

## Methow Restoration Council

October 20, 2020

Meeting Notes

### **Participants:**

Pete Teigen (UCSRB), Sarah Walker (UCSRB), Ryan Niemeyer (UCSRB), Matt Young (CTCR), Maddie Eckmann (YN), Joe Weirich (MBP), Alexa Whipple (MBP), Kristen Kirkby (Cascade Fisheries), Steve Kolk (Reclamation), Crystal Elliot (TU) Kodi Jo Jaspers (TU), Matt Mayfield (TU), Kurt Fesenmyer (TU), Mike Kaputa (Chelan County), Jamie Cleveland (BPA), Lynda Hofmann (WDFW), Amy Martin (OCD), Jean Bodeau (Public), Chris Johnson (MSRF), Jessica Goldberg (MSRF)

### Trout Unlimited Presentation: Upper Columbia Beaver Restoration Program

**Crystal Elliot** – today I am joined by Kurt Fesenmyer and Matt Mayfield from our Boise support team to present our decision support tool for beaver restoration and beaver dam analogues (BDAs). We are looking for feedback to maximize the usefulness of the tool. We've been working for 8 years on beaver restoration, with 100+ BDAs/PALS (post-assisted log structures) installed, 23 beaver relocations (Wenatchee/Entiat). So far we have done work in Methow, Wenatchee, Entiat, and Kettle sub-watersheds.

The point of all of this is floodplain connectivity and habitat complexity for fish, late season flows, water storage potential, buffering fire effects, riparian fire breaks, and creating habitat for beavers so that they come in and create sustainable watersheds.

We saw the need to scale up, and we wanted to look at a landscape watershed perspective to improve habitat, improve water storage capacity, and mitigate fire effects. We have the BRAT model for estimating beaver capacity, but we needed more. We wanted to identify sites that were both suitable and that would provide the maximum benefit. So we developed the *Decision Support Systems* (DSS) tool

- DSS – designed to bring everything together. The UW GIS squad ran BRAT for the Upper Columbia and incorporated it into the DSS, and then put that to help us find where we would get the biggest bang for our buck. The power of the tool lies in the flexibility and dimensional criteria based on user preference. Fully flexible queries based on multiple criteria: Geographic scale and location, ESA listed fish benefit, beaver dam capacity based on BRAT, fire effects, water storage potential, and land ownership.
- After you use the DSS tool to hone in on potential sites – for Beaver relocation: use the WDFW beaver scorecard; for BDAs/PALS: TU BDA survey 123 app (stay tuned!)
- Also, use LiDAR and other tools to help develop project design.

**Kurt Fesenmyer** – next I'm going to focus on the nuts and bolts of the tool, using a quick demo. Reaches are segments of stream to next confluence, catchments are the individual stream reaches contributing. For each we have scale and attributes:

- Context: Assessment Unit and subbasin, percent of public ownership;
- Physical habitat: stream length, floodplain width, and available water content;
- BRAT results: Average existing dam capacity and average historical dam capacity (in dams/km)
- Disturbance: percent burned from 2009-2018 and percent burned high severity from 2009-2018 (in the local or an upstream watershed)
- Salmonid habitat: bull trout, Chinook, and steelhead intrinsic potential or distribution (each species)

We used this to create the DSS, and from that you can run queries using the attributes.

The tool has multiple reference layers for the various attributes.

- Context: uses AUs, Subbasins, and Land ownership layers

- Physical habitat: uses stream slope, NorWeST stream temperature forecasts, roads, reach-scale historical dam capacity (dam/km), and soil available water capacity
- BRAT and beaver: uses historical beaver sightings, reach-scale existing and historical dam capacity (dams/km)
- Disturbance: uses wildfire burn severity layers
- Salmonid habitat: uses bull trout, chinook, and steelhead intrinsic potential layers
- Also has data on fish passage barriers

Tool demo – as you zoom in to think about individual streams, you can bring up catchment attributes, and then zoom into BRAT outputs.

For ArcGIS users, you can access the online map description, which will allow you to download the layers into a desktop GIS setting so you can do advanced or custom queries

Link to the DSS tool: <https://arcg.is/1f8S9T>

**Matt Mayfield** – We put together a field survey tool for BDAs using Survey 123, which can be run on a browser or on a mobile device. It works in a fully offline setting, which is helpful out in the field. As you fill out the survey the answers get cached on the device, and then get sent in once you are back in service. You can collect a list of attributes in the field.

There are mandatory questions in the survey, and we also have conditional questions that come up based on answers that you give to previous questions.

There is a worksheet to put in details about where you might put in BDAs.

Attribute list – it is a long list, but we can share:

## Survey 123- Complete attribute list



- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• <b>Distance to nearest road</b></li> <li>• <b>Approx. elevation difference between site and road</b></li> <li>• <b>Beaver relocation considered?</b> <ul style="list-style-type: none"> <li>• Distance to nearest downstream culvert</li> <li>• Distance to nearest upstream culvert</li> </ul> </li> <li>• <b>Is the stream incised?</b> <ul style="list-style-type: none"> <li>• Avg. depth of incision</li> <li>• Max depth of incision</li> <li>• Photo(s)</li> </ul> </li> <li>• <b>Dominant veg type</b></li> <li>• <b>Sufficient abundance of on-site weave material?</b></li> <li>• <b>Weave materials</b></li> <li>• <b>Plant species composition/structure</b></li> <li>• <b>Veg comp. photo(s)</b></li> <li>• <b>Ratio of avg. floodplain width to avg. bankfull width</b></li> <li>• <b>Floodplain photo(s)</b></li> <li>• <b>Relic sidechannels present?</b></li> <li>• <b>Do anadromous species spawn in the treatment reach?</b> <ul style="list-style-type: none"> <li>• Species</li> <li>• Notes</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>Stream lacking hydraulic complexity?</b> <ul style="list-style-type: none"> <li>• Description</li> <li>• Photo(s)</li> </ul> </li> <li>• <b>Sediment accrued behind existing instream structure?</b> <ul style="list-style-type: none"> <li>• Primary/secondary bed grain size</li> <li>• Primary/secondary bank grain size</li> <li>• Photo(s)</li> </ul> </li> <li>• <b>Local sediment needed to aggrade treatment reach?</b></li> <li>• <b>Potential pond width</b></li> <li>• <b>Hydric soils present?</b></li> <li>• <b>Incised relic beaver ponds present?</b> <ul style="list-style-type: none"> <li>• Description</li> <li>• Photo(s)</li> </ul> </li> <li>• <b>Treatment reach in headwaters?</b></li> <li>• <b># channel-spanning BDAs appropriate</b></li> <li>• <b># deflector dams appropriate</b></li> <li>• <b># post-assisted log structures appropriate</b></li> <li>• <b>Avg. width of BDAs</b></li> <li>• <b>Potential BDA(s)</b> <ul style="list-style-type: none"> <li>• Approx. width</li> <li>• Location</li> </ul> </li> </ul> |
|---|--|

Link to access the survey/field data collector APP: <https://arcg.is/1DP9Ky0>

Submissions will be viewable on the web mapping app

**Crystal** – we will send the links to the tools to the group, and would love to get feedback. We spent a lot of time on the tools, and if there are little tweaks that would make it more user friendly, we can do that, and if you see

any errors, please let us know. We need to be scaling up our work, as many people as possible out on the landscape working with our partners, making good decisions of where to locate projects. We need a way to be strategic, and I hope that this will be useful. Please send feedback to Crystal directly: [Crystal.Elliot@tu.org](mailto:Crystal.Elliot@tu.org)

Joe Weirich – what is the information on fish passage?

Kurt – it has to do with stream size and gradient for intrinsic potential, but it doesn't consider whether the habitat is accessible, so looking at the distribution layer can help with that, and the habitat potential gives you a sense that relative quality of the habitat if they were present. The information on the data sets is in the tool, the info button on the tool will bring up data sources with links to the source

Alexa Whipple - How are you evaluating the condition of BDA restoration as to when it may be ready for beaver relocation if beavers haven't found it already? For the next step after BDA installation/implementation, how you are evaluating the condition of the habitat over time so that the site would be ready for beavers in the future?

Crystal – that is a great question that this tool doesn't get at. The data collector could maybe be used to get something like an as-built condition, but it wasn't intended for it. A next step great question that will need to be answered on a site by site basis. I would love to talk with you to see if there was some way to the data collection tool to get at that.

Alexa – I think it would be an easy one to combine with some of the tools that you are presenting here

Chris Johnson – I'm also curious as to whether it could be used to identify where beavers adopt sites that you put in

Crystal – it's not in there, but it's a great thought and we could see if we can use the field data collector to have those post-project elements in there, they do show up in ArcGIS format afterwards, and you can make it publicly available. That would be really useful information

Mike Kaputa – what is the expected longevity of a BDA/PAL?

Crystal – that depends on a lot of factors, and is not covered by the tool

Mike – are the BDAs intended to be temporary until beavers recolonize the area?

Crystal – the tool does not dig into that question, and that is a site specific discussion. There are a lot of conversations right now about various scenarios. It depends on a lot of criteria, and while those discussion need to be had, they are part of the development of specific project objectives and what you are trying to accomplish at a specific site. It's an important question that needs to be determined at the outset of a project; these tools don't get at that, but it's a critical discussion to have.

Pete Teigen – is there a layer to show where beavers have been relocated and/or where BDAs have been placed by various partners to avoid duplicity?

Crystal – that is a great idea, and it could probably happen. The issue comes up of system maintenance and who would be the clearinghouse for that kind of information. Unfortunately we can't lean on Kurt or Matt to maintain the tool in perpetuity. But that's a really important question that I need to figure out the answer to.

Pete – let me know if you start to get into a way to incorporate it into HWS.

Alexa - Checking the box on beavers establishing after BDA restoration would/could be a great and essential metric for efficacy, funding justification, etc... I think that is a great suggestion.

How are you addressing fish passage issues with BDA projects?

Crystal – that is being discussed a lot in the region, but is not currently incorporated into the tool as a potential conflict – there are differing views on that question. I have addressed it on a site by site basis for projects, with regard to specific BDA structures.

Alexa – we are about to enter into a contract with Ecology on a streamflow restoration grant above the anadromous zone, and WDFW has a policy to require full passage for fish through structures. They are going to work with us to help us develop a plan to provide as much benefit as possible and work within their criteria.

Crystal – this is a really important question, and it probably could be a whole MRC topic in and of itself. We need to have a big discussion about it. We have a lot of momentum from DNR, for example, but we need to discuss what does that mean, and there are some opposing objectives even within these state agencies. It would be great to work with UCSRB on having that conversation region-wide.

Pete – I would guess that folks in the other subbasins would likely be seeing things similar from WDFW, maybe I'll reach out to Alexa and Crystal and figure out a good forum to have that discussion.

Chris – think this would be a really good Implementation Team meeting topic

Matt Young – I concur with that

Crystal – I look forward to getting everyone's feedback on the tool

#### Implementation Schedule Update

**Pete Teigen** – I think we got our last year's projects closed out, but look over the spreadsheet that was sent out and if we missed any please email me offline. We pulled the report from the Implementation (IS) from Salmon Recovery Portal (SRP) (rebranded HWS). What I've done is sorted them. We have project names, AUs, ECs, Secondary Concerns, start and end dates, and future resource needs for ongoing projects. Also status; the older projects mostly completed or dormant. I did filter it so we are currently only looking at Methow and mainstem projects. If you see anything that needs to be changed on the list message me or Jessica. We will have the final approval of the list at the December IT meeting and then the UCSRB board will approve at their December meeting. If folks could give final feedback by the very first part of November, that would give us time to finish it.

Discussion – need to check in with the Forest Service to get their project info, Pete will contact Gene

Pete – most of the projects from 2018-19 are still active, and we also have some conceptual and planned out projects.

- People should look at the projects on the spreadsheet (sent out October 16<sup>th</sup> with the MRC agenda) and review to see if their projects are accurate, send any changes to Pete by the week of November 3<sup>rd</sup>.

#### Prioritization Update

**Ryan Niemeyer** – we had the October RTT meeting last Wednesday, and we submitted the prioritization tool to the RTT for review; they will provide comments and any changes to reaches or habitat attribute scores by Nov. 2. We will present the final tool at the November 11 meeting, and then it should be approved. The prioritization tool will be used to update the biological strategy, but it will not change the EC scores for projects at this stage. We talked about each WAT do a feasibility/ranking, but the RTT decided that that would not happen. The idea is that there will not be any explicit feasibility scoring.

Sarah Walker – a while back, the RTT decided not to take on feasibility component. The UC board had started discussions with sponsors in September about advancing discussions around feasibility. After the IT meeting in September, UC Board staff had an internal meeting and decided that this is an important step but we need time for that. There was a placeholder for feasibility workshops, but staff decided that once we get the tool and the first round of projects, then we would have a workshop in the afternoon of December 1<sup>st</sup> after the IT meeting. We want to get things from step 2 out to folks, review it, and then look at what the next step looks like. A pause on any full-force feasibility framework, and incrementally moving forward with dialogue.

Pete – I did a sponsor survey in September to look back at the 2020 SRFB grant round, and there was not a lot of desire to have a separate debrief. We will have an item at the December IT meeting to discuss any issues, and we will have time to talk about the 2020 round and what we are thinking about small tweaks for the 2021 round. Hopefully RCO has a revised Manual 18 out by then.

Another regional update is the Forest Service should be releasing the draft EA for the Twisp Project in the next week or two, hopefully you will have an opportunity to look at the document and provide any feedback.

[Update: the EA is available – the document and information is at

<https://www.fs.usda.gov/project/?project=56554>]

## Roundtable

**Joe Weirich – Methow Beaver Project:** I started in June with MBP; I have worked with them on my thesis for the last three years exploring the potential for beaver dams connected with wildfire

**Matt Young – Colville Tribes:** we were able to successfully close on a property up Beaver Creek this week, which is fantastic, we did it with the help of Chris Johnson, and there was a lot of effort there. I was out last week on the Chewuch Ranch currently owned by the Lundgrens, that property is on the market, and I have engaged with Western Rivers Conservancy to see if there is a solution to possibly acquire that. Early, early days on this; we are still very much in the phase of seeing if there is a path forward on that.

**Maddie Eckmann – Yakama Nation:** We just finished up the Wolf Creek RA and presented it to RTT this month. I hope to have that wrapped up and finished by the end of the year, and it will be shared with MRC. Continuing to work on Golden Doe and Alder Creek project. We are grappling with change in FEMA policy on any sort of rise in the floodplain, and I'm wondering if any other entities have started thinking about that?

Pete – would love to have a conversation to understand more about that

Maddie – I don't have any answers; I'm wondering how it will play out, everyone seems equally unsure

Chris – we're also looking at this, I think this would be an excellent topic for an IT meeting

Pete – would like to talk to folks about that

Chris – right now I would say it is about as clear as mud

**Crystal Elliot –TU:** update from the water project: the Barkley pump station and first phase of the pipeline is up and running, and the project should be mostly complete by spring, Jacqueline is working on water leases for instream flow on Beaver Creek and McFarland Creek.

Other update – there has been a change of ownership on the Red Shirt Mill site, now working through a new set of factors, still working with YN, and will let the MRC know

**Chris Johnson –MSRF:** we have reached the 10% design alternative on the lower portion on the 5 mile reach at Sugar, we will be passing on a portion of those to BPA to engage with them on our Targeted award. This past month with Tributary support, we took a small action at the downstream end of the Sugar levee to allow the mainstem to reengage the historic side channel; we expect the side channel will reengage as flows come up. With Barkley we are continuing to engage with TU and the airport to work on the outstanding easement issues that will allow us to do Barkley Bear Habitat Phase 2 next year.

**Next MRC Meeting: November 17**