

2008 Capital Program Status Report

Presented to the
King County Flood Control District
Advisory Committee

October 21, 2008

2008 Capital Project Status

Basin	Construction/ Implementation Completed	Construction/ Implementation in Progress for 2008 Completion	In Progress/ Design – Completion in 2009+	Total Projects in Basin
Snoqualmie/SF Skykomish Basin	10	2	17	29
Cedar/Sammamish Basin	4	0	7	11
Green River Basin	5	2	4	11
White River Basin	1	0	3	4
TOTAL =	20	4	31	55

Flood Damage Repairs and the Army Corps of Engineers

- November 2006: \$33 million in repairs identified
- Leverage over \$23.6 million in federal funds for critical repairs at 10 sites
- Total cost of \$24.1M
- Significant real estate effort to certify ownership of 216 parcels
- Executed 9 Cooperation Agreements on behalf of the KCFCFCD



Army Corps of Engineers Construction Partnership

Eligible Flood Damage Repair Construction Costs Only

	King County	Corps	Total Constr. Costs
Galli's	\$ 461,800	\$1,847,200	\$2,309,000
Kent Shops-Narita	\$ 1,740,000	\$6,960,000	\$8,700,000
Meyer's Golf	\$ 900,000	\$3,600,000	\$4,500,000
Dykstra	\$ 254,000	\$1,016,000	\$1,270,000
Horsehoe Bend (1,2)	\$ -	\$2,600,000	\$2,600,000
Snoqualmie (4 sites)	\$ 148,267	\$593,068	\$741,335
Tukwila 205 (2)	\$ -	\$7,000,000	\$7,000,000
<i>Total Construction Costs</i>	\$ 3,504,067	\$23,616,268	\$27,120,335

(1) 2009 Construction

(2) Federal Levee; 100% Federal Cost Share

(3) Does not include non-construction costs such as real estate, permits, mitigation, design review, etc. With these costs included, King County's local share increases to approximately \$7,000,000 or 23% of total project costs.

2008 FCD Land Acquisition Activities

- 19 capital projects with acquisitions of property interest on 136 parcels
- 119 easements in support of 12 capital projects
- 17 fee simple parcel acquisitions for 7 capital projects
- Cedar Grove MHP relocation of 41 families underway

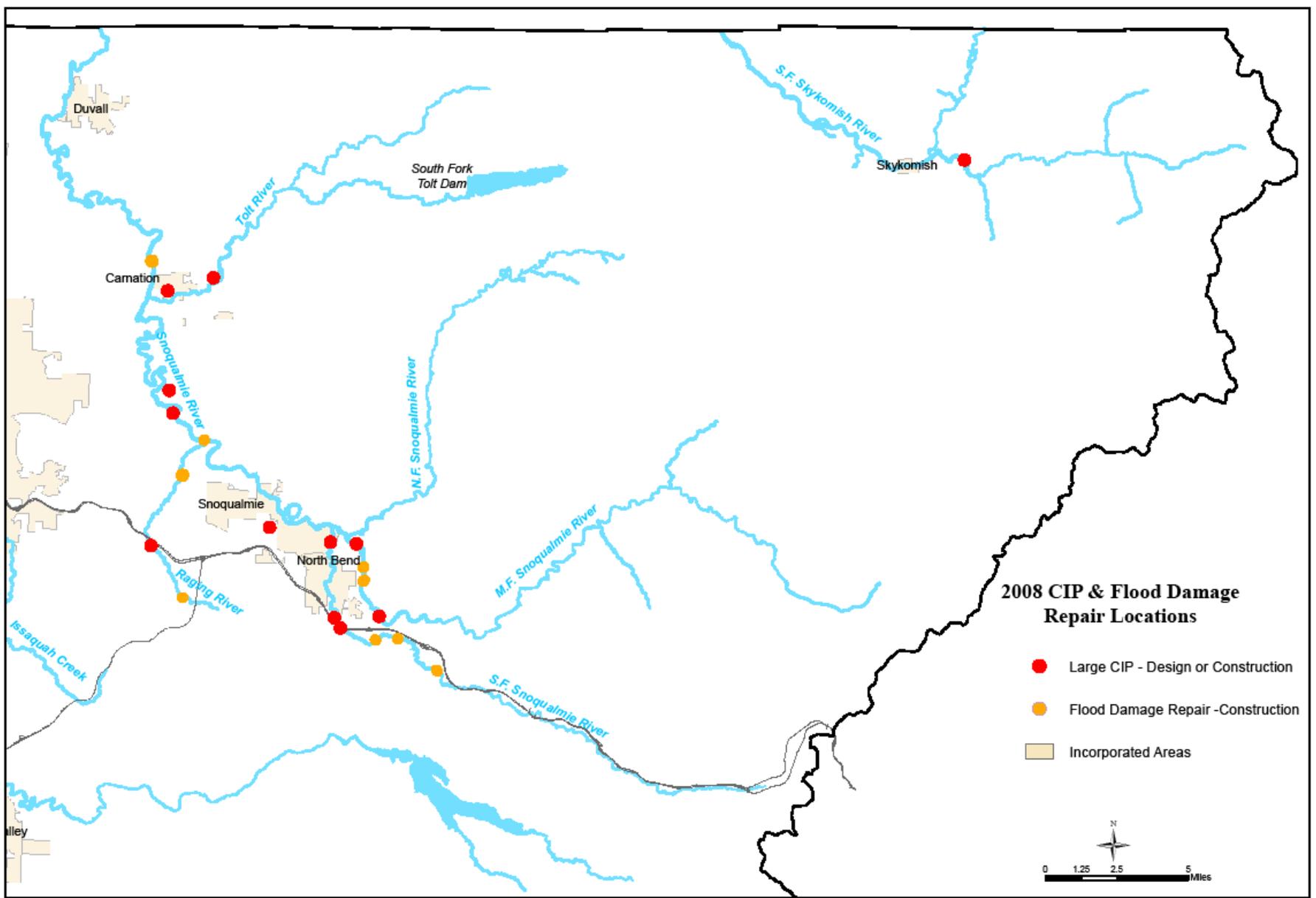


Snoqualmie River / South Fork Skykomish Basin

Snoqualmie/ S. Fk. Skykomish

Overall Approach

- Levee repairs to address November 2006 flood damages
- Home buyouts and elevations
- Large CIP to reduce flood hazard and risk
- Programmatic efforts to educate and inform, protect citizens from flood hazards
- Monitoring and mapping, modifying strategies based on results



2008 Flood District Projects

Flood Damage Repairs (2008)



South Fork

- Allen COMPLETE
- O'bert (pending)
- Riverbend COMPLETE

Middle Fork (with USACE)

- Mason Thorson Ells COMPLETE
- Mason Thorson Ext COMPLETE



Flood Damage Repairs (2008)



Lower Snoqualmie

- Aldair COMPLETE
- McElhoe Pearson (with USACE) COMPLETE

Raging River

- Arruda COMPLETE
- Bridge to Mouth Right (with USACE) COMPLETE
- Bryce's Bump COMPLETE
- Waring COMPLETE



South Fork Snoqualmie Levee Improvements

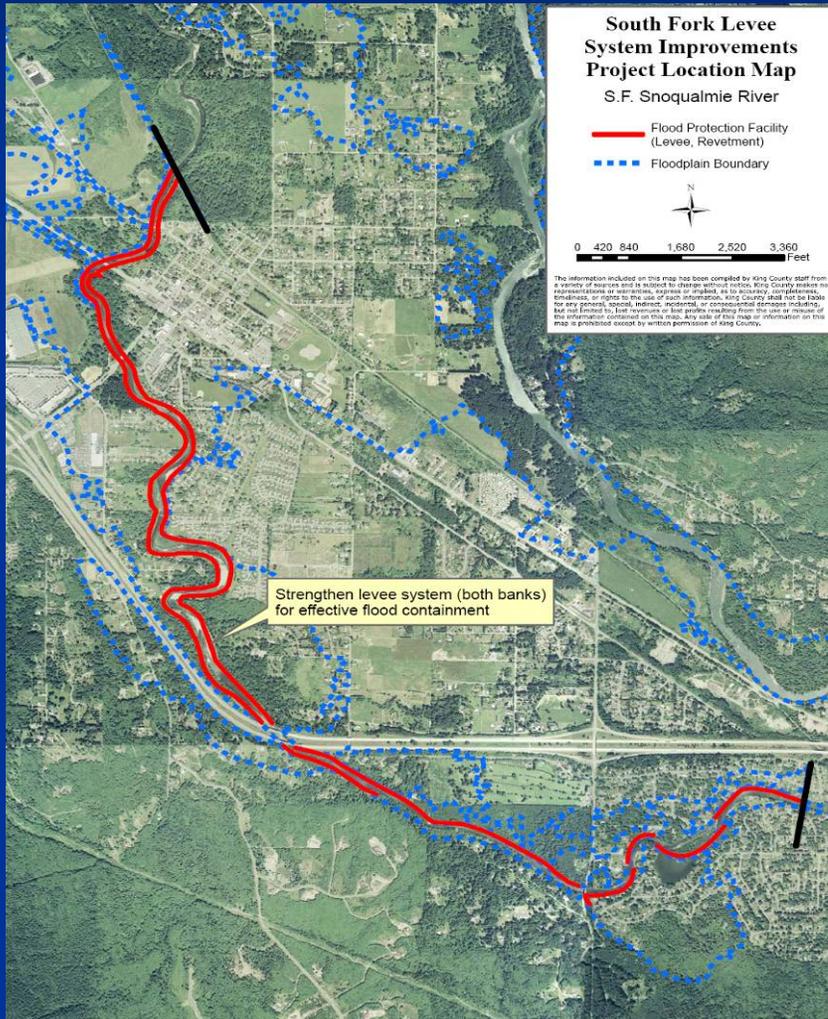
Early Action: Sinkhole Repairs



- Repaired 8 sinkholes, including 6 this summer
- Larger project feasibility will assess whether more are present and should be addressed
- More comprehensive construction over next several years

Currently in design...

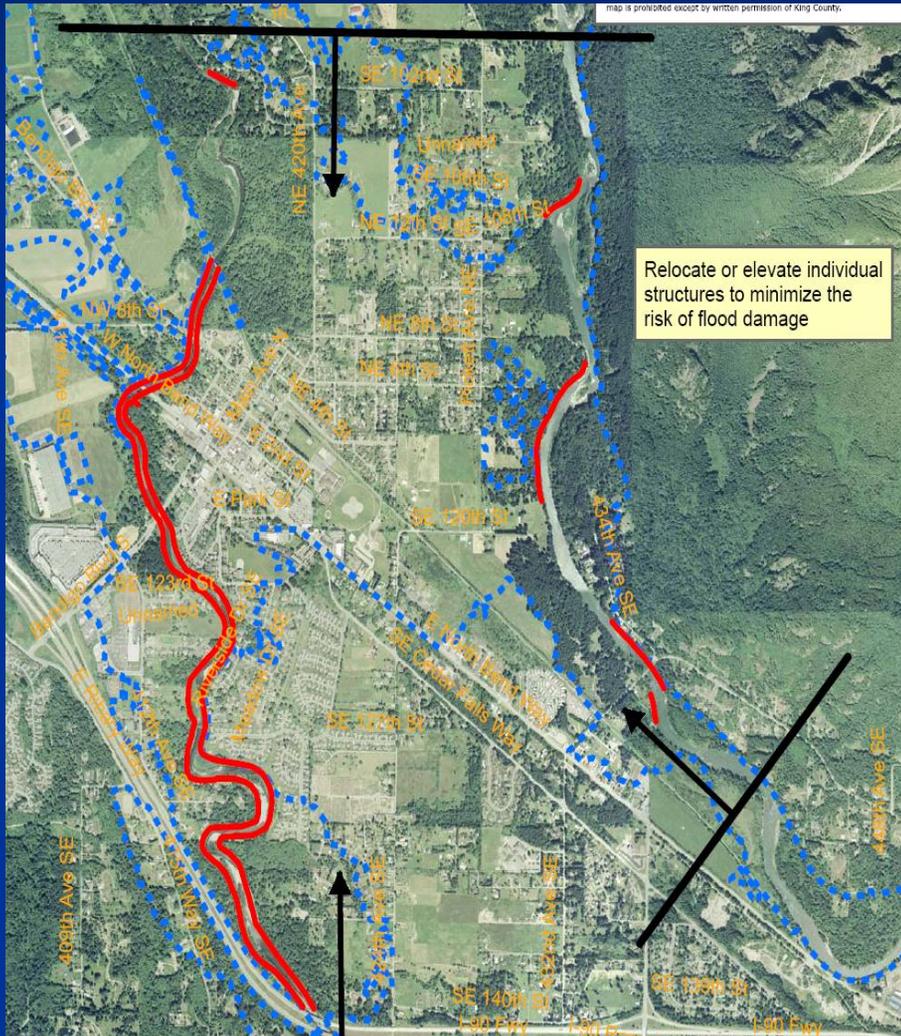
South Fork Snoqualmie Levee Improvements 2008 - 2012



- Work is in scoping and assessment phase
- Geotechnical studies of levee materials and structural stability
- Structural improvements to levee system
- Scope may allow for other improvements as well

Currently in design...

North Bend Area Residential Flood Mitigation 2008 - 2012



- Home buyouts and elevations in floodprone areas
- Middle Fork, South Fork, and overflow channels/ streams
- Possible Corps 205 partnership project
- Builds on 60+ elevations to date elsewhere in Snoqualmie basin

Cedar – Sammamish River Basin

Cedar-Sammamish Strategy

- Reduce flood velocities and volumes that threaten critical public infrastructure, residential dwellings, and block sole-access roads
- Reduce public safety risks associated with neighborhood-scale flooding and channel migration

Cedar Grove Flooding - 1990



Cedar Grove Mobile Home Park Floodplain Acquisition and Rainbow Bend Levee Setback RM 11 Right Bank



- 41 families living in high risk area
- Acquisition of 20 acre parcel and 10 neighboring homes
- Relocation underway – 18-24 months to complete
- In negotiations with one remaining homeowner
- Following relocation and removal of infrastructure, Rainbow Bend levee setback can proceed

Elliott Bridge Acquisition and Levee Setback



Cedar Rapids Levee Setback

RM 7 Left & Right Bank



Cedar Rapids Levee Setback



- Remove riprap and setback levees
- Slope back and bench banks
- Install large wood
- Covers 35 acres; 1/2 mile both banks

- COMPLETE Oct 2008
- Nearly 10:1 leverage of District funds
- 2 state grants of over \$1,100,000



Flood Damage Repair: Cedar River Trail Site #2B Repair RM 6.5 Left Bank



Post Flood Damage 2006

Flood Damage Repairs: Cedar River Trail Site 2B



- COMPLETE
- Reconstructed stable bank protects Maple Valley Highway and regional trail
- Jan Road project in 2009 will reduce need for future repairs



Flood Damage Repairs: Dorre Don Area Revetment Repairs



**Dorre Don Levee
RM 16.8 Right Bank
COMPLETE**

**Banchero Revetment
RM 15.8 Right Bank
COMPLETE**



White River Basin

White River Strategy

- Reduce risks to public safety by setting back levees to increase flood storage and conveyance capacity
- Buyout residential structures at risk of flooding and rapid channel migration

Stuck River Drive Revetment Repair



Project Description

- November 2006 flood damage
- 300-foot section of eroded river bank upstream of R Street Bridge
- Repair damaged revetment with bioengineered revetment

Project Status

COMPLETE September 2008

Estimated Cost

\$350,000

Project Partners/Funding

King County Flood Control District

City of Auburn (permitting)

Stuck River Drive (White River)



Stuck River Drive Revetment Repair



Project Status

- Completed September 2008
- Trail reopened to the public same day repaving completed
- County will continue to maintain and water new vegetation
- Project monitoring will continue for 5 years
- Upper bank plantings scheduled for Fall and Winter 2008-2009

Countyline to A-Street Flood Conveyance Improvement

Project Description

- Reduce flood-related risk to residential area by purchasing flood-prone property and providing conveyance through an existing levee into adjacent floodplain and wetlands

Status:

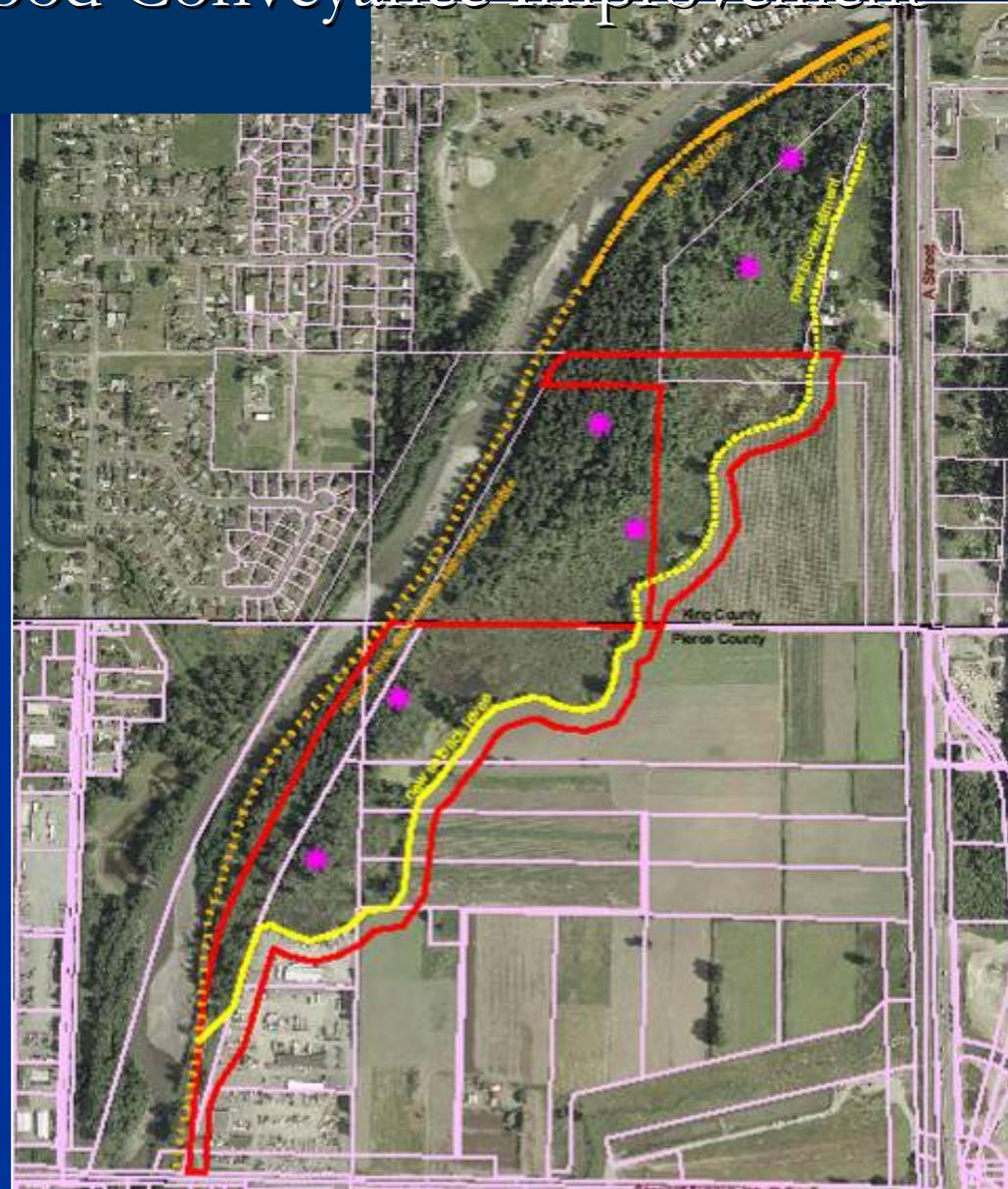
- 30% Design
- Negotiating with landowners

Estimated Cost

\$2,700,000

Project Partners/Funding

- Salmon Recovery Funding Board
- Pierce County



Green-Duwamish River Basin

Green River Strategy

- Rehabilitate levees to protect:
 - Critical public infrastructure
 - Employment centers
 - Regional warehouse distribution centers
 - Strategic freight corridors

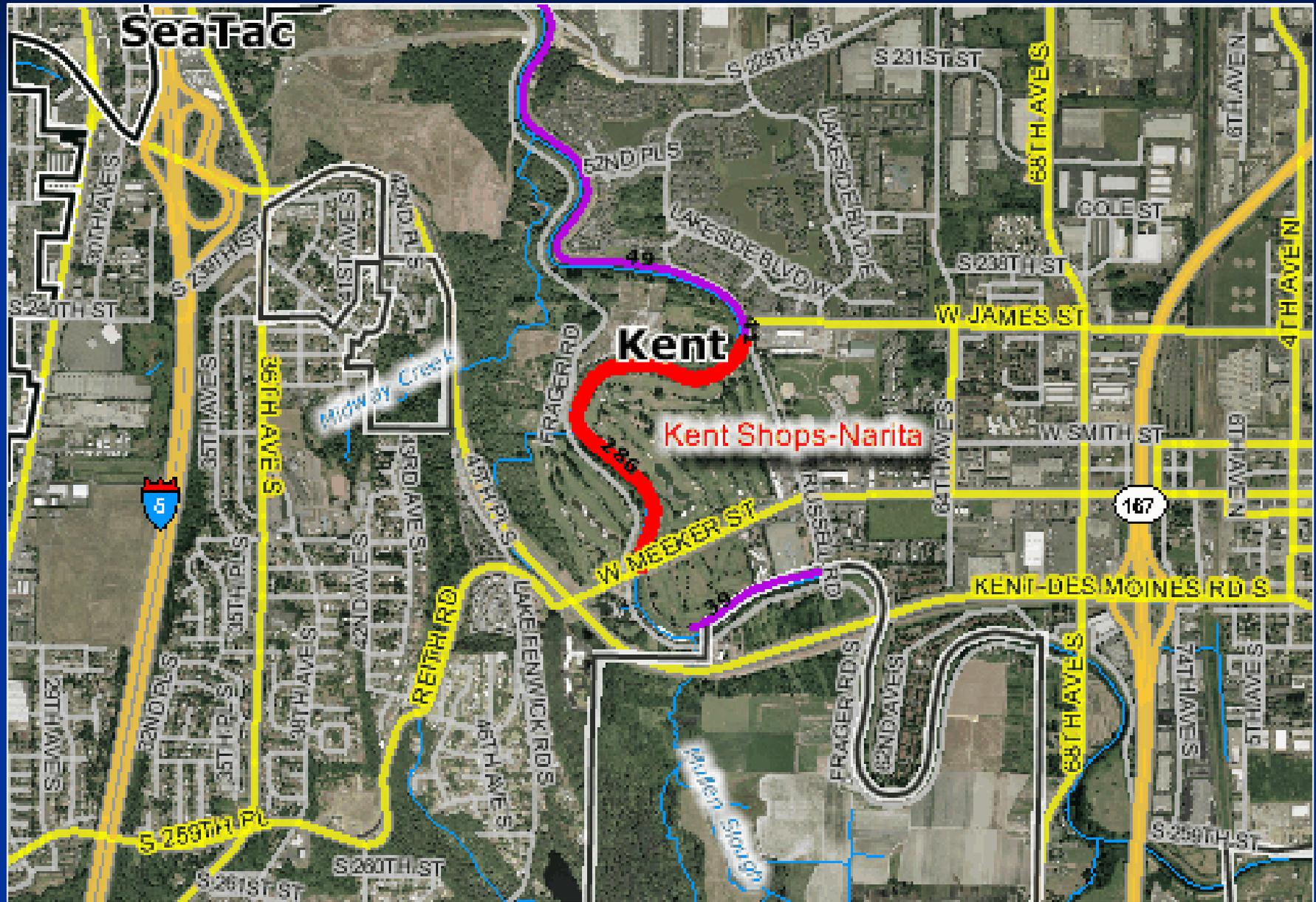
US Army Corps of Engineers Levee Repairs – Green River

2008 Levee Repairs

- Kent Shops-Narita
- Myer's Golf
- Dykstra
- Galli's
- Tukwila Sites 3 & 5



Kent Shops-Narita Levee Project



Kent Shops-Narita Levee Repair



Project Description

- Protects lower Green River valley commercial centers and infrastructure
- 3600 lf damaged in Nov 2006 flood: scour, slumps, cracks in trail
- Repairs include setback, midslope bench (riprap launchable toe), willows, large wood
- 25,000 truckloads of materials

Project Status

Scheduled for completion in early November

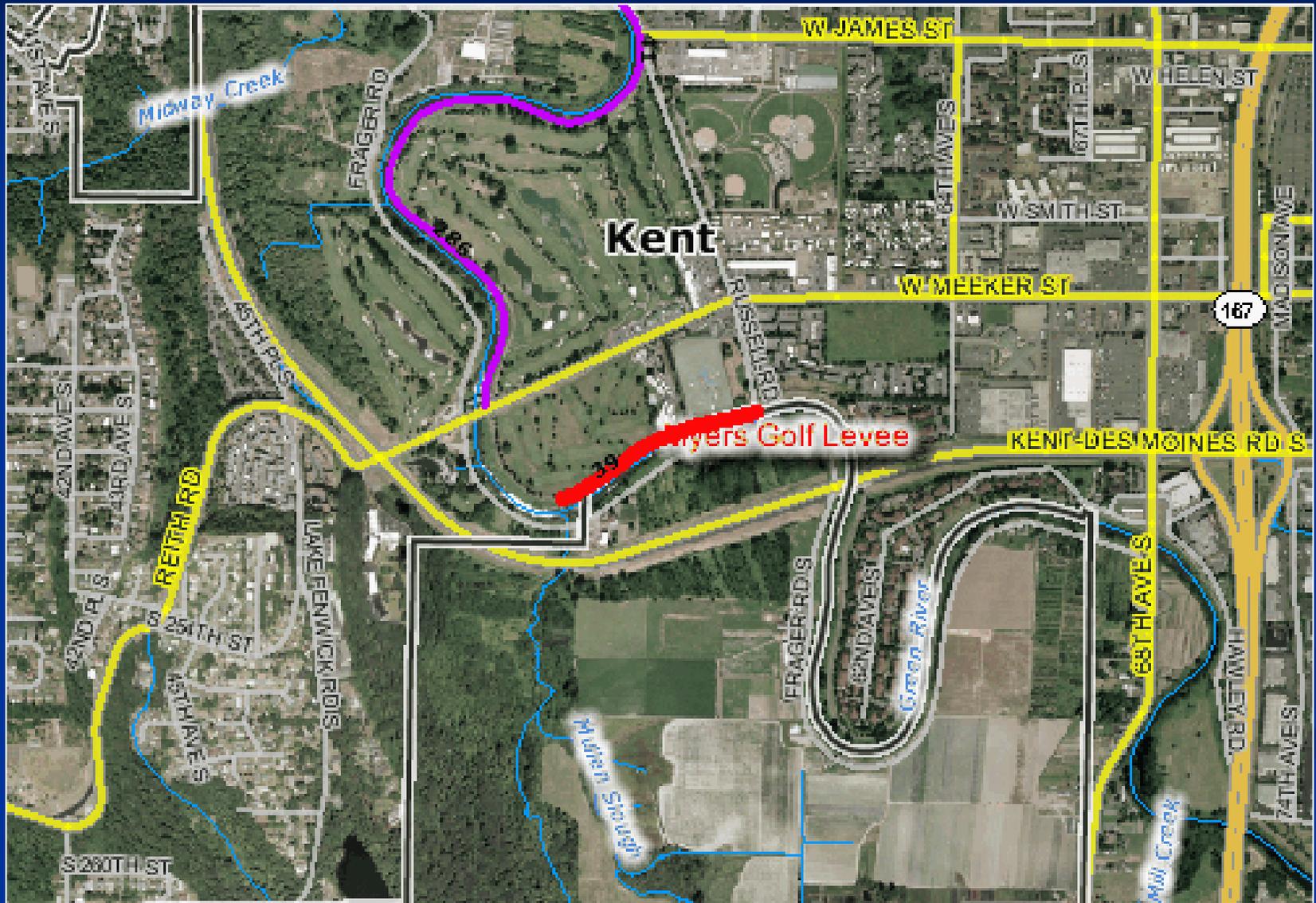
Project Partners/Funding

US Army Corps of Engineers

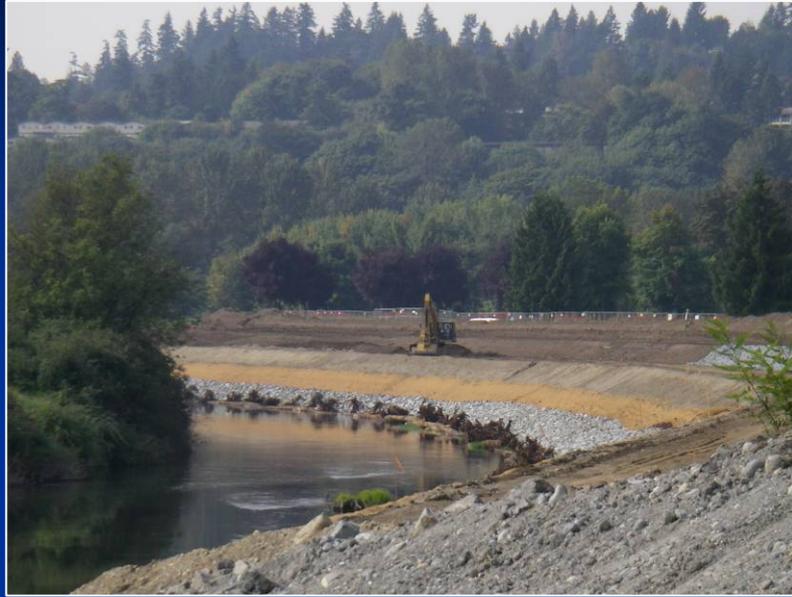
King County Flood Control District

City of Kent

Myer's Golf Levee Project



Myer's Golf Levee Repair



Project Description

- Protects lower Green River valley commercial centers and infrastructure
- 1600 lf damaged in Nov 2006 flood: scour, slumps
- Repairs include setback, midslope bench (riprap launchable toe), willow lifts, large wood

Project Status

Scheduled for completion in early November

Project Partners/Funding

US Army Corps of Engineers

King County Flood Control District

City of Kent

Dykstra Levee



Dykstra Levee Repair



Project Description

- Damage included missing toe rock and intermittent bank scour
- Repair 650 lf at downstream end

Project Status

COMPLETE September 2008

Project Partners/Funding

US Army Corps of Engineers

King County Flood Control District

City of Auburn

Galli's Levee



Galli's Levee Repair



Project Description

- Damage included missing toe rock and intermittent bank scour
- Significant erosion and over-steepening at upstream end
- Entire levee reconstructed – 1,100 lf

Project Status

COMPLETE September 2008

Project Partners/Funding

US Army Corps of Engineers

King County Flood Control District

City of Auburn

Tukwila Levee (Sites 3 and 5) Repairs



Project Description

- Localized slumping and erosion problems
- Levee setback, toe buttressing, midslope bench construction
- 900 lf floodwall
- Work initiated July 2008

Project Status

November 2008 anticipated completion date

Project Partners/Funding

US Army Corps of Engineers

City of Tukwila

King County Flood Control District

2008 Capital Project Status

Basin	Construction/ Implementation Completed	Construction/ Implementation in Progress for 2008 Completion	In Progress/ Design – Completion in 2009+	Total Projects in Basin
Snoqualmie/SF Skykomish Basin	10	2	17	29
Cedar/Sammamish Basin	4	0	7	11
Green River Basin	5	2	4	11
White River Basin	1	0	3	4
TOTAL =	20	4	31	55

2009 Recommended Capital Projects

- Green River
 - Briscoe 1-3, 5-8
 - Desimone 1
 - Desimone 2
 - Desimone 3
 - Desimone 4
 - Riverside / Reddington
 - Segale 2
 - Segale 3
 - Segale 4
 - South Park
- 2008 Projects continuing in 2009
 - 17 Snoqualmie / SF Skykomish
 - 7 Cedar / Sammamish
 - 4 Green
 - 3 White
- Cedar-Sammamish
 - Jan Road Levee Setback
 - Herzman Levee Setback
 - Dorre Don/Byers Hazard Evaluation
 - Maplewood Hazard Evaluation
- Snoqualmie / SF Skykomish
 - Middle Fork Snoqualmie
 - Sans Souci
 - Lower Tolt Acquisition
 - Tolt Mouth to SR 203
 - City of Snoqualmie Acquisition
 - **Timberlane Village Home Buyouts**

98.5% of new proposed costs are for high priority public safety projects that score above 68%

Questions?