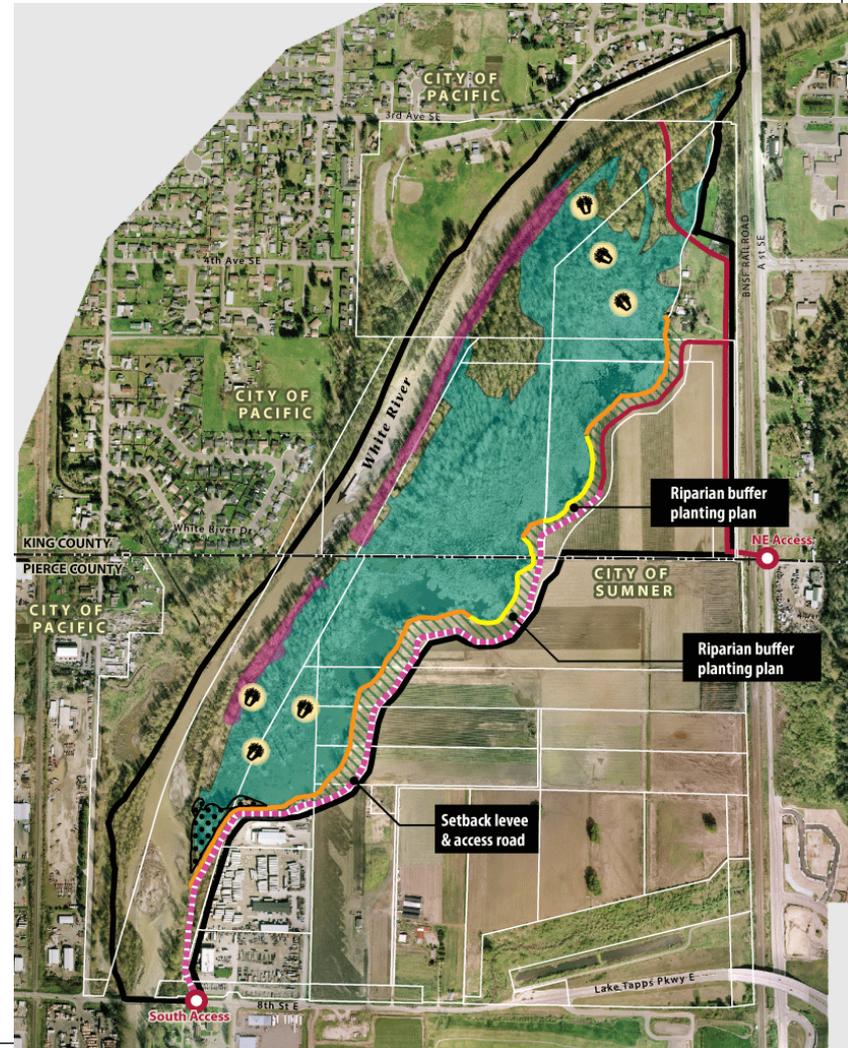


Accomplishments

Segment 1: 8th Street - RM 10

Countyline levee setback

- Acquisition
- Preliminary design
- Technical analyses
- Construction start 2014



Summary of Action Plan – White River

- Greatest risks & consequences in Pacific -Auburn area
- Major focus is capital improvements
 - Continue with capital projects already in progress
 - Develop further capital actions with feasibility studies
 - Conduct recreation study to inform capital projects
 - Develop local and state partnership to resolve 8th Street Bridge constriction





Cedar River Basin

-  River/Stream
-  Other Basin Boundaries
-  Lake
-  Incorporated Area
-  Cedar River Basin



Purpose of Presentation

- Brief summary info about the Cedar/ Sammamish Watersheds
- Accomplishments since 2006
- Overview of Implementation Strategy
- Future Direction – Flood Plan Update
- Solicit feedback from committee

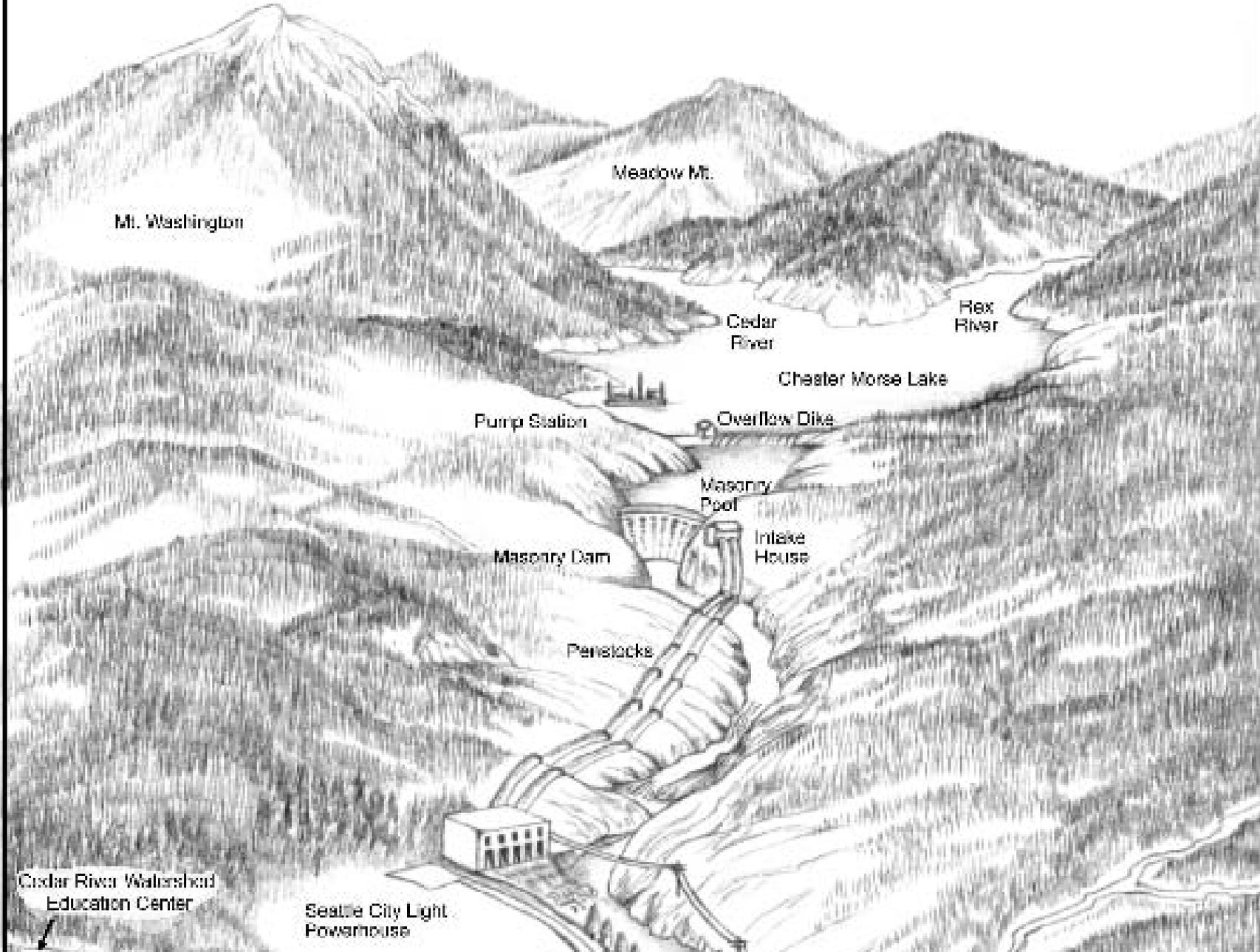
Cedar River Map



Cedar River Overview

- 188 sq mi, 45 mi long
- 100-yr flow = 10,300 cfs at Landsburg
12,000 cfs at Renton
- Recent Major Floods:
 - Jan. 2009 = 9,390 cfs at Renton
 - Nov. 1990 = 10,600 cfs at Renton
- Summer Low flow typically 150 to 300 cfs
- Regulated by Chester Morse releases

Cedar River Watershed



Mt. Washington

Meadow Mt.

Cedar River

Rex River

Chester Morse Lake

Pump Station

Overflow Dike

Masonry Dam

Masonry Pool

Intake House

Penstocks

Cedar River Watershed Education Center

Seattle City Light Powerhouse

Cedar River Flood Risk Overview

- Risk Factors:
 - Deep and Fast Overbank Flows
 - Bank erosion and channel migration
 - Flood Inundation
 - Sediment aggradation and channel maintenance (Renton)
 - Wood Accumulation and Risk Management
 - Outdated Infrastructure – primarily rock revetments

Cedar River Flood Risk Overview Contd.

- Flood Hazards Risk Focus Areas:
 - Business Core – primarily Renton
 - Suburban and Rural Residential
 - Roads and Bridges
 - Cedar River Trail
 - Utilities – e.g. Fiber Optic Cable

Cedar Flood Risk Reduction Strategy

- Buyout or remove people from harms way
- Protect critical infrastructure and development
 - City of Renton/ Boeing/ Airport (Sediment mgmt)
 - Cedar River Trail
 - Utilities – e.g. Verizon fiber optic
 - Roads and Bridges
- Setback levees (revetments) where possible in close coordination with WRIA restoration plans.
- Maintain/ repair revetments w/ required mitigation

Cedar Strategy Contd.

- CIP projects based on detailed feasibility/ geomorphic analyses, design and safety reviews (Levee Setback Feasibility)
- Technical information – sediment accumulation and channel migration analyses
- Flood warning, outreach and public involvement – share project information early
- Partnerships for restoration and stewardship;
- Coordination on dam operations*.

** Note: Flood control not a primary function or responsibility for operation of the dams*

Cedar River Flood Risk Reduction Accomplishments

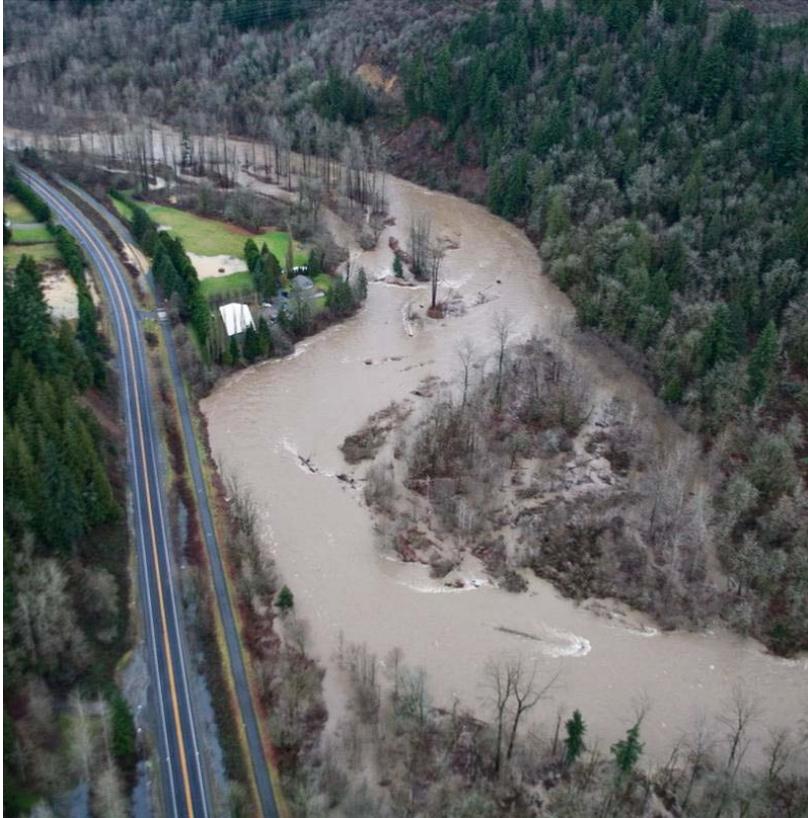
- 20 flood damage repairs - 2850 LF of bank protection;
- Acquired 80 homes = 93 acres of protected floodplain
- Setback of 2 major levees along 2730 LF of bank, reconnecting 31 acres of floodplain (Cedar Rapids)
- Improved coordination on dam operations reduced flooding and damages (e.g., January 2011 flood);
- Conducted large wood inventory and recreation study;
- Initiated Cedar River basin outreach strategy and hosted first (annual) public meeting.

Project Examples

Flood damage repair projects:

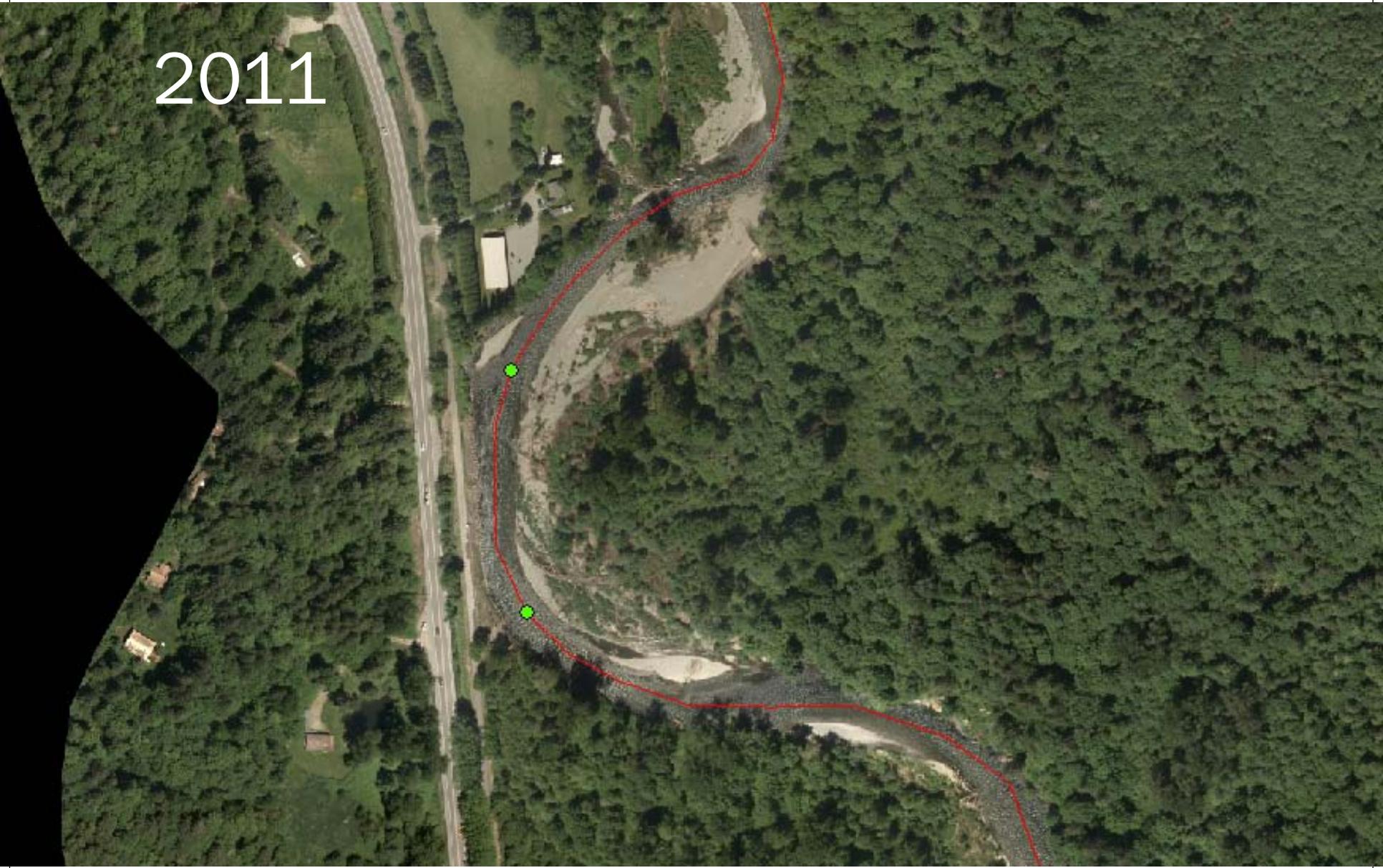
- Belmondo Reach
- Cedar River Trail Site 1
- Cedar River Trail Site 3
- Jan Road Levee
- Cedar Rapids – Setback levee
- Rainbow Bend/ Cedar Grove Acquisition

Belmondo Revetment



- Channel migration area
- Gravel bars & wood
- Severe bank erosion
- Infrastructure at risk

2011



2007



2002



Major Flood Repair: Cedar River Trail Site 1



- Severe erosion to within a foot of the Regional Trail, fiber optic cable and Maple Valley Highway

Major Flood Repair: Cedar River Trail Site 3



Minor Flood Repair: Jan Road Levee



Capital Projects: Cedar Rapids Levee Setback



Capital Projects: Rainbow Bend Levee Buyouts



November 1990



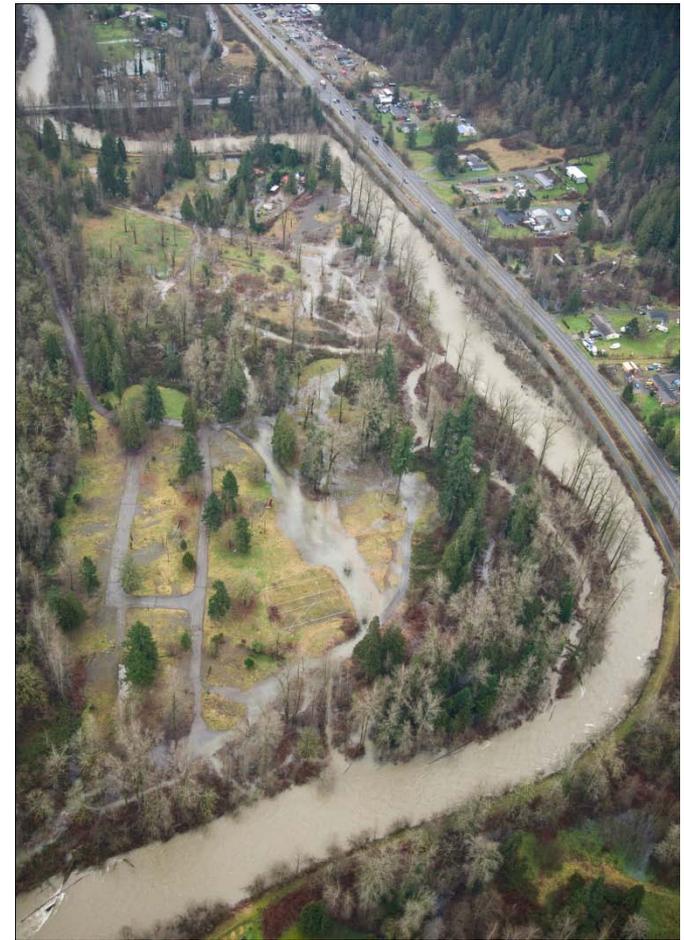
January 2009

Cedar Grove Mobile Home Park Acquisition and Relocation (Rainbow Bend)

- Repeated flooding of 51-Unit mobile home park



January 2009



January 2011

Emerging Issues

- Flood Events in 2006, 2009, 2011
 - Repairs and New Areas of Concern
- Multi-Objective Coordination & Partnerships
 - Fish and Wildlife Habitat Restoration
- Active and Passive Recreation
 - Large Wood Policies
- Outreach and Public Involvement
 - Buyout Program – gaining acceptance
 - Sharing Long Term Vision

Capital Project Outlook

- Cedar Rapids Right Bank Levee Setback - 2012
- Belmondo Mitigation and Repair – FEMA funded
 - 2012 and 2013 (includes mitigation for wood)
- Cedar River Gravel Removal – Renton
- Rainbow Bend Floodplain Reconnection
 - Partnership – WRIA recovery team and City of Seattle
- Elliott Reach Floodplain Reconnection
- Levee Setback Feasibility
 - Rhode & Getchman
 - Jan Rd & Rutledge-Johnson
 - Herzman
 - Byers Road

Rainbow Bend Floodplain Reconnection





Elliott Reach Acquisition



January 2009

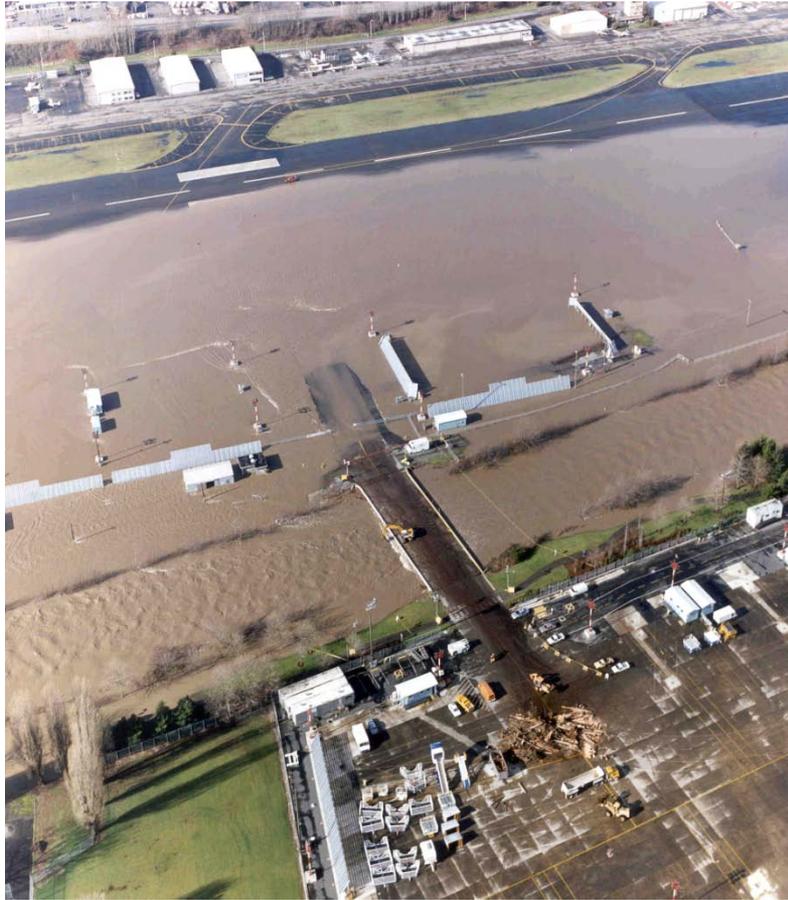


- Flood damages in 2006 & 2009
- Repetitive Loss Area
- Upstream from 2001 landslide

Elliott Reach Restoration Potential (WDOT Partnership)



Renton 205 Project: Renton Airport



February 1996
Flood peak 7520 cfs in Renton

- Dredging channel to maintain capacity

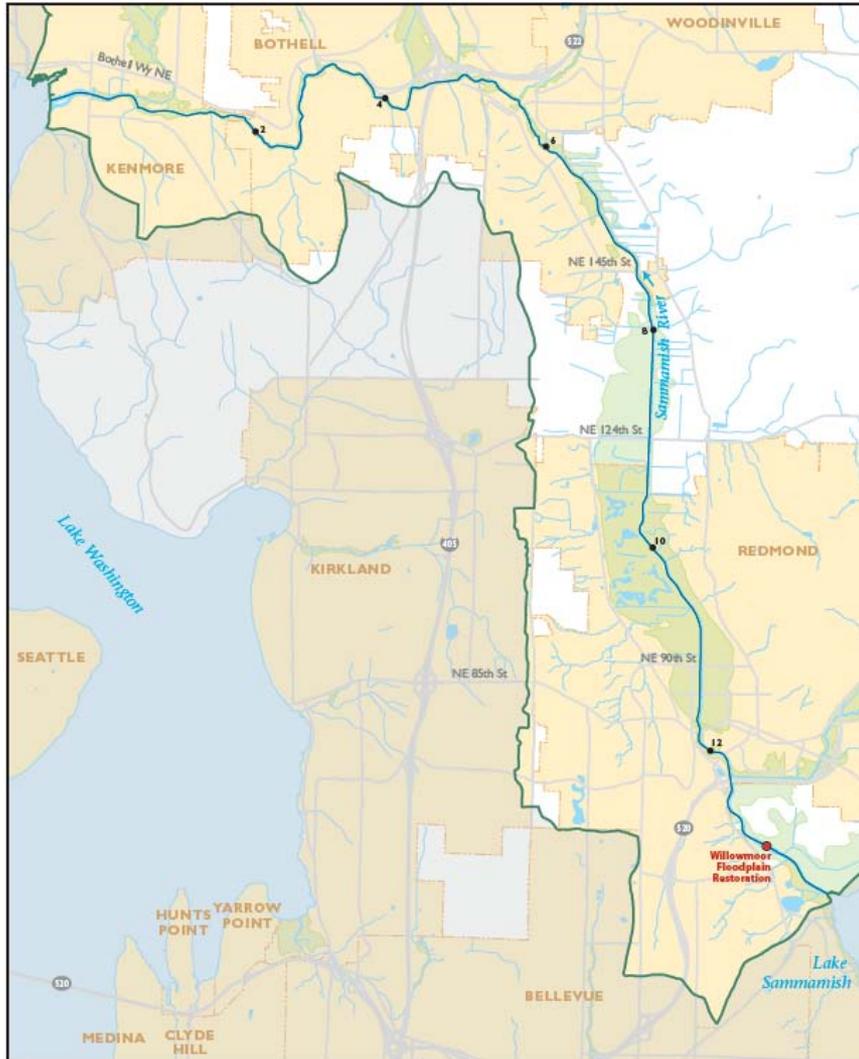


January 2009
Flood peak 9470 cfs in Renton

Cedar River Emerging Issues

- Costs – Expensive projects:
 - Renton Gravel Removal > \$5M
 - Acquisitions – e.g. Riverbend Mobile Home Park > \$6M + Relocation (Partnership with Restoration Program)
 - Levee Setback costs – pending detailed feasibility and preliminary design
- Wood and Sediment Management
- Safety Review
- Flood Response and Community Involvement

Sammamish River Basin



- 240 sq mi basin
- 14 mi from Lake Sammamish to Lake Washington
- 100 year flow = 1649 cfs L. Samm.
5,255 cfs L. Wash

Sammamish River Flood Risk Overview

- Risk Factors:
 - Low flood risk - Sammamish River Flood control channelization and dredging 1964
 - Vegetation growth in channel and on banks
 - Degraded habitat conditions
 - Sediment Accumulation in Transition Zone
 - Lake level concerns
- Areas Affected by Flood Hazards:
 - Agricultural, recreational, and residential uses
 - City parklands and suburban development

Sammamish River Corps Flood Control Project - Transition Zone



Increased Level of Maintenance

Lake Level Issues

- 2011 Flood Reduction Work Plan
- Mowing Reed Canary grass and trim Willows
- Maintain buffer
- Monitoring – increased gages and flow measurement:
 - Approx. 0.4 Ft reduction in Lake level for 700cfs (28.0 Ft. NGVD)
- Sediment Removal Study – 0.1 to 0.2 Ft reduction potential

Facility Maintenance – Post mowing/ Willow Trimming



Accomplishments

- Coordinated with Cities to accommodate modifications to 1964 project
 - Redmond Instream Habitat Enhancement Projects
 - Revegetation Projects in Bothell & Woodinville
 - Bear Creek Restoration near mouth
- Increased vegetation management in Transition Zone
- Sediment Removal Study
- Partnership with City of Redmond to conduct feasibility study for Willowmoor Restoration Project
- Negotiating transfer of Kenmore Navigation Channel to City of Kenmore
- FEMA Approved Revised FIS and FIRMs

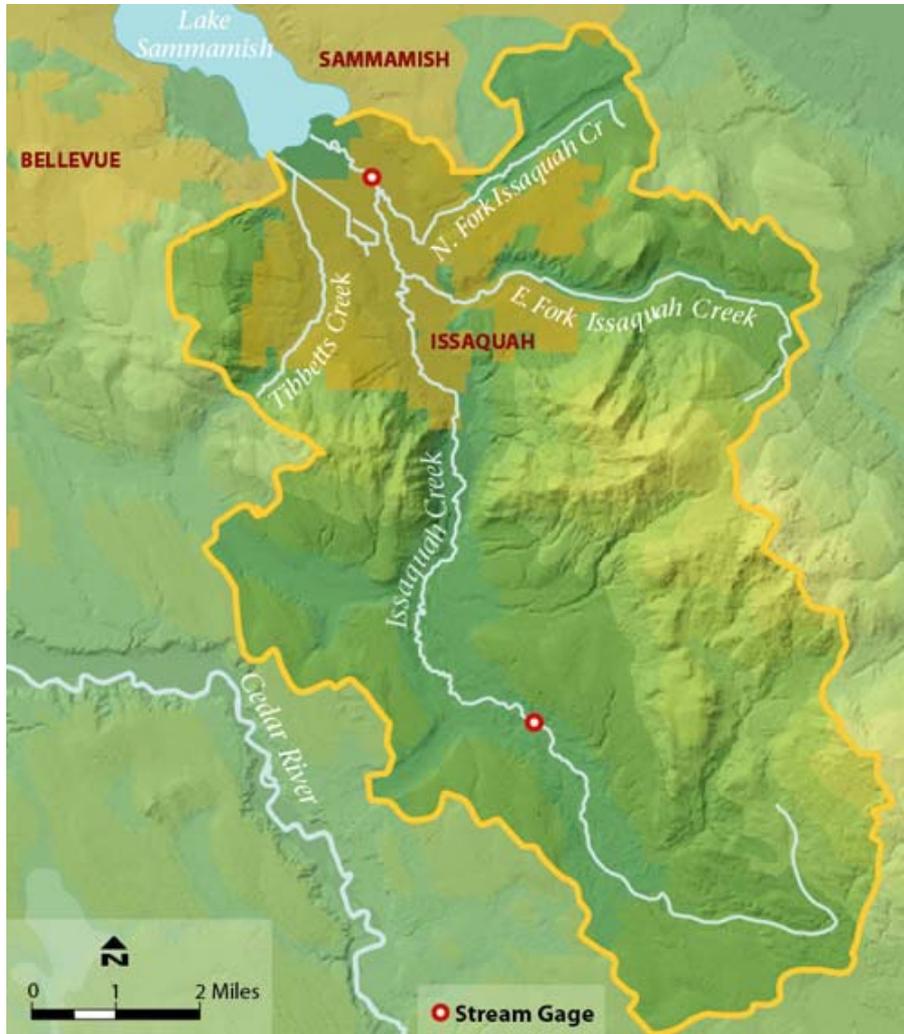
Sammamish Flood Hazard Mitigation Strategies

- Maintain flood conveyance while restoring degraded habitat conditions
 - Setback or reshape banks
 - Replace invasive with native vegetation
- Investigate need for sediment removal
 - Upstream end - Transition Zone
 - Downstream end – Mouth
- Willowmoor Project w/ Redmond

Near Term Sammamish Projects

- Partner with Dept of Natural Resources on pilot Brazilian Elodea removal project
- Feasibility Study for Willowmoor Restoration Project – partner with City of Redmond – initiate summer 2012:
 - Habitat Restoration and,
 - Lake Level control and downstream flood management
- Proposed Sediment Removal – 2013 Budget

Issaquah Creek Basin



- Largest trib to L. Sammamish
- 57 sq mi
- Lower 11 sq mi City of Issaquah
- 100 year flow = 4670 cfs

Issaquah Creek Flooding



Issaquah Creek Flood Hazard Mitigation Strategies (City)

- Acquisitions and elevations for flood-prone residential and commercial structures
- Flood proofing – e.g. Gilman Village
- Target mitigation actions for repetitive loss properties
- Open Space use for flood prone areas

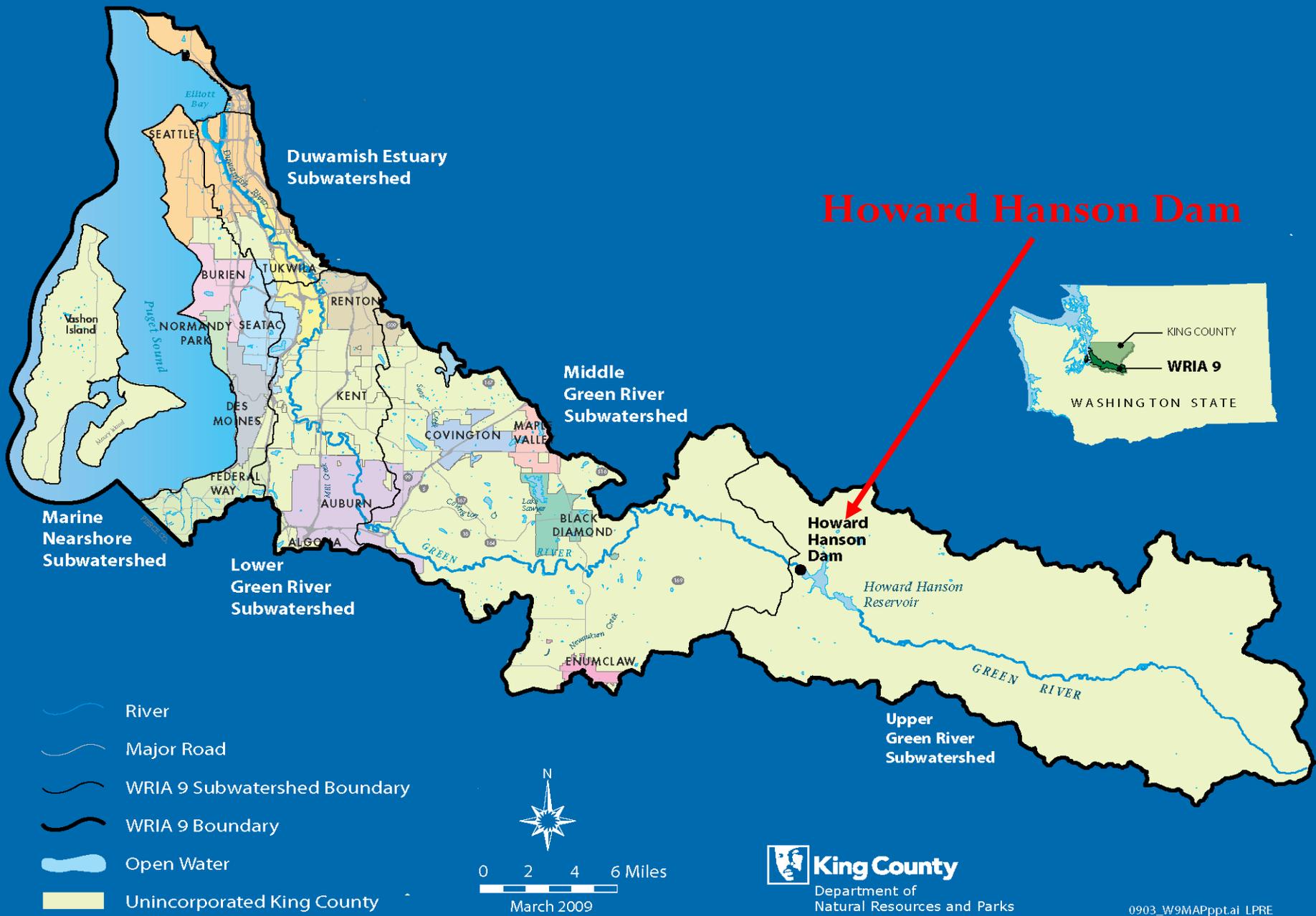
Other Lake Washington Projects

Other on-going projects in Flood Plan:

- Coal Creek – City of Bellevue
 - 6 year CIP cost \$8.4M
- Lyons/McAleer Creek – City of Lake Forest Park
 - 6 year CIP cost \$1.0M

Summary – Cedar/ Sammamish

- Generally stay the course - 2006 Plan
- Update projects with detailed feasibility – geomorphic and other constraints
- Continue partnerships with Salmon Recovery Plan implementation
- Implement design rigor and safety reviews
- Evaluate costs



Howard Hanson Dam



-  River
-  Major Road
-  WRIA 9 Subwatershed Boundary
-  WRIA 9 Boundary
-  Open Water
-  Unincorporated King County



King County
 Department of
 Natural Resources and Parks

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Basin Overview



Lower Green – Levee System Containment is Nearly Continuous

Basin Overview



Middle Green – Discontinuous Levees, Significant Agricultural Land Use

Green River Accomplishments

Work Completed Since 2006

Capital Projects and Levee Repairs:

- Over 15,400 linear feet of levee rebuilt, including critical repairs to protect public infrastructure and commercial and industrial land uses

Engineering and Design

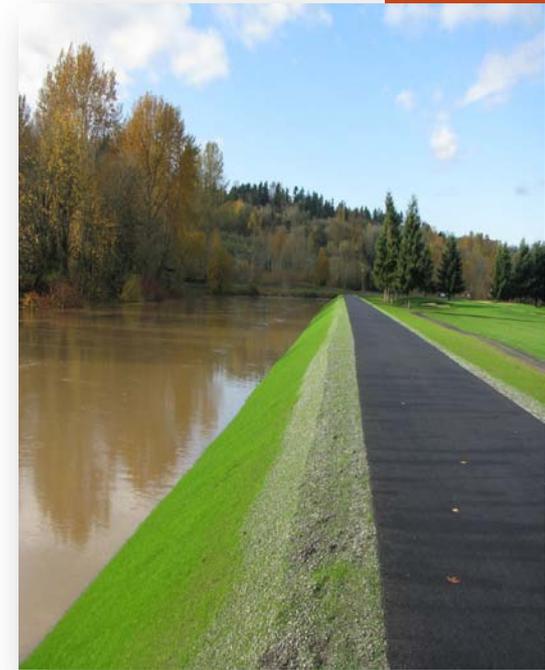
- Flood Insurance Study
- 180-200th Street Levee Setback Feasibility
- Reddington Levee Setback and Extension Feasibility
- Green River External Advisory Review Panel Report

Land and ROW Acquisitions

- Purchased 36.6 acre Teufel Nursery Site for project mitigation and habitat restoration.
- Acquired ROW for the 6,600 foot Reddington levee setback and extension project.

Emergency Response to 2009 Problems at HHD

- 26 miles of sandbags and HESCO barriers
- Pump station improvements
- Patrol training, coordination, and improved communication equipment.



Remaining Flood Risks

Reliance on Howard Hanson Dam

—Risks associated with depending on HHD for flood control downstream.

Green River Temporary Containment

- Installed along 26 miles of levees
- Inspection and Maintenance by KCFCFCD
- Ongoing coordination with Cities
- Removal in 2012 – \$5.8 million est.



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Example of Flood Risk Tolerance
 What is the probability of exceeding a design flow over different timeframes?

	30 Years	50 Years	75 Years	100 Years
1:100 (aka 'the 100-year flood)	26%	39%	53%	63%
1:140 (USACE estimate of flood flow control capability)	19%	30%	42%	51%
1:200	14%	22%	31%	39%
1:300	10%	15%	22%	28%
1:500	6%	10%	14%	18%

Remaining Flood Risks

Improved Understanding of Flow Control at Howard Hanson Dam

Annual Exceedance Probability	Recurrence Interval	Existing Effective Flood Insurance Study (FEMA 1995)	Preliminary Flood Insurance Study (FEMA January 2011)	Reddington Feasibility Study (NHC November 2011)
0.100	10-year	12,000 cfs	11,230 cfs	11,200 cfs
0.020	50-year	12,000	12,420	12,300
0.010	100-year	12,000	12,810	12,500
0.002	500-year	12,000	13,460	14,900

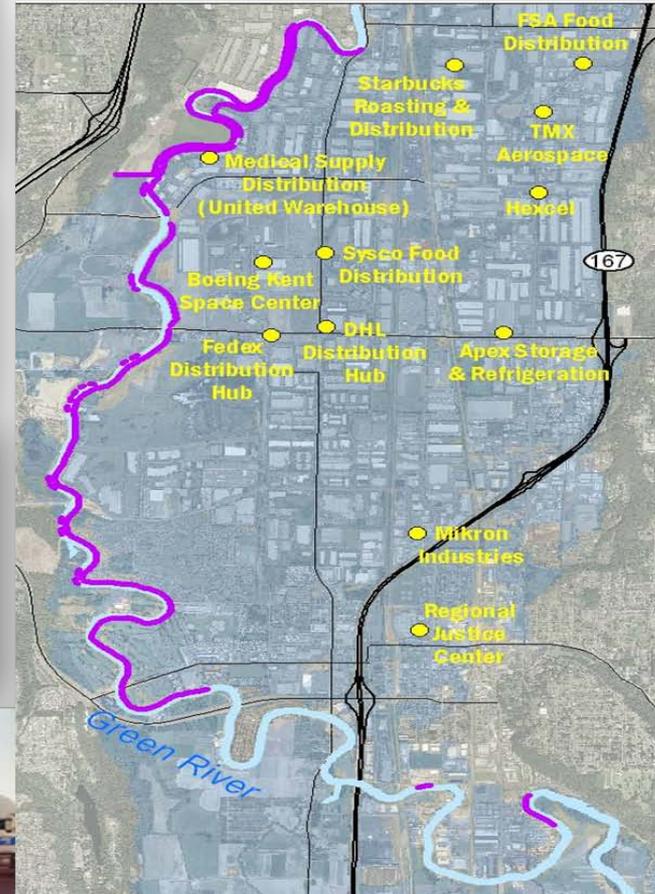
Remaining Flood Risks

Economic Risk

— Value of property, buildings and number of people needing protection

Green River Flood Risks

- over 100,000 jobs
- includes 100 million square feet of warehousing and distribution space (the 2nd largest complex on the West Coast; 4th-largest in the nation)
- an annual payroll of \$2.8 Billion
- comprises fully 1/8th of the entire Gross Domestic Product of the State of Washington,
- annual taxable revenue of \$8 billion.



Lower Green River Strategy

Improve Urban Levee System

Design and construct new levee facilities to meet or exceed all applicable stability and resilience standards.

Provide 500-year levee protection, to match historic understanding of protection despite limits on Corps flood flow control ability.

Stability requires flatter slopes, wider levees, more land. This brings opportunity to improve floodplain and riparian functions.

Urban acquisitions will be very expensive. Some flood repairs may be necessary in short term before setbacks are achieved.



Middle Green River Strategy

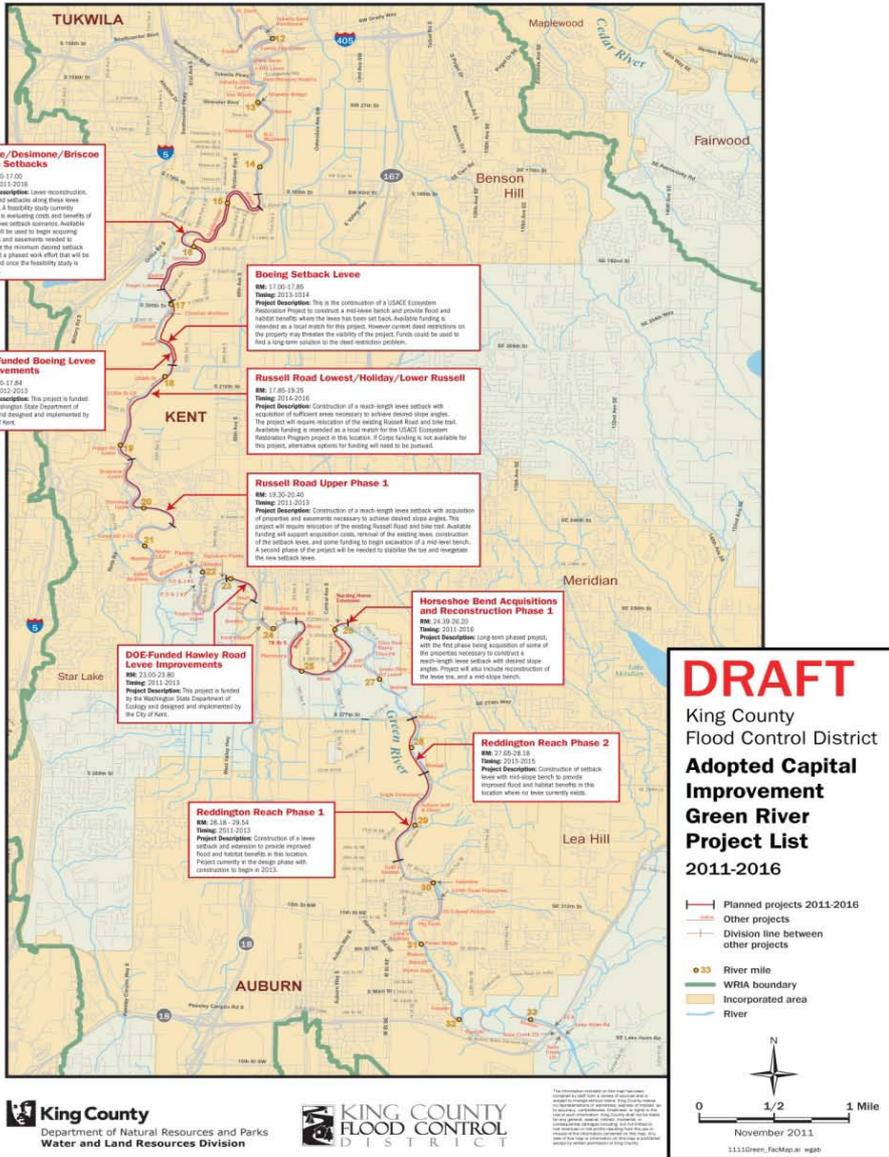
Rural Flood Hazard Reduction

Risk-based priorities generally do not favor investment in discontinuous agricultural levee system improvements.

Evaluate the need to acquire or elevate at-risk structures in coordination with other King County plans and programs.



Green River Proposed Actions



- Primarily consist of levee reconstruction, repairs and setbacks with the inclusion of “benches” to facilitate repairs and accommodate habitat.
- First project to be initiated is the Reddington Levee Setback and Extension.
 - First phase to start construction in 2013
 - Length of the project: 1.3 Miles
 - Received \$1.03 million in State funding to help with the project.
- Significant investments at 180th-200th, Upper Russell, and Horseshoe Bend
- Project deferrals as a result of sandbag removal costs
- Third-Party Review regarding project approach in constrained sections of river
- Evaluate need for elevation or acquisition of at risk structures in the Middle Green River Basin. Implement accordingly.

DRAFT
 King County
 Flood Control District
Adopted Capital Improvement Green River Project List 2011-2016

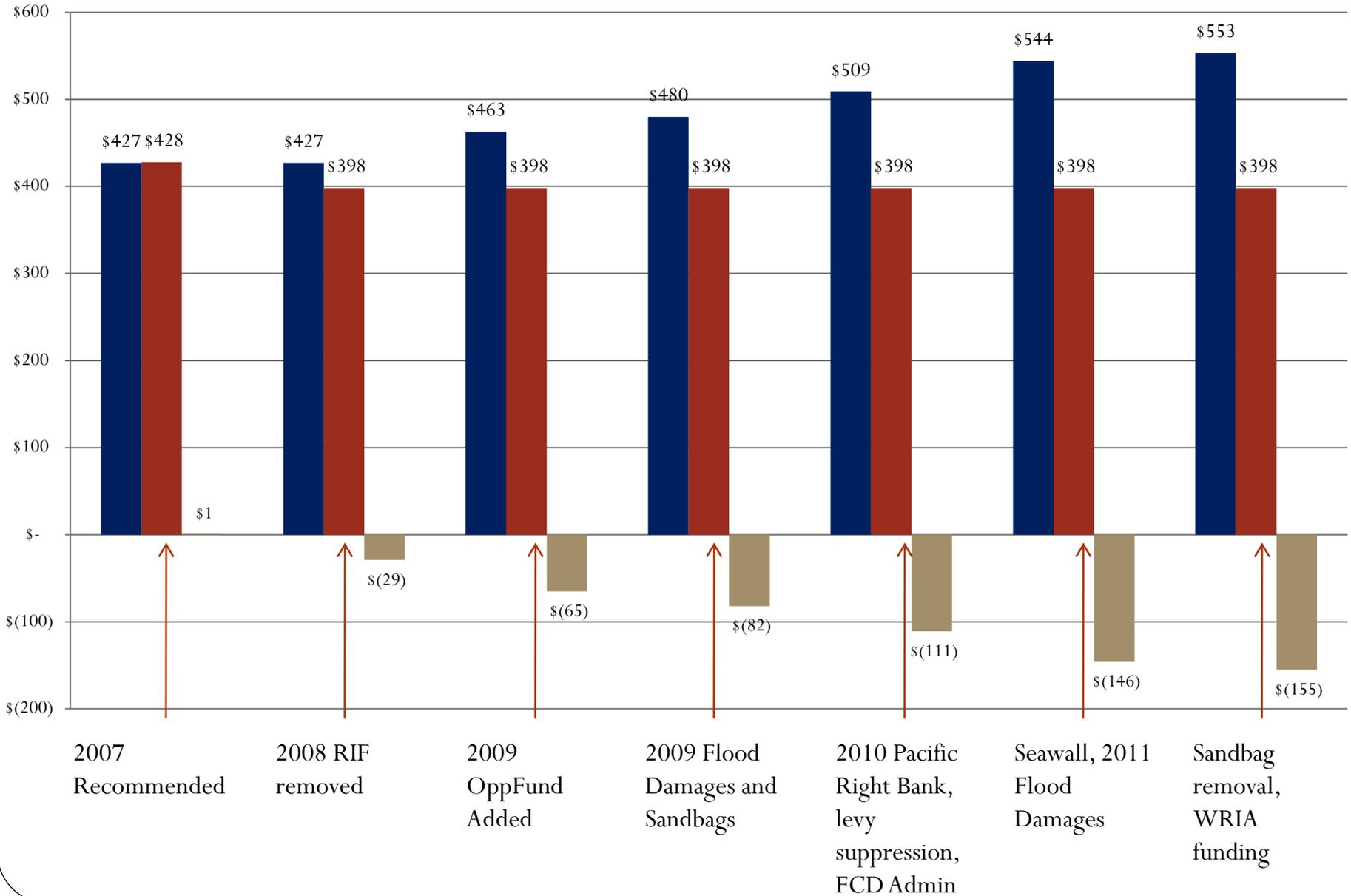
— Planned projects 2011-2016
— Other projects
+ Division line between other projects
● River mile
 WRIA boundary
 Incorporated area
— River

0 1/2 1 Mile
 November 2011
 1111Green_FactMap.mxd - wgb

Financial Plan Overview

- Revenues
 - Assumes \$3.3M one-time rate increase to ‘reimburse’ 2013 watershed management grant costs (note – \$3M for WRIAs increases OppFund by \$300K)
 - Grants committed through 2015; placeholder 2016-2018
 - NOTE: Levy suppression exemption ends 2018
- Capital Expenditure Rate
 - Past Financial Plans assumed 100% - large carryover
 - Assume rate increases from 40% to 60%
 - Ending fund balance must exceed \$7.5M insurance fund balance; undesignated fund balance must be in the black.

What's Changed Since 2007?



Emerging Issues

- Watershed Management Grants
 - \$3M per yr + \$300K Opp Fund = \$3.3M cost
 - Levy increase of 1.1 cent; impact of \$4.37 on \$400K home (2013)
 - Less than the \$5 parcel assessment under prior model for WRIAs
- Cumulative effect of funding decisions since 2007
 - How do we get ahead of the next flood if projects are deferred and/or implemented in increments
- Strategy Updates - Green River in particular:
 - New understanding of the Dam's capabilities
 - 1 in 5 chance vs 1 in 17 chance of overtopping levees over the next 30 years
 - What can we achieve in short-term, and how does it relate to needs in the long-term?
 - Executive Committee has directed 3rd party review of setback and floodwall proposals for highly constrained sections of river
 - "System-Wide Improvement Framework" with Corps, Tribes, cities, other stakeholders
- Plan Update discussions in September and October, public review draft in November 2012

How can we address these short-falls?

- 2010 Advisory Committee Discussion
 - Shift Projects
 - Add Revenue (Levy rate? Grants? Other?)
 - Borrow (Short-term 'bridge' loan vs. long-term bonding)
- Preliminary 2013-8 proposal assumes project shifts
 - Needs BTC discussion – June version was in the red in later years
 - How much to resolve in budget process versus plan update
 - 2013 in the black in both versions
 - Watershed Management recommendations needed for 2013

2013-2018 Capital Program

- CIP revisions made based on risk, readiness, and investments to date:
 - Areas at high-risk must be a priority (Briscoe, Pacific)
 - Contractual or permit commitments (Seawall, Coal Creek, Black River Pump Station)
 - Grants in hand (Countyline, Reddington, Briscoe)
 - Respect landowner discussions to date – don't lose opportunity (Aldair, Sans Souci)
 - Design progress and investments (Middle Fork Snoqualmie, Reddington)

Proposed Shifts:

- Landowner willingness to be determined (Timberlane, Alpine Manor)
- Project feasibility proposed, future construction needed (several lower Cedar setbacks)
- Acquisitions complete, defer construction (Tolt levee breach site)
- Cost-sharing multi-objective projects (Green River Boeing Corps project; Cedar Riverbend Mobile Home Park)
- Major impacts are Snoqualmie and Cedar
- Reductions are to projects that score from 66% to 89% out of 100%

Questions

- What additional information or analysis would you like to see on:
 - Operating budget
 - Capital budget
 - Financial plan assumptions
 - Watershed Management
- What are your thoughts on whether Watershed Management funding should be provided by the FCD?
- If you support this addition, should it be accompanied by a levy rate increase to offset the cost?