Methow Restoration Council
November 17, 2020
Meeting Notes

***Participants*:**
Greer Maier (UCSRB), Ryan Niemeyer (UCSRB), Matt Young (CTCR), Maddie Eckmann (YN), Alexa Whipple (MBP), Kristen Kirkby (Cascade Fisheries), Steve Kolk (Reclamation), Crystal Elliot (TU), Jamie Cleveland (BPA), Chris Johnson (MSRF), Hannah Coe (OCD), Hannah Chevelle Yeckel (Cascade Fisheries), Haida Ikeda (Cascade Fisheries), Sandra Strieby (Mosaic Land Use & Natural Resource Planning), Justin Yeager (NMFS), Jarred Johnson (YN), Jason Lundgren (Cascade Fisheries), Gene Shull (USFS), Robes Parrish (USFWS), Jacquelyn Wallace (TU), John Arterburn (RTT & CTCR), John Crandall (RTT & MSRF), Jessica Goldberg (MSRF)

Twisp Restoration Project [presentation]
Gene Shull – USFS: I hope everyone has had a chance to get online and view the draft EIS for the Twisp Project. With pandemic the FS hasn't been able to have in person meetings or field trips, which has been a difficult process for the public.
The project is mostly in the Twisp River watershed, but excludes Buttermilk (was in Mission Project and Chelan Sawtooth Wilderness area, but it includes Wolf Creek and Thompson Ridge, and includes Alder creek to the southeast. Includes several watersheds, almost 77,000 acres, with a mix of management areas.
The big drivers for the project are based on vegetation and fuels conditions and restoration needs. Treat the landscape and reduce fire hazards, treat departed forest conditions (departure from historic conditions), and the Twisp is a priority for aquatic restoration.
The project is based on the Okanogan Forest Restoration Strategy. The Forest does not have a defined model for how to assess restoration treatment for aquatics, so we relied on existing documents, including the RTT's Biological Strategy, EDT, and the limiting factors report. We have partnered with the Yakama Nation and the Colville Tribes. The existing Reach Assessments have been very important tools to identify priority treatment actions.
John Crandall – when was the data collected, pre- or post-fire?
Gene – we didn't have access to very recent sediment data, CTCR collected some coarse sediment sampling that will hopefully be available this winter, we have really good old data, but don't have anything recent, so we had to make some assumptions. We have recent wood counts that the YN did, a key piece to prioritize where we would need to add wood. We had some data gaps, and we had to make some assumptions
John C – it has been several years since YN did the wood survey for the RA, and there has been a lot of fire since then, is most of that based on pre-fire condition? Basing this on data, so we've had a lot of disturbance up there, a dynamic situation, both wood and sediment have likely changed, so how are treatments related to the disturbance condition up there?
Gene – we have had a few fires in Little Bridge Creek, definitely stream sediment levels generally increase after fires, and we don't know how much that increased the fine sediment levels in there. We are hoping to get some core data this winter. We do know that we have really high riparian road densities in there. We are getting at reducing roads, and we have good data on wood in Little Bridge Creek.
There aren't a lot of roads in the upper Twisp, so not a historic issue with fine sediment. We don't want to exacerbate the situation, add wood that will capture any sediment/debris flow
Discussion – fire impacts, negative and positive, how FS is considering these impacts
Gene – for the Crescent Mountain Fire burn severity, in a lot of areas the fire did the treatment for us.

For the project Purpose and Need, we have 5 areas of focus. For Vegetation management, new paradigm, a complicated piece of the project to understand, identify EMDS process, identify condition based treatments then areas will be identified later.
For the aquatic restoration focus, two priorities were protection and active restoration. Protect actively functioning habitat in Twisp River and Wolf Creek. A lot of habitat in Twisp River is pretty good. A really light touch planned in the Wolf Creek areas, and we want to protect the really important resource values out there.
For active restoration, we looked at work already done, and restoration guidance documents. For Wolf Creek the priority is reducing mortality from the ditch, and work was done there a few years ago. YN just did a habitat survey in there for more recent data.
For Twisp River, priorities are reconnecting side channels/wetlands – adding LWD, increase channel complexity – adding LWD, remove undersized bridges, restore riparian function in past harvest areas, Respect the River; reduce sediment impacts from roads through decommissioning/closure in areas where we have high aquatic risk roads, high road densities and roads that we can address particularly in Little Bridge Creek; increase primary productivity, reduce/eliminate brook trout. We're not able to consider all of these priorities, because some were outside of the project scope.
One of the drivers was the Aquatic Watershed Prioritization Score for the different areas. Treatments considered in Mainstem Twisp River, four areas were Identified. Yakama and Colville partners will give some information on planned work.

Maddie Eckmann – Yakama Nation: in the Horseshoe project area, a mix of FS and private land, there is wood impairment so processes that keep the channel connected are impaired here. We're trying to address restoring channel structure and form, looking at side channel and wetlands. Levees, pushup berms, no wood in the project reach. We are planning on putting some large wood structures back into the reach to restore some historic channels. We have 11 large wood structures planned, 9 bar jams, 2 bar apex jams, trying to restore that floodplain habitat. Dams/levees were put in to protect private properties

Matt Young – Colville Tribes: as a high level overview, one of the concerns Jarred and I had was that we wanted to supplement LWD in both Twisp River and Little Bridge Creek. We looked at the Fox and Bolton paper on areas in WA where wood removal, grazing, logging have not occurred, then used that to develop targets for wood loading. The 75th percentile was the goal, as indicated in the paper. In Little Bridge Creek we're looking at RM 2-3, and looking at helicopter wood placements. In the Twisp River, part of what we've done through our design process is we're looking at new wood recruitment from recent fires, and have shifted some areas based on where we're getting natural recruitment and reduced some amount of wood we are bringing in with helicopters in some areas. We are having an ongoing conversation about felling with FS; 90% of what we're doing is helicopter placed logs because of location.

Jarred Johnson – Yakama Nation: I'm working on 3 projects within the Twisp River Project, two are on the Twisp and one on Little Bridge Creek, adjacent to Matt's projects, so we have been coordinating a lot to make sure our restoration strategies align. Upper Twisp near Mystery Creek campground, we also have helicopter placed wood, minimally invasive, and there are good locations to fly wood from up the Twisp River, all the wood will be imported. We will also try to pull over some riparian trees to help anchor these large wood accumulations. There was no riparian burning downstream of the Mystery Bridge, so we aren't going to have any local recruitment there, some will come from upstream, but probably not a large enough quantity to provide the wood loading we want. We would use block and

tackle and truck mounted winches to fell trees, and there are some good access opportunities, may do some chainsaw felling, but pretty minimal. We want large rootwads to provide the habitat we want. Next is from the War Creek bridge to just upstream of the private property boundary, basically the same treatments, but there are some areas where we can get an excavator in to pull trees over and rearrange helicopter placed wood. Working on floodplain complexity and side channel reconnections, etc. Finally, on Little Bridge creek, working just downstream of the 31 road, approx. 2 miles, we will be placing locally harvest wood in a partnership with FS in their upland restoration efforts.

Chris Johnson – what timing are you thinking of for the helicoptering of the wood?
Jarred – ideally in the in-water work window, all projects are planned for 2022, with probably a month of work for the helicopter to be here

Gene – There are approx. 570 acres of commercial harvest in the outer edges of riparian reserve with the purpose of restoring stand condition in these areas. Riparian reserve is not part of the official timber base, but we can use commercial logging as a tool to maintain the riparian stand condition if it is departed enough from desired condition. We need to minimize impacts to get the long-term benefit. Areas identified have overstocked stands, located far enough away from stream channels that have little or no impact on stream shade or recruitment, and any work there would happen either in winter on frozen ground or possibly some other way that would have similarly low ground disturbance that we haven't thought of yet, but anything proposed would have to meet our criteria.
There are about 14.2 miles of temporary roads proposed for commercial timber harvest access, and 4.9 miles of new permanent roads proposed primarily on ridgetops. Temporary roads would last up to 18 months, would ideally be used and obliterated within 12 months before returned to natural conditions
Kristen Kirkby – why new roads when you are having issues with existing roads?
Gene – some are to provide access to replace access lost from riparian roads we are removing, and other is where timber proposed as needed for long-term management.
Justin Yeager – both short and long term benefits are needed in order to work in the riparian reserve

Gene – we have 9 artificial barriers we propose to replace with bottomless arch structures. We're getting to the bottom of the barrel, as the really big barriers are already repaired. We have these 9 proposed on roads we plan to keep, other culverts are on roads proposed for decommissioning.
We also include enhancing beaver habitat by placing BDAs to create habitat for future places to release beavers, working with Methow Beaver Project, WDFW, and CTCR
The main area where we are looking at reducing road impacts is Little Bridge Creek, and I'm excited about that.
Proposed Schedule: Project planning by summer 2021, implementation as early as summer/fall 2021, and we are looking for partners to implement treatments. The project comment period ends 11/28/20. Please provide comments

John Arterburn – I want to commend people on cross – agency coordination
Gene – I also echo that, as we're moving towards needing to rely more and more on partnerships, we want to keep building on those

<u>Hancock Springs 2019 [presentation]</u>
Kristen Kirkby – Cascade Fisheries: Hancock Springs has been a multi-phase project, and most of you are familiar with the previous phases. Robes has been involved since nearly the beginning, so he is a good resource for any questions.

We worked on restoration in Reach 2 in 2019; there is a Conservation Easement on both sides of the Creek. Jerry Palm was the contractor, Methow Natives did the planting, Robes and Katy from USFWS were out there almost the whole time. Project design worked around limitations on access, and we used a slinger to limit access disturbance. Pumping water was a big deal during the whole project. We had to pump and pipe around 7 cfs, and the reach gains around 2 cfs, so managing the water was a challenge. We used wetland sod mats from North Fork Natives, with plugs. They were wet and heavy, placed to prevent erosion. The Slinger was able to throw fill up to 100 ft. We had wetland plugs, shrubs, and trees planted throughout the project. For the most part the plugs did really well. We had high water in the first year, and did place some coir logs to prevent overland flow and did some additional planting. We had a steelhead redd in this reach and one in the reach above this year.
Next steps – the stream restoration complete, and we have funding from USFWS to look at creating a forested corridor to connect patches of shrubs and trees, to connect across the valley bottom floor.

Chris – what was your Ecology process like?
Kristen – good, the calculation was wetland gain, habitat moved from shallow open water to be a functional wetland. We had a web meeting with visuals and photos, Andrea was pretty supportive, as well as Jess Jordan.
Robes Parrish – an obvious gain, and worked well through both the NWP 27 and Ecology process
John A – was thinking about this project recently and was hoping for an update, so glad to see this, I think it's a great example of good work. I think areas in Okanogan that we may need your help to do similar work, hopefully we can talk.
Chris J – there are some key landowners in the Okanogan that would be good to bring into that conversation that would be key to help sell it to other landowners
Kristen – if there are any questions about the project, people can contact me directly

<u>Methow Barrier Assessment [presentation]</u>
Kristen – the Okanogan Basin work is still ongoing. The Methow Barrier Assessment was on fish bearing streams; we looked at culverts, dams, diversions, non-culvert crossings, misc. obstructions, and fish ways.
Passability was based on WDFW methodology, water surface drop and slope, and whether a 6" trout can move through between a 10% and 90% exceedance flow. Report will be available; we surveyed 581 sites, around half were 100% passable, 200 had zero passibility. Most of the issues were culverts, some dams and non-culvert crossings. All information is on the WDFW state fish passage site. They also show the survey date. We did outreach for 560 private parcels, received 241 approvals, 136 denials, and 130 we could not contact. This was our best attempt at a comprehensive survey, but there will be blank spots. Smaller obstructions are less easy to figure out. If you have questions, reach out to Kristen, we can go back and do surveys if property access becomes available in the future.
All of the data went into the fish passage prioritization model in partnership with UCSRB and RTT. Model developed by RTT, Aspect gave it life, and it is hosted on UCSRB's web site.

Kristen – for passability rating, Ryan Klett developed a method for looking at passability by month by species by life stage, whereas the WDFW method is only one value. With help from CTCR, we reevaluated some barriers with the EDT rating vs the WDFW passability metric, and the WDFW method appears to underestimate passability for adults and overestimate passability for juveniles. We haven't gone beyond this basic comparison to ranking of barriers, but it is interesting.
You can go to the Washington State Fish Passage database and look at any watershed, and you can also enter site ID if you have that: Geodataservices.wdfw.wa.gov/hp/fishpassage/index.html
It is important to look at when the survey was done and who did it

You can look at the UCSRB site to look at the barrier prioritization: Tier 1-4 are anadromous fish streams. I'm happy for people to review this, look at areas that people know of or have contact with private landowners
John A – I appreciate all the work done on this, we've come a long way. I am curious if it's possible to organize a field trip to some of these Tier 1 barriers, so that people go visualize them for ourselves to see how it is working on the landscape. Models don't always match up with reality.
Kristin – agree, same goes for all of the prioritization effort happening through UCRSB. One of the challenges is that a number of the Tier 1 barriers are diversion dams, likely all based on hydraulic drop, and there are some limitations on WDFW passability assessment. Getting on the ground is an important step.

Chris – have you identified the Chewuch Dam, which has a fish passage, is that new?
Kristen – there is a hydraulic drop at the inlet and outlet of the fish ladder; it's a complex structure, and potentially several pathways for passage and one single metric for passage
Chris – it is on WDFW property and RCO, BPA, Reclamation funds went into addressing it, so I would like to get on the ground and evaluate
Kristen – passability may depend on life stage and time of year
Chris – the challenge we face is that once funding is gone for a project, so is monitoring for the project, it's a good opportunity to see who past projects are functioning.
Kristen – a number of sites that were previously barriers have been fixed that weren't updated in the WDFW database, so it's important to provide updates and do resurveys from time to time.
Chris – think would be good to dive into it on the key projects, whether it rises to level of doing adaptive is not clear
Steve Kolk – both John and Chris' comments are consistent with what we hear in the field, not sure how we resolve the disconnect between quantitative criteria developed by WDFW for evaluating these, and prioritization is based on that, but often there is second guessing of that criteria when we're considering projects. I think there needs to be some sort of rectification of that, it is difficult to do on a case by case basis, maybe ok because there aren't that many Tier 1 barriers. For the benefit of sponsors and funders we do need a rectification of the occasional inconsistency between quantitative measurement and what people are thinking when they look at it.
John C – we're looking at a 6" fish for the criteria, but we don't have a lot of 6" fish. Mostly we're dealing with adults and yearling juveniles, so getting to what Ryan and others are looking at with age specific criteria is more relevant to what we are doing. Really we want to know if we have adult passage and passage for juveniles that haven't smolted yet. It is refreshing to see a different approach being taken, getting at what does passage mean for smaller fish, and it may be very different for 50 mm fish vs 190 mm fish. A finer grained look at what we are dealing with.
Kristen – Ryan's method is specific to culverts; dams may be more complicated. We do have the EDT passability method for around 80 barriers. If we're over-estimating passability for juveniles that could be really relevant to the ranking.
John A – I think the biggest disconnect comes when people are on the ground isn't for juvenile fish, it is more on the adult side, where there is an underestimation of passability for adult fish. We often look through the adult fish on our minds eye, this is why I've been trying to push for an alternate method
Kristen – WDFW method is what is used across the state, so it allows for comparisons across many basins. Ryan's model requires that we collect data on corrugation size of the culvert, which we don't have for earlier surveys.
Chris – is there a spreadsheet that can show how many of the barriers are on previously addressed sites?

Kristen – if you have a shapefile for that? Happy to try that, use a sample basin to try it, like Beaver Creek maybe.
Chris – I would be curious to sit down with you on Chewuch and Beaver Creek
Kristen – it would also be good to talk to Ryan about dams
Jason Lundgren – you may want to invite Ryan Daschle from WDFW; I think they struggle on fishways
John A – I think we want to figure out what we want to do in our area for our purposes, and then bring it to WDFW, we don't have control over what they do
Chris – which would be consistent with the intent of locally driven solutions

UCSRB Updates

Ryan Niemeyer – UCSRB: RTT Prioritization Step 2, in the RTT meeting last week the restoration results were approved for the Methow and the Wenatchee, with action categories for priority reaches based on prioritization process. We are using BPA funding to work with Aspect to develop a web portal to share the results. The tool is what John Crandall called a living tool - we can revisit, add data, correct errors, etc. We should have most of the wrinkles ironed out, but it is not set it stone, still updating the final updated action categories, have the mostly final on the prioritization products web page.
At the Dec IT meeting we will go over the results, share the tool and the outputs, and discuss how partners can use it. The next SRFB round will use the existing/old process [priorities from the Biological Strategy], and the new prioritization will be used in 2022. Also we will be asking for feedback on what kinds of products will be useful. Encourage people to participate.

Next steps – we need to finish up protection priorities. We are most of the way there, and will likely have two pathways like restoration priorities. It will also include land ownership and risk, we will be working on that. There will also an update on bull trout, and it is good that they overlap with chinook and steelhead, so much of the heavy lifting is done. John Crandall is involved in the bull trout work.
John C – because of timing, we didn't do bull trout initially, but we are now circling back, and getting bull trout specific info into the whole process, so stay tuned
Ryan – we will do protection priorities for bull trout at the same time as spring chinook and steelhead

Paper of the Month

John Crandall – This month we have *Wildfire may increase habitat quality for spring Chinook salmon in the Wenatchee River subbasin, WA, USA* by Flitcroft et al. This paper fits well with our earlier discussions on the Twisp Project, as it discusses fire impacts. The lead author is from USFS. It is from our region, and they brought in a lot of modeling to try to understand the effects of wild fire on habitat quality for spring chinook. They looked at effects in the Wenatchee on stream channels, and how does that influence quality of egg and incubation, juvenile overwintering, and adult habitat for spring chinook. Sediment, large wood, and stream temperature inputs from wild fire were considered, and they looked at different life stages, different landscape patterns, and changes from historic. The take home is that overall wildfire has a net positive influence on spring chinook habitat, based on inputs of large wood and larger substrate material. They looked at habitat potential, geomorphic suitability, temperature and LW, fine sediment. Classified suitability as low, medium, high. The habitat type influenced negatively in short term was egg and fry because of fine sediment, but adult and juvenile overwinter habitat increased due to large wood and inputs from that. It is an interesting paper, a lot of models, so we need to approach with a degree of caution; the temperature component is interesting.
Robes – so for LW inputs from wild fire resulted in improvement in spring chinook habitat, but Gene said in the Twisp it did not result in a lot of delivery to the channel. Does landslide also have to happen to get the benefit?

John C – the time frame eluded me, so that is a little unknown, obviously iterative, and depends on weather, precipitation, debris flow, erosion, but yes, debris flows are a mechanism of delivery of wood to streams. In small streams the wood is retained, in larger rivers wood may be transported more, but I would expect over time you could have more wood coming into the streams. The looked at spring chinook, which are not the highest elevation spawner that we have here (that would be bull trout) and fire effects may be more intense at higher elevations, could be interesting to look at effects on bull trout.
Gene – we had the Thirtymile fire that burned at headwaters near Chewuch falls, and then we didn't really have debris flows until 2004 [several years later], and after that the hillsides unloaded. It took the debris flow to be able to see substantial change. In the Twisp from the Crescent Mountain fire, we haven't had much runoff yet, and I think that getting those debris flows are critical to getting wood down to the receiving stream
Robes – so the distinction between a net positive vs negative is the debris flow, would that lead to a negative net balance if there wasn't one?
John C – the data that support the landscape analysis would be contributing analysis to how that wood will end up in the stream.
Discussion – disturbance and function, time scale
Chris – curious if the wood is an independent value or also looking at sediment load captured by the wood, is the wood as valuable if it doesn't have the heavy sediment load to capture?
John C – a lot depends on the flow year you get in the year or two after the event. Not just fines, also gravel that sorts out and ends up upstream of the wood inputs.
Gene – generally where I see the more deleterious effects of a wild fire is in a more heavily managed landscape, which usually means a lot of roads. In more unmanaged areas you get all the pieces of good and bad and that is the important habitat driver. In heavily managed areas you might not get the wood loading and you get too much fine sediment. In the Twisp you could almost say it could use more fines that fire could provide; I will be interested to see what happens out there, different factors that make it positive or negative

<u>Roundtable Updates</u>
Gene Sull – USFS: Volstead Road is gone; it was decommissioned about two weeks ago, and I'm happy to be able to say that. Expect a little extra sediment in the spring as it stabilizes, we tried to address some of the serious head cuts. It looks pretty good, so check it out.
Other update, we have a new permanent law enforcement agent, Andrew Larson
Chris – can you send photos of Volstead?
Gene – working on that and will send that out
We're still really interested in Stage Zero on Twentymile Creek alluvial fan, in discussion with tribes and Cascade fisheries, hoping that will be our first venture excited to look at first opportunity.

Matt Young– Colville Tribes: in regard to the Twisp River project, I really want to thank Jarred, Gene, Lance, and Maddie. We have had a lot of coordination, and will see a river restored the way we want to see it

Crystal Elliot – TU: we are working with USFS to replace a barrier culvert on Ben Canyon Creek; it is scheduled for construction next year.

Next MRC Meeting: [*Updated*] January 19, 2021