COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
October 25, 2023
Facilitator's Summary
Facilitation Team: Emily Stranz & Colby Mills, DS Consulting

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/2023/. 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 and facilitator summary from the October 4 meeting.

Chum Operation – Doug Baus, Corps, reported on current conditions at Bonneville Dam. Outflows today are averaging 90 kcfs with a project tailwater elevation of 8.7 feet. The NWRFC inflow forecasts for the next three days are around 80 kcfs, increasing to 130 kcfs on November 1. Doug noted that the increase in Bonneville Dam outflows is reflecting assumptions of Grand Coulee outflows associated with the start of the chum operation, rather than a result of current precipitation in the forecast.

The 10-day meteorological forecast shows precipitation and cooling temperatures in the Columbia River Basin. Forecasted snow levels will drop over the next 5 days down to near sea level. Although there is projected rain and precipitation over the next 10-day period, the 10-day QPF shows some divergent effects: below average precipitation in the upper Columbia, and average to above average precipitation in the south and mid-Columbia. The 5-day QPF shows most precipitation falling into southern and southeastern ID, and the upper Columbia in OR and WA are well below average.

Climate forecasts for the next 6-10 days show a probability of below average temperatures throughout the Columbia Basin with variability in precipitation; a probability of above average in the western basin, near normal in the central portion, and below average in the east. The 30-day outlook shows a probability of above average temperatures and equal chances for precipitation.

Joel Fenolio, Reclamation, noted that any opportunity to save water now, given the dry fall and anticipated dry and warm winter, could help mitigate a need for abandoning chum later on in the winter. Tony responded that the real savings in draft is the delay in starting the 11.3 feet elevation operation, saving 4-5 feet by the end of November from start of chum operations on November 1. Erick Van Dyke, OR, noted that from Oregon's perspective, this operation is about water management and should be considered as such, rather than an operation for chum. Kelsey Swieca, NOAA, noted the need to balance the chum operation with spring flow augmentation out of Grand Coulee, emphasizing that the situation is dynamic and TMT may seek a more conservative approach to water management given the start of this water year.

Charles Morrill, WA, noted that chum surveys are not relevant at this point, as there is no access to the Ives Pierce area. WDFW does not expect to count chum until the tailwater elevation is raised. Charles walked through a draft operation (posted on the TMT website). The draft proposes to start the chum operation at Bonneville Dam, on November 1 at 0600 hours, in the following order of operating ranges as project outflow increases:

1) All hours operate project outflow to provide a tailwater range between 10.3 – 11.2 feet.
2) If necessary to increase outflow, operate to provide a tailwater range between 11.3 – 13.0 feet. If this elevation is not achieved by November 13 at 2359 hours, operate to provide a tailwater between 11.3 – 13.0 feet, effective November 14 at 0001 hours.
3) If necessary to increase outflow, tailwater may be operated up to 16.5 feet during nighttime hours (1700-0600), concentrating highest elevations around 2400 hours.

4) If necessary to increase outflow, tailwater may be operated up to 18.5 feet during nighttime hours.
5) If increasing river flow precludes the ability to manage the tailwater in the above steps, operate to provide a tailwater range between 13.0 – 16.5 feet during daytime hours (0600-1700) and up to the maximum within project 24-hour ramp rate limits during nighttime hours.

Charles noted that operating to an elevation of 10.3 feet actually provides an elevation of about 10.5 feet. The key operational change from past years is starting at 10.3 feet elevation, instead of 11.3 feet. WA will be monitoring spawning grounds and will provide an update to FPAC and TMT. There were no objections on the proposed operation from TMT members.

Tony Norris, BPA, noted that real time operations teams will need guidance on outcomes that could trigger the need to transition to the typical 11.3 operating range, if there is a temporary exceedance of the 10.3 – 11.2 feet operating range prior to November 13, so that fish aren't stranded upstream after having temporary access to higher habitat. FPAC needs further discussion on an acceptable duration of exceedance before transitioning to a higher tailwater elevation; they will add this to their October 31 meeting agenda.

- **ACTION**: Next Tuesday, FPAC will further discuss criteria for the duration of exceedance above a tailwater elevation of 11.2 feet. Details on actions for exceedance of 11.2 feet will be finalized at the November 1 TMT.
- **ACTION**: AAs will move forward with plans to implement the coordinated chum operation, starting to target a tailwater range of 10.3 – 11.2 feet on November 1, looking to increase up to 11.3 – 13.0 feet on November 14.

Operations Review – *Reservoirs*: Joel Fenolio, Reclamation, reported on Bureau of Reclamation projects:

- **Hungry Horse**: midnight elevation was 3,539.3 feet, with inflows low and averaging around 560 cfs, and releases at 2,400 cfs as the project operates to Columbia Falls minimums.
- **Grand Coulee**: midnight elevation was 1,284.5 feet, with inflows hanging around 58,000 cfs over the last 5 days and releases averaging about 50,000 cfs. The project is storing slightly across the week.

Lisa reported on Corps of Engineers projects:

- **Libby**: midnight elevation was 2,438.4 feet, average inflows of 8.7 kcfs, outflows of 4.0 kcfs;
- **Albeni Falls**: midnight elevation was 2,054.4 feet, average inflows of 7.2 kcfs, outflows of 18.9 kcfs;
- **Dworshak**: midnight elevation was 1,515.9 feet, average inflows of 1.2 kcfs, outflows of 1.7 kcfs;
- **Lower Granite**: average outflows of 15.6 kcfs;
- **McNary**: average outflows of 75.1 kcfs; and,
- **Bonneville**: average outflows of 77.1 kcfs.

Water Quality: Dan Turner, Corps, had nothing to report.

Fish: Kelsey reported that for adults, fall Chinook, coho, and steelhead are all passing in declining numbers. At Bonneville, fall Chinook YTD is 102% of the 10-year average, 124% for coho, and 71% for steelhead. At Lower Granite, fall Chinook YTD is 125%, 181% for coho, and 86% for steelhead. For juveniles, sub-yearling Chinook are still moving through the system in relatively low numbers. Kelsey noted a bump in passage at Lower Granite, with the index reaching the mid-200s last week before dropping to 100 or less per day.

Power System: Tony reported colder temperatures and wind generation with incoming weather fronts.

Questions and Comments from Members of the Public – There were no questions or comments from members of the public.

The next scheduled TMT meeting is on November 1, 2023, at 9:00 AM.

Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, October 25, 2023
Minutes: Andrea Ausmus, BPA (contractor, CorSource Technology Group)

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. **Review Summaries and Minutes – October 4**

    - October 4 – Approved

2. **Chum Operations -** *Doug Baus, Corps-NWD; Tony Norris, BPA; Joel Fenolio, BOR; and Kelsey Swieca, NOAA Fisheries*

    Baus explained that the goal for today is to plan both a start date and start elevation for Chum Operations.

    a. Bonneville Dam - Hourly Data - *Baus*

        - Outflow: 90 kcfs
        - Tailwater elevation: 8.7 feet
        - Baus shared a reminder that we use the 'Project Tailwater Elevation' measurement listed in the far-right column and not the one listed as 'Tailwater Elevation' in the fifth column for these conversations.

    b. NWRFC - Inflow Forecast- *Baus*

        - RFC Inflow Forecast (Ten-Day)
            - Inflow Low: 80 kcfs (Next 3 days)
            - Inflow High: ~130 kcfs
                - Note: This number was reflecting some assumptions on the initiation of the chum operation, assumes some outflows from Grand Coulee Dam. This is not a result of any precipitation from today and may not reflect any current precipitation.

    c. NWRFC 10-Day Meteorological Forecast – *Baus*

        - Good news – there is precipitation throughout the Columbia Basin.
        - In addition, there are cooling temperatures.
            - Forecasted snow levels over the next five days, or so, will come down to near sea level.

- Baus said that he did see snow falling on the news at Government Camp. We are getting snow at lower elevations.

- As it relates to precipitation for this time of year levels are below average.

d. RFC Forecasted Precipitation Summary – *Baus*

- 10-day QPF (Percent of Climatology) -- as it relates to percent of average
  - Over the ten-day period while we are seeing precipitation throughout the Columbia Basin you can see some divergent effects.
  - Upper Columbia is well below average precipitation.
  - Areas in the middle and southern portions of the basin there is average to above average precipitation.
- 5-day QPF (Percent of Climatology)
  - Over the next five days, most of the precipitation is falling into southern and southeastern Idaho.
  - While the Upper Columbia, Washington, and Oregon are well below average precipitation.

e. NWRFC Climate Forecast – *Baus*

- 6 – 10 Day Outlooks:
  - Temperatures – probability of below average throughout the Columbia Basin.
  - Precipitation – there is some variability,
    - Western portion of the Columbia Basin there is a probability of above average precipitation.
    - Near normal probability in the central regions
    - Southeastern Idaho, for example, there is a probability of below average precipitation.
- 30 Day Outlooks (released October 19):
  - Longer term outlook for temperatures probabilities is above average.
  - Precipitation probability is equal chances.

f. Chum Salmon Spawning Ground Surveys - *Morrill*

- Chum surveys are not pertinent at this time, there is no access to Ives/Pierce area.
- WA has engaged in discussions with FPAC, Norris/BPA, Corps, and NOAA.
- Washington does not expect to count chum until we raise the tail water elevation.

g. Proposed TMT Coordinated Chum Operation – *Morrill/Baus/Norris*

Baus caveated that this is a draft based on comments captured during the coordinated FPAC meetings and pre-TMT and will likely require changes based on comments made in TMT today.

- Morrill said beginning with FPAC, continuing with the pre-TMT discussions with Kelsey Swieca at NOAA and other members of FPAC, and the feedback that was received from Norris about what is feasible from an operations standpoint, this is what has tentatively agreed to be brought as the chum operation proposal today.
- Starting on November 1 at 0600 hours
  - Bring the tailwater elevation up to a range of 10.3 - 11.2 feet.
  - 10.3' gives an actual operational minimum of ~10.5'.
  - If there is additional water then this water will be considered passed at night, which is noted in the Project Operation No. 3.[1]
- November 13
  - Move the tailwater elevation up to the range of 11.3 – 13.0 feet.
- Rest of the steps are similar to prior year operations.
- Key change is starting at 10.3' (10.5' actual).
- Washington staff will be out on the spawning ground this Friday looking to see what a 10.3' (10.5') does for access. They will be out in the area again on Monday and Tuesday.
  - Washington will update FPAC on Tuesdays, and TMT on Wednesdays.
  - Washington will also be engaging with their call managers on the phone to keep people posted on what is going on.
- Morrill said that is what he would like to share as the proposal. Washington usually takes the lead, but they have been collaborating with other comanagers.

Morrill asked if TMT should now open it up to discussion about the proposal.

Norris said BPA's Real-Time will need some guidance on the type of outcomes that might trigger the need to transition to the typical operating range prior to November 13. Right now, it is dry, but as we get some more precipitation in the region, and we have some wind tide events if we are going to exceed that 11.2' for a specific amount of time. They would need to know at what point and how much time would they need to transition to the typical operating range so that fish do not get trapped upstream of some of those breaks of the slope. He said something as a starting point for discussion if we exceeded

[1] Baus amends this later on and says that the current wording does not characterize it as Morrill had stated it. They would not reverse load factor.

11.2' tailwater for more than 2 hours than maybe they should transition to the higher tailwater range so that if any fish did get up there, they would not get stranded.

Stranz said that is helpful, she said to flag for that conversation but before TMT gets there, she saw that Baus' hand was up and she wanted to get TMT's input.

Baus told Morrill that he wanted to highlight that the current wording as it is written he did not think that it characterized what Morrill had described it as specifically. As far as the order, for example, Step 2 operating from 10.3 – 11.2. What Baus had heard Morrill say was that if we had additional project outflow to maintain that range, we would pass it at night. Baus said that he wanted Morrill to know that it is not how the current project guidance is written and it is Baus' understanding that we had that volume of water, we would not reverse load factor to maintain the lower tailwater range. He wanted to highlight that concept for Morrill. He asked Norris and Morrill to clarify Step 2.

Stranz clarified that what Baus was saying is that there is not anything written in here regarding passing at night specifically.

Baus clarified that there is, that it is Step 4. The second Step 3 should read Step 4 and continue 5 and 6. In the second Step 3 (Step 4) is that part that talks about moving water at night. That step would not occur until after going to the higher range of 11.3 – 13.0 feet. He thought this was done intentionally because the intent of the operation is to keep it low in the near term and then once project outflows are sufficient to go to the higher level we would go there, and we would not reverse load factor to maintain that. Baus asked Morrill and Norris if that made sense or if he had misunderstood from yesterday. He asked for additional clarification on the current operation.

Norris said that he thinks that the issue is that as long as we are in the 10.3 – 11.2' we are probably not going to want to allow fish to get above that break in the slope just downstream of Hamilton Creek. At least until Hamilton Creek starts flowing more robustly. So right now, we are not seeing that just yet. BPA operators will need some guidance, if they exceed the 11.2' point where they would potentially allow fish to get up there at what point do they go back to the 10.3 – 11.2' range and what point do they say that they have been up there long enough and high enough that they should transition to the typical operating range. Norris said that he thinks there might need to be a step between Steps 2 and 3 where they have guidance on what to do. Outside of if they see something coming, then they would inform TMT and make a change accordingly. Norris said that this would be mostly for the inadvertent exceedances where we have wind and tide that may affect their ability to stay below the 11.2' range. He said this is different than our typical operations where fish have access to all of those areas, this is a condition where fish could be stranded on a subsequent day if we were above 11.2' for too long during the day in particular.

Morrill said that Norris said that well. He said that his understanding of water supply situation is that if there is no surge of precipitation in the immediate future so it is anticipated that we will be operating in that lower range. But the unexpected can happen and if it does the question is if water goes up to over 11.2'; if it is for just an hour or two probably not a problem; but the goal right now is to keep that 10.5' range and the guideline is there to give the operator the needed room that they need to safely manage the system and Norris is correct, we do not want to provide enough water during the

daytime to get fish spawning at the higher range of that elevation. If that does happen, then the question is does it warrant us going up to 11.3 – 13.0' range at that point.

Stranz asked if Morrill has an answer to that question. She said that everyone has outlined the question a lot, Norris suggested maybe two hours of higher tailwater and then bump it up, she asked what Morrill is thinking.

Morrill said they have not had that discussion so that is something that members can weigh in on. This is an ongoing adaptive management for this scenario so that is a good question to come back to and see what folks feel.

Kelsey Swieca, NOAA, said that it was a good discussion, and she did not mean to pull us out of it but she thought that in the start of the conversation it is important for us to address the reasoning for the potential chum operation. She said it would be NOAA's preference to spend a few seconds addressing those other agenda items that talk about the water supply forecast and the conditions up at Grand Coulee (GCL) and their concerns about drafting at GCL before TMT does a deep dive into the minutia of the actual operations since that will set the stage about why these decisions are having to be made.

Stranz said that she did not see any additional agenda items beyond Idaho's perspective. She asked if there was more that TMT was going to look at.

Swieca said maybe TMT could hear from either Norris or Joel Fenolio, Reclamation, about concerns for Coulee and that Upper Columbia region and how that interacts with stages for chum flows.

Tom Lorz, Umatilla/CRITFC, said before we jump to that he can answer the last two questions to try to make things efficient. FPAC will take a look at that, because they cannot answer today on how many hours they are comfortable with. So FPAC will take a deeper dive on Tuesday, and they will get back to TMT. Lorz said on the Idaho thing, he spoke with Jonathan Ebel yesterday and he is more conservative because he is from the dry lands of Idaho, but he was at least comfortable with where we are at and Lorz thinks as long as there is adaptive management to make changes as we go along.

Morrill said that he can affirm that as well because he talked to Ebel yesterday and he is okay with the current proposal.

h. Grand Coulee – *Fenolio/Norris*

- Seeing 10th percentile in the northern part of the basin.
  - Ironically it is pretty saturated, and they have good carryover storage in southern Idaho.
- Looking at projections of operating in the normal chum flow where we are having to draft below **1275'** at the end of November and **1270'** to support it.
  - Right now, looking at dropping below those two elevations which are the generalized targets for being at for their April 10th Roll Curve.
  - Any water saved now pushes out the potential given that we are looking at a pretty strong El Niño signal at the moment.

  - Generally, means, drier precipitation and higher temperatures throughout the winter, where we would typically hit a point in terms of GCL's draft target that we would have to make a decision on abandoning chum.
  - Any operational wiggle room like we are discussing is appreciated and it keeps us out of that potential range of having to make that decision.
- Norris provided a perspective on the savings of running the TMT Coordination Chum Operation proposal by the end of November.
  - 10.3' Operation would not put a significant draft on GCL on those first couple of weeks.
  - Real savings in draft to support the chum operation will be the delay of starting the 11.3' Operation.
  - End of November, it would be equivalent to about 4 – 5 feet of foregone draft. It would save 4 – 5' from the start of the chum operation on November 1 in just the delay in moving up into the higher tailwater range.
  - Good from a precipitation standpoint because that puts us out into the mid-November where it is more likely for more precipitation which would reduce the amount of flow needed at BON to produce a specific tailwater.
  - Once the Willamette can reach the 40 – 50 kcfs range that will help minimize the augmentation needed from GCL.

Stranz circled back to Swieca for additional questions or thoughts.

Swieca said that she wanted to make sure that everyone listening in knew the conditions and the reasoning. As we go into this question of how to operate chum flows every year, we need to balance the GCL for chum flow augmentation and spring flow augmentation. Those are the considerations going into the potential modified operations that we are discussing today. Swieca just wanted to make sure that everybody listening in was on the same page about that before we proceed into the minutia.

Kirk Truscott, Colville, said looking at the draft coordinated chum operation shown up there right now, what is unknown to him is during the November 1 – 14 period how is TMT going to address flows, or flows that result in elevations, that are greater than 11.2'. He asked if we are going to pass those at night, if possible. He said he would assume that effects associated with tidal inflows should be predictable. He said wind is a whole other cat. He said that it is not clear to him what TMT is going to do relative with flows that are excess in meeting the 11.2'. He asked if we are going to pass them at night. If we cannot and fish get into areas that would require us to maintain 11.2' or greater, are we going to do that or are we going to not do that.

Norris said that under the condition where we felt like we needed to pass water at night that probably is a condition where we would have had a discussion prior to that with a potential move to the higher tailwater operating range if there is that much water in the system. This is mostly to address if we are running up close to top of the lower range and we get unexpected conditions that we do not have control over that would push us over a threshold that might allow fish to end up in a place that could not be supported on subsequent hours. Norris said what is that threshold where we should start to move to the higher tailwater range and not necessarily the condition where we are having to move

water at night. This is mostly just if we inadvertently go above 11.2', should we go back down to the 10.3' – 11.2' range or should we move back.

Stranz said that the action item was as follows:

- FPAC to talk about this next Tuesday, decide what to do if there is an exceedance of 11.2' for an X length of time, and come back to share their recommendation at the next TMT meeting.

Stranz asked about the operation on the screen that we have all been going over, whether any TMT members had any objections. Hearing and seeing none, she turned it over to Fenolio, or someone from the Action Agencies, to say how they will proceed.Norris said before TMT moves on from that, regarding the resolution of some criteria regarding an exceedance that would push us to the higher tailwater, he asked if we want to handle that with a separate TMT meeting or since it is not a significant change to the operation that is proposed, can it be done via email from the Salmon Managers.

Stranz said that we have a TMT meeting planned next Wednesday.

Norris said yes, but the operation begins on Wednesday so we may want to have some discussion on that before the operation begins. Norris said he hopes that we do not start off with a problem there, but BPA operators like to have some certainty planning the day.

Stranz said that Lorz had said that they would talk about it at FPAC which would be the Tuesday, so maybe Tuesday afternoon Lorz or Morrill could send an email to the Action Agencies and then we could talk about it at TMT.

Lorz said that they have a call, they call discuss at that time about what occurred and what they are thinking.

Stranz asked if timing-wise if that would be sufficient for Norris' operators.

Norris said he was hoping to get a little more resolution on that before then, but he thinks they might be able to make that work. He will talk to his folks.

Stranz said that another option is to take a short caucus to see if FPAC can get to a number. She said if Norris can check in with his folks on the timing for now that would be helpful.

Erick Van Dyke, OR, said because this is a topic that has been difficult for a decade or more, he has been on this group [TMT]. He said we are listening to what has been said and there is concern, obviously. He said that this is not about an operation for chum as much as it is about how we manage water. Van Dyke said that he wants to be clear that this is objectionable in terms of protecting chum spawning areas in the mainstem. The leveraging that is going on concerning because it is trying to set in stone an operation that is actually is not occurring, that is just changing. Van Dyke said to caucus right now is not going to change the recommendations many are offering. The path forward to try to armor what happens when they do not follow this as written is going to be a difficult place to be. He said that he does not think that the Fish Managers are in a good space for that. Van Dyke reiterated that this is not protecting chum, it is removing what has been done to try to address spawning concerns in the Lower Columbia. He said that it is being driven more by what we anticipate could be a problem for actually providing the spring

freshet. It is established by what management decisions have been made since refill has occurred. Van Dyke said that rather than try to extenuate the problem, which is not being addressed, the ESA-listing issued – across multiple species not just this one, he thinks that folks have tried to offer ideas that Van Dyke said that there is a wide range of discomfort about. He said that he thinks folks are interested in trying to see if they can trust actions will occur over a longer period to meet some expectations. He said that he does not think that everyone has the same feeling about what we will get from this.

Stranz asked Van Dyke about the ideas of how to move forward. She asked if there were ideas that he felt that we needed to talk about today. She asked if there were other options.

Van Dyke said that this conversation will not change the ideas that are being offered up right now. He said no, he is not going to offer more to figure out how we do less for ESA protection measures and do more to try to make sure that we get some signal of a spring freshet when water is being treated as if it is scarce. He said that he is not sure that he is going to help with that at this point. He said that he is not going to talk any more about it.

Stranz said okay but the point that she is taking from what Van Dyke said is that from Oregon's perspective, this is a water management operation and is not necessarily the best operation for chum and chum spawning.

Van Dyke said this should not be labeled as a chum operation, it is not it is about water management at this point and the concerns we generally have with it. It is not about providing for mainstem spawning, it will not provide anything for enhancing the alternative that was provided to move chum off of the mainstem so that they do not spawn there. He said that this is not about chum which has always been a nuance that has been difficult to talk about in this forum.

Stranz told Van Dyke thank you for providing that perspective.

Morrill said that Washington appreciates Van Dyke's comments. He said that the operation is not a holistic operation that would provide the protection that we would like to see provided for chum. He said that it is a pragmatic decision based on water availability in how we manage a limited resource of water to provide areas for chum to spawn in and minimize the disruption and hopefully have some success in providing access to the areas that they normally spawn in. Morrill said that Van Dyke's holistic comments are very valid and thanked him for sharing them. He also noted that this is a dynamic situation, Washington staff will be out monitoring, and they will provide timely feedback as we move through this operation. He reiterated that it is a dynamic situation, we will be watching it closely, we will learn from this, and we will provide that information and feedback and share with others as we go through this.

Swieca reiterated that providing the flow to support chum spawning has to be balanced with spring flow augmentation out of GCL. She said every year, and especially in dry years, we run into really difficult decisions where we are trying to forecast conditions when they are really dynamic. This year we are seeing really low inflows into GCL and NOAA feels we need to have a more conservative approach to water management into the beginning of this water year. She said with that in mind, based on the historical data the chum abundance in the Ives-Pierce area is generally pretty low until the second to

third week of November. NOAA feels that this operation is designed in such a way that we are offering some water for those early arrivers, but then the intent is to bump up and increase the spawning area available once those large number of chum typically arrive in the region. It is a balance between those two but NOAA believes that this operation moves toward trying to design something that save a little water in GCL for in the spring but also provides what chum need in the Ives-Pierce area when they typically arrive.

Stranz said thank you for NOAA's perspective as well.

Morrill added a thank you to Swieca, that was a key point to their internal discussion with the WDFW staff. Her points were spot on in terms of what we want to do. He said that NOAA is a very strong supporter of getting up to that 11.3 – 13' no later than the second week in November. NOAA is aware of that issue as well and Washington is comfortable with that, and it was part of their internal discussion with NOAA.

Stranz said that we have one action item for FPAC to talk about what the number of hours of exceedance of 11.2' would be before needing to transition to the higher tailwater. They will take that on next Tuesday and then connect with the Action Agencies hopefully that afternoon. She asked Fenolio if there are any other next steps, he would like to highlight for everyone.

Fenolio said no, not other than what is on the draft teletype, in terms of starting to target that 10.3 – 11.2' range on November 1 and then looking to increase up to 11.3 – 13.0' on November 14.

Norris shared that they can wait until Tuesday afternoon or Wednesday to finalize the details on any exceedances on 11.2' as discussed earlier.

i. Idaho Chum Operations Perspective – *Baus*

- Baus wanted to make sure that TMT knew that he posted Jonathan Ebel's comments.
- He said that TMT had already talked about the gist of what Ebel had provided but he just wanted to make sure that because he was asked to share it in Ebel's absence that it was done.
- Ebel provided notes and they have been posted on the agenda, Idaho Perspective on Chum Operations. Concepts such as:
  - Low GCL inflows.
  - Low water supply conditions.
  - Looking into a different operation this year.
- Baus said this has been done and has been coordinated. Many may have already seen this at FPAC.

3. Operations Review

j. Reservoirs

Reclamation – Joel Fenolio

- Hungry Horse Dam
  - Operating to Columbia Falls minimums.
  - Midnight elevation: 3539.3 ft.
  - Inflows: 560 cfs
  - Outflows: ~2400 kcfs
- Grand Coulee Dam
  - Midnight elevation: 1284.5 ft.
  - Inflows: 58 kcfs
  - Average Outflows: 50 kcfs
  - Storing slightly across the week.

Corps – Lisa Wright

- Libby Dam
  - Midnight elevation: 2438.4 ft.
  - Inflows: 8.7 kcfs
  - Outflows: 4 kcfs
- Albeni Falls (Hope gage)
  - Midnight elevation: 2054.4 ft.
  - Inflows: 7.2 kcfs
  - Outflows: 18.9 kcfs
- Dworshak Dam
  - Midnight elevation: 1515.9 ft.
  - Inflows: 1.2 kcfs
  - Outflows: 1.7 kcfs
- Lower Granite average outflows: 15.6 kcfs
- McNary average outflows: 75.1 kcfs
- Bonneville average outflows: 77.1 kcfs
- Wright said that we are still pretty low in the system

k. Water Quality – Dan Turner, Corps

- Nothing to report.

l. Fish – *Kelsey Swieca, NOAA*

- Adults
  - Fall Chinook, coho, and steelhead are all still passing, but in declining numbers.
  - Bonneville YTD Counts
    - Fall Chinook: 102% of ten-year average
    - Coho: 124%
    - Steelhead: 71%
  - Lower Granite YTD Counts
    - Adult Chinook: 125%
    - Coho: 181%
    - Steelhead: 86%
- Juveniles
  - Sub-yearling Chinook still moving through system but in relatively low numbers.
    - Though there was a recent pulse in passage at Lower Granite.
      - Passage index reaching mid-200 early last week.
      - Returned to roughly 100 or less per day.

m. Power System – *Tony Norris, BPA*

- Temperatures are getting colder but not too dramatic.
- Wind generation with fronts coming through.

4. **Public Comments:**
5. **Set agenda for next meeting – November 1, 2023**

Today's Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Aaron Marshall
Bonneville Power Administration	Tony Norris, Scott Bettin, Ben Hausmann
Bureau of Reclamation	Joel Fenolio, Chris Runyan
NOAA Fisheries	Kelsey Swieca
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz (CRITFC)
Colville Tribe	Kirk Truscott
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

COE – Chris Peery, Dan Turner

BOR – Eric Rothwell

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Chelan PUD – Jay Fintz, Melissa Lesser

Washington Ecology – Thomas Starkey