

McNary Fisheries Compensation Committee Meeting

Northern Wasco County PUD Meeting Room

2345 River Road, The Dalles, Oregon 97058

Call in Number: 1-971-256-0996 , passcode: 148967

Updated 5/23/2018

Link for Web Meeting: <https://www.conferencerecalling.com/meeting/14896798>

Tuesday, May 22nd, 2018, starting at 1:30

Attending: In person- Rick-PUD, on phone: RD Nelle-USFWS, Blane Bellerud-NMFS, Patrick Verhay-WDFW, Julie Carter-CRITFC, Presenters by phone-Ashton Bunce and John, Yakama Nation Fisheries.

1. August meeting minute's approval request – done via email.

Last call for edits. Did not offer this but opportunity to edit was provided after last meeting so will consider these minutes final.

2. New Proposals, Extension Request or Final Report Presentations.

a. North Fork Manastash Creek and Lower Umtanum Creek Wood Replenishment

Presentation by Ashton Bunce

We jumped right into this once we got the IT figured out. Ashton presented over the phone while walking through a slide show. She reviewed some of the past practices that have degraded these creeks. She then went through a couple of examples of similar projects they have done and had good success with, providing before and after pictures as proof. She discussed the importance of these creeks and the whole area for Mid C Steelhead. She then reviewed some of the details in the proposal such as the low, medium and high treatments and where you would use each type. She reviewed much of the details regarding log type, number, root wad or not, how they would be placed, referencing a “catchers mit” concept to keep logs from washing out. She discussed how this work ties in with other projects in the basin and lastly discussed the many partners. It was a great presentation followed by numerous questions.

Patrick started the questions asking if they had a contingency plan for lack of funding. Ashton said they would just have to prioritize and cut back on the low priority areas.

Patrick also asked why there was no wood being placed in the Umtanum close to the confluence with the Yakima River. Ashton explained that they didn't want to chance wash out damaging BLM structures at the confluence.

Blane commented that it is expensive but it seemed well planned, they have had success with previous projects, it is a high priority area, and the methodology is consistent with the current thinking on this type of work, preferred over anchoring.

RD said he had talked to his agency expert and gotten assurance that this methodology is effective.

Rick asked a couple of questions submitted by Brandon, specifically about the process of determining the size of DBH needed for these flows. Ashton explained that the WDFW's habitat stream restoration guidelines provided guidance on this using calculations to come up with what is needed. Brandon also asked about the stability and the need for LWD to stay put so as not to effect downstream structures. Ashton explained further that there are guidelines that detail the size of logs needed based on water depth, gradient, etc. Also though, this approach does anticipate some movement of logs but design and placement create complicated log jams that add complexity which is what you want.

Rick asked a series of questions that the presenters did not have detailed answers for but Ashton did provide more detail in an email the day after the presentation. Those responses are pasted below.

How far upstream of the Umtanum creek & Yakima River confluence is YKFP placing wood?

The original maps and descriptions submitted with our application were the APE maps developed for cultural survey. These maps showed the area our YKFP restoration team identified as needing wood replenishment to reverse channel incision, reconnect the floodplain and add instream habitat complexity. However, since those maps were submitted, Kelly Clayton (the YKFP project lead for NF Manastash and Lower Umtanum) refined the placement reach, so that no wood would be placed downstream of the series of catcher's mitts that she has planned, that will key into the robust riparian area that I showed you yesterday in the presentation. The lowest wood will be placed ~0.7 mi up from the confluence with the Yakima River.

Why is the cost of archaeological surveys so high for NF Manastash and why are the surveys necessary?

The cost of archaeological surveys is high for this site because the estimate is not only for archaeological surveys conducted for the wood staging and helicopter landings for the project, but also cultural surveys for the WDFW wood

harvest areas I showed on the map yesterday. However, \$30K of Washington Wildlife and Recreation Program funding was contributed by WDFW to pay for the cost of these surveys.

Archaeological surveys are required for our permitting process for the project; we need to hold a letter of concurrence from the State Preservation Historic Office saying that there are no important cultural/historic sites at these locations in order to move forward with these projects.

Some of the numbers in the budget looked like they were rounded, while others looked to be down to the penny; how were these cost estimates obtained?

The helicopter costs, archaeological work, and project management/book keeping fees are accurate numbers that came from our contractors for the helicopter and archaeological work, as well as Mid-Columbia Fisheries Enhancement Group. We received a quote from Columbia Helicopters for \$7,500/hr to place logs using their 107 Vertol Helicopter, so it just happens to be a round number. It also costs \$7,500/hr when they are mobilizing between our different project locations within the Yakima Basin. The only costs that may need to be further refined are those for the staging, cutting and road work, which are rougher estimates.

What is the average streamflow in both of these streams?

August 2000 flow study from the Department of Ecology showed:

Measured flows ranged from a high of 13.7 cfs in May of 2000 to a low of 0.7 cfs at the end of the summer for Umtanum Creek.

Daily discharge averages at Manastash Creek ranged from a high of nearly 195 cfs in late May to a low of about 6 cfs in late July for Manastash; note, this is before the work done by KCCD in the lower 5 miles to acquire streamflow. Also, this data is for the mainstem, below the confluence of the North and South Forks; I was not able to find any streamflow data for NF Manastash specifically.

How did KCCD acquire streamflow for the lower 5 miles of Manastash Creek?

On the KCCD website, it says that 18 cfs was acquired for Manastash Creek through water conservation projects under the KCCD's BPA Capital contracts and through Trout Unlimited WWP acquisition projects; 2014 was the first summer in decades that Manastash Creek flowed nearly all summer in the reach below the Reed Diversion (the last substantial fish barrier on Manastash Creek that I mentioned yesterday). Prior to this, a 3.2 mi section of the lower portion of the creek was seasonally dewatered due to irrigation withdrawals.

The proposal states that the placement of the LWD is being done according to WDFW's habitat stream restoration guidelines – could we see some examples of that guidance and how it informed for this design? What is the average size (dbh) of the LWD and was there a calculation of that size being appropriate for this treatment (stability, durability?)

To shift the existing baseline of channel incision towards channel aggradation and ultimately more frequent stream/floodplain interactions, a relatively aggressive prescription was developed which maximizes aggradation potential and cost effectiveness, while also following Washington Department of Fish and Wildlife Stream Habitat Restoration Guidelines (2012). This technique emphasizes the reintroduction of woody materials which allows the hydraulic energy of the stream to ultimately restore itself. Along a stream's longitudinal profile, varying degrees of degradation are typically observed. To plan for the restoration project, areas along the reach are broken into categories of high, medium, and low intensity. This refers to the level of degradation: high intensity= heavily incised, low = channel is lacking roughness and/or complexity. We can examine the level of degradation for a given stream reach in GIS using a relative elevation model. We have then assigned each of these categories a woody material prescription consisting of: logs, root wads and slash/100 feet of channel. This prescription is for application on stream channels with bankfull widths (OHW) less than or equal to 30 feet and channel slopes of 2% or less. Boles of the logs and logs with root wads must be 1.2X OHW or greater. We utilized a log stability plot adopted from Abbe et al 1997 that is in appendix G of the WDFW stream habitat restoration guidelines (SHRG) to aid in determining wood sizing based on channel size. This is a dimensionless plot of log length/bankfull width vs. log diameter/bankfull depth where stable and

unstable zones are indicated. Using this plot, for a bankfull width of <30 ft like we are seeing in Umtanum and NF Manastash, we determined that 40 ft. logs that are 15 in. dbh diameter will promote stability. We are trying to get as many key pieces 15 in. dbh and greater as possible from the WDFW forest health thinning project. The WDFW SHRG also suggests that presence of root wads influences the stability of wood by concentrating much of the mass of the tree onto a relatively small area of the channel bed (WDFW SHRG, 2012). The YKFP aims to use one root wad/three cut logs in areas of high intensity wood loading.

We have also utilized the log stability plot in the SHRG to identify stable locations for placement of the catcher's mitt structures on both projects. These structures have been approved for use to mitigate risk to infrastructure by WDFW engineer Kelli Snodgrass for other wood replenishment projects that we have done in similar size tributaries.

There are different treatment intensities for different site conditions. This would suggest that the LWD placed at a given site would need to remain there (not be washed downstream) in order to have the intended effect. What calculations have been made with regard the stability of the placed LWD?

The previous answer addresses what calculations were made to determine what size logs were needed for stability and to determine a stable location for our catcher's mitt structures. Also, from the SHRG, we know that the size of stable wood generally increases with the size, depth, and gradient of the stream. Because wood is buoyant, larger pieces are needed as stream depth increases to prevent the wood from being mobilized. Also, wood that is as long or longer than the width of the stream is more likely to become wedged between banks or channel obstructions than shorter wood. The logs we are using will be 40 ft in length and the average bankfull widths in both streams are <30 ft. Wedging a log between stable features within or adjacent to the stream can increase its stability by preventing its movement in one or more directions. Stable features may include standing trees, stumps, boulders or bedrock. However, according to the SHRG, the best chance for creating the desired habitat is by placing LWD in locations and orientations that mimic those of naturally formed wood jams and are known to promote habitat forming processes. We want our wood to stabilize long enough to aggrade the channel and reverse some of the incision, but we are not looking to create static structures that remain in place forever. The SHRG actually cautions against static, engineered structures in systems like NF Manastash and Umtanum that are highly dynamic; it says that placing structures in settings like this can lead to failure of a structure. Instead of static structures, we are using key pieces of wood that will help to stabilize the wood placement in the short term. We will also use the catcher's mitt structures to keep wood from mobilizing downstream towards infrastructure. However, other than that, our goal is to let mother nature take its course. Also, since these are smaller, remote streams, we aren't as worried about mobilization. The SHRG suggests that wood placement in small remote streams may require little in the way of data collection and assessment.

After the presentation we discussed the project and most comments were supportive. The main concern was the cost which prompted a question about how much would be left in the fund. Rick checked and responded that we would have about 1.4 million left. Rick asked if partially funding it, say \$300K instead of \$360K was an option for anyone. RD commented that if we support it why not fully support it and get some of that money on the ground where it can do some good. Rick commented that it is consistent with our criteria, and it is habitat work which we have funded in the past. Julie thought it was a good project and worthy of our support.

A roll call vote was taken and all present were in favor (Julie, Blane, RD, Patrick and Rick). Patrick asked a coworker that is familiar with the work and got the following response.

From: Easterbrooks, John A (DFW)
Sent: Tuesday, May 01, 2018 4:05 PM
To: Verhey, Patrick M (DFW) <Patrick.Verhey@dfw.wa.gov>
Subject: RE: MMF submittal for Manastash and Umtanum Creek

Yes...please support this proposal. I've been peripherally involved in these wood replenishment projects which are on WDFW's Wenas WLA and are supported by the Wenas WLA Manager, Cindi Confer Morris, and both R3 Fish and Habitat Program staff. The NF Manastash project also scored very well and received SRFB matching (cost-share) funding during the 2017 funding cycle...I was on the Technical Advisory Group (TAG) that recommended that SRFB funding be granted to this project. Both of these creeks support Mid-C ESA-listed steelhead from the Upper Yakima population (above Roza Dam)...the most vulnerable of the four populations in the Yakima Major Population Group (MPG). Steelhead spawn and rear in Umtanum Creek and now have

access to the upper Manastash watershed, including the North Fork. That has only recently become possible because all the remaining upstream passage barriers (irrigation diversions) have been removed or laddered, the diversions are now all equipped with fish screens, and Kittitas Reclamation District, in cooperation with the YN and WDFW, is supplementing instream flow to prevent lower Manastash Creek from being dewatered during the summer/fall. Two PIT tag arrays are installed on lower Manastash Cr. and have already documented steelhead “pioneering” into the upper basin to reestablish steelhead in an area that was blocked for over 100 years by irrigation development.

Easty

To Do:
Rick will fill out a Vote Record form and solicit votes from Erick and Brandon.
Rick will prepare the GAD and supporting docs when the votes are in if it is approved which it likely will be.

3. Other new business, agenda additions, etc.

- a. Website comments or suggestions.

Website development is nearly complete but not yet launched. That should happen soon and give us the ability to make our own updates and changes. Check it out.

- b. Grant Evaluation Table - I will update if I make any progress on this.

Rick has not made any progress on this and questions the utility. He will try to make progress before the next meeting.

To Do:
Rick will continue to work on the table.

4. Grant Updates, work progress and financial activity.

Active-Open Grants

The following updates were provided:

- a. Upper Yakima River Restoration Project-KCT- See update from Mitch.
- b. Screen Angle Testing- Update from Theresa- We have completed testing of larval lamprey and juvenile rainbow trout at a 20 degree and a 12 degree screen angle in the test tank. We are currently reviewing video files to determine the fate (bypassed or entrained) of each fish and will soon be giving WDFW a proofed dataset for initial analysis and summary.
- c. Juvenile Lamprey Tracking – Update from Theresa - Earlier this week (Monday May 14) we were able to tag a large group of juvenile lamprey, completing our planned releases. Lamprey will be monitored for the next 30 days as they move through the monitoring array.

To Do: Rick will add updates to folders.

Closed but Update Worthy

- d. Swauk Creek Restoration-Yakama Nation
- e. PIT Tagging Spring Chinook Parr-WDFW
- f. Facilities Inventory and RME for Lamprey-CRITFC
- g. Lamprey Screen Type Testing – USGS
- h. Lamprey Habitat Restoration Guide – Methow Salmon Recovery Foundation
- i. Cle Elum River Restoration- KCT
- j. Yakama Beaver Project- MCFEG
- k. Evaluation of Tucannon Restoration Work-WDFW –

5. Change Forms

6. Website updates

7. Next Meeting Date: Mid-August

To Do: Rick will create a doodle poll.

