

King County Flood District Advisory Committee

2009 Capital Project Evaluation

Preliminary Results

May 8th 2008

Presentation Overview

- Capital Project Evaluation Approach
- Preliminary Results
- Strategies for Capital Project Implementation
- Preliminary 2009 Work Program
 - New Starts
 - 2008 multi-year projects

Flood Risk Reduction Potential

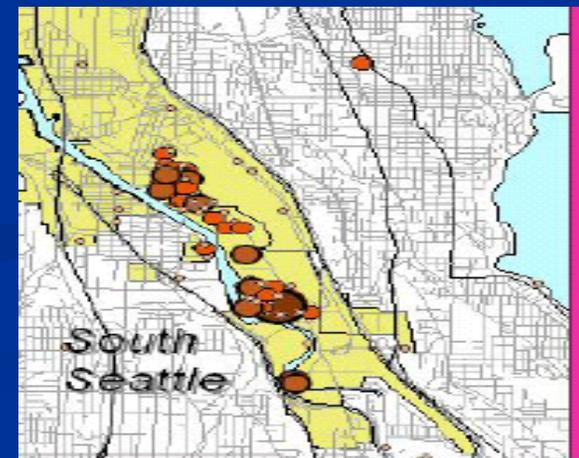
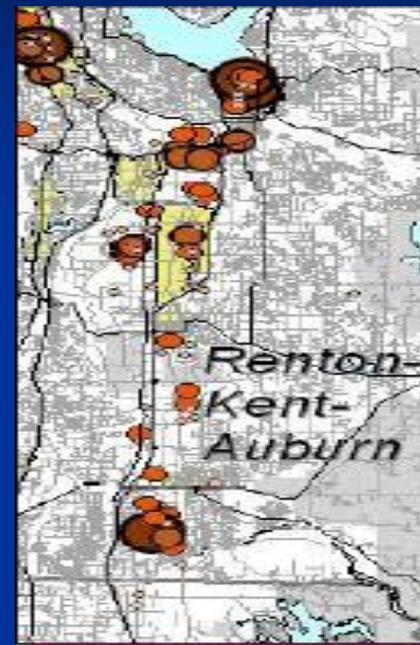
- Consequences: What would happen if no action were taken?
 - Critical facilities and residential vs undeveloped land
- Severity: How serious is the impact?
 - Human injury or death vs little or no damage
- Extent of Impact: What is the scale of the problem?
 - Impacts beyond the area of flooding vs. localized
- Urgency: How soon will the impacts occur?
 - Next high flow event vs. Risks are not rapidly increasing

Regional Economic Benefits: PSRC

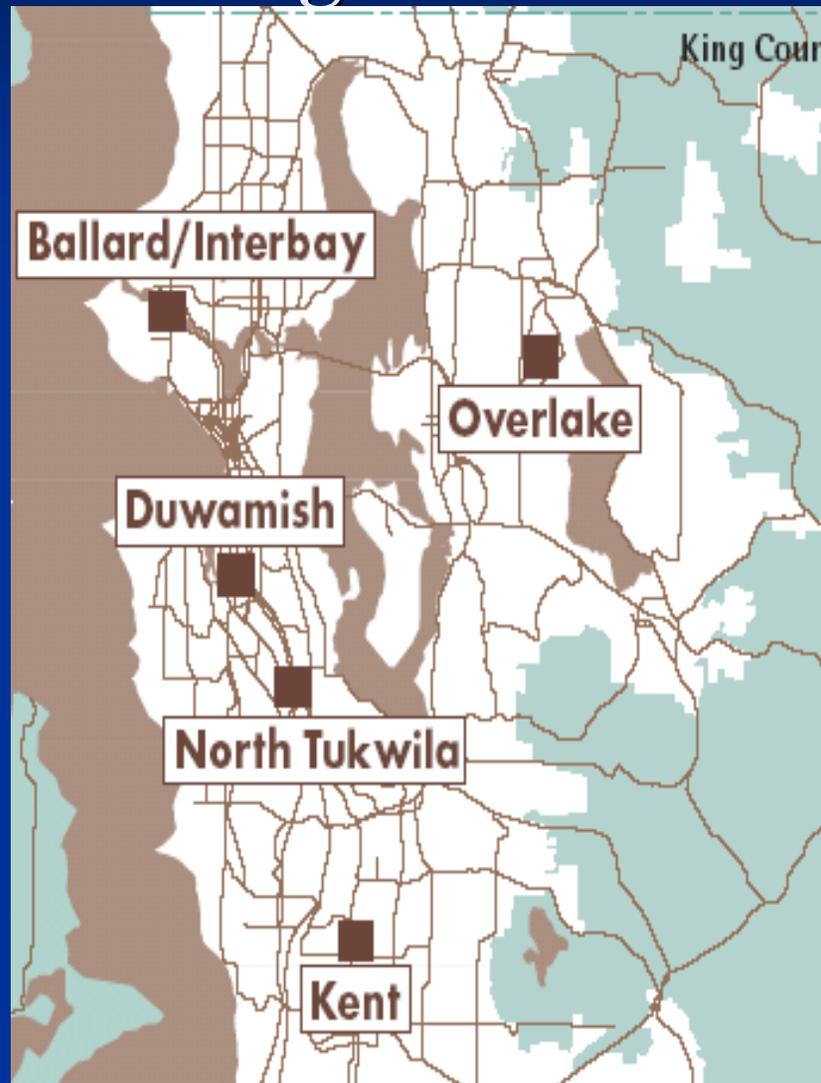
Employment Centers

High concentrations of employment in:

- Aerospace
- Logistics and Intl Trade
- Life Sciences
- Information Technology
- Environment and Alternative Energy



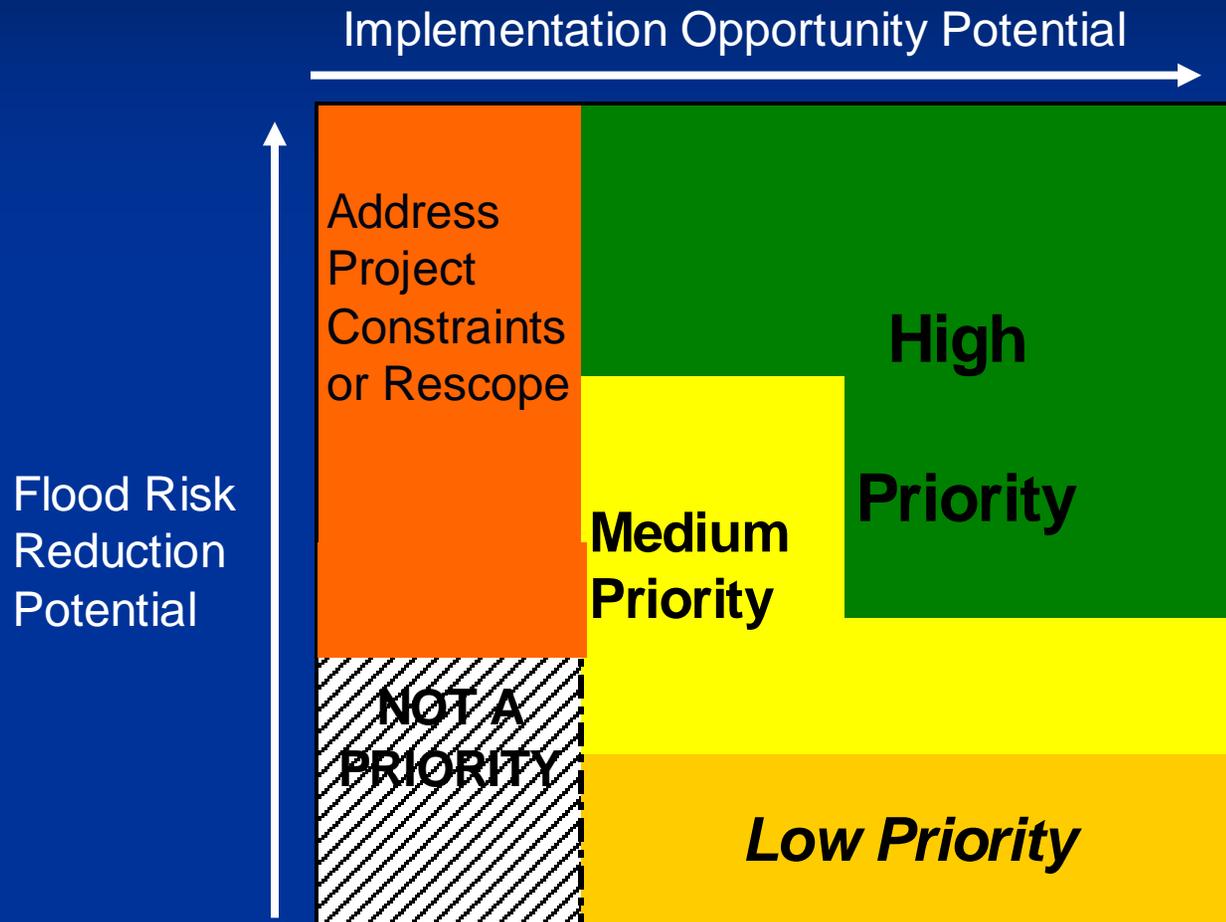
Regional Economic Benefits: Manufacturing and Industrial Centers



Implementation Potential

- Project Readiness
- Partnerships / Leverages Funds
- Supports multiple objectives
- Cost-Effectiveness
- 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.

Developing Strategies for each Project

- Objective is to move projects toward high benefit and high opportunity
- Actions with moderate to high benefit and moderate to high opportunity would be high priorities
- Actions with high benefit but low implementation opportunity require action to address project constraints
- Actions with moderate benefits but high opportunity – may need to meet certain conditions for funding

High Benefit; Moderate Implementation

- Projects constrained to varying degrees by:
 - Right-of-way
 - Design Issues
 - Landowner willingness

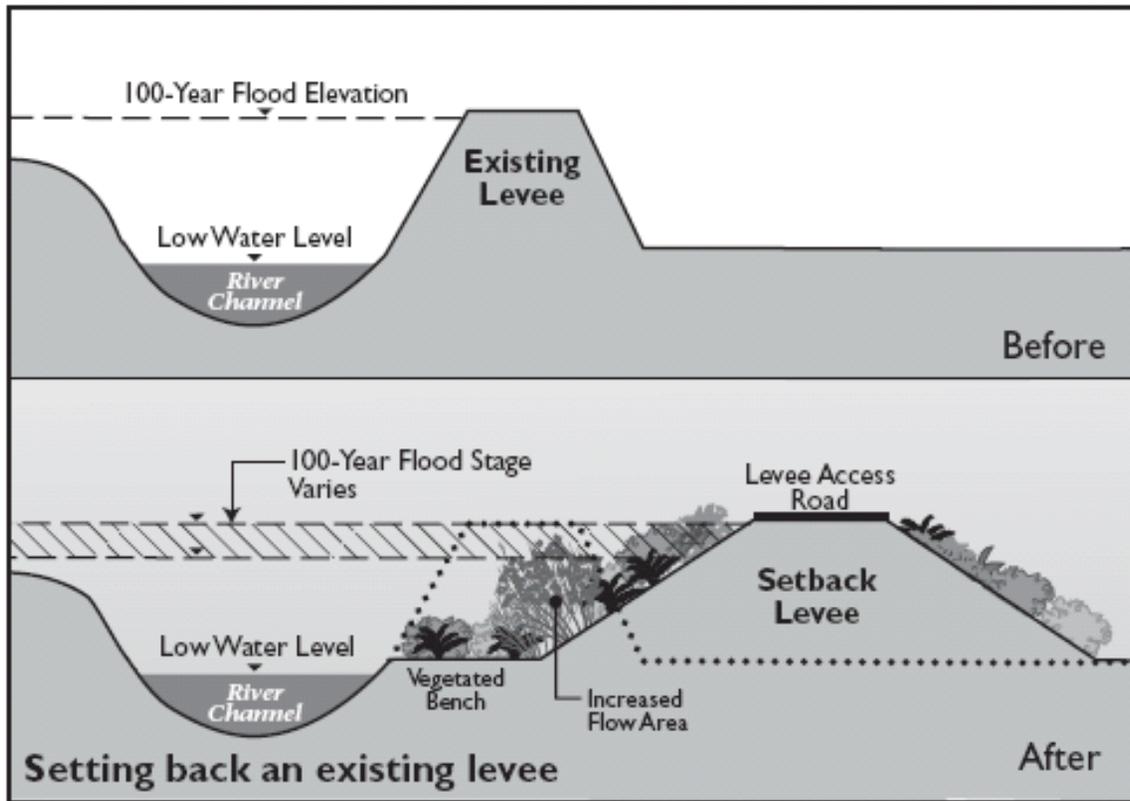
- Lower Green Levee Rehabilitations
 - Segale 2, 3, 4
 - Gaco Western
 - Desimone 1, 2, 3, 4
 - Briscoe 1-3, 5-8

- Flood Buyouts and Levee Setbacks
 - Jan Road
 - Dorre Don / Byers Bend
 - Riverbend
 - Getchman
 - Orchard Grove
 - Maplewood
 - Lower Jones Road
 - Timber Lane
 - Tolt SR 203 to Trailbridge

Addressing Constraints: Capital Project Phasing

LEVEE SETBACK PROJECTS

2006 KING COUNTY FLOOD HAZARD MANAGEMENT PLAN

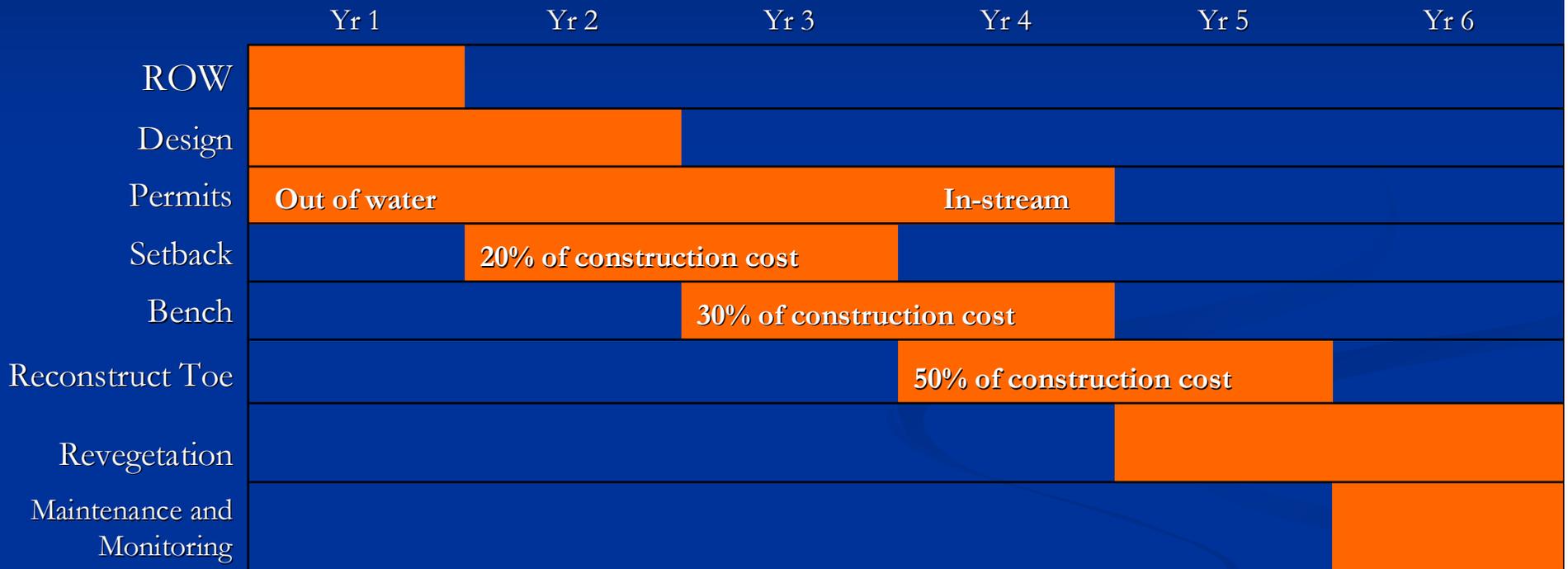


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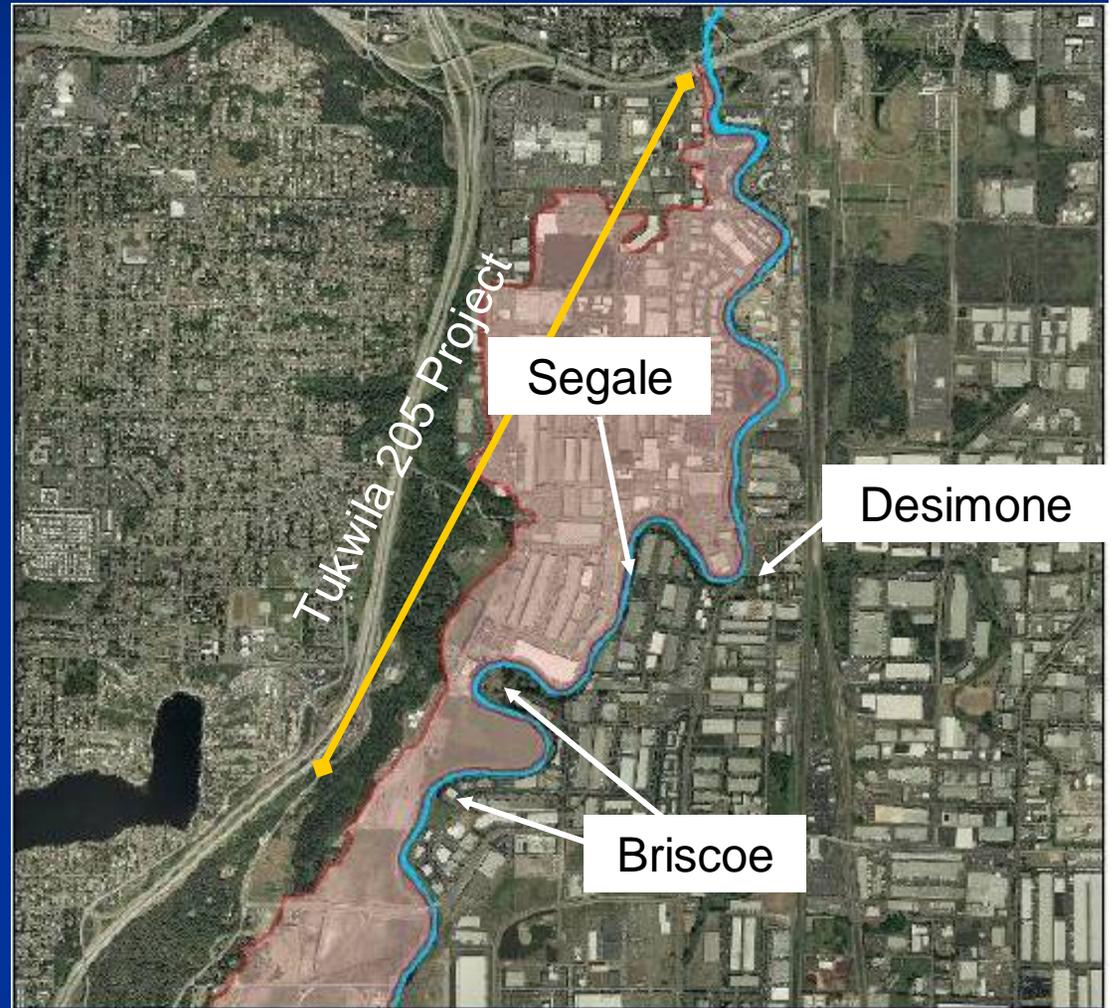
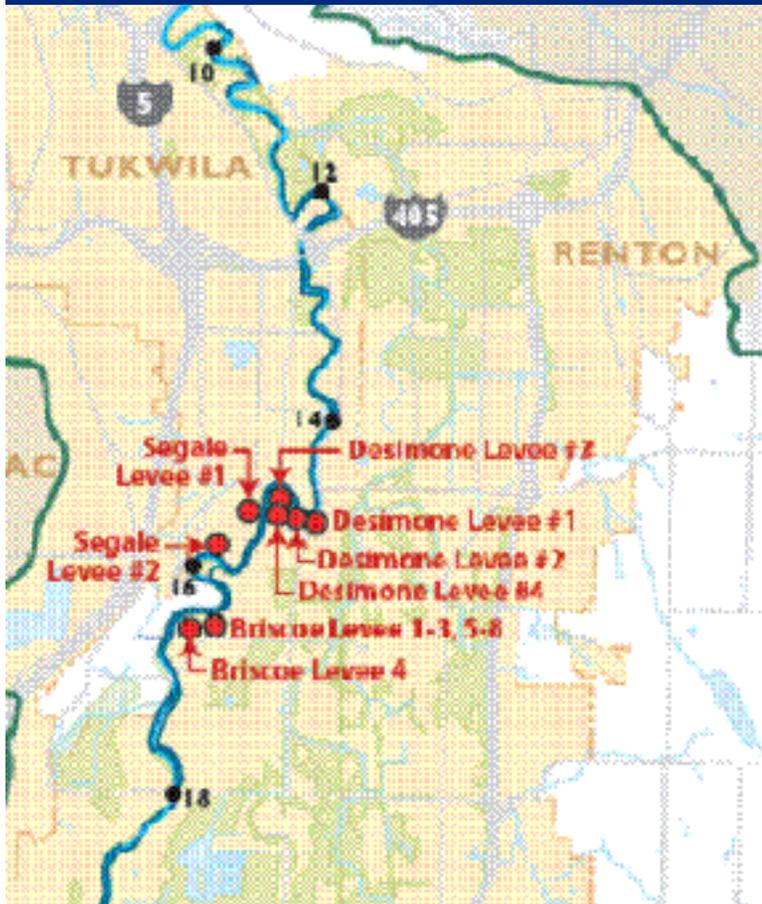


Bio-engineered levee setback - Lower Green River

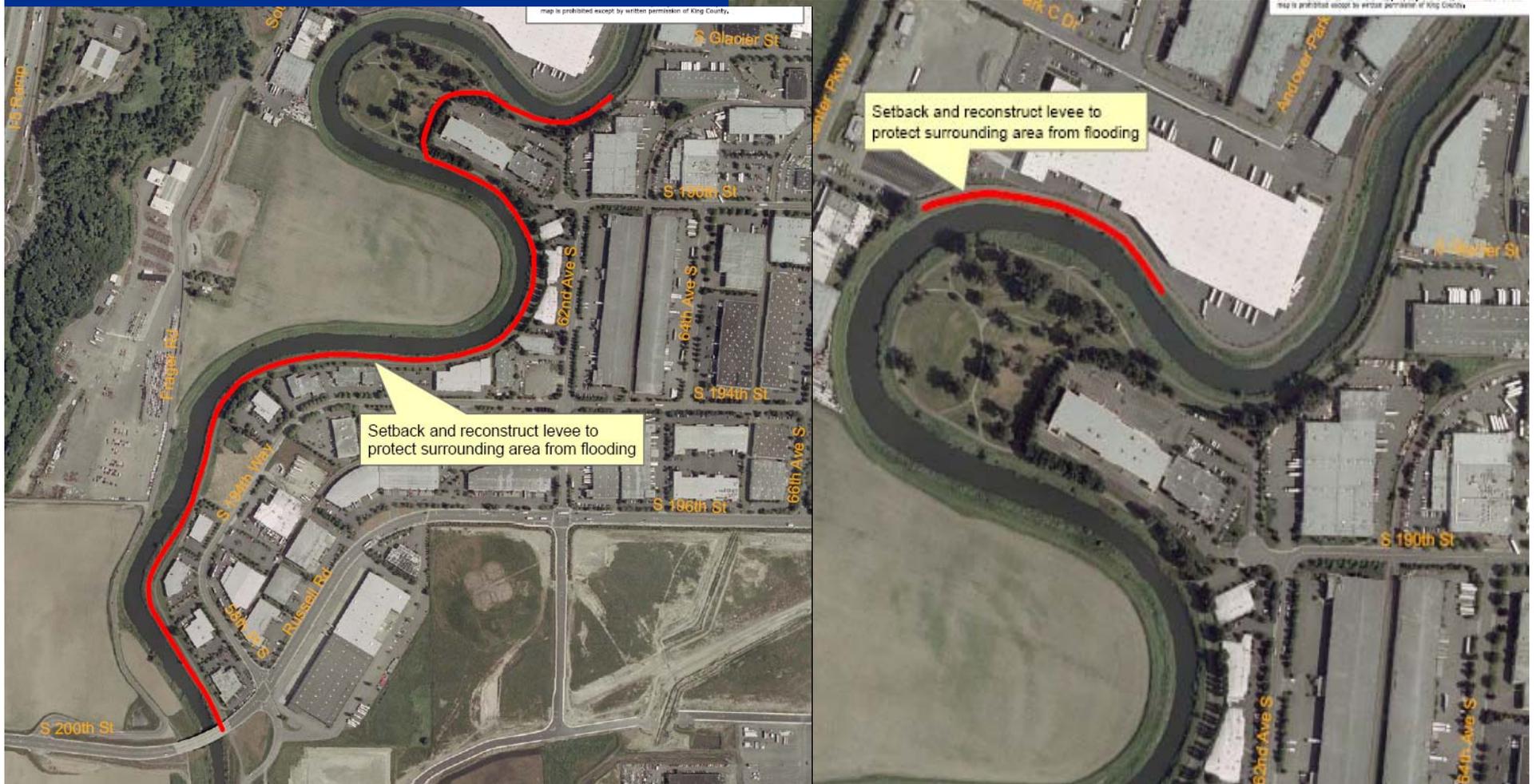
Addressing Constraints: Capital Project Phasing



High Benefit; Moderate Implementation Examples



Briscoe 1-3, 5-8; Segale 2



Tukwila Manufacturing and Industrial Area

November 2006



Addressing Constraints: Landowner Willingness

- Implementation of flood buyouts and levee setbacks limited by landowner willingness
- Landowner interest is not driven by CIP list
- Multiple parcels....and multiple owners

Cedar Grove Buyout Example

- Multiple landowners
- Multiple partnerships
- Multiple fund sources (12 separate grants)
- Multiple years to complete
- Acquisition of river bend allows setback or removal of levee to increase storage and conveyance



Maxwell Road & Royal Arch

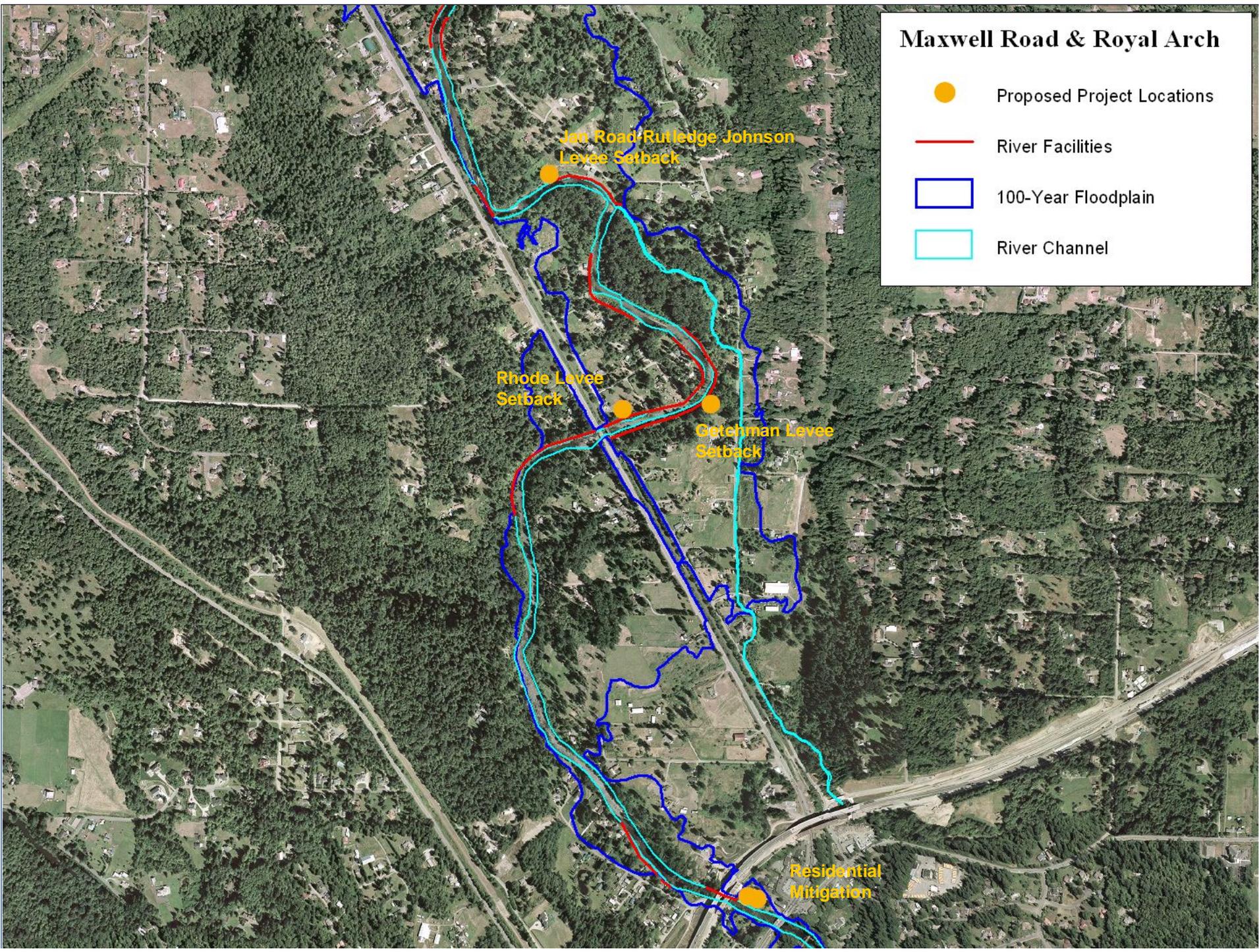
- Proposed Project Locations
- River Facilities
- 100-Year Floodplain
- River Channel

Jan Road/Rutledge Johnson
Levee Setback

Rhode Levee
Setback

Cetchman Levee
Setback

Residential
Mitigation

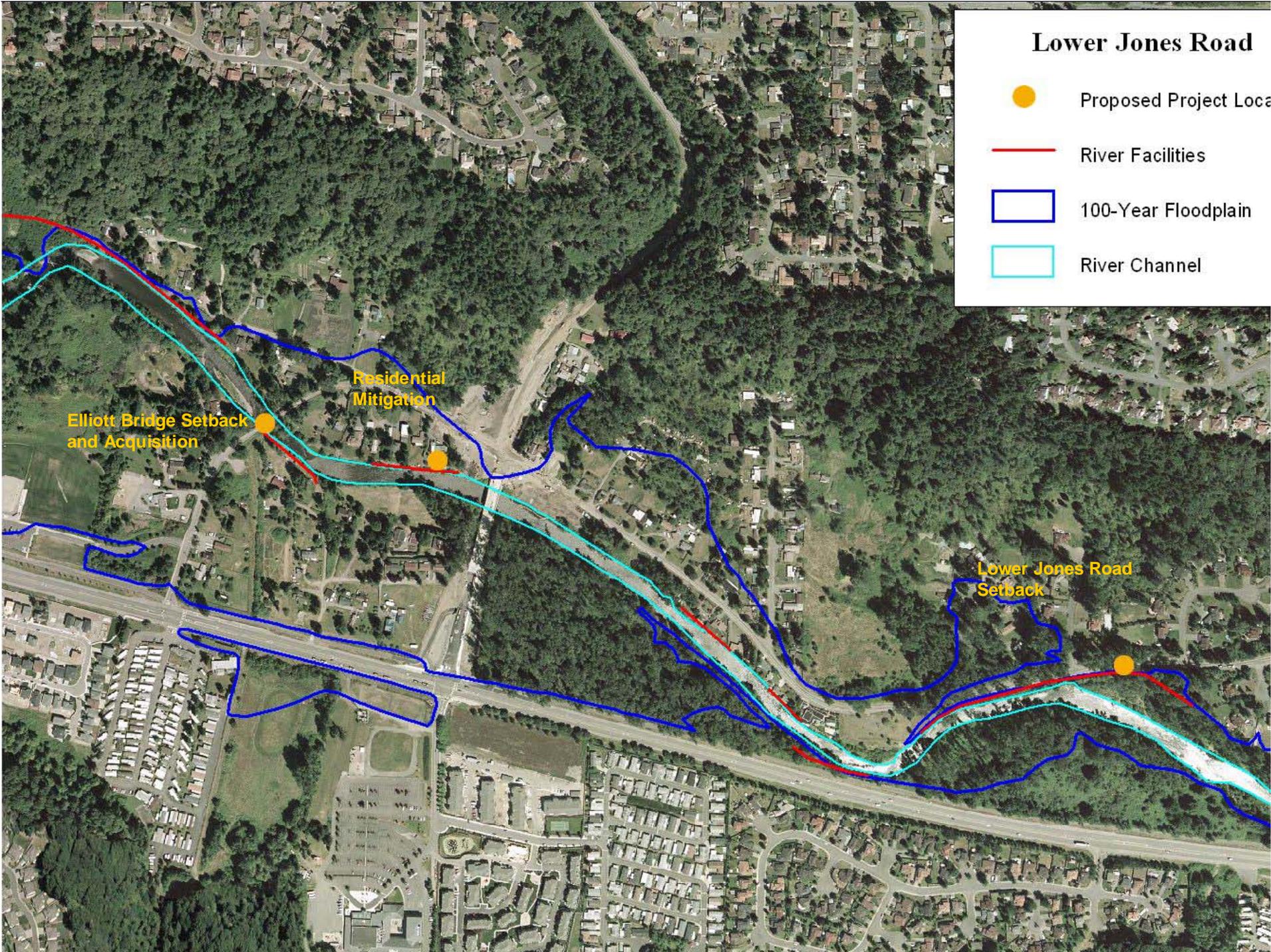






Lower Jones Road

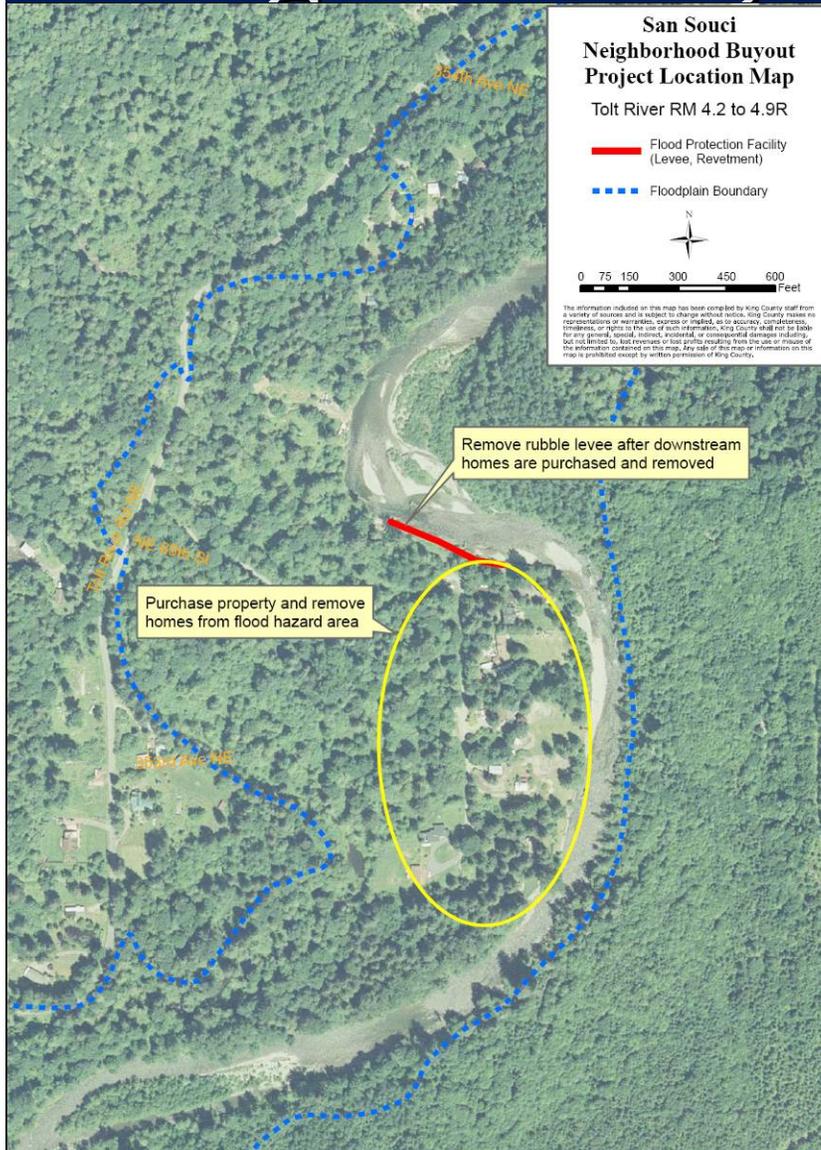
- Proposed Project Location
- River Facilities
- 100-Year Floodplain
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Addressing Constraints: Landowner Willingness

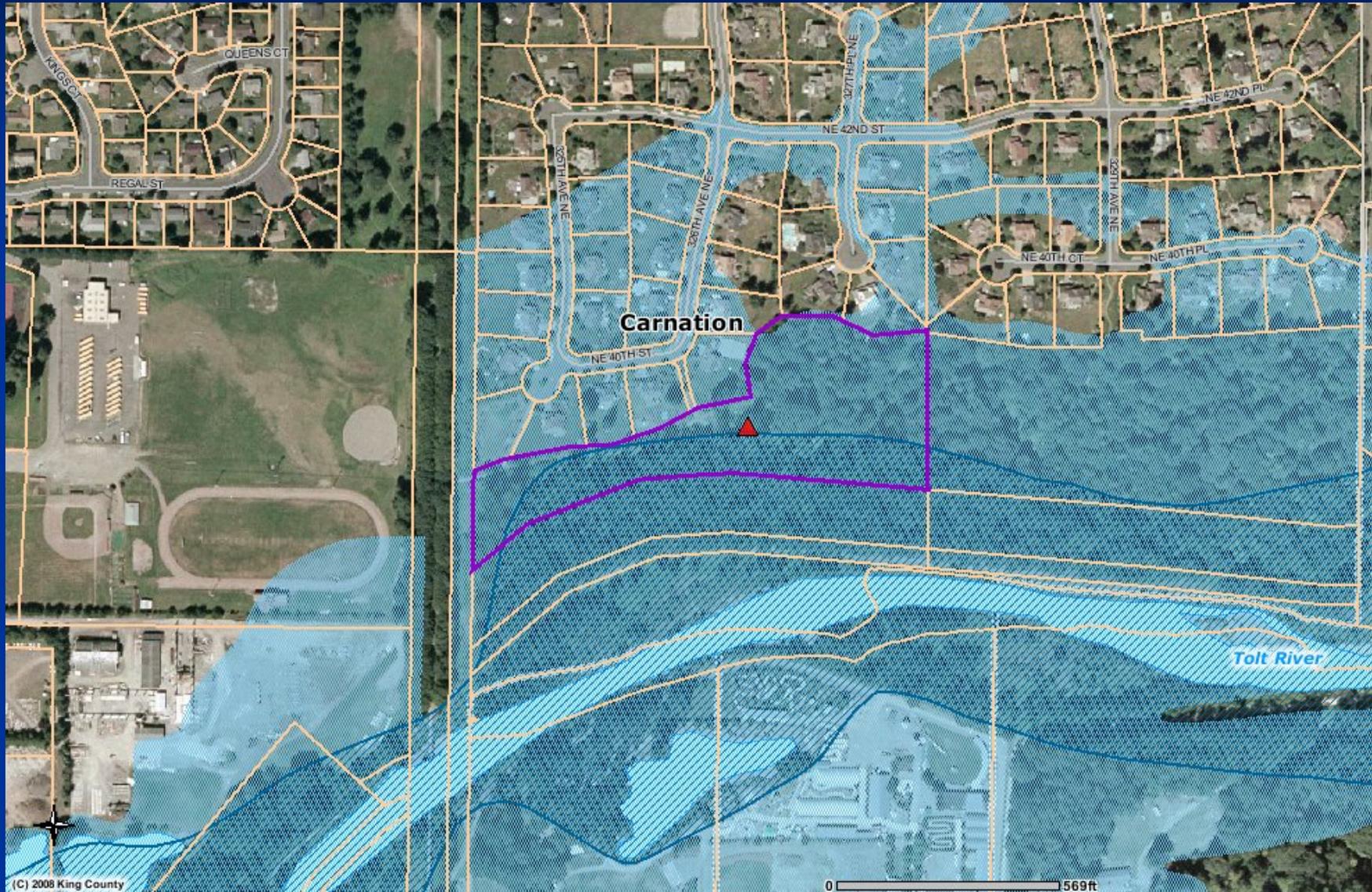
- Implementation of flood buyouts and levee setbacks limited by landowner willingness
- Landowner interest is not driven by CIP list
- Multiple parcels....and multiple owners
- Proposed Solution:
 - Flood Buyout and Elevation Program
 - Disaggregate a portion of acquisition funds from capital projects
 - Act on opportunities as they become available throughout the District
 - Leverage District funds through grants

High Benefit, High Implementation



- Deep, fast floodwaters throughout neighborhood
- Residents isolated, first responder access limited
- Revetment removal following buyouts
- Coordination with Seattle City Light

High Benefit, High Implementation



High Benefit, High Implementation



South Park Duwamish Industrial Area Tidal Inundation

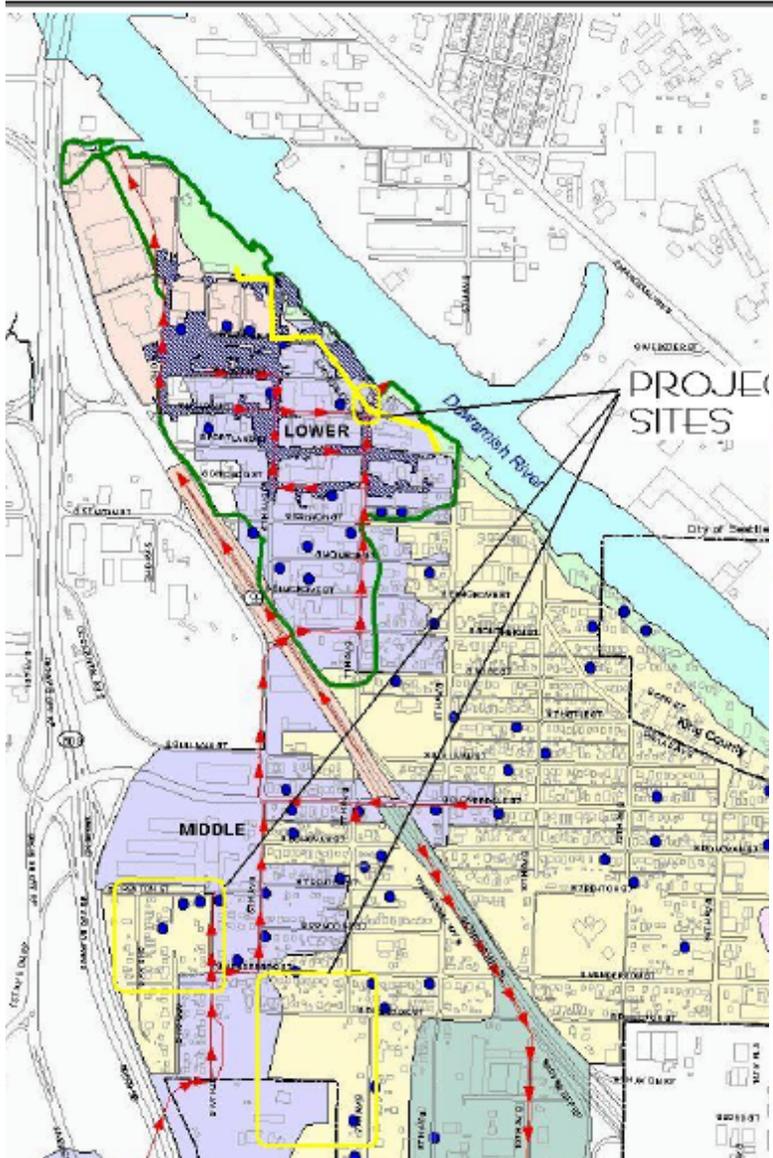
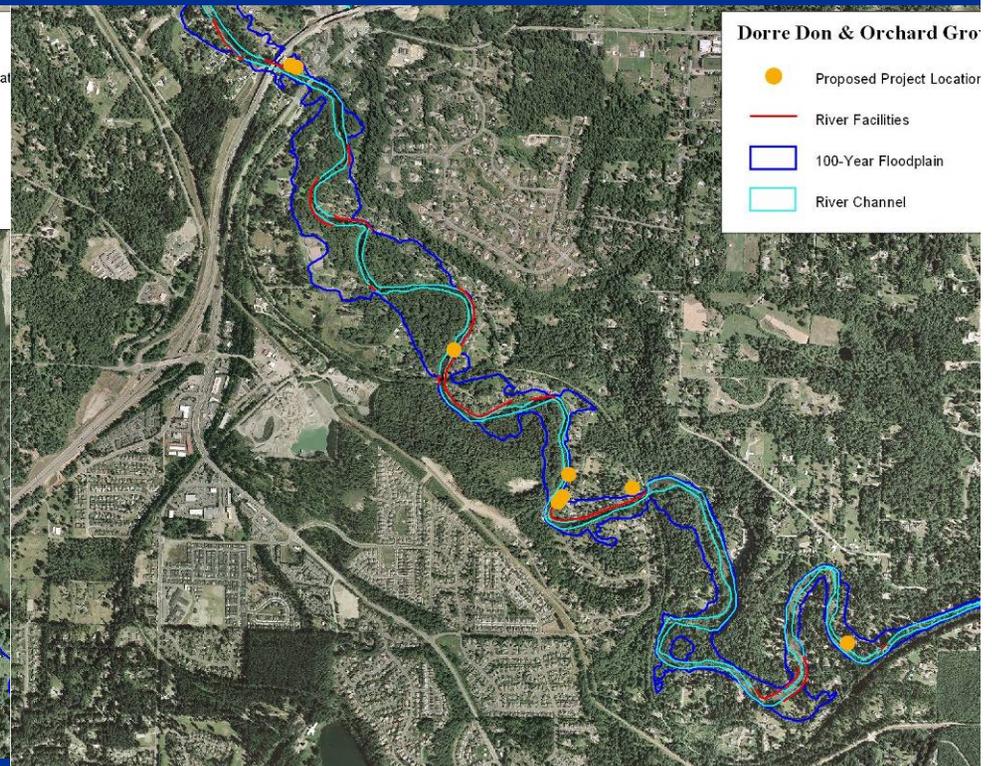
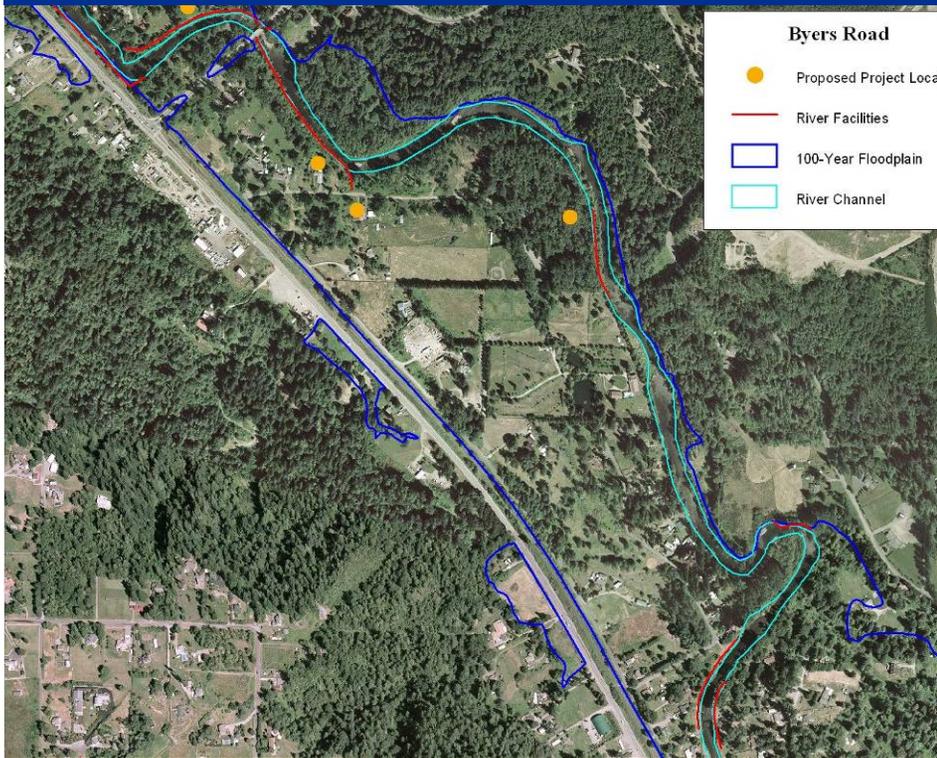


Figure 5 - Site of a Local Business close to the Duwamish River (11-18-2003)

High Benefit, High Implementation: Dorre Don and Byers Bend Hazard Mitigation Study







High Benefit Projects not Implemented in 2009

- Projects Not Implemented in 2009
 - Boeing Levee Setback – 150' setback complete, bench and levee toe work still needed, potential to partner with Army Corps ERP and WRIA 9 to complete this work
 - Abandoned Bridge Revetment – removal of bridge abutment should follow completion of Alpine Manor flood buyouts to avoid increased flood risks to residents
 - Tolt Pipeline – resequenced based on engineers report, monitor closely for any sign of increased erosion
 - Snoqualmie Residential Flooding – obtain FEMA grant support and partner with the City in 2013-2014

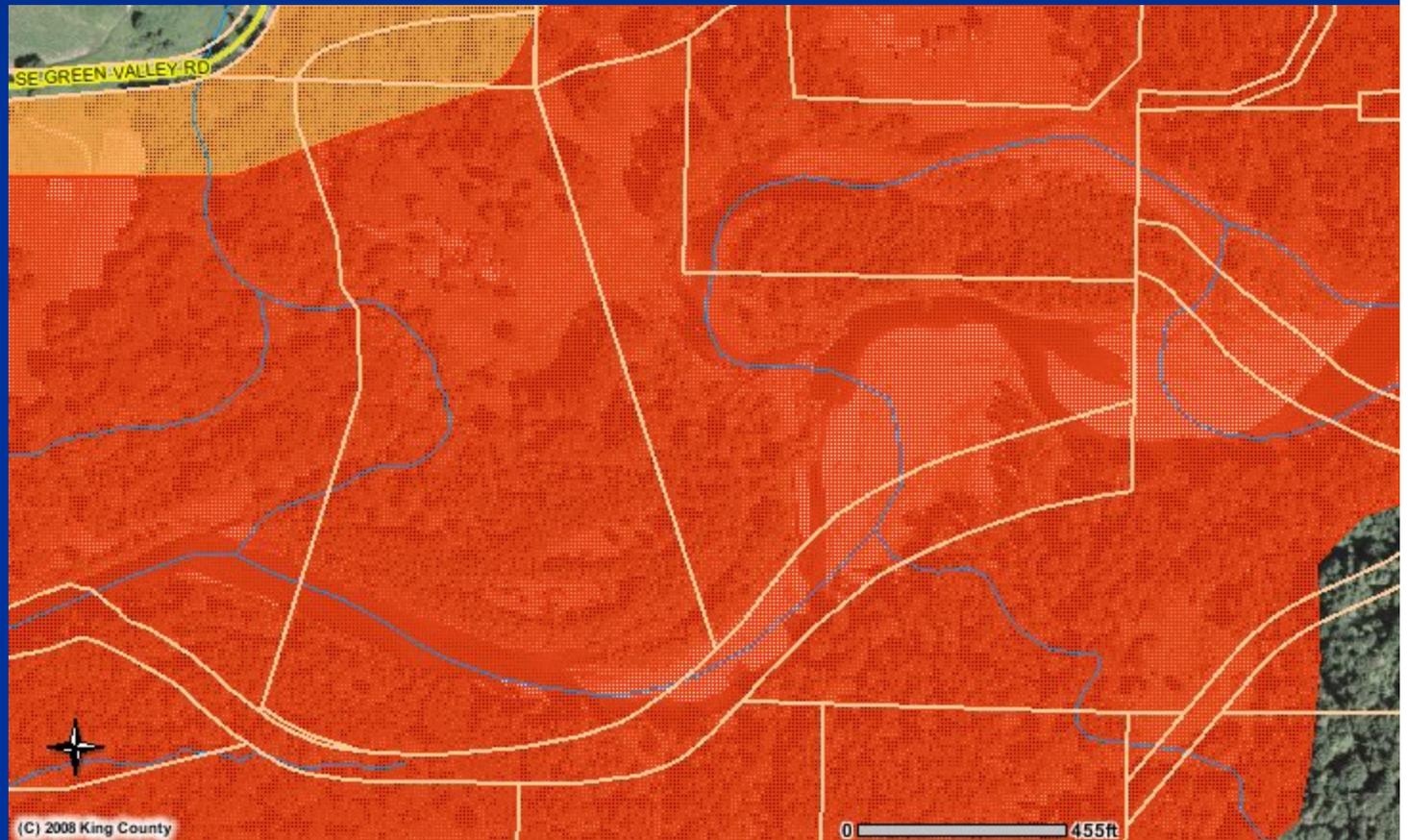
Moderate Benefit; High Implementation – Middle Green Acquisition

- Middle Green Acquisition
 - \$500,000 proposal
 - Leverage \$1.5 million
 - Landowner willing



Moderate Benefit; High Implementation – Middle Green Acquisition

- Severe channel migration hazard
- Access compromised
- Immediate jeopardy



Moderate Benefit; High Implementation

- Tolt Mouth to SR-203 Reconnection
 - \$700,000 Proposal
 - 10% of project cost
 - Ready for construction



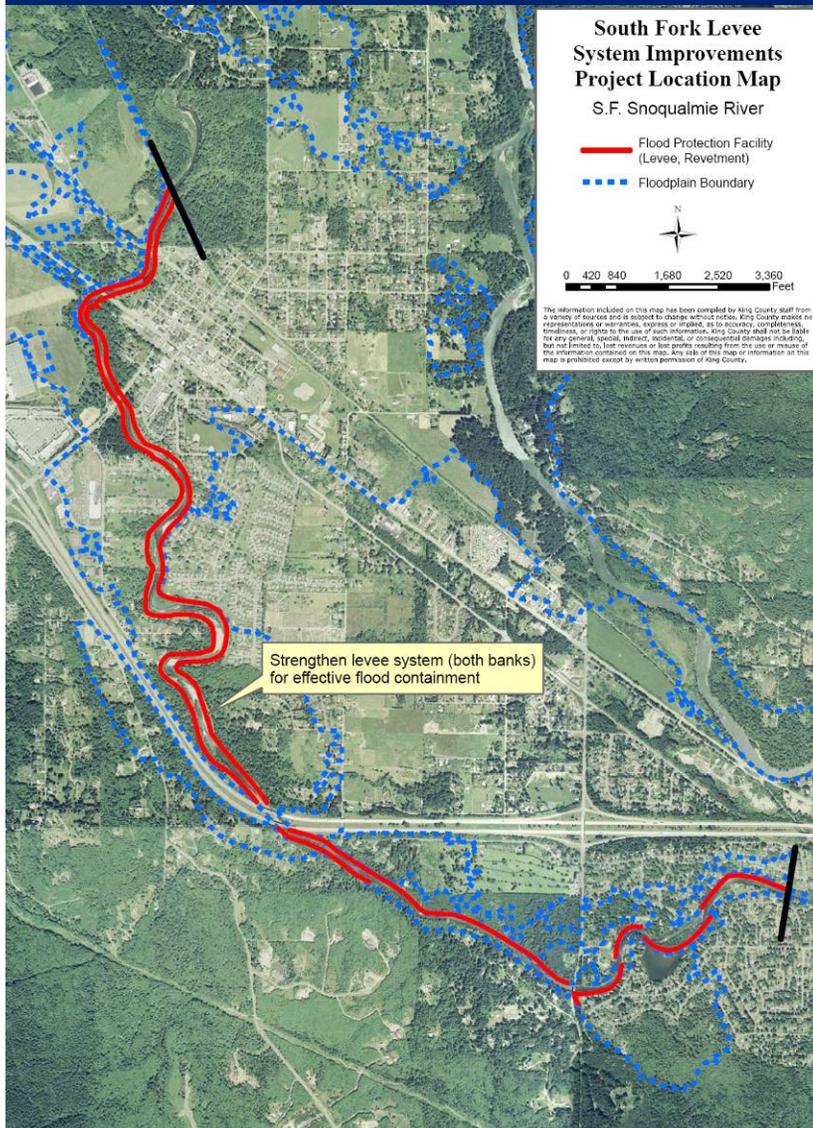
2008 Multi-Year Projects

Cedar Grove and Rainbow Bend

- ✓ Buyout of multiple parcels
- Relocation of MHP residents underway
- Increase flood storage and conveyance, protect SR-169, Cedar River Trail, and downstream residents

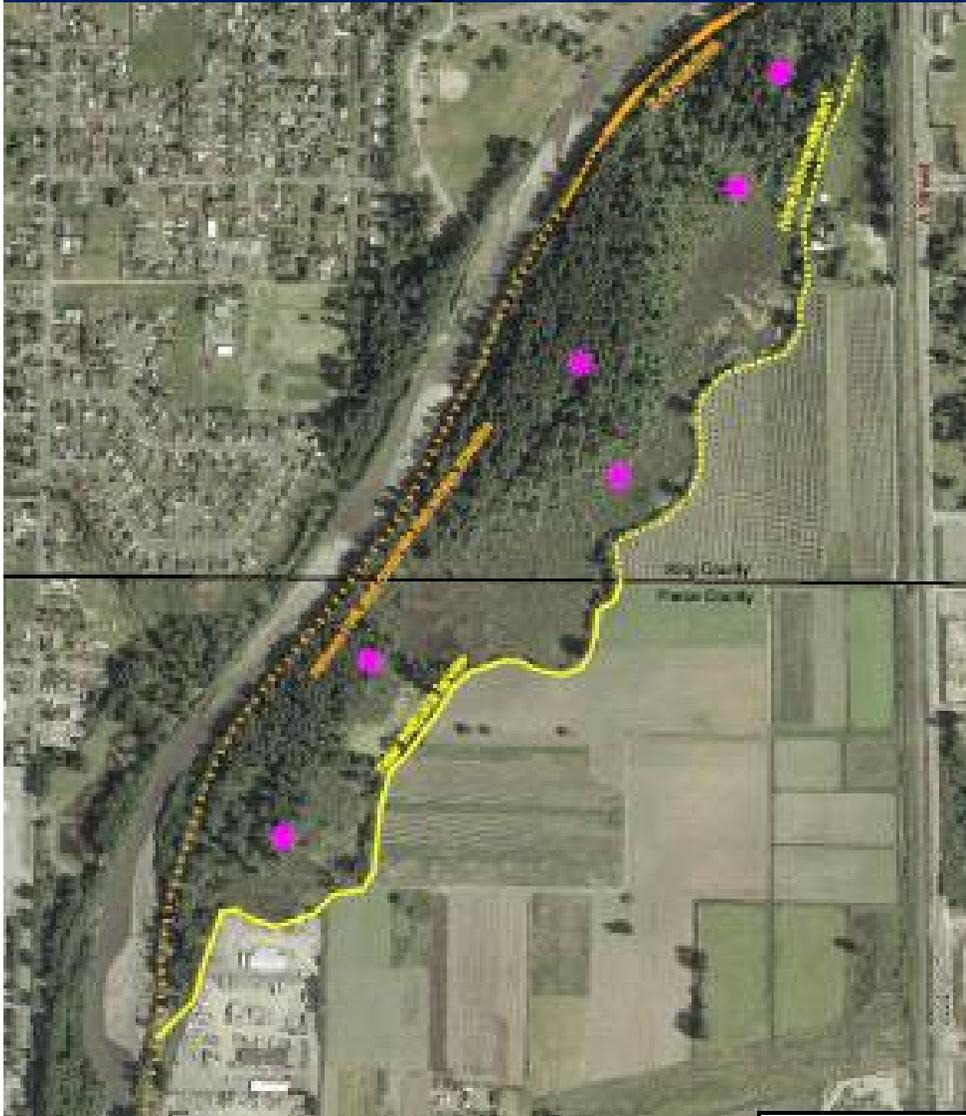


South Fork Snoqualmie Levee Improvements (North Bend)



- Geotechnical studies of levee materials and structural stability - scoping
- Repair sinkholes this summer
- Levee rehabilitations in out years

Countyline to A Street – White River



- Design underway
- Landowner negotiations underway
- Developing inter-local agreement with Pierce County
- Construction scheduled for 2010

2009 Preliminary Capital New Starts

- Segale 2 and 3
- Segale 4
- Gaco Western
- Desimone 1, 2, 3, 4
- Briscoe 1-3, 5-8
- South Park
- Riverside / Reddington
- Sans Souci
- Lower Tolt
- City of Snoqualmie Acquisition
- Dorre Don Evaluation
- Middle Green Acquisition
- Tolt Mouth to SR 203

2009 Draft Capital Work Program

Of the \$40M (2006 Dollars) for 16 proposed new projects:

- Median flood risk reduction = 82%
- 77% of costs are for projects scoring above 82%
- 89% of costs are for projects scoring above 75%
- 97% of costs are for projects scoring above 66%

Discussion

- Regional Economic Impact Score Approach
 - Do you support the use of WSDOT and PSRC information to recognize regional economic benefits?
- Application of Scoring System and Preliminary Results
 - Are we heading in the right direction for 2009?
 - Moderate benefit, high implementation projects?
- Flood Buyout and Elevation Program
 - Do you support disaggregating a portion of acquisition costs from projects to address implementation constraints and provide flexibility?
- What additional information would you like for May 28th?