

GREEN RIVER

Flooding and Erosion Conditions

- Howard Hanson Dam is a major flood control feature no longer expected to provide historical level of protection under current views of flood likelihood and volumes.
- Levees and revetments are nearly continuous along Lower Green and Duwamish, with heavy commercial and industrial development through Auburn, Kent, Tukwila and Renton. Steep banks, poor buttressing at toe, high consequence if flood protection fails.
- Vital levee system of uncertain origin and construction doesn't meet current flood protection standards.
- Flood hazards from inundation and channel migration are present in the Middle Green River Basin, primarily consisting of agricultural and rural residential land uses. Scattered, discontinuous and deteriorating levees were constructed in this area to direct flows, but do not contain floodwaters.



Vision & Strategy

- Strengthen and raise levees to confine 500 year event to achieve level of protection previously shown in federal studies.
- Maintain and repair levee projects on Lower Green River to address under-designed levee segments and to improve flood protection, by reconfiguring levees (in many cases setting them back) to achieve stable slope geometry and a less constrained channel.
- Continue to maintain and repair existing flood protection facilities as needed in the short term, but without compromising opportunities for longer-term solutions.
- Explore opportunities to widen river corridor for more stable levees, improve habitat and recreational benefits, and to reduce long-term maintenance.
- Evaluate need to acquire and remove existing at-risk structures. If need is identified, actions would be coordinated with agricultural and habitat restoration plans, programs, and projects.

Proposed Actions

- Major levee setback and extension project at Reddington Levee in Auburn to provide increased flood protection and improved riverine habitat.
- Rehabilitate and reconstruct high priority levee reaches along the Lower Green River to achieve setback levees and stable slope angles. High priority reaches include:
 - Briscoe/Desimone Levees
 - Boeing Levee
 - Lower Russell Road Levee
 - Upper Russell Road Levee
 - Horseshoe Bend Levee
- Update and maintain aging Black River Pump Station.
- Conduct a needs assessment and possible project implementation to acquire or elevate at-risk structures outside of levee-protected areas.

Accomplishments 2006 through 2012

- **Capital Projects and Levee Repairs:**
 - 12 projects totaling over 15,400 feet of rebuilt levees between 2006 and 2011
 - Includes critical levee repairs to protect public infrastructure and commercial and industrial businesses in the Lower Green River Valley
- **Engineering and Design**
 - Flood Insurance Study (basis of flood map appeal joined by cities)
 - 180th - 200th Street Levee Setback Feasibility Study (Kent/Tukwila)
 - Reddington Levee Setback and Extension Feasibility Study (Auburn)
 - Green River External Advisory Review Panel Report
- **Land and Right of Way Acquisitions**
 - Acquired 36.6 acres and 0.92 miles of shoreline at the Teufel Nursery Site (Kent) for future mitigation and habitat restoration projects
 - Acquired right-of-way for 6,600 foot levee setback (Reddington project)
- **Emergency Response to 2009 Problems at Howard Hanson Dam**
 - 26 miles of giant sandbags on levee system
 - Pump Station improvements
 - Patrol training, coordination, and communication equipment
 - Extensive public outreach and education

