Methow Restoration Council

December 17, 2019

Participants:

Name	Organization/Affiliation
Alec Spencer	Methow Beaver Project
Alexa Whipple	Methow Beaver Project
Brian Fisher	MSRF
Chris Johnson	MSRF
Gene Shull	USFS
Hannah Coe	Okanogan CD
Jacqueline Wallace	TU
Jarred Johnson	Yakama Nation
Jessica Goldberg	MSRF
John Crandall	MSRF
Katy Pfannenstein	USFWS
Kristen Kirkby	CCFEG
Lance George	USFS
Maddie Eckmann	Yakama Nation
Matt Young	Colville Tribes
Steve Kolk	Reclamation
Susan Crampton	Public
Tabatha Rood	BPA
Tara Gregg	MSRF
Vic Stokes	Landowner

2019 M2 Whitefish Island Adaptive Work

Brian Fisher: MSRF completed a small scale adaptive management at the Whitefish Island (WFI) site over the summer. The WFI project was the first project to come out of the M2 program to improve fish habitat in the 8-mile reach of the Methow between Twisp and Winthrop. This was an approximately $1M project, with 23 engineered log jams in the side channel designed to increase side channel connectivity and habitat complexity and availability. The side channel was an intermittent channel that disconnected at moderate flows. The project was completed in 2012 and was initially met all of the project goals.

This site was part of the USGS/BOR monitoring study including fish population surveys before and after the project. Monitoring showed significant increase in fish populations post-project; it went from less than 100 fish using the site overwinter to several thousand. After the high flows in 2017 and 2018 the side channel lost connectivity below 300 cfs, leaving disconnected pools in the side channel. This translates to flow through channel for about 7 months/year. The fish monitoring pointed towards losses in fish abundance and condition associated with the decreased connectivity.

Dissolved Oxygen measurements showed that oxygen dropped into non-fish friendly levels during the periods of disconnection. We also observed significant predation from snakes when the channel was disconnected.

Last summer we worked with BOR and BPA to come up with a small adaptive management fix. The adaptive management project was designed to maintain the much larger investment and benefits of the original project. For a few thousand dollars, we reconnected the side channel by excavating three riffles. In addition, we moved several logs from within the channel to places where they are expected to help maintain flow and sediment transport during high water. BPA funded the construction cost of about $5000.

Since the adaptive management, the side channel has maintained perennial flow in the side channel, even with river flows down to about 180 cfs.

2019 Yakama Nation Beaver Creek Project

Jared Johnson: Beaver Creek Reach 5, construction was this year. Project was identified during the reach assessment and was constructed between RM7 and RM9. We had a partnership with WFW and worked with OK County related to the county road. The project included 400 pieces of wood; the design was to engage floodplain and increase instream habitat through wood loadings – there were 4 pieces of wood per mile before project. Ballasted structures were designed to catch wood before it makes it downstream to valuable infrastructure. Piper Creek flows into beaver Creek, and Piper Creek's alluvial fan has pushed Beaver Creek to the valley wall and there is minimal riparian cover. This project realigned Piper Creek to a historic channel to hydrate spoils and encourage riparian growth. Piper Creek is not accessible to fish, before or after the project. There is an Ecology stream gage upstream, but it has never worked properly.

Discussion – was the gage rated with the hydraulic model? This could be explored to increase the accuracy of the gage.

Jared – a revetment was constructed along Lester Road. This project removed levee from historic road crossing and opened up a 600 ft channel. Spoils were added to the base of Lester road. Construction was by Pipkin and vegetation was by BFI. Construction was $330k. Planning for this project was completed in about a year. The project is on public land and interested individuals can visit it. 80-90% occluding the channel to encourage floodplain engagement. 3rd project Jarred has done Beaver Creek. Only saw O.mykiss during defishing; did not record lengths. The project was designed by TetraTech.

Did a drone flight. Looking to use structure for motion for bathymetry, and have 2015 green LiDAR to evaluate this option

Discussion – the Forest Service is doing a LiDAR study of most of FS lands from Carlton to the wilderness boundary. This data is available.

Methow Beaver Project

Alexa Whipple: the Beaver Project worked on wood loading in Frazer creek. We partnered with Colville Tribe and Sawyer Tree Services, and a willing landowner made work in this area possible. Worked on about 1000 stream feet on the Hardy property. After the fires and flooding there is a lot of wood on sight but very little was interacting with the stream. All wood used in the project was sourced from the site, where there is extreme incision. There are beavers upstream in an isolated spring-fed pond. This work is in an area where MSRF replaced several undersized culverts with bridges post-fire. Frazer creek is on a narrow valley in close proximity to the highway, so we considered the effects of possible wood movement, but the wood used is large and lots of sticky points were added to capture any wood that moves. The wood loading is at the upper end of natural wood levels, but we are hoping by increasing wood in the creek we can capture sediment and bring the creek bed up to engage floodplain, and

encourage riparian growth. We placed a wood "plug" on a constricted point at the downstream end of the project to keep wood from moving further downstream. There is floodplain on both sides of the project, with no danger to infrastructure.

Lower Moose Ponds, Trailer Ponds: This is a historic beaver complex at the headwaters of beaver Creek. There is a series of 6 historic dams that span the valley. The project goal is to restore wetlands, increase water storage while reducing sediment and nutrient transport, increasing biodiversity, and building resilience to wildfire. Cattle use the area in the summer, and they have broken the earthen beaver dams in places, and this allows water to move through rather than ponding. No beavers are there now to maintain the dams.

Question: How will you keep cows from breaking dam again? Answer: The Project elements reduce the appeal to cows of walking there. We repaired dam and added material to top so it's harder for cows to walk through.

Question: Are you bringing beavers in? Answer: These is a relocation site just upstream, but we have not had success getting beavers to stay there. Upper site is also heavily used by cows, and the site just isn't appealing yet to beavers. Conifers have been encroaching, and we need more deciduous trees and deeper water to offer food and protection for beavers. Ponds also offer water to cattle in late summer. Cows tend to stay out of the deeper ponds, so if ponding occurs then their will likely be less cattle trampling. The project saw great ponding results within 2 months.

The Beaver Project is working on restoring streams from the bottom up so that Beaver families are located near each other. This has been more successful than plopping beavers in an isolated spot high in the watershed. Isolated couples tend to only last a few years or less. If a partner dies the other beaver leaves to go find a mate. It's better if the next potential mate is relatively close. To implement this bottom up approach we are working on wood loading, repairing derelict beaver dams, and installing beaver dam analogues to emulate beaver activity

Lamprey Update

John Crandall: went to the Columbia Basin-wide lamprey exchange in Portland; Matt also attended. First session was on tribal ecological knowledge. This talked about the role lamprey played in the tribal community. A number of talks on lamprey genetics (complicated in terms of their specifies diversity, not well described. University of Manitoba is trying to identify the different species), In fall of 2015 they started adult translocations. Lamprey are being brought from the Lower Colombia after our count had pretty much gone to zero. The count at Wells tends to be low because hard to see lamprey, and they don't like wells dam. Translocation releases include lamprey ripe to spawn in spring and fall; releases are occurring in multiple watersheds. Following releases there have been increases in the number of lamprey appearing in counts. They know the genetics of all parent lamprey released. Will be able to see how translocations are affecting population.

Translocation efforts are happening in other places as well. The water temperature in Okanogan was too warm to place adult lamprey, so they started targeting cooler tributaries in 2018 - Salmon and Omak Creeks. Collected genetics of larvae lamprey from release streams in 2019. Colville efforts have wetted the lower 5 miles of Salmon creek – they improved diversion efficiencies from the Okanogan Irrigation Diversion to wet this formerly dry section. Unlike salmon, Lamprey don't hone back to a native stream. Instead, they hone to a pheromone that juveniles release so having more juveniles will draw more adults

back into the system. Releases are likely to continue for the immediate future, and hatchery programs for lamprey are being developed.

Question: Is there outreach to Wells dam in response the fact that lamprey don't like their bypass? Answer: They are aware of problem.

Question: What is the mortality of lamprey at fish screens? Answer: This is fairly unknown. The diversion structures are designed for salmon, not lamprey. Lamprey get through and they like the sediment bars downstream of irrigation diversions, which means lots of carnage when ditches dewater at the end of the season.

Pacific lamprey are not listed under ESA. Lamprey ingest lots of toxins/chemicals, so we can monitor sediment areas downstream of high contaminate sites to see if there is an affect. Structures installed for salmon habitat can result in fine sediment bars that are good for lamprey rearing.

Roundtable Updates

Tabatha Rood – COTR with BPA, new to working in the Upper Columbia region.

Lance George – Forest Service: The FS is working on Twisp River Project, also working on Mission, a bottomless arch culvert project on Ben Canyon with TU. FS will be decommissioning Volstead Road.

Gene Shull – Forest Service: the Region 6 NEPA programmatic for ARBO (aquatic restoration biological opinion) project will be signed this month and ready for use in January. Hope it will increase capacity to do the planning. Adding wood to streams, cattle closure, road decommissioning, etc. This will go towards meeting the agencies environmental compliance requirements.

John Crandall – MSRF: the annual Methow outreach meeting is here at 2:00. Found our first bull trout redd in Goat Creek in Vanderpool Crossing where we did a bull trout project a few years back. Bull trout numbers have substantially decreased in the basin.

Hannah Coe – OCD: the District approached many Methow irrigation companies about doing efficiency projects

Jacquelyn Wallace – TU: the Barkley Project has responded to the groups' feedback about the lack of public outreach. TU drafted a few outreach proposals, but Barkley would like the project outreach to be word of mouth. Craig Boesel from Barkley is available for questions. Jacquelyn can take any questions back to the Project and provide answers. There was a question previously about mulch and cottonwood debris. This is not landscape grade mulch, and most of the mulch has been used for the project. East County road should be cleanup up by the Spring. Majority of construction will be by snowfall next year. Cottonwood removal – landowners were given the option to save trees if they take on responsibility, otherwise the trees were removed due to construction or liability.

Chris Johnson – MSRF: we are waiting for Barkley pipe project to finish so that we can construct Barkley Bear habitat project.

Alexa Whipple – MBP: we will meet with designer to look at Molesworth/Salladay property to put in structure and reduce incision. Next years' focus is on returning beaver to the anadromous zone, restoring zone with BDAs, and Beaver introductions.

Jessica Goldberg – MSRF: MSRF has a new website, the Beaver Project does too. UCSRB is hosting science conference in January. MRC would be the day before the conference – probably too much for folks? Discussion – Cancel January MRC due to Science Conference conflict? Decision – yes

Steve Kolk – Reclamation: we have a new logo.

Tara Gregg – MSRF: we are working with Interfluve develop Goals and Objectives and Concept alternatives for Sugar Reach. Extended our area of analysis; we're not only looking at the levee. 2020 Living with the Methow River Calendars are available.

Next scheduled MRC meeting:
February 18, 2019