



REGIONAL TECHNICAL TEAM PRIORITIZATION SUBGROUP MEETING Draft MEETING SUMMARY

Date: Monday February 10, 2020
Time: 10:00 AM to 3:00 PM
Location: UCSRB and conference call

Members Present: John Crandall, Jeremy Cram, Hans Smith, Catherine Willard, and Tracy Hillman.

Others Present: Greer Maier/UCSRB, Ryan Neimeyer/UCSRB, Robes Parrish/USFWS, Tim Beechie/NOAA, Tabatha Rood/BPA, and Katie McDonald/BPA

Life Stage Workshops

Greer Maier/UCSRB gave an update on the Life Stage Prioritization Meetings. The Entiat Workshop took place on 15 January and the Wenatchee Workshop took place on 17 January. The Methow and Okanogan workshops are planned for later in February. The two workshops that have taken place have gone well. Information on which life stages need to be address and where (at the HUC 12 scale) has been captured in an online WebAp and in notes from the workshop. Once all the workshops are done, the information will go out to the region for review and will come back to the Prioritization Work Group (PWG) for final approval.

There was discussion about the information that was available to inform the priorities assigned. Assumptions made during the workshops about what was limiting productivity and abundance and what priority should be assigned. If a life stage was present (information gathered in Step 1), then the AU defaulted to "Low Priority." The group in the workshop then raised the importance of a given life stage if they felt it needed attention or if it was known or presumed to be limiting. Greer reiterated that this is just the first step in Step 2 and there will be more information gathered later in the process to confirm or deny our original assumptions about what life stages need to be addressed through restoration and protection. There will need to be some level of expert opinion and we will need to be clear about where that is being used in the process and how. Any empirical data available will be used.

Habitat Forming Processes

The group discussed how habitat forming processes will be addressed in Step 2. Greer and Ryan presented a draft approach to the group where both limiting factors and habitat forming processes would be evaluated to develop actions. The group discussed how this might work and whether it would lead us in the same direction or in two different directions in terms of actions. The group also raised concerns about how much time it would take to do both over the next few months. Because the two are linked (habitat and process), the group thought that a habitat analysis would help inform what processes to consider. Tim Beechie mentioned the need to evaluate not just the symptoms but the causes of habitat impairments (threats). Ryan showed the group a table of habitat attributes and how

they are linked to reach and watershed processes. Some habitat attributes like wood, water, and sediment are linked to watershed-scale processes. Others are more driven by reach-scale processes (barriers) or a combination of reach AND watershed processes (temperature). The group decided to move ahead with the limiting factor analysis (habitat evaluation) and then look at the threat or cause of the impairments. In some cases that would lead the group to consider larger questions about process impairments. Although most project sponsors would not be able to implement projects at the scale that might be necessary to address those impairments, other entities like the UCSRB, Forest Health Collaborative, or the Forest Service may look at how to address those process issues through management or restoration.

The group then discussed how the approach would look. They discussed how the conceptual framework would drive the inventory and analysis of habitat data. It was mentioned that there are tools and information that are available to inform many of the metrics the group is discussing (DOT critically environmental deficient areas (CED), LiDAR, CHaMP/ISEMP, riparian models and analyses, etc.). The framework the group is developing will link reach-scale impairments to the cause of those impairments and then develop actions to address them.

Life Stages and Limiting Factors

Next the group discussed how the life stages are currently split and what habitat attributes would be evaluated in Step 2 to assess limiting factors. Greer showed the list of habitat attributes that she had drafted based on input from the last meeting and subsequent input during the workshops. The group edited the document as follows. The importance of access, quantity/capacity, and habitat quality was indicated for each life stage. This list will go out for review along with the WebAp of restoration priorities by life stage.

Chinook Salmon and Steelhead

Adult Migration

Access- yes (barriers limiting access to spawning habitat)

Quantity- no

Quality- no? (no evidence at this time within subbasins)

Holding and Maturation (Spring Chinook in Tribs, Steelhead in Columbia and Mainstems)

Access- yes to off-channel holding in thermal refugia

Quantity- yes near spawning habitat and distributed throughout, adequate for all species during holding

Quality- yes as detailed below

- Deep Pools with cover close to spawning areas
- Undercut Banks
- Temperature- adequate temp or access to thermal refugia
- Cover
- Larger Substrate
- Lack of Predators
- Lack of Harassment

Spawning and Incubation

Access- no

Quantity- yes

Quality- yes

- Adequate Substrate

- Adequate Temperature
- Adequate Flow (depth and velocity)
- Low % Fines
- Low/No Embeddedness
- Lack of Scour
- Low/No Icing
- Pool-riffle channels
- Low/No Superimposition and Hybridization with Summer Chinook

Fry

Access- yes- lateral floodplain inundation downstream of spawning, no unscreened diversions

Quantity- yes

Quality- yes

- Low Velocity
- Shallow water (although fry will use deeper, low-velocity water in the absence of competitors and predators)
- Cover
- Substrate Diversity (fines to large)
- Lack of predators
- Edge habitat and floodplains

Summer Rearing (active rearing)

Access- yes

Quantity- yes

Quality- yes

- Cover- Woody debris, larger substrate, deep pools, surface turbulence, etc.
- Adequate Temperature
- Pool Riffle- Channel Form (they also use other channel forms but not as extensively)
- Flow Heterogeneity- parr move into faster and deeper water as they grow; they select foraging stations in areas with faster adjacent velocities. At night, they select low-velocity areas
- Food
- Side Channels and edge habitat but also deeper water in the absence of competitors and predators.
- Substrate diversity- (fines to large)
- Lack of Predators and Competitors
- Larger steelhead- faster, deeper water with cobble and boulder cover (juvenile steelhead use riffles and cascades more than do juvenile Chinook)

Winter Rearing (winter residency)

Access- yes- primarily downstream movement in fall or early winter but some also move into small tributaries

Quantity- yes

Quality- yes

- Temperature- above freezing
- Interstitial spaces (medium to large substrate with low velocities and low/no embeddedness, large wood)
- Adequate Depth
- Feeding areas adjacent to cover (Low velocity and groundwater areas)

- Lack of anchor ice and frazzle ice
- Lack of scour with ice
- Adequate flow
- Low velocity
- Edge habitat in larger channels
- Side Channel/Off-channel areas that do not freeze or with groundwater connections

Smolt Outmigration

Access- yes- no entrainment

Quantity- no

Quality- yes

- Lack of predators
- Lack of mechanical injury

Bull Trout

FMO (Foraging, Migration, Overwintering)

Access- yes

Quantity- no

Quality- yes

- Adequate Temperature
- Adequate flow
- Lack of Harassment
- Food

Spawning and Rearing (SR)

Spawning Adult Migration (upstream only, downstream is FMO)

Access- yes

Quantity- no

Quality- yes

- Adequate Temperature
- Adequate Flow

Holding and Maturation

Access- yes

Quantity- yes

Quality- yes

- Deep Pools with cover
- Undercut Banks
- Temperature- adequate temperatures or access to thermal refugia
- Cover
- Lack of Predators
- Lack of Harassment
- Larger substrate

Spawning and Incubation

Access- no

Quantity- yes

Quality- yes

- No Brook trout hybridization
- Adequate Substrate Size
- Adequate Temperature
- Adequate Flow
- Low Percent Fines
- Low/No Embeddedness

Juvenile Rearing (~age 0-2)

Access- yes

Quantity- yes

Quality- yes

- Adequate Temperature
- Adequate Flow
- Complexity/cover
- Low/No Embeddedness
- Lack of Brook Trout- predation and competition

Data Sources

Lastly, the group discussed what data are available to inform an evaluation of the habitat metrics identified above. The compilation of data in the next step will be at the reach scale. Greer showed the current reach network, which has been modified for each species based on distribution and IP. She mentioned she would be working with the PWG in the future to confirm what that network looks like before it is finalized (e.g., which streams are in or out of consideration for restoration or protection). Below is a summary of which data sources the group discussed for Access and Habitat Quantity and Quality.

Access: Barrier data are available through the barrier assessment and prioritization effort (Methow, Entiat-pending, and Wenatchee-complete). We will not have this information for the Okanogan in this round of prioritization. We will use expert opinion to get at other types of barriers (e.g., natural barriers, temperature, and flow), although any available data will help.

Quantity/Capacity:

- QRF- only for some life stages (summer parr and spawning) and species
- Geomorphic potential (Morgan Bond/NOAA, etc.)- need to identify which data to use
- Reach Assessments- could be used to identify opportunity to increase capacity
- EDT- already by reach
- IP - could be used but might need to be updated (currently a MaDMC data gap),
- Beechie Class - can give you historical – what the reach should be (i.e., if it's straight, but should be braided)– COULD be used for looking at restoration
- CHaMP tool outputs- need to look into these

Quality: [Need to identify an agreed-upon list of metrics]

- Reach Assessments (REI metrics)- Use REI indicators/PFC classes- Adequate, At-Risk, Unacceptable, would need to consider that some are out of date (will need to note where that is the case and potentially update those RAs in the future)
- Level II surveys- outside of reach assessments
- Biological Strategy- threats and ECs

- Riverscapes?
- CHaMP/ISEMP and PIBO

Greer said that this was a good start and would continue to work with Ryan and come back to the group with more potential data sources. Greer and Tracy are also working with BPA at the moment to identify what data and information BPA can bring to the effort.

Action Items:

- Greer Maier will work with John Crandall to update bull trout habitat requirements.
- Finish Life Stage Prioritization workshops and send out notes and WebMaps for review.
- Run an analysis of QRF at the reach scale (compare to Twisp sites?).
- UCSRB staff will pull together the Reach Assessment data and tie it to the life stage habitat quality metrics identified today.
- Add a riparian assessment to UW SOW.
- Evaluate the R-CAT and other riparian assessment tools.
- UCSRB will re-convene the subbasin workgroups to identify/rank limiting factors and threats.