

Final Notes, Skagit Watershed Council Monitoring and Adaptive Management (M&AM) Subcommittee

November 28th, 2022, 9:00am –10:30am, Zoom Meeting

(Underline indicates decision point; **bold** are action items)

Attending: Mike LeMoine (SRSC, co-chair), Richard Brocksmith (SWC), Aundrea McBride (SWC), Rick Hartson (Upper Skagit Indian Tribe, co-chair), Jen O’Neal (Natural Systems Design)

Absent: Greg Hood (SRSC), Jeff Fisher (SCL)

Beginning Business

- Draft Agenda approved
- Notes approved

4 Year Work Plan

New infrastructure money is highlighting projects being on the 4 year work plan so we are adding monitoring projects to the list. See the attached list of projects we discussed and recommend to the TWG. Any revisions due by the 7th.

Discussion:

- Milltown project could be an assessment linked to restoration design where we are manipulating the landscape.
- We need to write projects with multiple objectives.
- Effectiveness monitoring is important to people in the Skagit.
- **We need to add a second year of monitoring at Britt Slough and South Fork for effectiveness/projects outside the dike.**
- Cattail project is funded via BIA. Links to design considerations (adds planting as a design consideration).
- We need to know how many fry survive to parr or yearling. We know smolt to adult, but fry to parr is a gap. Next step is measure growth. Are they present, how many, do they grow, do they survive.
- The delta otolith study is to understand distribution of residency with flow and warming of delta. Effectiveness monitoring for the delta. Instead of using a static number for density we could use a distribution.
- Seeing change in growth and residence time since 1998 to present after restoration.
- Alluvial fans project of interest since there is no data except southwest. Not stream habitat and not floodplain habitat. They are in the Strategic Approach.
- Jenn’s idea: There might be a shift in size of outmigrants after 2021 flood due to decreased habitat pressure and increased growth. We have the data. Need to do the analysis.
- Hydromod study-may redo with LiDAR and drones and photography.
- Ask the Riparian Work Group if they have research questions.

Jen Johnson at County may be a good candidate for this committee.

Adjourn 10:20

Grant Round	Project Type	Primary Sponsor	Project Name	Project Status	Project Summary	Proposed Amt
2023	Monitoring & Research	Upper Skagit Indian Tribe	River Hydromodification Status Update	Planned	Complete status and trends monitoring of hydromodifications along the Chinook-bearing waters in the Skagit System. Update the 2015 inventory.	\$ 150,000
2024	Monitoring & Research	Department of Fish and Wildlife	Milltown Island Post Project Monitoring	Planned	Milltown Island alteration of fish pathways along tidal networks influence on fish distributions and density. This work is being conducted prior to restoration to evaluate Chinook densities across a tidal channel network (funded 2022), here we will go back and evaluate Chinook use in built channels post project.	\$ 50,000
2025	Monitoring & Research	Skagit River System Cooperative	Invasive Cattail impacts to juvenile Chinook salmon	Planned	Invasive Cattail impacts to juvenile Chinook salmon rearing (diets and susceptibility to predators). We would compare chinook diets and growth between cattail and native vegetation.	\$ 65,000
2026	Monitoring & Research	Skagit River System Cooperative	Chinook flood plain growth	Planned	Juvenile Chinook salmon diets and growth in floodplain habitats, an evaluation of habitat quality effects on growth. Responding to a comment from Bob Bilbey, we are to assess if there a difference in growth potential in different floodplain habitats.	\$ 135,000
2026	Monitoring & Research	Skagit River System Cooperative	Chinook Estuarine Residence Variation	Planned	Temporal differences in Chinook salmon residence time and growth in the Skagit estuary using otolith micro-chemistry, which will be compared with other years to evaluate residence and estuarine growth.	\$ 50,000
2025	Monitoring & Research	Skagit River System Cooperative	Alluvial fan habitats and fish use.	Planned	Alluvial fan use by Chinook salmon and other fish species. Currently, restoration practitioners only have tools for describing fish benefits to stream and floodplain habitats. These estimates do not translate well to alluvial fans so this project intends to describe habitat, density and occupancy of fishes across functioning alluvial fans to establish a base line of use.	\$ 85,000
2023 or 2024	Monitoring & Research	Natural Systems Design, Skagit River System Cooperative, SCL	Chinook growth as affected by density dependance/ environmental disturbance		Size shift in Chinook yearlings following Nov 2021 flood - do large floods have hidden benefits to yearling Chinook growth based on density dependance?	\$50,000

2023?	Monitoring & Research	Skagit River System Cooperative	Skagit estuary restoration monitoring outside the dikes	This project supports a second year of monitoring at two Skagit estuary restoration projects -Britt Slough and SF Dike Setback Phase 2-both of which were built in the summer of 2021. The goal is to determine habitat and fish response due to restoration at sites like these (Is habitat augmentation outside estuary dikes, where restoration opportunities exist, worth the effort, or should we only focus on dike removal?). Funding will support elements which are gaps in the entirety of Skagit estuary restoration monitoring at this time and support development of diagnostic tools necessary to evaluate the sustainability of restored habitat within estuaries.
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