

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
September 7, 2022
Facilitator's Summary
Facilitation Team: Donna Silverberg & 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/agentas/2022/>. 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's summaries for the August 17 and 24 meetings.

Dworshak Dam Operations – Jon Roberts, Corps, reported on operations at Dworshak Dam. The project is currently discharging about 7 kcfs (down from 7.5 kcfs last night) with elevation this morning at 1,530 feet. 10 more feet are available to draft through the end of September to keep temperatures cool in the Clearwater and Lower Granite tailrace.

The Snake River near Anatone is currently at 72 degrees F, while the Clearwater has been fluctuating widely due to its shallower river system; currently 66.5-66.74 degrees F at Orofino, and 48 degrees F at Dworshak. Jon noted that flows from Dworshak are making up the majority of water in the Clearwater at the confluence with the Snake, necessitating the slow decrease in flows to avoid an abrupt change in river temperatures.

Temperatures generally began to fall moving from late August into September, and the temperatures in the Clearwater are falling with the cooler ambient air. Unusually warm ambient temperatures this past week (up to 100 degrees F) affected stratification in the Lower Granite reservoir. This resulted in slightly higher temperatures at the fish ladder, but temperatures at the 20-meter-mark are starting to fall back down under 67 degrees F, and will continue to do so with cooler weather over the next few days, especially in the evenings.

The fish trap water temperature was ranging between 67-68.68 degrees F, and this morning came back down into the 64-66.5 degrees F range. The Corps expects it to fall even more over next few days due to incoming regional fall weather.

Looking at the 10-day weather forecast, unusually warm weather in Idaho and southern Idaho has pushed heat into the region. However, temperatures will cool starting tomorrow heading into Monday. Temperatures will decrease further into the 10-day, partly due to forecasted precipitation in the Clearwater and a regional system in northern Idaho and the Upper Snake. Locally at Lewiston, ID, temperatures are warm (97 degrees F today) and are expected to fall to a low of 59 degrees F tonight. Jon noted that evening temperatures in the mid-60s or lower are very good conditions for the reservoir, as heat gets pulled off the top. Even with the last warm day on Sunday of 93 degrees F, the lows will stay in the low 60s. Further out in the forecast, temperatures will hit the mid-80s for highs and upper 50s for lows; river temperatures will transition and cool in the next 5-10 days.

The Corps will continue to monitor temperatures and releases. The operational plan includes daily modeling while river temperatures remain above 68 degrees F; consistent modeling could potentially end by mid-September, although the Corps will monitor through the end of the month. The project will also continue to step down releases according to the Dworshak Board's plan, as long as it continues to meet the Lower Granite tailrace and fish trap criteria. Releases will step down 500 cfs each day, until the

maximum capacity of one unit (2,500 cfs) is reached, and will then reduce based on river temperatures and flows before reaching 1,520 feet. Releases should be ramped down by September 20 for the start of Doble testing at the project.

Spill Priority List – Dan Turner, Corps, reminded the group that the transition into fall/winter out of spring/summer spill brings changes to water quality criteria. The current Spill Priority List (SPL) is posted to the TMT website, and remains the same order as throughout the summer. TMT members can request a change to the order via TMT.

Tom Lorz, Confederated Tribes of the Umatilla Indian Reservation/CRITFC, noted that FPAC reviewed the SPL yesterday, and for now, is tentatively okay with the order. This may change depending on other current project spill operations. If FPAC desires any changes, they will inform the Corps via TMT.

Dworshak Board 2022 Operational Plan – Jay Hesse, Nez Perce Tribe, presented the finalized Dworshak Board Operational Plan for 2022 (posted on the TMT website), as discussed 2 weeks ago. He noted that the content and approach has not changed, and it reflects the plans Jon described in his update on the project of gradually ramping down flows to blend with natural thermal cooling.

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

- **Grand Coulee**: midnight elevation was 1,279.6 feet with flows yesterday at 89,000 cfs. Releases have been averaging 73,000 cfs, with inflows averaging 96,000 cfs. The project is targeting 1,283 feet by mid-October, and 1,281-2 feet minimum by the end of September. Joel noted that 2 recently repaired seals on the drum gate have failed, requiring the project to go down to drum gate elevation again next year for repair. Reclamation has no indication as to why the seals failed. Reclamation has connected with the Confederated Tribes of the Colville Reservation and the Spokane Tribe of Indians about the fall refill operation. Repair time depends on the severity of repairs needed, and could take the full 6-week period if concrete or steel repairs are necessary. In response to a query about drafting earlier to leave more time for refill, Joel noted that he would take the idea back for internal discussion to determine if it is a viable possibility.
- **Hungry Horse**: midnight elevation was 3,551.7 feet, releasing 1,900 cfs; the project will likely start operating to the Columbia Falls minimum in the next couple of days, and they anticipate being 1-foot or so below the end of September draft target (3,550 feet) by the end of the month.

Joel also reported that 2022 Upper Snake flow augmentation was completed on August 31, with approximately 179 kaf delivered out of the Payette system. Due to dry conditions this year, the total volume delivered was 377 kaf; below 427 kaf for the first time since the BiOp was issued in 2008.

Lisa Wright, Corps, reported on Corps of Engineers projects:

- **Libby**: midnight elevation was 2451.6 feet, with average inflows of 6.2 kcfs, and outflows of 8 kcfs;
- **Albeni Falls**: midnight elevation was 2,062.3 feet, with average inflows of 17 kcfs, and outflows of 14.2 kcfs;
- **Dworshak**: midnight elevation was 1,530.4 feet, with average inflows of 1 kcfs, and outflows of 7.4 kcfs;
- **Lower Granite**: average outflows of 23.9 kcfs;
- **McNary**: average outflows of 124.8 kcfs; and
- **Bonneville**: average inflows of 109.3 kcfs.

Leon Basdekas, Corps Seattle District, reported that the Corps is evaluating a slight increase in Libby Dam outflows (from 8 kcfs to 8.5 kcfs) in response to higher forecasted inflows, to meet the end of September target elevation of 2,449 feet.

Water Quality: Dan reported on the start of adult steelhead spill operations at lower Snake River projects and McNary Dam. These operations include 4 hours of morning spill through surface weirs occurring 3 days a week. Spill has caused exceedances of 110% TDG at Snake River projects. To address the higher TDG levels at Little Goose and Lower Monumental dams, the 4-hour block was split into two 2-hour blocks separated by a 2-hour period. If TDG continues to exceed 110%, the Corps will evaluate other changes to operations; past options being considered include a forebay restriction to decrease flow over the RSW, or splitting spill into 2-hour blocks for 6 days a week. Any changes will be coordinated with NOAA. Dan hoped that the decrease in water temperatures and dissipation of leftover TDG throughout the system from summer spill should help bring down TDG levels at the projects naturally.

Tom commented, from FPAC's perspective, that alternatives to the two 2-hour blocks likely won't make a difference, especially based on past experience. Instead, FPAC prefers a continuous 4-hour block. Because FPAC views this as a covered fish passage spill operation, it strongly recommends that the Corps seek clarity from the Washington Department of Ecology (WA DOE) on their 110% TDG standard, and will likely draft a letter to formalize this request.

Jay raised a concern that the Corps would only be coordinating modifications with NOAA, not all Fish Managers. Dan noted that the Corps' regular TDG season process is to coordinate daily with NOAA, providing updates to TMT. He also noted that the time sensitivity of day-of operational decisions are best suited to a single source, so encouraged coordination with NOAA.

Further discussion points and questions include:

- Jay clarified that the Nez Perce Tribe sees the role of TMT as in-season management with input from all members; as the current operation in September was not described in the BiOp, the Tribe's expectation is that it falls to TMT for coordination.
- The Corps' noted that the legal and policy levels are discussing the issue currently. They are aware of FPAC's concerns and will share more information with TMT on operations and process as soon as updates are available.
- Erick Van Dyke, OR, appreciated efforts made by all, and shared the concern regarding the role of TMT as the space for adaptively managing in-season operations. Oregon would like to see strong actions to assure in-season requests and needs for operations around adequate fish passage benefits. Additionally, some Fish Managers may feel less included in conversations for adaptive processes.

Questions that remain due to ongoing legal/policy discussions include: has the Corps contacted WA DOE or WQ agencies for guidance on the water quality standard? How can their rules be applied to this situation?

Fish: Kelsey Swieca, NOAA, reported that sub-yearlings continue to make up the majority of juveniles in the system. Passage indices from the last week in August through the first week in September have ranged from 1,000-1,800 at Lower Granite, and 40-280 at Bonneville (with slight reductions at both following the holiday weekend). There have been a handful of coho, steelhead and sockeye periodically throughout the projects, although nothing substantial.

Adult fall Chinook numbers are generally increasing at Bonneville, with YTD passage about 30% above the 10-year average; passage peaked early last week, dipped over the weekend, and has come back up. Coho and steelhead displayed similar passage patterns to fall Chinook at Bonneville, with both exhibiting

peaks in passage early last week and dips over the weekend; on average 3,000 coho and 1,500 steelhead per day. Lower Granite was averaging roughly 500 fall Chinook daily last week, with a bump in passage over the weekend. In response to a query from the Corps regarding the adult steelhead spill operation, Kelsey will report back at the next TMT meeting with PIT-tag data from RSW spill at Lower Granite.

- **ACTION:** NOAA will look at PIT-tag data to see if the past few days of RSW spill at Lower Granite has had an impact on passing steelhead adults, and will report to the TMT at the next meeting.

Dave Swank, USFWS, reported that lamprey juveniles are still trickling through at the projects, reflecting extended migration. Adults are in the home stretch of their migration (90-95th percentile). The biggest change is reflected in the Snake River, where the slow-moving wave has reached Lower Granite with passage at 264% of the 10-year average, although, Dave noted that this is not reflective of very many individuals. Additionally, he reminded the group that the numbers only include day time ladder counts.

Charles Morrill, WA, provided the latest update from TAC:

- Through September 8, a total of 209,673 adult fall Chinook have passed Bonneville Dam which is higher than would be expected given the preseason forecasts and average run timing. Over the last 10 years, the average 50% complete date has been September 10.
- Passage of upriver summer steelhead at Bonneville Dam during July 1 – September 8 totals 81,444 A/B-Index fish
- The *U.S. v. OR* Technical Advisory Committee (TAC) met yesterday Tuesday, September 8 to review run size and harvest information for summer steelhead and fall Chinook. The returns of bright and tule fall Chinook appear to be early and both are expected to meet or exceed the preseason forecasts. However, TAC did not update the run size for either fall Chinook stock. TAC updated the in-season projection for total A-Index steelhead to 82,000 (this includes an estimated 34,300 natural-origin fish). This update is an increase from last week's projection but still less than the preseason forecast of 85,900 A-Index steelhead.

Power System: Tony Norris, BPA, reported that the recent peaks of high summer heat in September are hopefully the last of the season. Additionally, BPA has been able to support adjacent areas in California and Idaho experiencing stress on their power systems due to extreme heat and resulting power demands.

Questions or Comments from Non-TMT Members – Ruth Burris, PGE, asked if there were any more details on the Grand Coulee drum gate operation. Joel confirmed that the current details are that the operation will occur, and that drafting generally occurs through the winter.

**The next scheduled TMT meeting is on September 21 at 9:00 AM.
A DS Consulting Process Meeting for TMT Members will follow the business meeting.**

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, September 7, 2022
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 Donna Silverberg, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. Review Meeting Summaries & Minutes – 8/17 and 8/24

- Approved August 17 summaries and minutes
- Approved August 24 summaries and minutes

Questions and Comments: None

2. Dworshak Dam Operations — Jonathan Roberts, Corps NWW

Heading into end of summer and have begun to transition into fall as the temperatures begin to go down.

a. Hourly Project Data

- Discharging ~7 kcfs. Last night they stepped down from 7.5 kcfs.
- Midnight elevation ~1530 feet.
- Leaves 10 feet to draft through the end of September as they continue to try to ensure temperatures remain cool along the Clearwater and the Lower Granite tailrace.

b. Current River Temperatures

- Anatone (Snake River mainstem) is 72°F and Orofino (Clearwater River) is fluctuating between 66°F and 68°F due to the shallow system; currently at 66.74°F.
- Dworshak's tailwater temperature is at a relatively constant temperature of 48°F.
- Orofino is providing 1300 cfs so is not making up most of the flow. Dworshak is providing the majority of water at the confluence at the Snake River. This is the purpose for a slow step down in Dworshak outflow for no abrupt change in the river.
- Temperatures are beginning to drop in late August and early September.

c. Current Lower Granite Forebay Temperatures

- Warm regional temperatures last week, up to 100°F, caused the stratification in reservoir to be pushed down. This led to higher temperatures in the fish trap.

- The stratification has redeveloped at the 20-meter mark and is beginning to dip back down to 66 - 67°F
 - They are expecting the reservoir to cool off at the lower depth with cooler temperatures over the next few days.
- d. Current Lower Granite Fish Ladder Temperatures
- Temperatures in the fish trap have ranged between 67 - 68.68°F.
 - As of this morning, the temperatures have come back down 64 - 66.5°F.
 - The temperatures are looking to fall over the next few days as they are affected by the change in regional weather.
- e. 10-Day Regional Weather Forecast
- They are expecting a warm day though southern Idaho and it is expected to push into their region. It is somewhat unusual for this time of year to have temperatures this warm.
 - Starting tomorrow temperatures begin to cool off and heading into Monday and forward, temperatures are going to fall assisted by some potential precipitation in the region.
- f. Weather Forecast for Lewiston, ID
- Warm day today (97°) – not too alarming as they are expecting to get down to 59°F for a low. This should pull the heat off the reservoir.
 - Generally, temperatures below 69°F overnight provide cooling.
 - Highs will be in the mid-80s and the lows will be in the upper 50s. Even the projected high of 93°F has an expected low of ~60°F.
 - In turn, the river temperatures will transition to cooler. The river system beginning at Lower Granite will begin to cool down and make their way downstream.
- g. Water Temperature Comparisons
- The Corps will continue to monitor the river temperatures and Dworshak releases.
 - They expect to see the temperatures begin to fall off. They will continue to run their model and keep a very close eye daily as long as the river temperatures are above 68°F. Potentially the temperatures will fall below the 68°F and that will mark end of consistent model running. They will keep an eye on it until the end of the month.
 - Dworshak releases will be stepped down in accordance with the Dworshak Board's plan. As long as it continues to meet the Lower Granite tailwater and the fish trap below 68°F.

- Current plan is to stay at 7 kcfs out of Dworshak for two days, then step down 500 cfs every 2 days until they reach the maximum capacity of 1 unit, which is 2500 cfs.
- They will then vary how they reduce discharge based on temperature of the river as they reach minimum flow as well as how much water is available.
- End of ramp down is projected for September 20; this is due to Doble testing, as they need to be down to 1-unit capacity.

Questions and Comments:

Doug Baus, Corps, commented that the Dworshak operation for temperature management went very well this year and thanked everyone.

3. Spill Priority List – *Dan Turner, Corps NWD*

- With the transition to fall and winter from spring and summer spill, there is a change in water quality criteria to 110% TDG.
- For the current list, the order of projects is the same as the previous order for spring and summer.
- If TMT members would like a change in the project order, they can bring the request to TMT for discussion.

Questions and Comments:

Tom Lorz, Umatilla/CRITFC and FPAC acting chair, said FPAC reviewed this yesterday – the spill priority list is fine for the moment but it will depend on other operations that FPAC is monitoring (fall surface spill). If there are proposed changes, FPAC will bring them to TMT as available. They are tentatively okay with the order for the moment.

4. Dworshak Board 2022 Operational Plan – *Jay Hesse, Nez Perce Tribe*

- The final plan was already discussed at the TMT meeting two weeks ago, from that meeting the content did not change. The plan has now been finalized and is posted to today's TMT agenda.
- Operations shown in the graph are consistent with what Roberts explained.
- Looking to provide the gradual ramp down of flows and temperatures then match that with the natural thermal cooling.

Questions and Comments:

None

5. Operations Review

a. Reservoirs

Reclamation – Joel Fenolio

- Upper Snake flow augmentation update: On August 31, Reclamation finished the delivery of 179 kaf out of the Payette system. This concludes delivery of the flow augmentation volume for 2022, which was 377 kaf. This is the first time since the BiOp was issued in 2008 that the volume was under 427 kaf. Drier conditions did not allow for a delivery of 427 kaf.
- Hungry Horse
 - Midnight elevation 3551.7 feet.
 - Releasing 1900 cfs.
 - Will start to operate to the Columbia Falls minimum, anticipating being ~1 foot below the end of September draft target of 3550 feet.
- Grand Coulee
 - Midnight elevation 1279.6 feet.
 - Refilling – inflows as of 9/5 were 89 kcfs.
 - Releases have been averaging 73 kcfs and inflows averaging 96 kcfs.
 - Targeting to be ~1281 feet by the end of September and 1283 feet by the middle of October.
 - One thing to note is that they did have a break on two of the seals on the drum gate over the summer. They have spill coming through those. They are not aware of what the issue is or why the gates broke. Fenolio believes it was one of the gates that had its seals replaced last year.
 - They are planning to go down to the drum gate elevation this year to try to fix those seals. He spoke with the Colville and Spokane Tribes about the fall refill operation. He is working with the staff at Grand Coulee and there is some flexibility if it is a dry year and depending on the issue.
 - Caveat that if it is a dry year and it is just repairing the seal than it might be a short duration drum gate year and they might be able to start refilling if they are below FRM. If it is looking like there is an issue with the seal and welding or concrete repair is required, it may take the entire 6-week window to be fixed.

Questions and Comments

Lorz asked if Reclamation would try to draft earlier since they are aware of the problem, and if the repairs could be done earlier would there be a better chance for refill.

Fenolio responded that there are no current plans to do so but it could be something that they discuss internally to see if it is possible.

Lorz responded that FPAC would look into it as well.

Fenolio will also communicate with BPA. He believes that there is flexibility knowing that they are going there but there is always the possibility that they are heading there anyways depending on what the FRM elevation is for next year.

Corps – Lisa Wright

- Libby Dam
 - Midnight elevation of 2451.6 feet. Yesterday's average inflow 6.2 kcfs and holding outflow of 8 kcfs.
- Albeni Falls
 - Midnight elevation 2062.3 feet. Yesterday's average inflow 17 kcfs and outflow 14.2 kcfs.
- Dworshak Dam
 - Midnight elevation 1530.4 feet. Yesterday's average inflow 1 kcfs and outflow 7.4 kcfs.
- Lower Granite average outflow 23.9 kcfs
- McNary average outflow 124.8 kcfs
- Bonneville average outflow 109.3 kcfs

Libby Operations – Leon Basdekas, Corps

- Libby is tracking their end of September elevation of 2449 feet.
- They might need to slightly increase releases as the inflows have ticked up a bit from beginning of August and the forecasted inflows may be even higher.
- Looking at the possibility of bumping outflows to 8.5 kcfs (current is 8 kcfs) but will evaluate to meet their end of September target elevation.

b. *Water Quality – Dan Turner, Corps*

- Adult steelhead spill operation has started at the Lower Snake River projects and McNary. Reminder: 4 hours of spill over the surface weirs 3 mornings a week.

- Some of these spills caused exceedances of the 110% TDG criteria at the Snake River projects.
- Because it is a 4-hour spill block there is not a lot of time to figure out what is happening with the TDG. Instead of using one day of spill, they use two days of spill to measure for exceedance that necessitates a change in operations. After two days of exceeding, the Corps switched to two 2-hour blocks separated by a 2-hour period at the Snake projects. This operation was successful on September 6 at Lower Granite.
- Little Goose had a similar issue and was treated the same but still exceeded 110% TDG. The next spill day will be Thursday; if TDG continues to exceed 110%, they will evaluate another change.
- Other options to manage TDG:
 - Lower the forebay to decrease the flow over the surface weir.
 - Spill in one 2-hour block, 6 days a week.
 - Any changes will be coordinated with NOAA.
- They are hoping TDG will dissipate throughout the system; they are still seeing TDG from summer spill. They are also hopeful that there will be less TDG produced due to cooler water.

Questions and Comments

Lorz asked for clarification about the current TDG solutions and rehashed the solution list provided in the update. He mentioned that FPAC has noticed that the two-hour blocks does not seem to fix the issue. FPAC has discussed the issue with the WA Department of Ecology's TDG standard and they believe that the spill is covered as a Fish Passage operation. They strongly recommend that the Corps look for clarity from DOE as they have seemed to have indicated that this is covered. A four-hour operation is better than two. NOAA has said the 2-hour blocks should still be okay, but anything less than that may not work. In addition, operating the gates more frequently increases the need for maintenance and less operation is better. Lorz added that FPAC will draft a letter to strongly request the Corps consult WA Department of Ecology to clarify the standard.

Hesse asked why modifications are only coordinated with NOAA. He asked if there should also be discussions with all fish managers. Especially with the fish managers preference for a full 4-hour block but if there will be changes he would like for the coordination to be made with everyone.

Turner responded that at this point their process is based on the same process during the rest of the spill season where they have daily coordination with NOAA. This is a BiOp operation and making decisions in real-time can be difficult to coordinate with a large group. Maybe NOAA can get feedback from the other salmon managers and then

incorporate that into a real-time decision. He is not opposed to more options but he wants to be cognizant that decisions must be made quickly.

Silverberg restated the points of Turner's response and added that it is more difficult now as TMT is now meeting every other week.

Hesse countered that it is not unheard of for TMT to meet for important events off schedule. He believes that the role for TMT is in season management and to have the input from all fish managers within these discussions. The nuance to this is that this September spill was not actually described at the BiOp and is actually from the Stay Agreement and he believes that it should be a TMT expectation for coordination if there needs to be. This all can be sidestepped if they implement the four continuous hours. May be overly sensitive to communications between Corps and NOAA.

Baus responded that the Corps is coordinating these concerns at the Legal and Policy level. He would rather wait but did confirm with the group that the Corps is aware of the FPAC concern. He added that they would be able to share more when they know more. He asked if Hesse would be willing to put it on pause until they have more information.

Hesse agreed.

Erick Van Dyke, OR, appreciated the effort that everyone is making but he has some concerns that the role of TMT is to adaptively manage in season, as was described. What seems to be happening is that they are pausing strong actions to recommend in-season requests and needs for operations that revolve around adequate fish passage benefits. He understands that this process has been involved in this situation for a while but it is starting to get to a point that agreements are being pushed aside or pausing to try to figure things out. It seems like this group's role is being undermined a bit. He appreciates Baus' input but if the topic is important, TMT needs to be active and not pausing. In addition, he says that he feels that things are falling to different processes that exclude those that are in the conversation during the adaptive process. Specifically, the federal discussion nexus that disconnects the fish managers that are involved in the discussion at TMT has been a common thread seems to need work. Van Dyke is not satisfied with the discussion about how they are going to manage a planned operation for benefitting steelhead. In addition, the water quality agencies seem to be outside of this discussion and in fact they are those that are regulating modification to provide ways to benefit fish passage, having them disconnected from the discussion seems inappropriate as well. He feels that there is a lot of work to do. His main question is – has the Corps contacted Washington Department of Ecology for guidance about levels of impact that people are responding to right now, and then get their recommendations on how their rules could be applied here.

Baus reiterated that they are aware of the conversations and they are being made at the Legal and Policy level. He does not feel comfortable speculating on what is being done at the Legal and Policy level. He currently does not have anything else at this time but will share updates as soon as they have some.

Silverberg asked if there is a timeframe for the conversations. Baus agreed with her assessment that action is happening now. TMT will hear back as soon as there is information.

Van Dyke felt that his question was not answered but he took nonresponse as his answer.

Charles Morrill, WA, appreciates Van Dyke's question and Baus's response was helpful. He would like to know if they have yet talked to Department of Ecology.

Baus said that it is at Legal and Policy and that is all he knows at this time.

c. Fish – Kelsey Swieca, *NOAA Fisheries*

- Juveniles
 - Subyearling make up majority of juvenile salmonids in the system.
 - From last week of August through the first week of September the subyearling juvenile passage index has ranged from 1000 – 1800 at Lower Granite and 40 – 280 at Bonneville.
 - While they are moving down the system there was a slight reduction at those projects following the holiday weekend.
 - Apart from the subyearlings, there has been only a handful of sockeye, coho and Chinook periodically showing up in the projects but nothing substantial yet.
- Adults
 - Bonneville
 - Increasing and the YTD passage is about 30% above the ten-year average.
 - Passage was high last week and it dipped over the weekend. It has now come back up.
 - Coho and Steelhead displayed similar passage patterns to fall Chinook, with both exhibiting peaks in passage early in the week and dips in passage over the weekend.
 - On average, they are seeing 3000 Coho/day and 1500 Steelhead/day.
 - Lower Granite
 - They were averaging ~500 fall Chinook/day making it to Lower Granite before there was a steady bump over weekend.

d. Lamprey – Dave Swank, *US Fish and Wildlife*

- Juveniles

- We are still getting a few trickling in, even though it is into September.
- Adults
 - Not a lot has changed since last update.
 - We are in the home stretch of adult lamprey migration – are at ~95% of the timing of this run.
 - On the Snake the slow moving wave have reached Lower Granite.
 - Last update 166% at Lower Granite and now we are at 264% at Lower Granite. These are not large numbers with only 174 individuals at Lower Granite with the ten-year average being 66 individual lamprey.
 - These numbers reported are the daytime ladder counts – there is a page on the FPC website that give both the day and night counts. For example, at Lower Granite, the daytime count was 174 counted to date during the daytime but they also have 854 counted at night. If you want a full picture it is best to look at both day and night.

Questions and Comments:

Charlie added latest TAC update in chat:

- Through September 8, a total of 209,673 adult fall Chinook have passed Bonneville Dam which is higher than would be expected given the preseason forecasts and average run timing. Over the last 10 years, the average 50% complete date has been September 10.
- Passage of upriver summer steelhead at Bonneville Dam during July 1 – September 8 totals 81,444 A/B-Index fish
- The U.S. vs OR Technical Advisory Committee (TAC) met yesterday Tuesday, September 8 to review run size and harvest information for summer steelhead and fall Chinook. The returns of bright and tule fall Chinook appear to be early and both are expected to meet or exceed the pre-season forecasts. However, TAC did not update the run size for either fall Chinook stock. TAC updated the in-season projection for total A-Index steelhead to 82,000 (this includes an estimated 34,300 natural-origin fish). This update is an increase from last week's projection but still less than the preseason forecast of 85,900 A-Index steelhead

Lisa Wright, Corps, asked Swieca about the latest data for the adult steelhead spill. She wondered if there are PIT-tag data from Lower Granite to evaluate whether the RSW spill has affected passing adults. Swieca does not have that data and will look to make it available or share it at the next meeting.

- e. Power System – Tony Norris, Corps
 - All is well and they were able to support the adjacent areas that had extreme heat and high energy demand. (California and Idaho – had severe events related to high-energy demands and stress on their systems.)

Questions and Comments:

None

6. Public Comments:

Ruth Burris, PGE, asked Joel Fenolio, Reclamation, if there is a summary of the Grand Coulee operation in regards to the drum gate issue. Fenolio other than they have to spill he has no additional details. Burris asked for clarification on whether the draft will be next spring. Fenolio responded that it is generally through the winter.

7. Set agenda for next meeting - September 14, 2022

Today's Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin, Dan Hausmann
Bureau of Reclamation	Joel Fenolio
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/CRITFC	Tom Lorz
Colville Tribe	
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

Corps – Jonathan Roberts, Dan Turner, Leon Basdekas, Aaron Marshall

DS Consulting – Donna Silverberg (Facilitator), Colby Mills

BPA – Andrea Ausmus (note taker, Contractor with CorSource Technology Group)

Clearing Up – K.C. Mehaffey

Portland General Electric – Ruth Burris

Columbia River Bulletin – Mike O'Bryant

Oregon DEQ – Marilyn Fonseca