



SOUTH FORK NOOKSACK RIVER FISH CAMP (*Ts'éq*) INTEGRATED FLOOD AND FISH PROJECT WORKSHOP#3: SUMMARY NOTES

The [South Fork Nooksack \(Nuxw7iyem\) River, Fish Camp \(Ts'éq\) Integrated Flood & Fish Project](#) (Fish Camp) Workshop #3 (Workshop) was held in person at the Acme Presbyterian Church on Sept 15, 2022. The Workshop was hosted by the Nooksack Indian Tribe and Whatcom County River and Flood, facilitated by consultants from Veda Environmental, and featured presentations from project team members from the Nooksack Indian Tribe, Whatcom County and Herrera Environmental Consultants.

The goal of the workshop was to share the highest ranked alternative and preliminary project design, answer questions, and hear feedback from participants.

Workshop Objectives included:

1. Continue collaboration between the Project Team and the Community to develop broadly supported solutions to address flood risk and habitat degradation by building relationships and encouraging dialogue.
2. Review project goals and work to date.
3. Update community members on the design process, including:
 - a. ranking of the three alternatives,
 - b. a description of the highest ranked alternative,
 - c. the preliminary project design,
 - d. highlights of the project approach, and
 - e. expected benefits from the highest ranked alternative.
4. Answer questions and solicit feedback on the highest ranked alternative.

Project team members and staff support titles and affiliations:

- Lindsie Fratus-Thomas, *Co-Project Manager*, Watershed Restoration Coordinator for the Nooksack Indian Tribe
- Paula Harris, *Co-Project Manager*, River and Flood Manager for Whatcom County River and Flood
- Ian Mostrenko, *Consultant Team Project Engineer*, Herrera Environmental Consultants
- Brian Scott, *Consultant Team Project Manager*, Herrera Environmental Consultants
- Hilary Wilkinson, *Outreach Lead*, Veda Environmental
- Melanie del Rosario, *Outreach Support*, Veda Environmental
- Deb Johnson, *Project Support*, Whatcom County River and Flood
- Ned Currence, *Project Support*, Nooksack Indian Tribe

Thirteen stakeholders participated in the workshop:

1. *Adam Anderson*, represents the Acme Presbyterian Church
2. *Georgeann Gordon*, South Fork Valley Resident
3. *Steve Gordon*, South Fork Valley Resident
4. *Louise Hellyer*, South Fork Valley Resident

5. *Duane Jacoby*, South Fork Valley Resident
6. *Elvin Kalsbeek*, South Fork Valley Resident
7. *Jamie Kalsbeek*, South Fork Valley Resident
8. *Hank Malang*, represents Whatcom Fire District 16
9. *Brandon Rogge*, South Fork Valley Resident
10. *Seth Stromme*, South Fork Valley Landowner
11. *Daniel Probst*, Whatcom County Resident
12. *Ian Smith*, South Fork Valley Resident
13. *Nate Todd*, new South Fork Valley Resident
14. *Nan Todd*, new South Fork Valley Resident
15. *John Stephens*, South Fork Valley Resident

Project Team Presentation (slides are available on the project webpage linked above)

Project Update and Status

Lindsie Fratus-Thomas, Co-Project Manager, Nooksack Indian Tribe (slides 4-6)

- There are two goals for project: improve habitat conditions in the lower south fork to support salmon recovery and reduce flood risk to the Acme community
- The project area is located between River Mile (RM) 7.3 to 9.6. There may be some opportunities to do things elsewhere, but this is the area of focus for the project.
- Brief overview of chinook salmon decline in the reach:
 - Chinook are threatened under the Endangered Species Act and habitat degradation is considered the leading cause for the decline of local populations
 - This project seeks creative solutions to recover habitat for this population.
 - High temperatures and low habitat diversity are the most significant limiting factors for Chinook in the south fork

Paula Harris, Co-Project Manager, Whatcom County River and Flood (slide 7)

- This project represents a new paradigm in that it will produce multiple benefits (fish and flood) for a win-win solution.
- The Tribe's Habitat Program has been implementing restoration projects in the lower South Fork for over 15 years, these projects have all been designed to improve habitat and to not adversely impact private property. However, this project presents an opportunity for us to partner on designing a multi-beneficial project that addresses both flooding and habitat needs and thus expand the Tribe's restoration efforts.
- Acme is considered a "repetitive flood loss" area by FEMA, which means that there are one or more properties with flood loss claims in a 10-year span.
- This is an exciting project with a great team. A lot of community members have been involved over the years.

Melanie del Rosario, Community Engagement Lead, Veda Environmental (slide 8)

- Community engagement activities to date include:
 - Listserv announcements – eight have been distributed so far
 - Project webpage containing up to date information

- Presentations at the Acme / VanZandt Flood Control Subzone Advisory Committee¹ (Subzone) meetings on four different occasions.
- Workshops
 - #1: 6/27/19
 - #2: 1/26/21
 - #3 (this workshop): 9/15/22
- There is a poll on the website to get input on how the Nov 2021 flood impacted residents in Acme.

Questions participants asked on the project background:

1. What is the role of state and federal agencies in this project?
 - Federal and state agencies conduct the environmental review the project will have to go through to obtain permits for implementation
 - Some state agencies such as Washington Department of Natural Resources (DNR) and Washington State Department of Transportation (WSDOT) are project stakeholders since the project area includes state aquatic lands and state highway rights-of-way
 - Funding for the project has been from both state and federal agencies (see the project webpage for funding sources)
 - Washington Department of Fish and Wildlife (WDFW) and DNR Aquatics staff are involved with project design review as a member of the WRIA 1 Salmon Recovery staff team
2. Has the money been allocated yet?
 - We have received funding to complete 90% design for one portion of the project area and 30% design for a second area (Project Area 1 and Project Area 2, respectively; see slide #23) and have some funding allocated for construction/implementation, but are seeking more funding to cover increased design and engineering costs and the funding to pay for full project implementation
3. Could you give an update on what happened during the Nov 2021 flood?
 - The flood was the result of an “atmospheric river” event; Whatcom County happened to be in the eye of that. This event, coupled with low snowpack in the mountains that could have acted as a sponge, created severe flooding. (Other comments made by participants: Acme floods every year; last year was the worst not because of how high the flows were (it wasn’t the highest) but because of the duration; flooding is a fact of life in Acme)
4. How much higher was the flood than a “normal” flood?
 - Comment from participants/local residents: There is no “normal”. One of the problems was that it stayed above flood stage for 24 hours, vs. what has happened in previous years when it was only above flood stage for a few hours. It was the duration of this last flood that was different,

Review of Highest Ranked Alternative and Preliminary Design

Ian Mostrenko, Project Engineer and Lead Hydraulic Modeler, Herrera Environmental Consultants (slides 10-20)

¹ A taxing district with a five-member advisory committee; they advise the county council. This particular subzone generates \$24,000/year.

- Reviewed how we got to this point in the project from the onset in 2019. For those who were unable to attend Workshop #3, the recording of [Workshop #2](#) includes a helpful overview of how designs were developed from ideas to alternatives.
- The focus today is to discuss how input to date led us to identify the highest ranked alternative.
- An accompanying “Basis of Design” report provides a detailed overview of this highest rank alternative, including preliminary drawings. This report will be uploaded to the project webpage when all the workshop materials are uploaded.
- Brief overview of the three initial alternatives from which the preferred alternative was selected and the community engagement process that was undertaken.
- Workshop 2 is where the community provided feedback on these three alternatives. Highlights include:
 - Support for opening up SR 9 and BNSF bridge constriction issues and ELJ projects in general (like the existing Downstream of Hutchinson Creek Project)
 - Request for more info, especially the cost of the berm
 - Concerns expressed: Williams pipeline erosion
- Shared basic process for evaluating alternatives via an “Alternative Evaluation Matrix”
- The end result was development of an “Alternative 2 Hybrid”, which blended Alternative 3 elements with Alternative 2 elements.
- The “Alternative 2 Hybrid” is the highest ranked alternative (see slide 18 and Highest Ranked Alternative figure on project webpage). Highlights include:
 - Removal and/or lowering of riprap levees
 - Expanding the opening/conveyance of the BNSF bridge
 - Habitat Log Structures
 - Log Roughened Riprap
 - Flood Protection Berm
 - Floodplain excavation

Questions (Overall)

1. How will you handle discussions with private landowners for areas where you want to do work?
 - Not only will we need landowner support, we are trying to come up with solutions that have broad-community support. There are many landowners within the project area and while we’ve already had many conversations with several landowners; more will need to happen. One of the reasons we host these workshops is to get as many landowners in the same room together to share key project developments and then we can follow-up with high-priority landowners one-on-one.
2. Is there USDA funding?
 - Yes, there are multiple grant funding sources for this project, one of which is the Regional Conservation Partnership Program (RCPP) funding through the Natural Resources Conservation Service (NRCS), a program of the USDA. The RCPP funding constitutes approximately 10% of the total estimated project cost. Funding sources can be found at the bottom of the project webpage.
3. Could you explain the berm a little more? Is it solid, and if so, would we need to go up and over berm to get to other side if it’s on our property?
 - Yes; it would be solid. The top elevation of the Acme berm has not been confirmed, but it is likely equal to the height of a 10-year flood event or close to the recent flood. It is unlikely to go all the way up to the 100-year flood elevation because of increased flood risks elsewhere. The top of the berm gently slopes from south-to-north at the same

gradient/slope as floodwaters so that the berm doesn't crest in one location (i.e., no concentrated overflow like what currently happens near SR9 bridge near Turkington Rd). Berm height at the south end is very low (~1 foot), and the berm gets higher as you move toward the SR9 bridge and is 4 to 5 feet high on the north end. The width is very preliminary because it is dictated on berm slope which has not been fully vetted by the design team. The top width could be 15 to 20 feet wide and the bottom width would be 40 to 50 feet at the highest portion of the berm (portion to the north). The length of the berm is also preliminary, but as currently designed, it's approx. 2,000 ft to 2,200 ft long. We plan to meet with the Acme berm landowners in the coming weeks to discuss details and get additional feedback from the high priority landowners (property owners where project elements are proposed).

4. Why can't you take the gravel out of the river and make it deeper?
 - This type of action would not benefit salmon, and benefiting salmon is one of the two major project goals. Also, it would have to be done annually and would be a continual expense. Lastly, it is not an issue in the lower south fork because the river is generally incising in this area, not aggrading. So, gravel accumulation on a reach scale isn't a problem here; that is a lower mainstem issue, in some reaches.
5. Is there an overlay of riparian buffers or vegetation that would go along with this to reduce the sediment input?
 - The main function of the engineered log jams and woody habitat structures being proposed is to create deep cool water refuges for salmon. The Tribe does riparian plantings opportunistically and would like to incorporate more riparian planting into this project, it's just a matter of landowner willingness.
6. Is this highest ranked alternative close to final design on density of logjams?
 - Yes, the quantity and location of logjams shown in the highest ranked alternative is close to what we'd like, however the final design will depend on final hydraulic modeling ("turning those knobs" so to speak, as described in the presentation) and landowner willingness, log jam placement and quantity will have to be vetted by funding and regulatory agencies.

Focused questions for Q&A

1. Questions about the features of the highest ranked alternatives

- Comment: Regarding the Williams Pipeline: they did a line-lowering project through a lot in the park.
 - a. The project team will address scour and pipeline depth with Williams during final design.
- Regarding the high-flow pilot channels: How are they designed to not encourage avulsion?
 - a. There is some level of channel expansion that is proposed, as well as logjams to maintain design flow split into the high-flow channels.
- I am curious about areas where revetments are being lowered. Are you trying to reconnect floodplain storage?
 - a. It depends on which one. In every case, we'll always go down to floodplain elevation.

2. Questions about the benefits of the highest ranked alternative

- No questions

Next Steps (slide 23)

- To accommodate funding availability, landowner outreach needs, and for constructability, we have broken the project into two project areas: Project Area 1 and Project Area 2.
 - Area 1 is downstream of the SR9 bridge. We currently have funding to complete 90% design for this area. We also have funding to implement/construct at least a portion of the area 1 project as currently designed. The soonest construction would occur for this area is 2024.
 - Area 2 is upstream of the SR9 bridge and extends to the “Dozer Hole”. So far, we have funding to complete 30% design for this area but are awaiting to see if we will get funded through the Puget Sound Acquisition and Restoration (PSAR) large cap grant program. We have much more landowner outreach that needs to occur in this area which is why it is on a more extended timeline.
- In between each of these design stages (30%, 60%, etc.), the team will be reaching out for review and input from stakeholders.

How to stay informed and engaged (slide 24)

- The best way is to sign up for the listserv to receive updates via email
- Visit/bookmark the project webpage – whatcomcounty.us/3106
- Fill out the flood poll on the webpage
- Attend future Subzone meetings
- The project team will continue one-on-one outreach with landowners & stakeholders directly associated with the project, including soliciting feedback at each design stage
- Contact us! We welcome feedback and dialogue from the community. Contact information for the project team is on the project webpage.