2008 Capital Program Status Report

Presented to the
King County Flood Control District Advisory Committee

October 21, 2008
## 2008 Capital Project Status

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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 KCFCD
Army Corps of Engineers
Construction Partnership

Eligible Flood Damage Repair Construction Costs Only

<table>
<thead>
<tr>
<th></th>
<th>King County</th>
<th>Corps</th>
<th>Total Constr. Costs</th>
</tr>
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<tbody>
<tr>
<td>Galli’s</td>
<td>$461,800</td>
<td>$1,847,200</td>
<td>$2,309,000</td>
</tr>
<tr>
<td>Kent Shops-Narita</td>
<td>$1,740,000</td>
<td>$6,960,000</td>
<td>$8,700,000</td>
</tr>
<tr>
<td>Meyer's Golf</td>
<td>$900,000</td>
<td>$3,600,000</td>
<td>$4,500,000</td>
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<tr>
<td>Dykstra</td>
<td>$254,000</td>
<td>$1,016,000</td>
<td>$1,270,000</td>
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<tr>
<td>Horsehoe Bend (1,2)</td>
<td>$-</td>
<td>$2,600,000</td>
<td>$2,600,000</td>
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<tr>
<td>Snoqualmie (4 sites)</td>
<td>$148,267</td>
<td>$593,068</td>
<td>$741,335</td>
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<tr>
<td>Tukwila 205 (2)</td>
<td>$-</td>
<td>$7,000,000</td>
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<tr>
<td>Total Construction Costs</td>
<td>$3,504,067</td>
<td>$23,616,268</td>
<td>$27,120,335</td>
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(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; ½ 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
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
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
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 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 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 Projects
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
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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

- 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

- 2008 Projects continuing in 2009
  - 17 Snoqualmie / SF Skykomish
  - 7 Cedar / Sammamish
  - 4 Green
  - 3 White

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