CEDAR RIVER

Flooding and Erosion Conditions.

- Upper watershed is preserved in forest and managed by Seattle for drinking water and hydropower; provides flood storage that helps lessen flooding impacts to some extent.
- Middle watershed is dominated by rural residential uses; extensive bank armoring reduces channel migration but leaves homes and roads vulnerable to overtopping and damage. The Cedar River Trail and Hwy 169 are vulnerable to channel erosion and protected by many revetments.
- Lower river, including channelized last 1.25 miles, flows through downtown Renton, passing businesses and important infrastructure, such as the Renton Boeing Plant and the Renton Airport. Sediment carried by the river from upstream sources deposits in this low-gradient reach.
- Older flood risk reduction methods emphasized bank hardening structures that do not adequately reduce flood risk, hamper recovery of significant salmon resources, and are vulnerable to damage or failure.
- Flood events often overwhelm the storage capability of the dams and containment capability of levees; leads to widespread flooding, erosion, evacuations, damage to infrastructure and contaminated drinking water, failing septic systems, and access cut-off.
- Steep hillsides can slide into river, affecting or even blocking the channel as occurred in the 2001 Nisqually earthquake.

Vision & Strategy

- Reduce flood and erosion risks to residents through voluntary acquisitions of at-risk homes and neighborhoods.
- Protect infrastructure by setting back existing levees to expand channel capacity and reduce elevation and velocity of floodwaters.
- Minimize economic disruption with periodic sediment removal in the river's lowest 1.25 miles to reduce overbank flooding in urbanized Renton, including the Boeing plant and Renton airport.
- Support habitat restoration in flood-prone areas by coordinating flood risk reduction projects with habitat recovery efforts, e.g., setbacks and acquisitions can create open space that benefits fish and wildlife habitat including off-channel habitat for Chinook salmon.
- Communicate effectively with residents about specific flood risks, safety measures and proposed projects and activities in the watershed.

Proposed Actions

- Analyze river conditions to inform levee setback projects through detailed river geomorphic assessments and feasibility studies.
- Support periodic gravel removal from lower river to safeguard downtown Renton businesses and infrastructure.
- Acquire property interests as necessary to setback levees to reduce velocity and elevation of floodwaters affecting infrastructure and homes, such as the Herzman, Rhode, Getchman, Jan Road, and Rutledge-Johnson Levees.
- Remove levee at Rainbow Bend and work with habitat partners to restore natural floodplain functions.
- Analyze flood patterns and solution alternatives to reduce flood risks to homes in Maplewood, Byer's Bend and Dorre Don neighborhoods.
- Complete acquisition of flood-prone homes at Elliott Bridge Reach and move forward on levee setback in partnership with WSDOT and other partners.
- Continue acquisition of flood-prone homes from willing sellers, focusing on repetitive loss properties and neighborhoods vulnerable to fast and deep flows that threaten both safety and structures.
- Set back road and revetment at Lower Jones Road. Remove parts of levees at Jan Road and Rutledge-Johnson.
- Provide partial funding to upgrade of five flood-prone bridges in Renton.

Accomplishments 2006 through 2012

- Repaired and retrofitted 2,850 lineal feet of riverbank with biotechnical bank stabilization techniques using native plants and large wood to improve habitat value as well as stabilization.
- Constructed 2,730 linear feet of levee in a setback formation reconnecting 31 acres of flood plain with the river.
- Acquired 90 flood-prone homes, including a mobile home park and 11 repetitive-loss properties through voluntary buyout.
- Completed studies of channel mapping techniques, large wood size, location and movement, and recreational river use.
- Continued coordination with City of Seattle on Masonry Dam operation and annual outreach to communities on flood preparedness.