

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

October 20, 2021

Facilitator's Summary

Facilitator: Emily Stranz; Notes: Colby Mills

The following Facilitator's Summary is intended to capture basic discussion, decisions, and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: <http://pweb.crohms.org/tmt/agendas/2021/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes

TMT Members approved the official meeting minutes for the July 9 and August 4 meetings, and the facilitator's summary for the October 6 meeting.

Chum Operation

Doug Baus, Corps, reported on coordination for the first phase of chum operations. Operations begin (as described in the BA) the first week of November, or when chum arrive. Coordination for the spawning phase will be from November through December, and will transition into the incubation phase from January through April, 2022.

Average outflow at Bonneville Dam for the month of October has been 89.8 kcfs, with an associated project tailwater average of 8.5 feet. Current forecasts show precipitation on the horizon, and the RFC inflow forecast for the next 10-days is between 80 kcfs and 121 kcfs. Snake River inflows have been relatively low; the forecast for Lower Granite is between 15 kcfs and 19 kcfs. Doug noted that for chum operations, if flows from the Snake and Willamette rivers are low, the balance must be made from the upper Columbia River, although as other TMT members noted, the Snake River input is typically relatively small. Also of note is the Willamette River at Salem, where forecasts for the next 10-days show a discharge range of 6 kcfs to 30 kcfs. Additionally, with dry soil conditions, there is a lot of uncertainty surrounding the effect of precipitation on these initial stream flow rises. Joel Fenolio, BOR, noted that relative to WY 1991, Grand Coulee inflows are in the bottom 20th percentile, while flows into Ice Harbor are in 15th percentile. Tony Norris, BPA, reported Hamilton Creek is flowing, and more so with forecasted precipitation, which will help contribute to hyporheic flow in that area.

RFC forecasts for the next 10-days show significant and well above average precipitation in the Columbia River basin and west of the Cascades. Climate forecasts for both the 6-10-day and 8-14-day outlooks show a probability of below average temperatures and above average precipitation. The 3-4-week outlook is consistent with these forecasts as well. Charles Morrill, WA, noted that FPAC is aware of the current situation and advocates for patience to see how forecasts develop.

Charles reported a few chum have been counted passing over Bonneville, with some chum in the lower river. Chum have not been seen in the Ives Pierce area; they typically show when there is enough water, in early November. Except for Oregon, those present at yesterday's FPAC discussion (Colville Tribes were not present at FPAC) did not object to starting chum spawning operations on November 1, assuming that flows increase, and operating to the 11.3 ft (11.5 ft with buffer) tailwater minimum. Action Agencies noted they prefer a start date of November 2 or 3 with the operating range of 11.3-13.0 feet. However, due to the inflow uncertainties, Salmon Managers think it is prudent to not make any decisions on chum operations until next week; Action Agencies agreed.

Kirk Truscott, Colville Tribes, raised concerns on behalf of the Tribes regarding the risks to Grand Coulee refill, power production, and effects on resident fish rearing and spawning. Claire McGrath, NOAA,

noted that NOAA does not support “hardwiring” a start date, emphasizing the need to consider each year’s water and fish conditions. Erick Van Dyke, OR, also raised concerns about the intent to protect riverine species and restore riverine requirements, noting that when fish are present and water is low, they are not able to access the habitat, and monitored areas. Charles added that it takes 2-3 days after the habitat is wetted for the chum to move into the area, but that they will start spawning as soon as they arrive onsite.

TMT Members decided to schedule a meeting next Wednesday to finalize the start of chum operations. This will allow more time to see how the precipitation plays out.

→ **ACTION**: TMT will meet next Wednesday, October 27 at 9:00AM to continue the conversation and decide a start date for chum operations. TMT Chair, Doug Baus, will facilitate this meeting.

Steelhead Spill

Dan Turner, Corps, reported that the AAs are implementing adult steelhead spill on the lower Snake River and at McNary Dam. There have been some exceedances of the 110% TDG criteria in the tailrace of Lower Granite and Lower Monumental dams. Lower Granite switched from consecutive 4-hour blocks to 2 2-hour blocks, which seems to have reduced TDG. The project will return to 4 consecutive hours and see how TDG reacts. Lower Monumental has had 3 exceedances of 110% in a row; starting tomorrow, the project will switch to 2 2-hour blocks in an effort to bring TDG down. Other than these exceedances, operations at other projects have not resulted in higher TDG levels.

Salmon Managers strongly encouraged the Corps to talk with WA Department of Ecology to discuss the intentions of WQS. The Nez Perce Tribe and NOAA shared concerns that splitting up the 4-hour block is degrading to the intent of the operation and will not be as effective for steelhead, and that there is not enough data to analyze the effects on fish.

→ **ACTION**: Dan and Charles will connect with their policy representatives regarding conversations with WA DOE.

Questions or comments from members of the public: There were no questions or comments from members of the public.

**The next scheduled TMT meeting is a conference call on October 27, 2021, at 9:00 AM.
This meeting will be facilitated by TMT Chair, Doug Baus (Corps).**

Columbia River Regional Forum

Technical Management Team DRAFT OFFICIAL MINUTES

October 20, 2021

Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)

Today's TMT web meeting was chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees.

1. Review of Official Minutes and Summaries

Official minutes from the July 9 and August 4 TMT meetings were approved as well as the facilitator summary from the October 6 meeting.

2. Chum Operation - Doug Baus, Corps; Joel Fenolio, Reclamation; Claire McGrath, NOAA; and Tony Norris, BPA

The BiOp calls for chum operations to begin the first week of November or when chum arrive. The spawning phase occurs November to December and then operations transition to incubation protection. During spawning, the BiOp requires Bonneville Dam outflows to provide a sufficient tailwater elevation for chum access to spawning habitat in the Ives/Pierce Island complex.

Bonneville Dam average outflows for October have been hovering around 89.8 kcfs. The tailwater has been at 8.5 ft., on average.

Precipitation is forecasted for the region, but the RFC inflow forecast at Bonneville Dam is 80-120 kcfs over the next 10 days. At Lower Granite Dam, inflows have been low and are forecasted to be between 15 kcfs and 19 kcfs over the next 10 days. When the Snake River cannot provide adequate flows for chum operations, the flows mostly come from the Upper Columbia.

The Willamette River at Salem is forecasted to range from 6 to 30 kcfs over the next 10 days.

Tony Norris, BPA, reminded the TMT to be cautiously optimistic as this is some of the first precipitation of the season and there is some uncertainty as to how dry the soil is and how much of the precipitation it may retain. Baus agreed, adding that stream flows may not increase as much as expected due to the dry conditions that persisted this year.

Joel Fenolio, Reclamation, added that inflows at Grand Coulee Dam are in the bottom 20th percentile of observed years since 1991. At Ice Harbor, they are in the bottom 15th percentile. This means streamflow is low and streams are not as robust due to water retention in the soil.

On a better note, there are some signs water is flowing through Hamilton Springs. Historically at this time of the year, this has been an issue, but it does not look to be an issue this year. Incoming precipitation may contribute to flows in the Hamilton Creek area and keep the springs running.

Climate forecasts show above average precipitation and below average temperatures in the 6-10 and 8-14 day period. The 3-4 week forecast shows the same.

Charles Morrill, WA, reported no observed chum in the Ives/Pierce Island complex, which is not surprising due to water levels. FPAC discussed chum at their meeting yesterday and agreed that incoming precipitation is promising. With the exception of OR, the group agreed that it would be best to increase flows to that of the 2020 operation [11.5 ft. to 13 ft. in the Bonneville tailwater starting November 1. The buffer for this operation goes down to 11.3 ft.]. Last year's operation is available in full on the TMT agenda. Due to uncertainty, Morrill believes the decision should be delayed until next week. He opened the floor for other FPAC members to discuss their concerns and thoughts, noting that Colville Tribes were not present at yesterday's FPAC meeting.

Kirk Truscott, Colville Tribes, reminded the TMT that Sheri Sears (the Tribe's former TMT representative) has retired. Truscott is concerned about the 11.3 ft. minimum elevation. Due to the uncertainty of forecasted flows, the Colvilles are concerned about what this would mean for discharge out of Grand Coulee Dam and how the operation would impact both juvenile and adult fish that may be dewatered and stranded in tributaries. If the operation continues into December, he noted that redds could also be stranded. He added concern for risk to refill and elevation at Grand Coulee, which would affect spring and summer 2022 operations. Lastly, he noted that the tribe has a 181B agreement in place for power production and sales and is not sure how this operation will impact power production at Grand Coulee or that agreement.

Norris responded by noting that the current STP shows Grand Coulee drafting up to half a foot per day, initially, to support the chum operation. In the past, the TMT has preferred Grand Coulee elevation be maintained at a minimum of 1,283 ft. through mid-November. This is why it is important for the operation to be discussed and coordinated annually. Starting the operation prior to chum arrival can unnecessarily draft water from Lake Roosevelt, lowering the reservoir's elevation. Norris added that if the operation is started too early this year, it could impact the ability to stay above 1,283 ft through mid-November.

Norris reminded TMT of the special conditions that attract chum to the Ives/Pierce Island complex. While other fish can spawn in the area, it is the warm water upwelling that attracts the chum. The area near Cascade Locks was created by landslides and the river in that section contains gravel. When precipitation has been high enough, the warmer water comes up through the porous gravel and that is what attracts the chum. Each year, the start date of the chum spawning operation is coordinated at TMT. In the past, it has started as late as November 7. As in the past, the group could wait for calls from the survey crews to start the operation. Norris noted that there is a survey crew out this week. He will have information from that survey available for TMT next week.

Truscott added additional concerns after the clarification from Norris, noting that he would not want to see Grand Coulee continually drafted in order to support the Bonneville tailwater. Norris responded by noting that chum are an ESA-listed species and are a higher priority. He added that the forecasted draft to elevation is 1,270 ft. by the end of December has been seen in the past. In dry conditions such as this, BPA tries to minimize impacts to Grand Coulee by leveraging environmental factors to the best of its ability, including tide, wind, contributions from the west slope of the Cascades, and the Willamette River.

Truscott asked if it is possible to use the storage capacity in the lower Columbia reservoirs to support the chum operation and reduce the draft of Grand Coulee. Norris noted that the limited

storage in the lower river is used daily to achieve the tailwater below Bonneville Dam. Regarding the storage behind Grand Coulee, we also have to be careful not to be too full to avoid setting a higher chum spawning elevation. Whatever elevation chum spawn at must also be protected and maintained during incubation so if the chum spawn too high, the higher protection level can increase the risk to spring refill.

Norris added that while some people think of Grand Coulee as a headwater reservoir similar to Dworshak Dam, it is more of a re-reg dam for the upper Columbia Basin. The project provides the last opportunity to manage high precipitation events. The Action Agencies need to be able to leverage storage as needed to absorb big precipitation events, which typically happen in November and December in western Oregon and Washington. With 11 days left in the month, the Action Agencies are trying to position Grand Coulee so that it can meet augmentation requirements 3-4 weeks out while attempting to avoid drafting Grand Coulee below 1,283 ft. before mid-November. As of yesterday, Grand Coulee was at elevation 1,284.3, which is about 2 feet lower than the median observed at this time over the past 11 years but is expected to continue to fill until the start of the chum operation.

Claire McGrath, NOAA, noted NOAA's stance is that conditions need to be monitored each year and a start date coordinated based on data and what survey crews are seeing for the exact reasons that Truscott mentioned (reservoir storage and conditions at Lake Roosevelt). As she mentioned last year, it is important to be judicious about using water early. NOAA does not believe in "hardwiring" a start date for the operation each year. For instance, some fish managers have suggested that the operation should start on November 1 each year. NOAA does not support that.

Jonathan Ebel, ID, added that from his perspective, the contribution from the Snake River is minimal compared to that of Grand Coulee. He said not to expect much water from the Snake system, even with the incoming precipitation. Norris noted that when the Snake rises in winter, precipitation events can minimize the contribution required at Grand Coulee to support chum spawning and incubation.

Grand Coulee drum gate maintenance is not forced this year but would occur if the FRM elevation for April 30 is at or below 1,265 ft. If that happens, the project would be drafted heavily to meet FRM but it is still way too early to tell. If maintenance is not completed this year, it will be forced next year.

Erick Van Dyke, OR, commented that he appreciates what has been done for chum but that appears to not be enough. He noted that OR differs from others on this issue because the intent of this operation is to protect riverine species and OR sees the actions as lackluster given that. He would like to see some of the riverine requirements restored. When fish are present and water is low, the fish are not able to access habitat and OR continues to be concerned about that. OR would like to provide for fish when they are in need and noted that fish that pass Bonneville may be ignored under the assumption that they are headed elsewhere to spawn. Van Dyke inquired into the Banks Lake operation, which is currently about 1.5 ft. above average but still operating within the 5-foot operating band that it is restricted to. Van Dyke reiterated concerns he voiced last year regarding the 11.3 ft. minimum. OR considers operating to 11.3 instead of 11.5 to be a de minimis action. It is OR's belief that the additional 0.2 ft. could be important in mitigating impacts to chum. Van Dyke said he believed the change started around 2018. Norris clarified

that Van Dyke's insistence that 11.5 feet is the intended operation in the BiOp is not factual. Norris noted that since the beginning of the operation, when the Action Agencies began targeting a tailwater elevation in lieu of a flow rate, they used a 0.4-foot operating band of 11.3 ft. to 11.7 ft. Hearing this, Van Dyke noted that he started at OR's TMT representative in 2013 and that it sounds like this was part of the coordination discussions that may have occurred before he was on the team. He was not personally aware of the previous discussions regarding the 11.3 ft. minimum. That said, he still takes issue with it because it was used as the basis for work done in the region, for instance habitat work.

Morrill added chum will not move until the 11.3 ft. operation is in place. Once chum sense upwelling, it takes them 2-3 days to respond and move. Thus, the sooner water is in place to support the chum, the sooner spawning can be supported.

The Action Agencies shared their perspective that it would be prudent to start the chum operation on November 2 or November 3 with a target tailwater range of 11.3 ft. to 13 ft. Norris receives reports from the field from the previous week each Monday. Holding off a week to make a decision on when to start the operation would allow time for this report to come in and would also bring some clarity on how the system is responding to precipitation. Ebel asked how a November 2 or November 3 start date may benefit power sales. Norris responded that there is a potential consequence to Lake Roosevelt of losing 0.5 ft. per day and a risk to remaining above 1,283 ft. through mid-November. He added that while it would not be ideal to move water on Sunday (October 31) but it is not as simple as distilling it into a power sales component, noting that precipitation can override everything.

Stranz encouraged additional questions to be addressed offline over the next week. A TMT call will be scheduled for next Wednesday to revisit the chum operation.

3. Steelhead Spill - Dan Turner, Corps

Dan Turner, Corps, reported on Steelhead Spill at the Lower Snake and McNary dams. There have been some exceedances of the 110% TDG criteria in the tailrace of Lower Granite and Lower Monumental during this operation. This continues from what Turner reported at the last TMT. The Corps has been addressing the exceedances by trying different operations. At Lower Granite, the Corps switched to two 2-hour blocks during the last three spill days, which reduced TDG to at or below 110%. The Corps will revert back to 4 consecutive hours to see if environmental conditions have changed enough to allow for that. At Lower Monumental, there have been three consecutive exceedances of 110% TDG, so the Corps is going to switch to two 2-hour blocks starting tomorrow. Other than those two projects, the operation has not resulted in any TDG exceedances.

Morrill asked what is causing the TDG fluctuations. Turner said his team has looked at flow rate, temperature, barometric pressure, and forebay elevations and has not pinpointed anything obvious as to why these two projects are exceeding. Morrill wondered if the gage is accurate. Turner responded that the gages are checked regularly and added that the bounces observed in the data are due to steelhead spill that occurs three days a week for four hours in the morning. When not spilling, the TDG is lower. The small changes of 1% or so are not surprising, said Turner; it is usually driven by environmental factors out of the Corps hands.

Morrill asked if the Corps had reached out to WA DEQ. Turner has raised the issue to the policy team and they are discussing next steps. Turner asked if Morrill had reached out on his agency’s behalf. Morrill said someone from his team was reaching out but that he has no update. Jay Hesse, Nez Perce, strongly encouraged the Corps and WA DEQ to communicate, particularly regarding expectations of TDG and spill for fish passage. Hesse said he is not thrilled about splitting the 4-hour block into two 2-hour blocks and believes it is degrading the intent of the spill operation. McGrath added that she expects communication between the Corps and WA DEQ, as well and shares the concern that two 2-hour blocks may not be as effective. She added that there are not many data points currently. Stranz added an action item for both Morrill and Turner to reach out to their policy folks again regarding coordination.

Today’s Attendees:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Claire McGrath, Trevor Conder
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	Kirk Truscott
Warm Springs Tribe	Jen Graham
Kootenai Tribe	Absent
Spokane Tribe	Absent

Other Attendees (non-TMT members):

Corps – Alexis Mills, Aaron Marshall, Dan Turner, Chris Peery, Scott St. John, Greg Hoffman
 DS Consulting – Emily Stranz (Facilitator), Colby Mills
 BPA – Melissa Haskin (Notetaker)
 Portland General Electric – Ruth Burris
 Nez Perce Tribe – Anthony Capetillo
 Yakama Nation Fisheries – Tom Iverson
 Columbia Basin Bulletin – Mike O’Bryant
 Snohomish PUD – Mike Shapley