Howard Hanson Dam and King County’s Response
King County
Lower Green River Valley
Green River Flood Protection Facilities

- Howard Hanson Dam built in 1962.

- 138 levees and revetments along almost 40 river miles.
January 2009 Flood Event

- heavy rain in early 2009
- the storage reservoir at the dam rose to a record level
- two depressions were observed
- Construction of a temporary seepage barrier grout curtain until a permanent solution was identified and implemented
Warnings of increased flood risk below Howard Hanson Dam

- Possibly 2X the design capacity of the downstream levee system
- 1 in 3 chance of significant flooding
- Created the biggest challenge to flood control since the construction of the dam in 1962
Economic Impacts of Flood Damages

- Damage of $1.34 billion-$3.77 billion
- Direct and secondary impacts up to $32 billion, 132,554 lost jobs, and $8 billion in lost wages
- Long-term impacts on the economy would be felt through 2030
Overview of Emergency Response Preparations

- King County and the King County Flood Control District played a major role
  - Coordination with cities and vital services
  - King County provided over $29 million in emergency funds for protection and relocation of critical facilities
  - The King County Flood Control District budgeted $12 million for temporary advanced measures
Flood Protection of King County Buildings and Facilities

- South Wastewater Treatment Plant
- Regional Justice Center
- King County Elections Center
- District Court
- King County Animal Shelter

Relocated King County Facilities

Radio Shop, Kent Probation Offices, Regional Public Health offices, King County Seized Vehicle Storage
Temporary Advanced Measures

• Temporary Levees installed due to elevated flood risk while HHD was compromised.

• Installed along 26 miles of levees

• Partnership with the Cities of Kent, Tukwila and Auburn

• Approximate King County Flood District budget for installation, maintenance and removal: $12 million.
Flood Patrol and Communication Improvements

- Early coordination and increased flood patrols
- Levee inspection training by Corps of Engineers
- King County Flood Patrol books provided to all jurisdiction and Corps of Engineers
- Uniform Communication Radio System for all jurisdiction and Corps of Engineers
Enhanced Public Outreach

- Flood Warning Brochure; produced in multiple languages
- Expanded roll-out of automated Flood Warning System
- Enhanced public meetings during October Flood Awareness Campaign
- Flood Preparedness and Safety Video in over 20 different languages
- Developed and distributed extensive print and online media communication
Current Status

• Dam has returned to normal flood operations.

• Downstream flood hazards are a continuing regional priority
  
• 2007-2012 Flood District expenditures $31.2 Million
  
• 2013-2018 revised six year CIP $67.1 Million
  
• Partnerships with USACE, Green River Cities, and Washington State essential to success.
  
• FEMA did not help fund regional 2009-2011 hazard mitigation below the dam
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