Meeting Summary

FLOW WORK GROUP

Thursday March 7, 2024

USFWS Office Arcata/TRRP Office Weaverville/MS Teams

Thursday, March 7, 2024: 1:00 PM

Participants*

Core members: Justin Alvarez (HVT), Galen Anderson (USFS), Todd Buxton (USBR/TRRP), Kyle De Juilio (YTFP), Patrick Flynn (Trinity Co.), Ken Lindke (CDFW, coordinator), Seth Naman (NOAA)

Other participants: John Bair (McBain Assoc.), Mike Dixon (USBR/TRRP), Chris Laskodi (USBR/YTFP/TRRP), James Lee (USBR/TRRP), Eric Peterson (USBR/TRRP), Oliver Rogers (USBR/TRRP), Ty Wallin (USFWS, notetaker), Veronica Yates (HVT/TRRP)

* List may be incomplete.

Summary of Meeting by Agenda Item

Review of hydrologic conditions

Presentation by Lindke:

- Precipitation still over 100% of April 1
- No B120 available yet. Looking at CNRFC, prediction dropped on 3/6. The CNRFC forecast is usually higher than the B120. Normal might be more likely now following the drop, but Wet is still most likely.

Review candidate hydrographs for WY24, discuss, select hydrographs for recommendations to IDT and TMC

- Lindke began discussion by stating he could not support any full release of ROD volumes limited to after April 15th knowing that it is detrimental to fish at this time of year. The workgroup made its technical recommendation and TMC did not adopt it. He does not support recommendations that are not based on the best available science to leverage the flexibility we have with water management, which was demonstrated by WVF implementation in WY23. He will still contribute to the workgroup process and present a workgroup decision to IDT and TMC.
- De Juilio expressed support for Lindke's position. The Yurok Tribe will not support an official recommendation to release the full volume after April 15th, but he will still help with the process. He would only formally oppose recommendations that include a steep drop in flow (i.e., the ramp down from the habitat bench in the 2000 ROD schedule), or do not have DSS modelling to support.

- Naman also supported not making a recommendation to TMC for full ROD volumes after April 15th. He added that we can provide TMC with options that have been considered in the past and modelled, but we don't need to accompany that with a recommendation. We've already made our recommendation that was based on the best available science.
- The 2016 Wet hydrograph was presented. No DSS results yet. There is variability and small peaks. Objectives stated in 2016 were focused on "keeping the river cool." Production of food for juvenile salmon on the descending limb.
- The 2019 Wet hydrograph was presented with DSS results. It had a more modern shape with multiple peaks.
- The "TB Wet" hydrograph was presented by Buxton. It was a modification of the 1912 hydrograph observed at Lewiston with a modification to allow installation of equipment for Buxton's hyporheic flow study (drop to 500 cfs for one week toward the end of the spring recession). The equipment and installation is new so one week is extra cautious. Bair noted that the drop would be bad for riparian vegetation. It would kill anything recruited prior to the drop. De Juilio noted that it would also be bad for FYLF if they lay eggs before the drop. Eggs would get desiccated. Lee noted that if eggs are deposited during the drop to 500 cfs, they would likely be scoured when the flows go back up. Yates offered to run FYFAM. Someone noted that it looks like a middle finger and seems to be doing all the wrong things. A lot of water is pushed into May, making the river colder. The fast receding limb is not ideal for fish, frogs, or plants. Dixon noted that emulating a natural hydrograph is not inherently good. Naman pointed out that a 1912 hydrograph likely doesn't provide benefits that may have been provided in 1912. The channel and temperature regime is completely different. Lindke added that adopting just the snowmelt portion of a natural hydrograph ignores the 4 months prior. De Juilio asked why it gradually builds up to a peak rather than front loading the peak. Peterson noted that it gradually wets floodplains, scours periphyton in the channel and has an unknown effect on fish. Buxton stated he would support other hydrographs if they could be modified to include the drop to 500 cfs to install equipment.
- The "HVT Wet" hydrograph was presented by Alvarez. It is a modification of the 2011 "Wet 8.5" hydrograph. It starts April 16th, the recession limb is better for plants, and there's a 600 cfs bench through mid-August. The 600 cfs bench is intended to prevent riparian establishment at the 450 cfs elevation and encourage recruitment at higher elevation, widening the riparian area. There is potential for mortality of established narrow leaf willow by inundation rather than scour. Someone expressed concern that the Yurok may not support if it is not modelled. De Juilio said he would advise leadership that it is close enough to the hydrograph that was already implemented in 2011. Someone expressed concern that the extended 600 cfs release could delay FYLF metamorphosis by keeping temps lower. Buxton noted that 600 cfs through summer could compromise diurnal temperature variability as compared to 450 cfs.
- The 2016 Extremely Wet hydrograph was presented without fanfare. No objectives were found in meeting notes or otherwise and it was presumed to be the same as 2016 Wet, possibly just a scaled-up version. No further discussion.
- The 2017 Extremely Wet hydrograph was presented with DSS results for two hydrographs. It was unclear which results were for this hydrograph. Dixon noted that it looked like the hydrograph that was actually implemented. No further discussion.
- The "TB Ex Wet" hydrograph was presented, which was a scaled version of a natural hydrograph. De Juilio noted that taking a natural hydrograph and applying it in a different

channel and scaling it changes everything. Naman noted that the snow melt decrease is not representative of what actually happened.

- The "HVT ExWet" hydrograph was presented, sometimes referred to as the "Bart Simpson hair" hydrograph, which was good for willow recruitment.
- Lindke presented the 2019 "Norm1912" hydrograph, which was the most recently modeled Normal hydrograph. This was added for consideration at the last minute in response to the drop in the CNRFC forecast, just in case. The 2019 Normal "OffChan" hydrograph was also presented.
- Lindke suggested we only consider Wet hydrographs first. It is the most likely and we're limited in time.
- Buxton proposed the "HVT Wet" hydrograph, modified for installing the hyporheic flow study equipment. He asked if those modifications would trigger re-modelling needed for Yurok support. De Juilio responded that if the modellers could justify that it is not necessary, then there would be no need.
- Naman stated that the workgroup should not make any recommendation to TMC. We already made a recommendation based on the best available science twice. There is nothing in the ROD or EIS saying the workgroup must make a recommendation. TMC can look at what they have done in the past and decide for themselves.
- Buxton responded that a "if you don't take what we want then we aren't going to provide you anything" mentality is "acting like babies" and "being unprofessional." Lee suggested we should do the best we can to provide the best available hydrograph we can.
- Lindke responded that we are adults and can handle our recommendations not being accepted. His position remains that full ROD volumes after April 15th is detrimental to fish, and that is why he will not support a recommendation. Our task is to make technical recommendations based on science, not capitulate to politics or economic concerns. That is a policy decision beyond the scope of technical workgroups. He also noted that TMC passed a motion to NOT implement 300 cfs all winter until mid-April, so making a recommendation including this schedule would be against the will of TMC.
- Alvarez noted that Radley Ott at the December TMC meeting was sure to make TMC provide guidance to the Flow workgroup. We would have water to use with or without WVF. A failed motion isn't the same as actions.
- Peterson relayed discussion from the February TMC call that the workgroup was to do the best they could to spend the water.
- Rogers noted the workgroup manual offers a path for dissenting opinions and when a consensus cannot be reached. Lee suggested those in opposition write a minority opinion to provide a record of workgroup concerns so opponents could keep their scientific integrity intact.
- De Juilio stated that the January TMC call did not provide guidance or values to follow in hydrograph development.
- Buxton asked that if opponents cared for the river, why didn't they present a hydrograph, noting that we have been under spring flow constraints since 2000.
- Lindke responded that new information has come to light and analyses in the WVF report have convinced him that full ROD volumes in spring are detrimental. Reclamation has also demonstrated that better flow management for fish and the ecosystem can be implemented (WY23 WVF implementation).
- Naman reiterated that it is OK to provide TMC with options without at recommendation.

- Discussion ended with no opposition to presenting the "HVT ExWet", 2012 Normal, and "HVT Wet" with modification for installing hyporheic study equipment to TMC as options.

Timing of diurnal flow variability

- The group needed to decide when to start diurnal variability and when to end it. It has to end early to prevent spring Chinook from getting trapped behind a broken screen. Once they get stuck behind the screen it is very difficult or impossible to get them out, even when trying to entice them out by reducing flow.
- Lindke relayed that after discussion with other CDFW staff they recommend stopping diurnal variability by May 31st. That is about the earliest we see spring Chinook arrive near the hatchery.
- Buxton suggested starting the variability on April 8th, which would give 55 days of variability. He noted that scheduling and implementing diurnal flows is very labor intensive.
- Buxton agreed to schedule diurnal flow variability through May, and asked that hydrograph developers need to develop subdaily schedules and ensure that volumes are correct. He has a spreadsheet that can be used and is willing to provide guidance.

Guidance to Trinity Co. on flow management requests

- There was a request to start planning for WY25 ASAP. TRRP plans to request the County bring well defined sideboards to TMC for consideration by the Flow Workgroup when developing WY25 recommendations.
- Lindke expressed interest in interaction between the County and flow planning staff to ensure that what the County presents is actionable, without influencing their position. It would just be to make sure there is sufficient detail and that sideboards could be implemented physically and within EIS coverage.
- De Juilio emphasized that the final direction or decisions need to come from TMC. He would like TMC and Reclamation to make clear how water will be spent (i.e., regular ROD schedules vs. WVF) by the beginning of the water year, October 1st.
- De Julio noted that previous sideboards provided by the County were workable, but they were incomplete. He suggested the County reach out to workgroup members in their official capacities outside of the workgroup.
- Buxton noted that we are not here to do what the County says, but rather to work with the County for an agreeable action for the County and the river.

5:00 PM Adjourn