

## Methow Restoration Council

October 20, 2015

### Participants:

Name	Organization/Affiliation
Amy Martin	Okanogan Conservation District
Charlie Snow	WDFW
Gardner Johnston	Inter-Fluve
Jarred Johnson	Yakama Nation
Jessica Goldberg	MSRF
John Crandall	MRC
Joy Juelson	UCSRB
Julie Grialou	Methow Conservancy
Ken Muir	USFWS
Kristen Kirkby	Yakama Nation
Lynda Hofmann	WDFW
Maddie Eckmann	Yakama Nation
Makary Hutson	BPA
Paul Wagner	Colville Tribes
Robes Parrish	USFWS
Susan Crampton	Local Citizen
Teresa Fish	Yakama Nation

### Meeting Notes:

**John Crandall – Outreach Update:** we have the Salmon in the Classroom program, which is becoming more recovery focused. We will be doing presentations in the classrooms, and the kids will be divided into stakeholder groups. Last year we had representatives from the community from various stakeholder groups to talk to the kids. We had Paul from CCT, reps from the Fish Hatchery, Methow Conservancy. We would like to add fishing guide, some other type of business interest. We are looking to repeat the success from last year. Starting in November we will have these community reps come talk to the specific groups that the kids will represent. If you are interested in participating, contact John. It will probably be the second and third week of November, on Tuesdays and Thursdays, most likely in the afternoon. It will be about 45 minutes in two sessions. Very worthwhile, and the kids enjoy it. We will be getting salmon eggs from Wells soon; Chinook for the classroom tanks. We are just about done with the Water Quality Survey through the Survey Monkey; we got about 200 responses, trying to get people's perspectives on water quality.

**Kristen Kirkby – Hancock Springs Update:** I am working for the Yakama Nation until Thursday, then I will be working for CCFEG starting on Monday. I have been working at Hancock Springs for about a year and a half. Teresa Fish and Maddie Eckmann will be running the program at Hancock from here on out, so direct inquiries to them. Hancock Springs has been a project for a while and has undergone an evolution. Hancock is a little spring-fed creek just above the Weeman Bridge. It is on private property with a Methow Conservancy easement, was formerly a dairy, and was pretty well-used site. There was a lot of work with a lot of partners to recreate the upper channel. They put in pools and riffles, restored sinuosity and large wood, fenced for deer exclusion. We have been working up there collecting data, and there is strong data from 2013 on. We have data collection within three distinct sites within the reach, and we sample six times per year. There has been steady sampling from 2013 and it is planned to

continue through 2018. Very food-web based approach. We sample water chemistry, there is benthic macro-invertebrate sampling, and we also collect terrestrial macro-invertebrates. There is a lot of diversity. We also electrofish for fish abundance. We have had a lot of volunteer assistance, which has been important to the effort. We PIT tag, measure and weigh the fish, compare recaptured fish for survival and growth. Also take stable isotope samples, and lavage for fish diet, a sub-sample of 5 of each species caught. At this point, the project is focused on looking at nutrient supplementation in the restored reach, they will be putting gout carcass analogs, will be looking at the effects of adding marine derived nutrients in the system. That treatment should go in next fall with Chinook spawning and then also in the fall of 2018.

There was also this really great restoration project there, and I think it would be a shame to not consider the effects of that restoration. Have had Chinook and steelhead spawning up there. We have a lot of data, a very interesting seasonal look at fish use. Higher densities of Chinook and Mykiss are seen in the restored reach vs. the unrestored lower reach. Mykiss are seen year round. Brook trout removal is not currently in the plan. Some bull trout are also seen in the restored reach when the Chinook come in, some coho are also starting to be seen. Highest densities of all fish are seen in the restored reach. Growth is similar in both reaches, so not showing density dependence. There is CHaMP data for the site, somewhat challenging to use, but shows all of the habitat unit. Did a single pass e-fishing this October to look at habitat units; it is a work in progress. There is a lot more that could be done with this. This project has a lot of interesting data, a lot that could be done with that; combine with a lot of the other data available, a lot that would be useful for people out there, and a lot of opportunity to comparing to other sites. Also have movement and survival data.

Julie Grialou – the density results, was that within reach one?

Kristen – yes, with the single pass, it was only within reach one, but they could also do within the lower reach.

John – if you did put some wood in the lower reach, at what point do you not consider it untreated?

Kristen – I think it would be worthwhile to compare the habitat characteristics of the two rather than restored vs. unrestored. Not a great control site.

Robes Parrish – can you talk about what you saw for periphyton production between the two reaches? Most of the upwelling happens in the upper reach, not much gaining in the lower reach.

Kristen – We do have some data, but I'm not sure that it is an effective method for looking at algae. There are not a lot of rocks in the lower reach, so it may be misleading for the substrate that is there, by putting in the substrate in the upper reach, we have increased the surface area available. Qualitatively, there is a lot more going on in the upper reach.

**Joy Juelson – UCSRB Updates:** we are looking for a new citizen's committee member. The call for nominations goes through October 23<sup>rd</sup>. We could potentially draw on nominees from last year if we do not receive any nominations. We will send out another notice and see if we get any volunteers, and then decide how we will proceed from there.

Okanogan County and the UCSRB selected three outreach grant proposals to fund. One is from CCFEG, the Upper Columbia Salmon Awareness Project (\$10,000), the second is from MSRF, Salmon in and out of the Classroom project (\$6950), and the third is from Okanogan Conservation District, for the Salmon Recovery Interpretive Signage project (\$8,000). These are all similar to projects funded last year that were very successful. The recipients presented last year's projects at the UCSRB Board meeting and it was impressive how much was done with a relatively small amount of funds.

Greer has the call for abstracts for the upcoming Science Conference; the call is open through November 13<sup>th</sup>. You can go to the UCSRB web site ([www.ucsrb.org](http://www.ucsrb.org)) for more information. The Science Conference will be January 27 & 28, 2016 in Wenatchee.

**Jarred Johnson, Yakama Nation, and Gardner Johnston, Inter-Fluve:** Presentation on the Upper Methow Reach Assessment.

Jarred – Inter-Fluve did the field work in 2014; this is a pretty robust assessment that goes from Weeman Bridge to Trout Creek. It covers about 19 miles of stream, and the RA is a large document.

Gardner – Project goals: address habitat impairments limiting salmonid population productivity, protect and restore dynamic processes that support sustainable habitat, improve and protect water quality, and coordinate efforts with local stakeholders.

The study area from approximately River Mile (RM 61) (Weeman) to Trout /Creek (RM 80). We broke the area into 9 reaches to facilitate comparison to previous work. Mazama is in Reach 4. We looked at fish distribution, and steelhead, Chinook, and bull trout are the primary species that we are focused on. Habitat Assessment, used standard US Forest Service methods. At the upper end of the study area, steeper reaches on National Forest with no roads. Middle reaches have a mix of pool riffle glide. Lower reaches, riffle and glide, not many pools.

Secondary channel habitat, off-channel and side channel areas, reach 2 has very high off-channel and side channel habitat, high potential for restoration.

Discussion – measurements, they used FS Level 2 methods, areas can be dewatered and still count. If a side channel was blocked off by a human feature it was counted but noted as disconnected. Habitat Assessment done at low flow. Timed habitat survey work so that it was not dewatered.

Gardner – wood distribution, medium/large and small, density – number of pieces per mile. Up in Reach 9 there is a lot of wood brought in from an avalanche.

Geomorphic Assessment: we looked at geology and hydrology, flood and channel change, sediment dynamics, LW and veg dynamics, land use impacts, and surface mapping.

Reaches 7, 8, 9 are a lot steeper, primarily public lands, functional habitat. Around Lost River the river becomes wider, moderate habitat, impacts from residential development – Reach 5, 6 are a mix of public and private lands. Reach 4, includes Mazama, is vertically unstable, has poor instream habitat, portions seasonally dewater, mostly private lands. Reaches 1, 2, 3 are moderate to unconfined, glide and riffle dominate, mostly private lands.

Hydraulics Assessment; used SRH-2D, LiDAR, mapped inundation extents (2 year and 100 year floods). Calibrated the model based on some date stamped aerial photos during high floods, plugged into the model with calculated discharge at date of photo.

We did a coarse-scale sediment mobility assessment, did 1 or 2 pebble counts per reach, used the model to predict sediment mobility at sampled sites. Not enough data to say a lot, but we did confirm some of the other information/our understandings of how the different reaches interact. A lot of material in the system and a lot of movement of the bed at higher flows.

Hydrology assessment – subsurface conditions, seasonally dewatered areas between Lost River and Weeman. Isolated pools may still hold fish; dewatered areas can be a problem in winter due to icing.

REI – Reach based Ecosystem Indicators, have a summary by reach. Reaches 1, 2, 3 for the most part is highly impaired, except for the area where Goat Creek comes in. The Weeman Bridge has a significant impact at the lower end, some serious armoring at the upper end. There is a levee with the ski trail along it, which blocks access to a really long side channel

Julie – do you think that it is a natural side channel, or related to an old ditch?

Gardner – I think it is natural, but there is a complex of side channels and some may be related to old ditches.

Reach 4 is moderately confined, changes at Early Winters creek, vertically unstable, minimal off-channel habitat, poor instream habitat, Early Winters creek is a very high contributor of hydrology to the system, but not sediment, upstream areas are contributing sediment but not hydrology. A Supply limited reach. Poor instream habitat, some dewatering, moderate use by salmonids, but not a lot of fish data for juvenile use, so the fish use data is mostly from redd surveys. All private lands. Big apex log jams

downstream of Mazama Bridge, but those represent the only wood in Reach 4; they are more of an anomaly in the reach.

Reaches 5, 6: moderate ecological function, river left communities impact the area, mix of public and private lands. Seasonal dewatering in areas.

Reaches 7, 8, 9: unconfined to moderately confined. Riffle dominated, good functioning condition, most impacts are related to past timber activities; the forests are maturing. A large amount of wood is available from a large avalanche; we hope that it will supply wood downstream over time. There is a lot of old fire/burned wood that will also become available.

Restoration Strategy: Characterize existing conditions, determine target conditions, develop a strategy to achieve targets, identify specific actions to meet targets, then design and implement actions. For each reach we have strategy tables. Each table identifies the overall ecological function, the trajectory if no action taken, the recovery potential, restoration objectives (quantifiable as much as possible), action types, projects and prioritization. Restoration objectives feed from Existing and Target Condition tables. Project prioritization – this is a system to get a benefit score (includes recovery gap analysis, fish use, root causes), cost score, benefit/cost, and feasibility designation.

John – what species are you considering?

Gardner – salmon, steelhead, and bull trout are the focus, main source of data are the redd surveys, so bull trout not as emphasized in this analysis. If you had additional data, you could consider it.

Charlie Snow – there is a lot of fish use in the upper reaches, resident rainbow trout that contribute a lot to the steelhead population.

Gardner – root causes is a “processed based restoration” type score. Gives higher scores to projects that address fundamental root causes.

Recovery gap analysis – you have a “pristine condition,” an existing condition, and what is your achievable target, the recovery gap is the distance between your achievable condition and your existing condition. Project prioritization table puts it all together.

Teresa Fish – what was the flow when you were measuring the wood?

Gardner – in the report, we have a chart that shows survey dates. It was low flow, but before dewatering. There was a freshet where things spiked a bit for a day or two. We measured if it was within the bankful section of the river.

Robes – did you take a look at any of the available climate modeling data to give a sense of potential long-term, to what extent do you think we can be effective at buffering some of that?

Gardner – there is a section in the report on climate change; we discussed potentially more instances of rain on snow, increase sediment loading, may exacerbate subsurface flow conditions below Lost River. Some of the things that you might do to address climate change would be the same things that you would do to address the subsurface flow. We struggled with that, we came to realize that the subsurface flow is largely a natural phenomenon, our best strategy is add resiliency to the system to help fish deal with these unfavorable conditions, off channel habitats, tributary habitats, potentially increase structure to increase pools with cover that fish could use, but there is a risk creating an attractive nuisance. In the report, projects in a dewatered reach got a somewhat lower fish use score. The draft RA will be available for review – contact Jarred, and comments are welcome. The RTT is reviewing and giving official comments. Send any comments to Jarred.

## **Roundtable**

**Robes Parrish – USFWS:** we have an RFP out for Partners for Fish and Wildlife and National Fish Passage. We are looking to try to generate Methow-specific projects. Talk to me if you have ideas for projects.

Silver side channel project – we are hoping to secure some additional cost share funding in the next couple of weeks to submit a scope of work revision to the SRFB. We are currently limited to Phase I on

WDFW land in the lowest 2000 ft of channel; we have an unwilling landowner on the upper 2/3 of the channel. Stay tuned.

**Makary Hutson – BPA:** I am now working on the tributary habitat team at BPA, supporting Rosy.

**John Crandall:** The Goat Creek project is essentially done, I was up there with Robes and Ken. We took the wood from the War Creek slide and placed it in the stream in two project areas. There was no ballast; we also put some wood on the banks to keep cows out. The two sites were about 1 mile apart, between the sites we felled 27 trees into the channel. The goal is to increase spawning habitat for bull trout. A lot of rainbow, and Charlie brought in a crew to help us tag. We worked in the wet, flow went up one night; overall the work went well and took about 4 days. We will begin monitoring. The project extends spawning survey areas by about a mile.

Bull trout are about done spawning in the Methow. Redd counts are kind of mixed, Twisp spawning was down from the average by about a third, and they were more downstream than normal. Other places, Lake Creek above Black Lake, I think there is a barrier from an avalanche that is preventing movement, redds low. There may also be issues with fishing up there. Lost River did pretty well, Early Winters had a bump as well.

Charlie – do you count upper Chewuch?

John – yes, I think those were about normal this year.

Discussion – superimposition, counts, can't get bull trout abundance just from redd counts

Robes – what is the longest data set you have?

John – varies, but it's pretty decent, likely from the early 2000s for a bunch of them, but varies based on location.

**Maddie Eckmann – Yakama Nation:** I am talking about bull trout in lakes at the Methow Valley fly fishers meeting at the high school at 7 o'clock.

**Susan Crampton – Public Comment:** It is heartening to hear what everyone is doing every month.

**Jarred Johnson – Yakama Nation:** Chris Butler is wrapping up the Chewuch River Right project this week and then they will be doing reveg; there will be field trips. The Forest Service ID team is meeting to discuss the restoration actions for River Mile 15-18. At Eightmile Creek, we have surveyed and modeled fish barriers, hydrology modeling is happening, and we are supposed to have concepts in November. Hans Smith is finishing up the Fender Mill project, which will be finished next week. The first round of 1890s fish use monitoring has started, PIT tag antenna arrays will be installed, the HPA is on its way. Still continuing to develop Twisp Ponds left bank and Horseshoe side channel project for 2016, also working on Early Winters campground project for implementation in 2017.

Scaffold Camp and War Creek project areas in the Twisp – we currently have proposals in to PRCC to acquire parcels, the Post and Fergus properties.

Julie – there is another landowner who contacted us in the Twisp Avia area wanting to sell, I contacted Hans.

Jarred – not sure about that one, will check with Hans.

Robes – will you be collecting data in 1890s that will be methodologically similar to Hancock?

Jarred – will also be collecting habitat data in addition to fish use. We have been considering Hancock and the comparability of the two sites.

John – do you have a write up of the protocol?

Jarred – I will see if I can get it for you.

Would like to discuss coordinated effort to work on landowner outreach in the Upper Methow, now that we have the assessment.

We are still in the process of determining landownership in the Sugardike area

We have the Big Valley project scheduled for next year, working on the Newby Narrows project on the Twisp, and the lower Twisp large wood project between Poorman Creek and the lower Twisp Bridge, RM 3 to the lower Poorman turnout.

**Amy Martin – Okanogan Conservation District:** OCD is continuing to work on fire recovery efforts with landowners. Have had 140 people contact us for advice on post-fire properties. Have talked to about 15 people on the Twisp River fire, concerns with funding. Leslie Michel put together a BAER team; the report is in draft form now. In the Twisp, Woods Canyon and Myers Creek are at risk for flood events. The Forest Service will be working on their areas. Black Canyon Creek, Squaw Creek, and McFarland Creek also were in last year's report and had additional burning this year. NRCS emergency watershed protection program will be on the ground helping to plan for actions, but they don't have any funding for implementation. We've also been approached from irrigation districts interested in piping.

**Charlie Snow – WDFW:** we are conducting a radio telemetry study with steelhead. The fishing season opened, so if anyone gets a radio tag on a fish that they keep, please turn them in, a reward for returning the tags. Primary purpose is to track wild fish. Tagging is happening at Priest, around 250 per year, 50/50 hatchery and wild. Anglers will see a clear piece of what looks like monofilament coming out of their mouths. It will be sticking out 8 inches or a foot. Please turn those back to WDFW; spread the word.

We went out to Silver Side Channel and tagged fish, lots of coho and Chinook, and we killed 350 brook trout. In the whole lower section, we didn't see any fish except for suckers. A few salmonids were in there last year. If you calculate density using number of shocker seconds, it about the same as last year, .17 salmonids per shocker second. No sculpins. We did get one juvenile lamprey. We will be helping with the tagging at 1890s too.

**Paul Wagner – Colville Tribes:** working on the same list of projects as last month; a couple of bridges on Frazer Creek, Fencing on Lawson on the Methow and Devaney on the Twisp, production wells to replace some irrigation. Some work on Mission Timber Sale, but not a lot.

Julie – Devaney fencing?

Paul – we will replace barb wire with electric fence and move it back 75 feet.

Frazer Fish Sampling: we did a presence/absence survey in Frazer in the spring, and had talked about doing one in the fall, but haven't heard anything since, has anyone else?

Charlie – if you make a date and send it to Ryan Fortier, it can happen. He is really busy, but if you set a date and let him know, then it can probably happen.

**Jessica Goldberg – MSRF:** The Twisp River Floodplain project started last week, they have demolished and removed the former MVID West fish screen. Work this fall is in areas isolated from the stream.

Next year we will do levee breaches, log jams, boulder clusters, and wetland enhancements during the in-water work window July 2016. Pipkin Construction is the contractor.

John – we also removed the two diversions on Poorman Creek.

**Next MRC: November 17<sup>th</sup>**

<b>Definitions of Commonly used Acronyms</b>	
AEM	Action Effectiveness Monitoring
ANS	Aquatic Nuisance Species
AREMP	Aquatic and Riparian Effectiveness Monitoring Program
BACI	Before, After, Control, Impact (study design type)
BEF	Bonneville Environmental Foundation
BO/BiOp	Biological Opinion
BPA	Bonneville Power Administration
CAC	Citizens Advisory Committee (for SRFB funding applications)
CAO	Critical Areas Ordinance
CBFWA	Columbia Basin Fish and Wildlife Authority (pronounced "cubfwah")
CCFEG	Columbia Cascade Fisheries Enhancement Group
CCT	Colville Confederated Tribes
CHaMP	Columbia Habitat Monitoring Program
CMZ	Channel Migration Zone
CREP	Conservation Reserve Enhancement Program
CSF	Community Salmon Fund
EDT	Ecosystem Diagnosis and Treatment
ESA	Endangered Species Act
FCRPS	Federal Columbia River Power System
FFFP	Family Forest Fish Passage Program
FIA	Forest Inventory and Analysis program (USFS)
Four "H"s	The four factors affecting salmon recovery: Hatchery, Hydro, Habitat, Harvest
HACCP	Hazard Analysis and Critical Control Point
HGMP	Hatchery Genetic Management Plan
HPA	Hydraulic Project Approval
HSRG	Hatchery Scientific Review Group
HWS	Habitat Work Schedule
IMW	Intensively Monitored Watershed
IS	Implementation Schedule
ISEMP	Integrated Status and Effectiveness Monitoring Project
ISRP	Independent Scientific Review Panel
IT	Implementation Team
LW/LWD	Large Wood/Large Woody Debris
M2	Middle Methow (a project area defined as the reach between Winthrop and Twisp)
MaDMC	Monitoring and Data Management Committee (pronounced "madmac")
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Methow Restoration Council
MSRF	Methow Salmon Recovery Foundation (pronounced "em-surf")
MVRD	Methow Valley Ranger District
MWC	Methow Watershed Council
MYAP	Multi-year Action Plan (also sometimes called the 3-year workplan)
NFF	National Forest Foundation
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPCC	Northwest Power and Conservation Council

OCD	Okanogan Conservation District
OBMEP	Okanogan Basin Monitoring and Evaluation Program
OWL	Okanogan Wilderness League
PCSRF	Pacific Coastal Salmon Recovery Fund (pronounced "Pacsurf")
PIBO	PACFISH/INFISH* Biological Opinion
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
PUD	Public Utility District
QAQC	Quality Assurance, Quality Control
RA	Reach Assessment
RCO	(Washington State) Recreation and Conservation Office
REI	Reach-based Ecosystem Indicators (used in Reach Assessments)
RFEG	Regional Fisheries Enhancement Group
RFP	Request for Proposals
RM	River Mile
RPA	Reasonable and Prudent Alternative(s)
RTT	Regional Technical Team
SEPA	State Environmental Policy Act
SMP	Shoreline Management Plan
SOAL	State Owned Aquatic Lands
SOW	Statement of Work
SPIF	Specific Project Information Form (used with the Corps ESA programmatic)
SRFB	(Washington State) Salmon Recovery Funding Board (pronounced "surfboard")
SRP	State Review Panel (for SRFB funding applications)
STEM Database	Status, Trend and Effectiveness Monitoring database at NOAA's Northwest Fisheries Science Center
UCSRB	Upper Columbia Salmon Recovery Board
TRT	Technical Recovery Team (NOAA)
USFS	US Forest Service
USGS	US Geological Survey
VSP	Viable Salmonid Population
WAT	Watershed Action Team (the MRC is our WAT)
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WNFH	Winthrop National Fish Hatchery
WWP-TU	Washington Water Project of Trout Unlimited
YN	Yakama Nation

\*PACFISH/INFISH The PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program was initiated in 1998 to provide a consistent framework for monitoring aquatic and riparian resources on most Forest Service and Bureau of Land Management lands within the Upper Columbia River Basin.