



*“To voluntarily bring people together to improve communication, reduce conflicts, address problems, reach consensus, and implement actions to improve natural resource management on associated private and public lands in the Entiat WRIA 46”*

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Entiat Watershed Planning Unit Meeting  
February 11, 2026  
4:00pm-6:45pm  
Entiat Fire Station – 2200 Entiat Way  
Facilitator: Mark Ingman, Cascadia CD

**4:10 Roundtable**

Mark Ingman, CCD (Roaring Creek + Stormy Creek projects)

Chace Witmer, CCD

Verónica Arroyo-Pérez, CCD

Teresa Worden, Entiat landowner

Alan Schmidt, Entiat landowner

James Hudson, Yakama Nation Fisheries

Nate Schmidt, WA Department of Fish and Wildlife

Steve Kolk, Bureau of Reclamation

Dave, Entiat landowner

Keith Vradenburg, Entiat landowner

Bret Gardner, WA groundwater, water supply

Larry Selden, Entiat landowner

Tom Desgroseillier, WA Department of Fish and Wildlife

Mike Kane, Chelan County Natural Resource Department

Steve Tift, Entiat landowner

Holly Krake, USFS District Ranger

Russ Truman, CCD board member and steering committee for prescribe burn association

Mickey Fleming, CDLT

Brice Crayne, Lower Columbia Fish Enhancement Group

Amber Jackson, Department of Ecology

Philp Klenke, Cascade Fisheries

Keith Van der Broek, Hinchinbrook, Inc

Tracy Bowerman, US Fish and Wildlife

Jason Lundgren, Cascade Fisheries

Julianna Hallza, WSU PhD Candidate

#### **4:25 Forest Health and Roads Update Holly Krake, USFS District Ranger**

- Atmospheric rivers caused a lot of damage in Chelan County, here in the Entiat we discovered issues on Preston Road and main Entiat river road above cottonwood guard station, up to 8 ft of debris up to 2000 cubic feet of debris. We submitted that for a program for emergency relief for federally owned roads, so we won't have to just use our local forest budget.
- If the community finds damage, report it to Entiat USFS. The more information, the better, including milepost, photos etc. We have 9 months from December events to report on it and get additional funding. There are no guarantees that we will get the money we applied for. We have prioritized certain projects.  
→ Storm Damaged Road Reporting: Matt Maher at [matthew.maher@usda.gov](mailto:matthew.maher@usda.gov)
- About 45 miles of roads that need suppression repair after sugarloaf fire coming this summer 2026 and funding is secured for that. Additional burned area emergency response work as well.

#### **Active Forest Management**

- Active salvage timber sale underway in upper Tillicum and French corral area
- Large firewood decks from 2025 Pomas fire should be hauled this year. Expect log trucks along main Entiat road

- 600+ cords of community firewood sold in 2025

Q: is that the one up the road?

Holly: No, this one is up Wilson Creek

James: Is Preston cleared out?

Holly: No

Steve T: Who bought the timber?

Holly: CNC Timber, bought both

- 50+ cords remain in spur 113 pit off tommy creek rd.
- 1200 acres prescribed fire planned for spring 2026
- Aquatics work in Tillicum, Indian, and Kloochman Creeks

Steve T: What is your annual budget?

Holly: I'll write it down and get back to you

Q: How has staffing been affected this year?

Holly: I haven't calculated totals, last year we were down 68% of recreation staff. We remain on a full federal hiring freeze; there has been no hiring for over a year. We have been relying on partners and community.

Steve Tift: I see a lot of understory thinning, but there are ladder fuel scenarios up the Entiat where if you could get in there and remove the understory, we might be able to prevent some of these larger fires. If you were to do that fairly aggressively, you might be able to find some businesses that would be interested in what you're doing. The climate is warming and we have these forests that haven't been managed in 100+ years, and we allowed the understory to come in on the west side.

If there was a harvest program you would be able to maintain roads. I think the feds need to step up and do their part. If we see roads failing, it's because they haven't been maintained. We could be protecting our watersheds by managing our roads.

Phillip: Question about the Cottonwood campground, does the extent of that slide go into the Entiat river or does it stop at the banks?

Holly: It goes down to the river

Phillip: Is it impacting flow?

Holly: We have not done a hydrologic assessment yet

#### **4:45 Stage 8 Process Based Restoration in the Lower Columbia (Featured Project) Brice Crayne, Lower Columbia Fisheries Enhancement Group**

##### [Peer-reviewed Articles | Stage Zero](#)

- Stage 8 creates a smaller floodplain within the larger floodplain, while still protecting the infrastructure there
- Channel migration in the SF Toutle is associated with high sediment loads and a lack of structure.

Steve T: After the Mt. St. Helens eruption, how long was it before you started seeing fish come back up?

Brice: In 2019, the project was built, by October the fish were spawning and rearing. In the floodplain expansion zone, fish spawned all through that too. Before restoration, there were 25 redds per mile, after restoration 70 redds per mile, 200% increase in redd density. Hoping the beavers will come in and create a more ponded area.

Mike Kane: Do you know how habitat area has increased? Stream flow?

Brice: Volume of water is no different, before restoration there were very few pools, now there are fry all over the new pools. The fry would leave and not come back but after restoration they did.

Mark: On roaring creek, we have a stage 0 partnering with the forest service

Phillip: I think it would be great to highlight to folks the impact that projects like stage 8/0 could have on the fire regime in the watersheds that these projects are taking place

5:15 - *Pizza and soft drink break* –

#### **5:25 Upper Columbia Spring Chinook and Steelhead Recovery Status Tom Desgroseillier, WDFW**

- Upper Columbia spring chinook and steelhead recovery plan
  - Progress measured “objective, measurable criteria”
    - Adopted the Viable Salmonid Population concept
      - Abundance and productivity represent short-term observations
      - Spatial structure and diversity

- For spring chinook in the Entiat we have one spawning area, in Wenatchee there are 4 main spawning areas plus other areas, that's why there are different numbers in the thresholds

NOAA 5-yr status review:

- Most recent review through 2019
- Review relies upon qualifying VSP parameters
- Compares results of prior reviews to establish trends
- Abundance: all populations are looking poor in comparison to target
- Productivity: all populations remain in decline
- Spatial structure and diversity: high risk applied by NOAA

All populations high risk of extinction for chinook

Steelhead - abundance/productivity moderate in Wenatchee but again high risk of extinction

Quasi-extinction is defined as the probability that a population will decline below a predetermined threshold (threshold = less than 50 original spawners)

- Results indicate which populations are at greatest risk and help direct future recovery efforts
- Entiat populations are becoming a greater priority for recovery in the upper Columbia
- As current studies conclude in Wenatchee and Methow, WDFW will shift effort to the Entiat

Current research needs

1. Sub yearling spring chinook use of the Columbia River
  - a. Survival, distribution, and habitat use
2. Adult spring chinook prespawm mortality
  - a. Leverage finding of current Wenatchee study or study the Entiat population
3. Interactions between spring and summer chinook
  - a. Competition, redd superimposition, and spring/summer run hybridization

Alan S: Hybrid fish don't survive to spawn?

Tom: Hybridization is really isolated to the Entiat, so we see prespawm mortality across all three basins. We have been doing a pretty good job at hybrid rates and they're only about 3% of our juveniles. Our hybrids seem to reproduce.

Tracy: Regarding the last question, I did some research on spring chinook survival and returning to the Snake River. The fish that come in early are experiencing prespawn mortality rates because the theory is that they are running out of energy. The fish that come in later at peak July temps don't make it to spawning grounds. The optimal window is shrinking to the middle. It is possible that hybrids could be beneficial, there is no data to support that, just a thought. The spring and summer chinook hybrids may be optimizing their window.

Tom: How do we treat that in the context of recovery? Are the hybrid individuals USFW listed?

Tracy: Absolutely, and we don't have a clear answer

James: Is there a natural population of spring chinook in the Entiat?

Tom: Yes, there is a natural hybridization rate. There is some evidence that summer chinook were not in the Entiat historically, but we do support a healthy naturally spawning population in Entiat

Mike Kane: Question for Tracy. What has the degree of warming in the last 40 years been in the Entiat?

Tracy: I'll answer that question in two weeks, and I hope to get that summarized soon

Mike K: In the pre spawn mortality, are you looking for dam related or Columbia related?

Tom: It is a factor; migration history we are calling it. One of the things we are looking at is the preexisting injuries, an indication of migration history. We are seeing a correlation between pre spawn mortality and preexisting injuries. But is it injury or is it disease because of injury? We now have a fish health lab, so we will begin to start testing for disease. Nobody really knows what is happening with the natural fish.

Steve K: Tom did you say that the spring and summer hybrids are not as successful as spawners?

Tom: Compared to non-hybrid, we have no idea. We don't have a lot to go on.

Tracy: Do we have a tremendous backlog of genetic samples that we could run? If anybody wants to pay for it let me know.

## **6:05 Beaver dam analogues increase amphibian breeding occupancy and bat activity**

**Julianna Hallza, WSU PhD Candidate**

Tracy: You have two different response variables between your two taxa, your response variable for amphibians was breathing and the bats are responding to foraging, so you would expect them to be different. So, another question is, what are they eating?

Julianna: For amphibians their breeding is so concentrated on ponded sites. Why do High-frequency echolocating bats respond to BDAs more strongly? They are more maneuverable and have a more generalist diet. Low-frequency bats have more of a specialist diet. I don't know what the insects at BDAs beaver sites or controlled sites are, that would be great future research.

Phillip: I'm probably familiar with all the project sites in Wenatchee and Entiat. And you broke them up in ponded and not ponded, I'm curious if you took into account the slope or the gradient of the site and where that site fell in the watershed in relation to what you would expect to see in amphibian response?

Julianna: I tried to control for that, but I was working in all the sites that I could get access to, so most of the sites were mid to low in the gradient area since project partners had similar criteria in the project

Mark: Julianna came in when we were doing model T, when we were the least similar to how beaver dams really are like. Now we evolved and have improved the way we make BDAs and went back to improve the older ones. It was encouraging to see the taxa at our fresh and newer BDAs. It's sometimes depressing to see how many fish we have because we would love to see more fish to see the response, but here are these other animals that are responding. Are they eating the same types of insects?

Julianna: I have tried to learn as much about fish as I can. When we do restoration, the goal is to increase salmon population, but we also want to increase biodiversity in general and increase other populations. We need more people looking at this more holistically and if nothing is responding well, it would be time to try something else, but this is saying that there is a positive here even if the fish are not responding. They are absolutely eating some of the same things, talking about amphibian and bats.

Nate: Question on the about ARU. Were they calibrated just for bat sounds or is there data for other bird species?

Julianna: Yeah, they can capture other birds. I did not survey birds because I got a grant through wildlife acoustics and they didn't come with the mic you need for birds, so the equipment I had was only for bats.

Mark: Bird and restoration tours available in Leavenworth Bird Fest. Copy of presentations will be coming with the notes. Look forward to seeing you in May. May 12<sup>th</sup> is the Birding and Restoration Tour date, contact [marki@cascadiacd.org](mailto:marki@cascadiacd.org) if interested in the tour.

6:45 Final comments & questions, request for next meeting topics