Kalispel Tribe of Indians
Kalispel Tribal Headquarters
Usk, WA 99180

US Forest Service
Colville National Forest
Newport – Sullivan Lake Ranger Districts
Newport, WA 99156

WA State Dept. Of Natural Resources
Northeast
Colville, WA 99114

Sx^{w}uytn – Kaniksu Connections 'Trail' Project
Aquatic Resources
Public Workshop Notes

Meeting Type: Public Date: May 16, 2019
Location: Camas Center Time: 6:00– 8:00 pm
Facilitator: Andrew Spaeth

Meeting Objectives:

1. *Present an overview of the Sx^{w}uytn Project Planning Area and Purpose and Need for the project.*
2. *Share information regarding aquatic restoration principles.*
3. *Gather information from the public regarding site specific needs and potential opportunities for aquatic restoration in the Sx^{w}uytn Project Planning Area.*
4. *Foster a positive interest-based dialogue regarding aquatic restoration within the Sx^{w}uytn Project.*

TIME	TOPIC	PURPOSE	PRESENTERS
6:00 PM	**Welcome**	Welcoming Remarks Introductions Overview of Sx^{w}uytn Project Planning Area	• Andrew Spaeth, Facilitator • Mike Lithgow, Kalispel Tribe Natural Resources
6:30 PM	**Presentation: Understanding Streams in a Watershed Context**	Learn about aquatic restoration and potential applications in the Sx^{w}uytn Project	• J.D. Jones, Colville National Forest • Jason Olson and Eric Berntsen, Kalispel Tribe Natural Resources
7:00 PM	**Break**	Snacks	
7:15 PM	**Discussion and Q &A**	Discuss aquatic restoration needs and opportunities in the Sx^{w}uytn Project	• J.D. Jones, Colville National Forest • Jason Olson and Eric Berntsen, Kalispel Tribe Natural Resources

Refreshments courtesy of Northeast Washington Forest Coalition

Welcoming Remarks and Overview

Present: 26 team members and guests

Mike L – welcomed everyone and gave an introduction and background and project

Gayne – introduced herself and reiterated that the **evaluations and decisions are for NFS lands only**. The info will be shared as a way to inform neighbors. Neighboring individuals, and other entities will proceed with projects on their own lands as they individually see fit.

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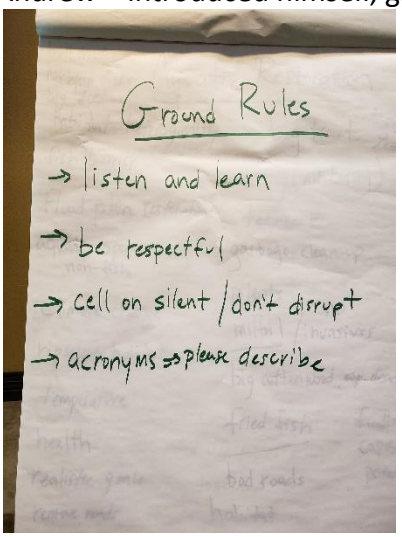
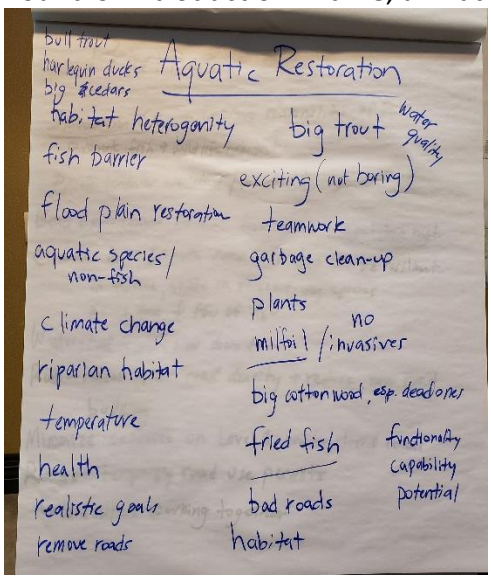
Andrew – introduced himself, gave a brief welcome and went over ground rules.



- Listen and learn from others
- Be respectful of others
- Cell on silent/don't disrupt
- *Please spell out all acronyms (Requested by attendee)*

Round of introduction: name, affiliation, what you think of when you think of **aquatic restoration**



- big trout
- fish barriers
- exciting (not boring)
- habitat heterogeneity
- teamwork
- other aquatic organisms (other than fish)

- clean-up garbage
- floodplain restoration
- Dan Mum Bead Lake
- Climate change
- riparian habitat
- Big cottonwoods (especially dead ones)
- temperature
- plants
- fried fish
- health
- bad roads
- realistic goals
- habitat
- bull trout, harlequin ducks, big cedars
- water quality
- functionality, potential, capability
- plants
- milfoil/no invasive plants
- remove roads

Tiana Luke, NEWFC/Conservation Northwest - gave a brief history of NEWFC, why collaboration, and why we are here. The Cross Boundary and Capacity Infrastructure grants were mentioned and described.

Q - What does NEWFC attribute its success to? – Tiana responded that because the NEWFC Board focusses on interests rather than positions, they are able to better work together on the collaborative's goals.

Mike Manus, Pend Oreille County Commissioner– Expressed his thanks to KTI and the stakeholders working on this project. He mentioned what a great achievement such a large project will be upon completion and his excitement and appreciation of the process and hard work. He also briefly mentioned the power of collaboration.

Eric B. – Watershed based aquatic restoration – what does it mean?

Looking to see what you want to get done

Stream vs. watershed – A **stream** is a small waterbody with surface water flowing within a channel. It flows to a certain spot where it joins other streams. A **watershed** is an area of land which acts as a collection basin of all streams, rain, and snow that drains to a common outlet (e.g. Stream system, reservoir, bay, etc.).

Stream ordering starts with 1st order at highest upstream point and moves downstream with each confluence (joining) of streams (two first order streams come together to create a 2nd order stream. Two 2nds create a 3rd, and so on). The Pend Oreille River is a 6th order stream.

Watershed level looks at what drives the system as a whole.

Nested hierarchy – river continuum – fish micro-organism community

Depending on where you are within the river continuum will vary the numbers/types of fish

Heterogeneity – Harvey Creek – wide floodplain

Lateral conductivity restoring habitat conductivity

Basic assumptions – streams and watershed are dynamic systems

Habitat restoration

Watershed – starting with lithography and going to reach or habitat scale

Three important stream ingredients – flow, sediment, wood (critical habitat component)

Geology and slope, valley confinement

Pretty easy to evaluate the movement etc. through the system

Metamorphic rock/glaciated

Erosion – This natural process is not as huge a contributor/risk as on the west side of the state or in parts of California but it is a contributing factor – roads – runoff and sediments – sediment is not always bad within a stream. These sediments, when in balance within the system are used to further scour and build structure throughout the system

Reach scale – where woody debris and supply really important

Instream habitat in 'naturally functioning" system

Aquatics team have been working closely together

Hyporheic zone - interchange of surface and ground water – usually happen in wide valley

Can also happen at reach and habitat type scale – up welling (ground water coming to surface).

Streams are not static – highly dynamic

Channel evolution – downcutting, disconnection from floodplain

Goose Creek – downcutting with channel widening – this site in

Anastomosed channel – more access to floodplain

Straightened – down-cut

Q – why is it a bad that the stream no longer can reach its floodplain.

Kershner and Bon – link between restoration and expected responses

I.e. Stabilized roads will reduce sedimentations.

Restoration measures: tried to reconnect stream to floodplain – looked at tree canopy height in relation to floodplain

Q – Does that mean you want to get the streams away from the

Q – What was the problem on Harvey Creek that was the goal to fix? The stream is now only single channel – used to move a lot across the floodplain. Need to determine what is the proposed

Q – Ben Goldfarbe wrote **Eager**, about the usefulness of beavers within a stream system. Might that (encouraging or introducing beaver) be another opportunity for this project? Definitely. This concept has been used in an upper reach meadow system.

Q – about the county and roads – communication is key and working together

Pond and Plug – somewhat mimics beaver activity – created a multiple channel – 2.5 miles of new channel

Hughes Meadows – just created starter channel, and added did two plugs – started a dam and the beaver moved in within a couple months – wanted a multiple thread channel

What can we do? Fix roads – rolling dips, water bars – decommissioning roads that are erosive; culvert removal – can help improve longitudinal connectivity

Beaver dams can help build up and help restore vertical connectivity

Organized the into 6 HUCs - questions – to determine the some of the issues.

What we need to figure – what is problem we need to address? What is the runoff?

Channel types? i.e. GRAIP – geomorphic roads

We are looking for a lot of input and what kind of

Is there going to be logging within the Riparian? Short answers – possible but don't really know because we haven't evaluated those stands. There may be situations and those will be carefully evaluated and discussed.

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Final Slide from presentation summarizes, by key aquatic ecosystem feature what are the key questions, what data-layers are needed, and what analysis tools can be used:

Key Aquatic Ecosystem Feature	Key Questions	Datalayers	Analyses Tools
Watershed scale Runoff	How is development influencing the drainage network? How will vegetation management influence snow accumulation, retention, and runoff?	Roads, streams, DEM, vegetation cover, snow, soils	NRCS SNOTEL, runoff estimation for gaged and ungaged sites, watershed characterization, current-historic-future condition
Watershed scale Erosion and Sediment Supply	Which roads are contributing fine sediment to streams? Which roads interrupt wood and coarse sediment delivery to streams? What is the road sediment contribution relative to the overall sediment budget?	Roads, streams, DEM, soils, vegetation cover, surficial geology	Sediment yield methods, GRAIP-LITE
Reach scale Riparian conditions and wood supply	What is the current condition of riparian habitats to provide shade, wood, filter sediment, etc.?	Stream type, vegetation, grazing, large trees	Riparian mapping, LiDAR, current-historic-future condition
Reach scale Channel, Floodplain, and Habitat Dynamics (lateral and vertical connectivity)	How have human activities impacted the amount and function of floodplains?	Floodplains, DEM, roads, other human developments	Channel migration zone mapping, stream channel classification, LiDAR, in-channel surveys, active channel area
Reach scale Habitat Connectivity (longitudinal connectivity)	How have human developments affected aquatic organism passage? Do barriers prevent access to current and future cold water? Do barriers prevent invasive species range expansion?	Road-stream crossings, barrier inventory, current and potential fish habitat, cold water	Barrier data, field evaluations, intrinsic habitat potential
Reach scale Habitat for Listed Fish Species	What is the current distribution of listed fish? Are there key spawning and rearing habitats? Do invasive species limit listed fish habitats?	Current fish distribution, potential habitat, stream surveys, invasive species distributions	Fish distribution surveys, intrinsic habitat potential

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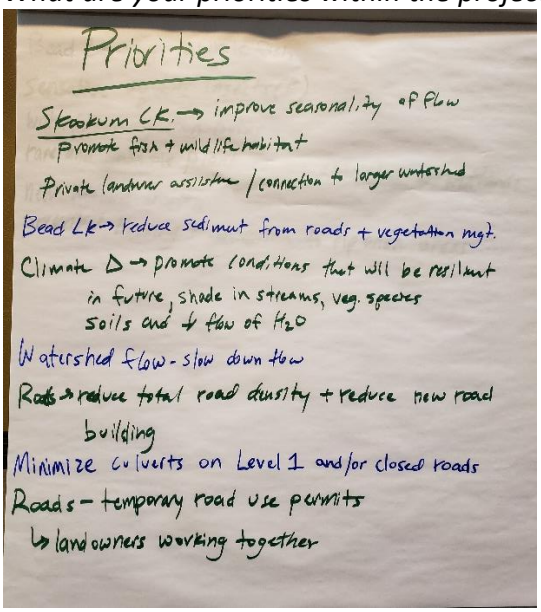
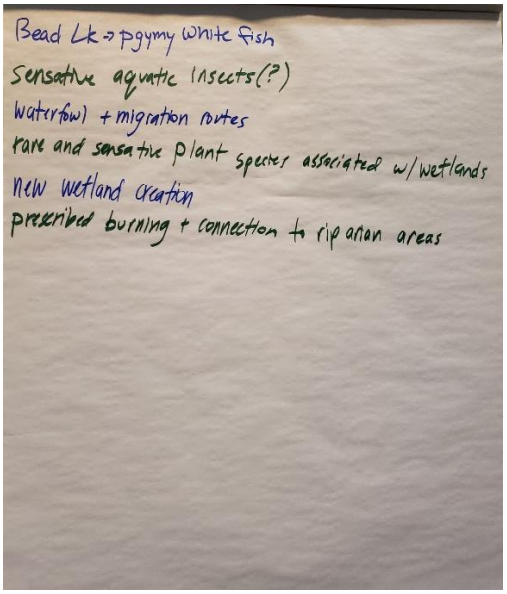
Discussion and Q&A

What are your priorities within the project?





- **Skookum Creek** – in spring it flows well but as the summer progresses it deteriorates. Would love to see improved condition. Would like to understand what is happening on my property and how it is connected to system
  - Proposal is to survey 6 watersheds. Will ask permission of landowners to surveys and we can evaluate. Ideally, we will work with landowners to get permission. Without permission, we will not conduct surveys on private lands.
  - Conservation Board may have ways to help private landowners with concerns and may be able to connect landowners with specialists specific to their needs.
- **Bead Lake** – limiting erosion/sediment from roads, vegetation treatments, etc.
- **Climate Change** - How is climate change in this? We have to be aware with what is changing – need to include take into account the potential resiliency of the systems and how to improve the resiliency.
  - More resilient
  - Soil itself – increase the water holding capability of the soils.
- **Watershed flow** – what we do in upper watershed to help slow flow will have a positive affect on the flows downstream.
- **Roads** – perhaps some changes in the density
  - Reduce total density and reduce new road building
  - Minimize the number of culverts on Level 1 and temp/closed roads. Culverts require maintenance. Are useful, but also can potentially become a problem
  - Teamwork – roads are a tough because of the varied ownership within the project area – perhaps we can “remove” roads we don’t need. Temporary road use permits.

- **Are there places where there are sensitive fish populations** – Pigmy Whitefish in Bead, Sullivan and one other lake. Are there sensitive aquatic insects? We have some background data on macroinvertebrates on CCA
- **Are/will Waterfowl and migration routes affected**? Probably not. Please let's save that question for the **Wildlife workshop…next month** – June 20.
- **Rare and sensitive plant species** seems to be focussed in wetland areas. Do we have a plan for those? **Cultural and Sensitive Plant workshop is on July 18, 6 PM**. Wetlands are mapped by FWS.
- **Prescribed Burning** - *One of NEWFC's priorities is prescribed burning – how does that come into play in within the project. Will there be activities within the riparian zone? We* won't say no, and if there is, we will be extra careful. There are areas where fire and logging maybe beneficial. Activities within these areas will need to be clearly described.
- **Field Trip -** Where do we sign up for the field trip – this is the importance of signing in. Check the website and make sure that you have signed in.

Please visit the maps with the specialists if you have site specific questions.

Meeting Adjourned.