

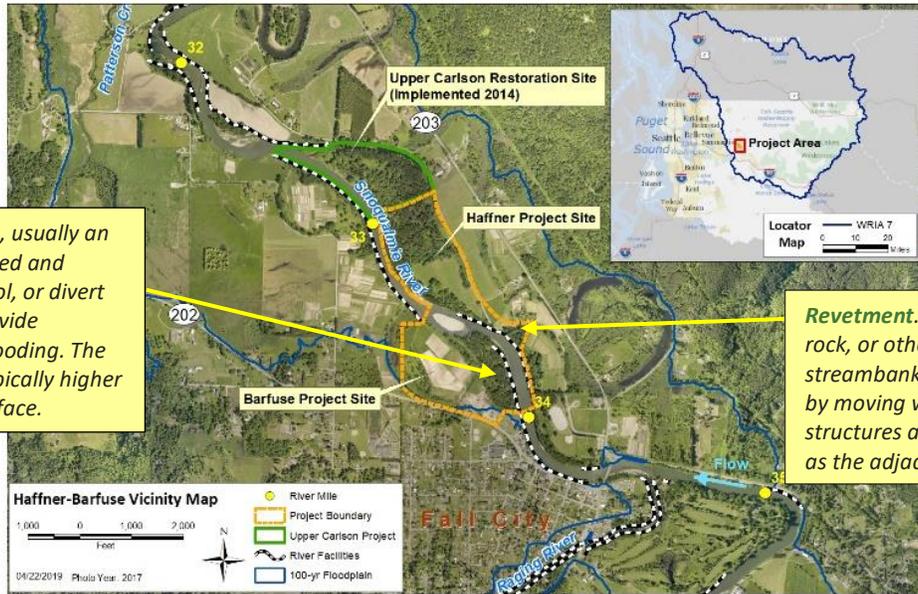
# Fall City Floodplain Restoration

formerly Haffner-Barfuse Project

## FACT SHEET

### Location

The project encompasses two river facilities (one levee, one revetment) that are across from each other on the mainstem Snoqualmie River about a half-mile downstream of the State Route 202 Bridge in the town of Fall City.



**Levee.** A man-made structure, usually an earthen embankment, designed and constructed to contain, control, or divert the flow of water so as to provide protection from temporary flooding. The top of these structures are typically higher than the adjacent ground surface.

**Revetment.** A facing of stone, broken rock, or other material placed on a streambank or slope to minimize erosion by moving water. The top of these structures are typically at the same level as the adjacent ground surface.

Project Location

### The Urgent Need for Floodplain Restoration

Chinook salmon, bull trout, and steelhead trout are listed as threatened and the Puget Sound Southern Resident Orca population is endangered under the Endangered Species Act (ESA). Chinook salmon in the Snoqualmie and across Puget Sound are at less than 10 percent of their historic population. Puget Sound Steelhead trout populations are currently 5-10 percent of historical abundance and showing little sign of recovery since their listing in 2007. The Southern Resident Orca population has dwindled to 74 individuals, the lowest abundance since the live-capture of these whales for marine parks was terminated in 1975. The population was listed as Endangered in 2005. Chinook salmon are the main prey species for the Southern Resident Orca population who have been showing signs of undernourishment among other distress factors. Immediate and bold actions are needed to save these populations.

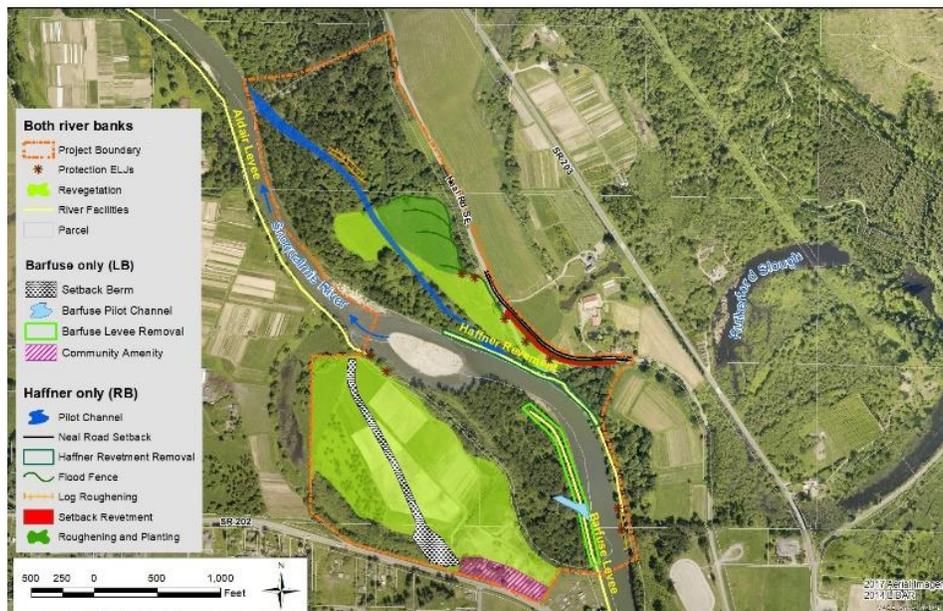
The mainstem Snoqualmie River and the Tolt and Raging Rivers were historically very productive for Chinook and other salmonids (salmon and trout). However, the habitat needed for salmon to thrive, both spawning and rearing, has been greatly limited as a result of removing trees from a once forested valley; construction of levees and revetments to keep rivers locked in place and to reduce bank erosion and flooding has prevented the rivers from forming and re-forming essential salmon habitat features.

In particular, for young salmon, areas of slow moving waters associated with floodplain side channels, log jams and complex river edges provide hiding places from predators and relief from strong river currents. The [Snohomish River Basin Salmon Conservation Plan](#) (Salmon Plan) prioritized restoration on the mainstem Snoqualmie River and the Tolt and Raging Rivers and set targets for the first 10 years – to be completed by 2015. We are dramatically behind in several milestones including edge habitat, currently at 19% of the 10-year target, and off-channel habitat, currently at 8% of the 10-year target. The Fall City Floodplain Restoration project will make substantial gains by adding an estimated 10,000

lineal feet towards the target of 55,000 lineal feet of edge habitat and approximately 14 acres to the target of 168 acres off-channel habitat.

## Project Details

This project combines two major actions that were previously thought of as separate projects – the removal of the Haffner revetment on the right (north) bank of the Snoqualmie River and the removal of the Barfuse levee on the left (west) bank. The projects will restore almost one half-mile of river edge habitat; restore the connection of the river to approximately 134 acres of its floodplain; construct an estimated 2,500 feet of floodplain side channel; control invasive weeds; and restore native plants on more than 80 acres. On both banks, setback facilities will be constructed to protect farmland and infrastructure that are outside the project footprint. Those new flood and erosion hazard facilities will be constructed to current engineering standards, including approximately 1,200 feet of Neal Road that will be relocated to improve public safety and maintain access to private properties.



Project Elements

## Timeline

Project design will take place over the next two years and construction is expected to begin in 2022.



## Estimated Cost

The total estimated cost to implement the project is between \$14 and \$17 million dollars. Projects of this scale and nature are typically funded by multiple sources, with the majority of funds secured through competitive federal, state and local grants. While many grant sources are specifically focused on salmon recovery, water quality and watershed health, King County will also pursue multi-objective grants that can combine actions for overall ecological improvement with others that reduce flood and erosion risks and support agricultural priorities.

## Project Funding To Date – Acquisition & Design:

- King County Surface Water Management Fees; Washington State Department of Ecology – Floodplains by Design; Snoqualmie Tribe; Washington State Recreation & Conservation Office; King County Flood Control District Cooperative Watershed Management Grant; Conservation Futures Tax; King County Parks Levy; King County Flood Control District; Washington State Salmon Recovery Funding Board

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## FREQUENTLY ASKED QUESTIONS

### *How is King County approaching solutions to the complex, intertwined challenges facing fish habitat restoration, farming and flood risk reduction in the Snoqualmie Valley?*

In late 2013, King County Executive Dow Constantine assembled representatives from throughout the Snoqualmie Valley to provide advice on how to overcome the issues that were creating obstacles and conflict around salmon habitat restoration, farming and flood risk reduction. They included a cross-section of agricultural, salmon recovery and flood risk reduction interests, as well as tribal, state and local jurisdictions.

In 2017, the Snoqualmie Fish, Farm, and Flood (FFF) Advisory Committee forged the first major agreement in King County to strike a balance between farming interests and salmon recovery. The Advisory Committee unanimously agreed to 34 recommendations that, if funded and implemented, would significantly improve ecological function and habitat quality, strengthen the agricultural sector, and reduce flood and erosion risks.



### *How is this restoration project consistent with the FFF agreements?*

A cornerstone principle of the FFF 1.0 agreement was that the top priorities of the fish and farm caucuses-- large capital restoration projects for fish, and durable changes to agricultural drainage management for farms--would move forward in tandem. These tandem or “bundled” actions included the two following top recommendations from the Fish and agricultural communities:

- **Accelerating the pace of large-scale habitat restoration projects.** Project acceleration was the number one priority for

the salmon recovery interests of the FFF Advisory Committee (tribes and other salmon recovery proponents). The FFF 1.0 agreement recommends projects and alternatives that provide the most benefit to salmon recovery at sites like downstream of Fall City that are considered ecologically critical. In the case of the Fall City Floodplain Restoration, the project will also result in the loss of approximately 30 acres of floodplain area that is currently, or has recently been in agriculture production, to restore former salmon habitat.

- **Provide durable programs and regulations that make agricultural drainage easier and less expensive.** The top recommendation from the agricultural community is to create durable, cost-effective, and environmentally sound approaches to maintaining productive agricultural lands in the Snoqualmie Valley. King County and partners are exploring roles and responsibilities in developing and funding comprehensive assistance that includes engineering review, permitting guidance, identification of regulatory barriers, and identification of strategies to change King County Code when needed.

The project will also reduce flood impacts, potential road closures and provide greater protection of Neal Road, while also reducing maintenance costs of aging levees.

### ***How was the decision to convert agricultural land to habitat restoration land reached?***

Since salmon recovery planning began in earnest in the late 1990s, this reach of the Snoqualmie at the confluence of the Raging River has been identified as critical for salmon due to its very high level of use for spawning as well as rearing. Over the last seven years King County purchased three parcels behind the Barfuse levee for the specific purpose of implementing a major salmon restoration project that would allow the river to move and re-form habitat where salmon can thrive from spawning through rearing. The FFF agreement acknowledges that in critical locations, restoring lost salmon habitat will mean the loss of some currently farmed or potentially farmable land. In the Fall City reach, at least 50-75 acres of farmland are expected to be converted to large restoration projects in the next decade, with potentially more to follow. Those losses are not taken lightly and the FFF work deepened the mutual understanding of the need for both this kind of salmon recovery project and the urgent need to protect farmland. Opportunities to convert land back to agriculture production are continuously being pursued, such as the conversion of the Tall Chief Golf Course which is now fully integrated into the operations of the valley's largest remaining dairy farm.

King County is leasing a portion of the Barfuse site to local farmers. The lease agreement includes the understanding that farming will end once on-the-ground project implementation begins; one-year notice is provided to lessees.

### ***What are the near-term actions?***

Between now and October 2021, the following actions will help inform the design and prepare the site for construction.

- Conducting hydraulic modeling and other technical analyses of site characteristics.
- The Snoqualmie Tribe will begin controlling weeds and planting trees and shrubs at the Barfuse site in 2019.
- Continue agricultural operations on the Barfuse site with one-year notice in advance of site changes (initially, plantings).
- Meet and talk with nearby landowners.
- Update the Fish, Farm, Flood Implementation Oversight Committee.
- Update Tribes, community groups and stakeholders.
- Have a third-party evaluator participate in the identification of potential (pre-) and actual (post-) impacts of the project
- Establish a plan to monitor the project site for 10 years and address any issues that arise.

### ***How can I get more information or take actions to help improve salmon habitat and protect water quality?***

Visit this [Fall City Floodplain Restoration project website \(www.kingcounty.gov/restoration\)](http://www.kingcounty.gov/restoration) for more information and updates as they become available. Be sure to check out this [Healthy Habitat video \(https://www.govlink.org/watersheds/7/\)](https://www.govlink.org/watersheds/7/) to learn more about salmon needs and how you can help.