

DRAFT Facilitators Agenda

FFF Implementation Oversight Committee Meeting Agenda

August 25, 2020

9:00-10:30

Zoom Call Meeting ID: 883 5359 2030 **Passcode:** 882141

Reminder: You must register w Zoom for this meeting.

Meeting Purpose: Hear about the 30% design of the Fall City Floodplain Restoration project, ask questions and provide feedback.

9:00 – 9:10	1. Introductions and Welcome Welcome from your Co-chair Agenda review	Cindy Spiry & Tamie Kellogg
9:10 -- 9:40	2. Fall City Floodplain Restoration Project Presentation <ul style="list-style-type: none">a. Respond to questions on drainage element of the FbD grant requestb. Presentation by the Capital Project Team Materials: Fall City Floodplain Restoration Public engagement 1 page, Fall City Floodplain Restoration Project Fact Sheet, FbD drainage element description	Fall City Floodplain Restoration project team, & Erin Erickson
9:40 – 10:10	3. Caucus/Break out group discussion on Fall City Floodplain Restoration Project Presentation <ul style="list-style-type: none">a. Break into 3 groups discuss the project. Each group will have someone from the project team who can respond to most questions.b. Discuss the project design and share your feedback. Note any issues/topics or questions that you'd like to highlight for the full group discussion following the breakout.	All
10:10 - 10:30	4. Full Group Discussion on Fall City Floodplain Restoration Project Full group Q & A	Tamie Kellogg
10:30	5. Adjourn	

Snoqualmie Fish, Farm, Flood 2.0 Implementation Oversight Committee

DRAFT MEETING NOTES

Tuesday, August 25, 2020
9:00 am – 10:30 am (scheduled)
Video Conference Call via King County Zoom Account

Committee Members Present (Y/N)					
* = denotes caucus co-chair					
Fish Caucus		Farm Caucus		Flood Caucus	
Cindy Spiry, Snoqualmie Tribe* (proxy: Matt Baerwalde - N)	Y	Josh Monaghan, King Conservation District*	Y	Angela Donaldson, Fall City Community Association*	Y
Denise Krownbell, Snohomish Forum	Y	Cynthia Krass, Snoqualmie Valley Preservation Alliance	Y	Stuart Lisk, City of Carnation	N
Mike Remington, Snoqualmie Forum	Y	Bobbi Lindemulder, farmer	Y	Lara Thomas, City of Duvall	Y
Micah Wait, Wild Fish Conservancy	Y	Meredith Molli, Agriculture Commission	Y		
Daryl Williams, Tulalip Tribes (proxy: Kurt Nelson – Y)	Y	Libby Reed, Sno Valley Tilth	Y		
Ex Officio Members Present (Y/N)					
Gary Bahr, WSDA	N	Brendan Brokes, WDFW (proxy: Stewart Reinbold – N)	N		
Josh Baldi, KC DNRP	N	Tom Buroker, WDOE (proxy: Joe Burcar – N)	Y		

1) Introductions/Welcome by Co-Chair (Tamie Kellogg, Cindy Spiry)

Ms. Kellogg called the meeting to order at 9:02 am. Ms. Spiry briefly welcomed all. Several updates were noted:

- A letter in support of Floodplains by Design (FBD) funding for the Fall City Floodplain Restoration Project has been submitted by caucus co-chairs to the County Executive's office.
- Funding is secured to pursue blue/green LiDAR and 2D modeling as tools to address drainage concerns.
- Beth leDoux asked FFF partners to provide a short update for FFF's GovDelivery newsletter by September 10.
- The buffer task force recommendations transmittal letter has also gone to the Executive's office.
- Elissa Ostergaard reported the Snoqualmie Forum received a \$655K grant to investigate if polluted road runoff is impacting coho salmon mortality. This is in partnership with tribes and others, with fieldwork to begin in winter. Landowner permission requests are being sent. Questions can be directed to Ms. Ostergaard.
- Kurt Nelson reported the Tulalip Tribes and USGS have completed a thermal imaging study in the Snoqualmie and Skykomish rivers. The contractor is processing data now, to be available by end of the year. Questions can be fielded to Mr. Nelson.

2) Fall City Floodplain Restoration Project Presentation (Fauna Nopp, Jo Wilhelm, Chris Ewing – DNRP)

This is the first major salmon recovery project since inception of FFF. It puts into action requests of FFF 1.0 and represents three recommendations: increasing floodplain restoration; enhanced public engagement; and incorporating third-party review of the work, by consultant Vaughn Collins. King County Councilmember Kathy Lambert also praised inter-jurisdictional collaboration efforts on the project.

It was noted while drainage was a concern attached to the FBD grant application, this does not address all drainage issues in the Valley or raised by FFF. The IOC awaits a reply from the Executive to the support letter to his office on this matter. Cynthia Krass added the Snoqualmie Valley Watershed Improvement District (WID) had divided the watershed into sub-basins, which were prioritized in terms of severity of wetness impacting farmland. Projects for top-prioritized sub-basins were identified, and are now being teed up and designed, and funding sought.

Fauna Nopp is the Fall City project manager. The site footprint is 145 acres, downstream of the Fall City bridge. Preliminary design is complete, with final design to begin soon and construction expected spring 2022. The project combines the once-separate Haffner and Barfuse projects, two of four priority projects identified in the basin. This

project is currently ranked #1 with Puget Sound Acquisition and Restoration (PSAR) fund. Ms. Nopp noted the preliminary design phase delivers on multiple promises to FFF, including: on-schedule completion of 30% design; expanded community engagement; and incorporation of third-party review.

The project site is a single-thread mainstem channel, which acts as a “firehose” washing fish downstream, due to lack of a connective channel habitat or floodplain. Goals are to restore river and floodplain processes; improve salmonid habitat; reduce flood erosion risk; accommodate public river use; and balance benefits with costs.

Jo Wilhelm of DNRP’s capital projects team reviewed project elements. These should open up space and create a 0.55 mile side-channel with engineered log jams (ELJs), and floodplain swales to bring flood flows into the side-channel and lower flood levels quicker. Floodplain connection should mitigate flows over banks onto nearby farmland. 1,300 feet of the left-bank Barfuse levee will be removed, with a new side-channel punched in. A 1,600 foot soil berm will be placed on now-unused farmland, to meet 100-year flood event zero-rise standards and mitigate nearby landowner impacts. Revegetation is also key, as large trees drive habitat processes, microclimate protection, and pollutant removal. The project should create 13 acres of off-channel fish habitat.

Chris Ewing, also of the capital projects team, reviewed impacts modeling. While there were noted water level differences observed in 10-year and 100-year flood event models, smaller “2-year” events are also important and can result in water rises of 2-4 inches. More work is needed to mitigate these impacts. Mr. Ewing noted this consideration of smaller events is beyond the minimum requirements of the project process. He said velocity is also a stakeholder concern. In velocity maps for 100-year flood events, models show significant energy would shift to the floodplain and side-channel, and lessen mainstem velocity. This may also catch more gravel in this part of the river instead of more problematic downstream areas.

Impacts to agriculture were reviewed. The main such impact is conversion of 42.5 acres of agricultural land into riparian forest. Flood levels will be reduced on 300+ upstream acres and 1.5 miles of roadway. Neal Road is being set back to improve local access, including several farms. Reduction of erosion at Fall City Farms is also expected.

Ms. Nopp said final design will involve: detailed engineering design; permitting; refining models and geomorphic analysis; establishing a new right-of-way for Neal Road; response to the third-party review; and further community engagement. A virtual public meeting is planned in the next few months. She reviewed the community engagement timeline; monitoring and landowner check-in are expected through 2033. She broke down the basic budget for the project. Of a budgeted total \$19M, \$15.8M is needed. Open funding applications total \$15.5M.

The presentation raised several questions from IOC members:

- **Q:** How will larger shade trees impact agricultural growing areas?
A: Trees will be planted on land the County acquired for salmon restoration, with no agricultural areas. There will be space between planting areas and nearby farmland, so shading should not occur.
- **Q:** What is the size of the wood and impact to recreation?
A: This reach of the river is designated as separate from the reach for recreational activity. The ELJ along Neal Road is designed to push the river away from the road. Recreational safety is being considered in all steps.
- **Q:** Are you calculating zero-rise for the project?
A: Yes; the County is applying for a flood hazard certificate, and analyzing to show compliance with FEMA.
- **Q:** Can the County provide updates on project alternatives?
A: Yes.
- **Q:** Will a Conditional Letter of Map Revision (CLOMR) from FEMA be required?
A: Hopefully not, but zero-rise analysis needs to be done.
- **Q:** How were the estimates for large wood made?
A: Projections from the project team geologist. The team is working with a firm, Herrera, on wood recruitment through the Snoqualmie, engaging them more in final design. Some salmon recovery interests also asked for more wood. *(This question was flagged for follow-up.)*
- **Q:** Have flood variances changed in response to the recent FEMA update/memo?
A: More 1D analysis is needed to understand the implications. *(This question was flagged for follow-up.)*

3) Caucus Break-Out Discussions on Fall City Project

Attendees were sent into break-out rooms by caucus to discuss their impressions on the Fall City project:

- **Fish Caucus:**
 - Recreation: There is concern from many groups of recreational users, like floaters and jet skis, influencing the project and habitat benefits. Outreach was done to ensure the upstream reach is used for recreation.

There is hesitancy to put large ELJs mid-channel, but discussion will occur if needed. It was suggested the project use signage, similar to the Upper Carlson project, to communicate with the public.

- Wood recruitment: More mainstem large woody debris is needed, as relying on natural recruitment may be inadequate. This includes key pieces and ELJs, with adaptive management. Side-channels may help wood retention. Planting more cottonwoods was suggested due to their fast growth; outreach was advised to clarify they aren't an allergen. Current left/right bank floodplain areas also have good-sized hardwoods.
- Barfuse berm: It was asked why this location was chosen for the berm, and its portrayal as a berm vs. a levee. There was also concern about maintaining the oxbow's hydrology. It was answered: the location was determined by presence of adjacent private property and property owner needs; a levee uses placed rock while the berm uses soil and plantings; and the berm won't block connection to the oxbow, which may not be optimal habitat and may be used for disposal of non-riprap levee materials.
- Aldair Levee: Land acquisition is still in progress, with a project timeline to be determined.
- There was a desire expressed to for the caucus to review the alluvial fan report.
- **Farm Caucus:**
 - Impressions of the project team and presentation were generally favorable.
 - The agriculture community's confidence in the project can be helped by measuring the historical accuracy of modeling in past projects.
 - It was noted that stakeholders/landowners are in an uncertain emotional place; the project team should be ready to address their concerns. It was asked if landowners and farmers being communicated with.
 - Several caucus members agreed even a 1-inch rise from a "small" flood can have major impacts on some lands; they want to know what improvements can be made for these landowners.
 - Fauna Nopp replied that modeling is an imperfect tool, and her team may back off some habitat benefits, such as adjusting a proposed side-channel, to mitigate landowner impacts. She said reaching 60% design phase, by next May, will bring more answers to risk questions.
 - The view was voiced that mitigated impacts don't equal agriculture benefits. The agriculture community wants long-term impacts to be as beneficial as possible to agriculture.
 - It was asked if there are compensatory storage benefits from these projects.
 - It was stated a reduction in velocity should be recognized if it will lead to major erosion reduction.
 - A caucus member said impacts to future farmers, as well as current, should be considered.
 - There will be a presentation on the project at SVPA in September.
 - A caucus member said their view of the soil berm has improved; they now see the need to protect downstream properties.
- **Flood Caucus:**
 - It was generally agreed that this project can provide many gains, to infrastructure as well as habitat.
 - Continued coordination between jurisdictions is encouraged.
 - It was advised to reach out to WSDOT, as flooding on SR 203 is a concern. Bart Treece at WSDOT and state representative Bill Ramos were named as possible contacts.
 - It was asked at what point the County should be concerned in regards to flooding and CLOMR.
 - It was agreed that impacts to agriculture/adjacent farms from smaller flood events should be minimized.
 - Other sentiments included:
 - It should be asked if culverts are on the state's fish-passage list;
 - A conversation on blue-green LiDAR would be interesting to have;
 - The project should have contingencies and adaptive management in place; and
 - The dam alarm issue raised by Councilmember Lambert does impact Carnation, but should be addressed by the Flood Control District, not FFF.

4) Full Group Discussion on Fall City Project

Each caucus chair reported highlights of their break-out room discussions:

- **Fish Caucus:**
 - The top concern is large wood recruitment. More of this, possibly cottonwoods, is needed in the mainstem.
 - There was a question about the Barfuse berm and its connection to an oxbow.
 - The caucus asked to review the alluvial fan report before transmitting to the Executive, which did not occur, so they would now like to review it after the Executive.
 - There are concerns about recreational users on the river impacting the project, and their safety.
- **Farm Caucus:**
 - It is an ongoing process for the agriculture community to build trust in an imperfect model.

- A key concern is recognizing importance of the many smaller flood events now coming earlier in the year.
- Another concern is how to help the project team reach out to downstream landowners.
- **Flood Caucus:**
 - There are many positives to the project, especially the collaboration between agencies.
 - It was advised to reach out to WSDOT; the project has benefits to safety on SR 203 and Neal Road.
 - It is pleasing to hear that nearby farmers support the project.
 - The news about 2D modeling/blue-green LiDAR use is welcome.

5) **Wrap-Up/Adjourn**

Future meetings may be extended to two hours to allow time for break-out sessions and discussion. Next steps are to document any concerns, issues, or questions; IOC members should contact their co-chairs for anything urgent.

Tamie Kellogg adjourned the meeting at 10:53 am.

Next IOC Meeting: October 7, 2020 from 3:00 – 5:00 pm (Zoom video conference call)

FFF IOC Updates

August 25, 2020

King County Alluvial Fan Report: King County Department of Natural Resources and Parks, in partnership with King County Department of Local Services, has transmitted the Alluvial Fan Demonstration Projects Report to the King County Executive. This report describes and evaluates four alluvial fan demonstration projects, including two that were constructed (Mud Creek Project near Fall City, and Clough Creek Project near North Bend), and two projects that were planned but not constructed due to landowner concerns, cost, and permitting issues (Ames Creek and Deer Creek Projects) both located in the Lower Snoqualmie Valley. This work was authorized through Alluvial Fan Demonstration ordinances adopted in 2014 (Ordinances [17877](#) and [17878](#)), with a key intent to develop “best management practices for addressing alluvial fans to meet operational needs of farmers and landowners and to protect and to reduce the impact to the aquatic area and the fish and animals that utilize the aquatic area.” These ordinances directed the Executive to transmit the evaluation report and a recommendation on further action and proposed legislation, if any, to the Council. A draft of the report is now being reviewed by the Executive Office. The draft report summarizes best practices and lessons learned from the demonstration projects. It recognizes that management of alluvial fans takes place in a complex regulatory, treaty rights, natural resource management, and land use policy context with intersecting and sometimes conflicting interests in public safety, property and infrastructure protection, and fish habitat protection. It emphasizes that best practices and any future county policy and code changes need to be developed in formal consultation with Tribes, and in coordination with regulatory agencies advisory groups such as the King County Agriculture Commission, Rural Forest Commission, and Snoqualmie Fish, Farm, Flood Implementation Oversight Committee. This report is an internal product to the Executive and because of that, will go through Executive approval prior to public distribution. It is understood this report is of interest to the FFF IOC and King County WLRD and we would be happy to walk through key draft findings and next steps, and to share the final Executive proposed report.

King County Budget: WLRD submitted its budget proposal to the Executive, including recommendations for ongoing support for FFF, ADAP, habitat restoration, and flood hazard reduction. We will share the details once the Executive transmits his formal proposal to Council later this fall.

Transmittal Letters: The Fall City Floodplain Restoration letter of support and the Buffer Task Force transmittal letters have been received by the Executive. Responses will be shared as soon as they are received.

Blue-green LiDAR funding: One of the critical steps in development of 2D modeling is the compilation of solid data including acquisition of blue-green (Bathymetric) LiDAR. Having blue-green LiDAR will not only benefit potential 2D modeling work, it will be an important dataset to support the development of other projects supporting FFF in the Valley. The target is to acquire the dataset during low-flow conditions, mid to end of September 2020. KC Water and Land Division has prioritized allocation of funding for the acquisition of LiDAR from current budget. We still need to secure funding for the 2D modelling. We

have submitted a pre-application for a federal Hazard Mitigation Grant and should know soon whether we will be invited to submit a full application. King County Flood Reduction Grant to support this work. We are continuing to explore the timing and how best to communicate with the Supervisors and Council members about the 2D letter.

FFF GovDelivery: It's time to highlight the work of our partners who are doing great work! To share the great work that is catalyzed by our partners in Fish, Farm, Flood we are starting a quarterly newsletter. We want to highlight work happening in the valley on all things Fish, Farm, Flood. If you have a project or program you would like to highlight, please send Beth leDoux a note - beth.ledoux@kingcounty.gov

Coho Pre-spawn mortality study: The Snoqualmie Watershed Forum was awarded a \$164,500 National Estuary Program (NEP) grant through the Near Term Action process for work beginning this fall. The grant will support investigations across urban areas in the Snohomish basin to determine whether coho salmon are being prevented from spawning by polluted road runoff. In partnership with Tulalip Tribes, King County and the Snohomish and King Conservation Districts, Forum staff will search for signs of coho pre-spawn mortality in urban streams in King and Snohomish counties this winter and next winter. To alleviate impacts where coho prespawn mortality is found, creative outreach will be conducted along to provide stormwater technical assistance to businesses and municipalities. Please reach out to Elissa Ostergaard, Snoqualmie Salmon Recovery Manager with questions at elissa.ostergaard@kingcounty.gov or (206) 477-4792.

Fall City Floodplain Restoration Project
Floodplains by Design Drainage Proposal

One of the strategies identified in the Snoqualmie Fish, Farm & Flood Agreement was to **bundle agricultural drainage improvements and habitat restoration projects** to ensure balanced implementation of recommendations outlined in the agreement. The King County Project Team worked with the WID, who has evaluated and prioritized catchment basins within the Snoqualmie Valley for improving agricultural drainage to identify key drainage projects. The projects are not located in the immediate vicinity of the floodplain reconnection project, but further downstream where they can provide the greatest benefit within the valley. The first project is in the Langlois Creek area, just south and east of Carnation. In the Langlois Creek basin 4 culverts will be replaced that will enhance drainage on 160 acres of farmland and improve fish passage on 5.6 miles of the creek. In the North End basin, just south of the county line, the replacement of an outdated drainage pump will enhance drainage on 700 acres of farmland and update the system with a more fish-friendly pump.

The two potential projects are:

- **Replace 4 culverts on Langlois Creek:** The culverts are currently barriers to both fish and effective field drainage, which delays field access for planting in the spring. The design of the new culverts will be 100% passable by anadromous fish and will fully comply with WDFW Water Crossing Design Guidelines and Stream Habitat Restoration Guidelines. One of the four culverts is on King County Parks land and the other culverts are on private property. The WID has agreement from all landowners for the construction of the new culverts.
- **Drainage pump replacement in the North End Basin:** This project will replace an existing 1930's-era undersized drainage pump with a new, fish-friendly, appropriately-sized pump. The WID is working with landowners to develop a drainage pump management plan that will improve farmable acreage during critical farming periods, comply with fish passage requirements, and improve energy efficiency of the pump.

Haffner-Barfuse Floodplain Restoration Project Community Engagement Plan

Engagement Principles: <ul style="list-style-type: none"> • Incorporate FFF floodplain restoration project community outreach recommendations into the project design, where possible. • Increase transparency in the CIP process by providing clarity in communications and greater predictability (as much as possible). 				<ul style="list-style-type: none"> • Timely and focused engagement with the community to ensure: <ul style="list-style-type: none"> ○ The right people are engaged at the right time ○ There is integrity in the community engagement process ○ The project meets its milestones for grant applications and design stages ○ Effective stewardship of public funds and staff time 		
Timing	Q3 2018- Q2 2019 (AUGUST 2018 – APRIL 30, 2019)	Q2 2019 - Q4 2019 (MAY 2019 – DECEMBER 2019) (NOVEMBER 2019)		Q1 2020 - Q3 2021 (JANUARY 2020 – AUGUST 2021)	Q1 2022-Q4 2023 (JANUARY 2022 – DECEMBER 2023)	Q3 2022-Q4 2023 (OCTOBER 2022 – OCTOBER 2023)
Project Phase	SECURING FOOTPRINT AND INPUT ON DESIGN ELEMENTS	RECONNAISSANCE, MODELING, INFORMATION GATHER AND PRELIMINARY DESIGN THROUGH 30%	INITIAL MODELING RESULTS	PRELIMINARY THROUGH FINAL DESIGN AND PERMITTING	CONSTRUCTION	POST CONSTRUCTION
Engagement Objective	<i>Identify interested parties, and their questions and concerns.</i>	<i>Share any updated information.</i>	<i>Share information on modeling with highly involved parties and solicit input on those results.</i>	<i>Share information on preliminary design, address questions and concerns and incorporate changes to project design where possible.</i>	<i>Inform residents and local community about construction timeline and potential effects on river and road closures.</i>	<i>Identify interested parties, and their questions and concerns.</i>
Activity and Audience	<ul style="list-style-type: none"> ✓ Conduct pre-project nearby landowner consultations and site visits. ✓ Coordination with Tribes ✓ Develop project website and a FAQ ✓ Presentations to: <ul style="list-style-type: none"> ✓ FFF IOC ✓ FCCA ✓ WRIA 7 Tech Committee ✓ Snoqualmie Forum 	<ul style="list-style-type: none"> ✓ SVPA/WID presentation ✓ Site visit with Tolt Fisheries Habitat Group ✓ Meet with landowners in broader project reach ✓ Update project website, if needed ✓ Briefings at FFF IOC quarterly meetings ✓ Large Wood Meeting 	<ul style="list-style-type: none"> ✓ Site visits/meet with landowners in project footprint ✓ Conduct listening sessions involving small groups of nearby project site neighbors and landowners in broader project reach ✓ Consult with Tulalip and Snoqualmie Tribal Nations ✓ FFF IOC brief update 	<ul style="list-style-type: none"> ✓ Presentations to potential funders: WRIA 7 Tech Committee and the Snoqualmie Forum ✓ Large Wood Meeting ✓ Presentation to FFF IOC • Virtual Open House • Share Third Party Review • SEPA Review/Comment Period • Ongoing communication with nearby neighbors, as needed 	<ul style="list-style-type: none"> • News releases • Notification to neighbors, stakeholders and interested parties via emails, phone calls and website updates 	<ul style="list-style-type: none"> • Check in with Landowners • Invite community and stakeholders to ribbon cutting celebration • Monitor cumulative effects of projects

SVPA – Snoqualmie Valley Preservation Alliance, SVWID – Snoqualmie Valley Watershed Improvement District, FFF IOC – Fish, Farm, Flood Implementation Oversight Committee, WRIA 7 – Watershed Resource Inventory Area 7,

FCCA – Fall City Community Association, SAFC – Snoqualmie at Fall City, SEPA – State Environmental Policy Act, Large Wood Meeting – Annual meeting held in June

Created: 5/2/19, Updated 8/7/20

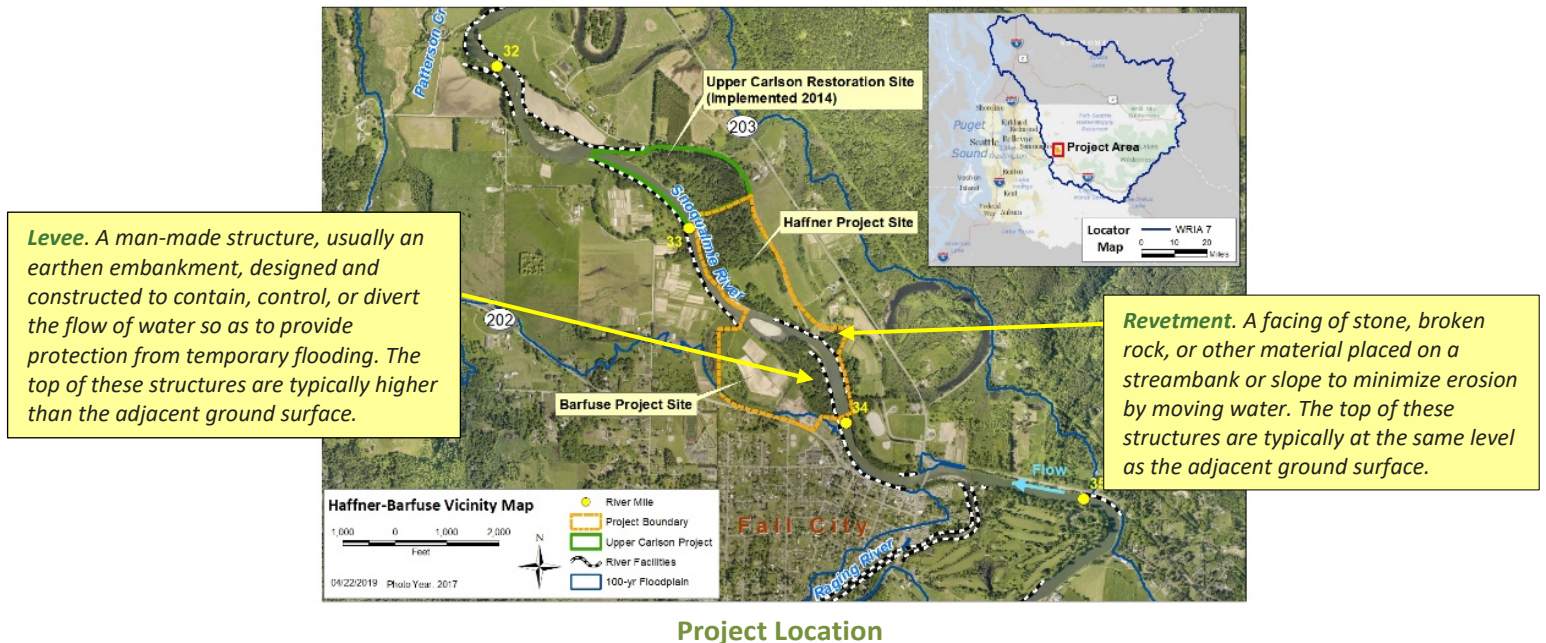
Fall City Floodplain Restoration

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.



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.

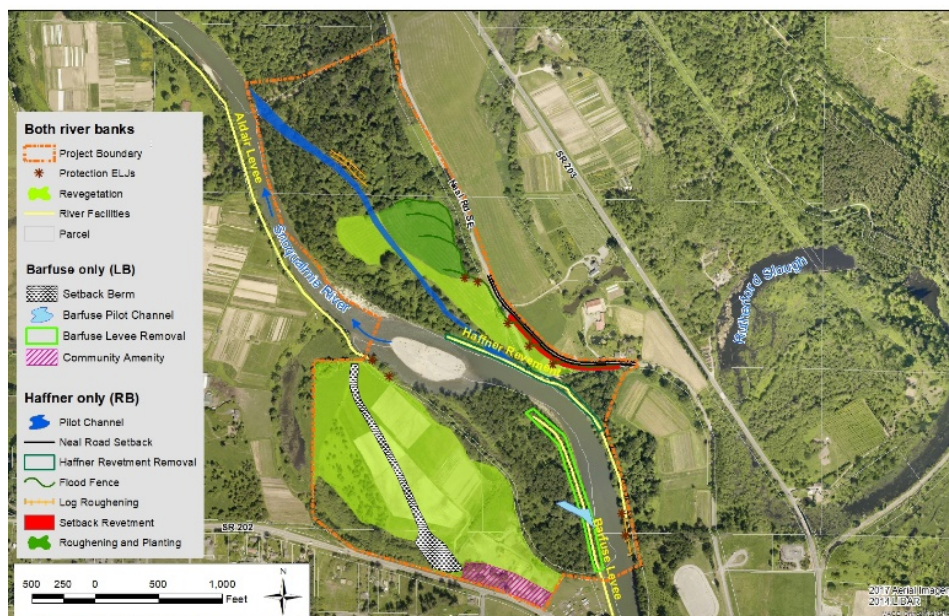
The mainstem Snoqualmie River and the Tolt and Raging Rivers were historically very productive for Chinook and other salmonids (salmon and trout). However, the habitat needed for salmon to thrive, both spawning and rearing, has been greatly limited as a result of removing trees from a once forested valley; 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

Fall City Floodplain Restoration

formerly Haffner-Barfuse Project

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.