

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

August 24, 2022

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/2022/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes – Official meeting minutes and facilitator's summary for the August 17 meeting will be reviewed for approval at the next TMT meeting.

Dworshak Dam Operations – Jon Roberts, Corps, reported on operations at Dworshak Dam. The project is currently discharging at full powerhouse at 10.2 kcfs, with midnight elevation at 1,546 and will draft about 1 foot/day through the end of the month.

Water temperatures are beginning to come back down after the recent heat wave; Orofino was in the low 80s F and the Snake River was in the mid-70s F. Warm weather is expected through end of this week, and river temperatures are looking fairly average for this time of year. The Lower Granite tailrace has stayed consistently around 67 degrees F with the help from Dworshak releases. A consistent 1-degree buffer from the 68 degrees F threshold is expected moving forward. Stratification in the reservoir remains good, with the project maintaining temperatures between the 10-20-meter mark to preserve cool water at the bottom of the pool and maintain fish trap temperatures. Surface temperatures should reduce over the weekend with incoming cooler ambient weather. Fish trap temperatures over the last few days have been between 64.5-67 degrees F. Jon noted that things look good for this time of year heading into fall.

The regional weather forecast shows chance of precipitation and higher temperatures through the end of the week. Saturday and Sunday will provide a cool spell, unusual for this time of year, with temperatures in the mid-80s and low-50s F, which will relieve heat from the river. Temperatures will warm back up to average for the extended 10-day forecast, and Wednesday is expected to be close to 100 degrees F. The extended 15-day indicates temperatures returning to the high 90s in the Lower Granite region. Local temperatures at Dworshak look fairly cool on Saturday and Sunday, then will warm up to 99-101 degrees F. This should be an isolated event with no drastic changes to the reservoir or river, and temperatures are expected to go back down at end of the week to the low 90s.

Jon noted that the project will make some slight reductions heading into September, and looking towards Dworshak Board releases. Jon and his team will continue to run the model until natural flow temperatures hit 65 degrees F (typically end of September).

Snake River Basin Adjudication (SRBA) September Plan – Jay Hesse, Nez Perce Tribe, reported on the Dworshak Board's approved operational plan for 2022 (posted to TMT website). Under the SRBA, the purposes for the water have been to connect the end-of-August river conditions to river conditions after the natural cooling period in mid-late September. Given the existing fisheries resources in the lower Snake, with adults coming upstream and juveniles downstream, and that fish are holding and rearing in the lower Clearwater River, the Nez Perce Tribe wants to avoid extreme changes in water temperatures, river elevations and flows. The recommended plan describes criteria for how to ramp down flows from current levels to base flows. Jay noted that the Doble testing occurring this year (starting September 21) constrains the ramp down period, as the project needs to be down to flows through 1 unit by September 21.

The Plan recommends holding flows as high as possible through the first 9 days of the month (about 8,500 cfs), then dropping about 500 cfs every other day, shifting to a larger drop between Sept 19/20, then smaller adjustments as available in the single unit through end of the month. Jay noted that the final Plan will be posted as soon as possible.

Fall Treaty Fishing SOR – Kyle Dittmer, CRITFC, followed up on the Fall Treaty Fishing SOR 2022-C2 (posted to the TMT website), as introduced at the last TMT meeting, that requests a 1.5-foot band at Bonneville and The Dalles dams, and a 2-foot band at the John Day for the following periods:

1. August 22, 2022, 0600 hours - August 25, 2022, 1800 hours
2. August 29, 2022, 0600 hours - September 2, 2022, 1800 hours
3. September 5, 2022, 0600 hours - September 10, 2022, 1800 hours

Kyle noted that the initial 3-week season leads for better certainty and planning, and the expected fish forecast is similar to 2021, with good returns for fall Chinook and steelhead. CRITFC sponsored net flights on August 23, and data will be processed and ready to share with Action Agencies by the end of this week. After week 3, CRITFC will look at catch data and work to predict the remaining fishing periods for the season (typically ending late September/early October). Tribes are selling their fish to the public, and interested parties can look at CRITFC website for fishing vendor details. In response to a query, Kyle noted that the next Compact hearing should be the week of September 5-10, on Wednesday.

Doug Baus, Corps, noted that the Corps / BPA have been implementing week 1 as identified in the SOR, and will continue to implement weeks 2 & 3 as requested.

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

- **Grand Coulee:** midnight elevation was 1,283.2 feet, with inflows of 110,000 cfs, and releases of 126,000 cfs. The project is on track to reach 1,279 feet at the end of August for flow augmentation.
- **Hungry Horse:** midnight elevation was 3,553.4 feet, and dropped releases on Monday to 2,100 cfs, targeting 10-feet from full by the end of September.

Joel noted that Banks Lake also has a draft requirement by the end of August; current elevation is 1,561.5 feet (3.5 feet from full) and is on track to reach 1,564.7 feet by the end of the month.

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

- **Libby:** midnight elevation was 2,452.5 feet, with average inflows of 8.1 kcfs, and outflows of 9 kcfs;
- **Albeni Falls:** midnight elevation was 2,062.3 feet, with average inflows and outflows of 10.1 kcfs;
- **Dworshak:** midnight elevation was 1,546.7 feet, with average inflows of 0.9 kcfs, and outflows of 10.2 kcfs;
- **Lower Granite:** average outflows of 27.3 kcfs;
- **McNary:** average outflows of 168.2 kcfs; and
- **Bonneville:** average inflows of 173.2 kcfs.

Water Quality: Doug noted no significant water quality updates, except for some missing data at Chief Joseph Dam. Although a timeline for the fix is not yet confirmed, the Corps is aware of the data issue and is working to fix it.

Fish: Trevor Conder, NOAA, reported on juvenile passage indexes. Sub-yearling Chinook are coming through Lower Granite in decent numbers for this time of year, between 1,000-3,000/day, although those fish appear to be holding up at Little Goose. McNary had up to 16,000 coming through on August 16. The Bonneville index is between 200-1,000/day. Trevor noted the switch to late summer spill on August 15; Lower Granite saw an increase of PIT-tags in the bypass system compared to the RSW.

Fall Chinook adult passage indexes at Bonneville are similar to the 10-year average for this time of year, with 900 on August 22, and 3,000 on August 23; steelhead are between 88-611 and are expected to pick up again; total steelhead between 352-2,496. McNary passage is similar, with a reduction as fish move through the system, close to 1,000 fall Chinook and between 100-200 steelhead. Lower Granite is seeing good numbers of fall Chinook, in the 400 range yesterday, which is higher and earlier than the 10-year average. Steelhead are low and should be pushing through as things cool off.

Charles Morrill, WA, provided an update from TAC: “TAC met on August 22, 2022, and reviewed information for the A/B-Index summer steelhead run. As of August 21, 2022 the cumulative of summer steelhead passage since July 1 at Bonneville Dam was 66,269 (42,166 clipped and 24,103 unclipped). Based on the recent 5-year average run-timing and the pre-season forecast both the clipped and unclipped steelhead passage are higher than expected to date. TAC updated the total A-Index return to 112,000 (80,000 clipped and 32,000 unclipped) based on the recent 5-year average run timing for the A-Index components. The unclipped return includes hatchery origin steelhead that were released without an adipose fin clip. The majority of the B-Index steelhead return in September and October, therefore it is too early to provide an update for the B-Index components. As of August 21, 2002 there were 23,219 adult fall Chinook and 610 adult coho counted at Bonneville Dam. In 2021, the adult fall Chinook count as of August 21 at Bonneville Dam was 12.”

Dave Swank, USFWS, reported that juvenile lamprey are still trickling in, especially at Lower Granite and McNary; but not many at Little Goose or Bonneville. Adults are nearing the end of their run, with a slower than average wave. At Bonneville, nighttime ladder counts are 45,650, similar to the 10-year average; and at McNary 3,415, or 302% of the 10-year average. Counts at Ice Harbor are 925, or 196% of the 10-year average. Jay reminded the group that the nighttime counts are only indexes, and that not all lamprey passage is reflected in these numbers. Also, given conversion rate struggles of adults upstream, the Nez Perce Tribe continues their translocation program, hauling adult lamprey into the basin. As of today, the Tribe has trucked 2,332 fish from Bonneville, The Dalles, and John Day, with half for direct release and half for release this spring. The Confederated Tribes of the Umatilla Indian Reservation are also translocating a similar number upstream; the majority of adult lamprey are getting upstream via truck transport. Charles added that with more juvenile lamprey at Lower Granite throughout the course of this season than last season, the increase likely reflects the successes of the translocation program.

Power System: Scott Bettin, BPA, reported that all is good in the power system. McNary was spilling a little more than 20 kcfs past August 15, due to limited powerhouse capacity, and is back down to 20 kcfs now. He noted the positive effects of the extra water from delayed runoff due to the favorable conditions this year.

Questions or Comments from Non-TMT Members – There were no questions or comments from members of the public.

The next scheduled TMT meeting is on August 31 at 9:00 AM.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
August 24, 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 Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

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

Waiting another week for approval of meeting minutes.

Questions and Comments:

None

2. Dworshak Dam Operations – Jonathan Roberts, Corps NWW

We are within seven days of the end of the month, so operations will begin to change.

a. Hourly Project Data (AM of 7/27)

- Dworshak is currently discharging at its full powerhouse of 10.2 kcfs.
- Forebay elevation is 1546 feet, and is 11.5 feet from the minimum elevation for the end of August of 1535 feet.
- Drafting a foot a day will keep it within the elevation required for this time of year. Water levels are looking good.

b. Current River Temperatures

- There was a heat wave last week but the water temperatures have begun to come down. The water temperatures were measured a few days ago with Orofino's temperature in the low 80s and Snake River in the mid-70s. River temperatures are looking average for this time of year.
- The Lower Granite tailrace has been consistent at 67°F with the current releases from Dworshak. They are not running close to the 68°F mark and still have a buffer.

c. Current LWG Forebay Temperature

- The stratification continues to stay within the 10- and 20-meter-mark, with the 15-meter-mark being the transitional space.
- They continue to keep a cool bottom of the pool, which will continue to ensure cooler fish trap temperature.

- No concern with the tailrace temperatures.
- d. Current LWG Fish Ladder Temperatures
- For the last few days (back into July), the fish trap has retained a relatively cooler temperature, between 64.5 – 67°F.
 - For August 24, the hourly data jumps around a little bit, up to 67°F in the warmest hours in the afternoon.
 - Running at 65.5°F currently, looks good as it moves into fall.
- e. 10-Day Regional Weather Forecast
- Looking into the final days of August and into September.
 - Currently there is a small amount of precipitation forecasted for the northern parts of the basin.
 - There are high temperatures into the end of the week.
 - Saturday and Sunday are looking cool for this time of year, highs in the 80s and lows in the upper 50s. This will take a lot of heat out of the river and off the top of the reservoir.
 - The extended forecast shows that average temperatures will return. Wednesday shows that there will be a higher temperature of about 100°F but it appears to be a spike and should not continue into a heat wave.
- f. Weather Forecast for Lewiston, ID
- Forecast shows it being warm with a cooling for Saturday and Sunday.
 - Temperature spike of 99 – 101°F appears to be short lived, and should return to low-90s.
- g. Water Temperature Comparisons

Seasonal Ramp Down

- Currently the river temperatures should come down.
- They are running on a conservative approach to ensure that the water they are releasing is sufficient because they have a little more water for this time of year.
- Ultimately, they believe that the temperature will be coming down more than is shown but they are running conservative so that there is no chance for the Lower Granite tailrace temperatures to go above 68°F or interfere with the fish trap.
- Making some reductions for September and releases for the Dworshak Board.

Questions and Comments:

None

3. Dworshak Board 2022 Operational Plan - Jay Hesse, Nez Perce Tribe

- The Dworshak Board has reviewed the Operational Plan for 2022. Under the Snake River Basin Adjudication, the Tribes secured 200 kaf of water from Dworshak. Allocating that water has been described in the Dworshak Board Annual Plan. Purpose is to connect the end of August river conditions to the conditions after the natural cooling (typically occur mid- to late-September).
- To benefit the fisheries resources that exist in the Lower Snake River, both as juveniles going upstream and adults going downstream, as well as fish holding and rearing in the lower Clearwater, the Tribes want to avoid extreme temperature changes, water levels, and flows. Criteria for this year are described in the Operational Plan for the ramp down from the current levels to base flows.
- This year Doble testing has to be done at Dworshak and this constrains the ramp down period. Testing is scheduled to start on September 21. Outflow will be limited to one unit by that date.
- They are recommending holding the flows as high as possible through the first nine days of the month, at about 8500 cfs, and then start a 500 cfs drop every other day. This would continue through September 20th, when capacity does not allow a 500 cfs drop so there will be a larger drop in the last shift. They plan on running out with small adjustments being made through the end of the month.
- The final plan will be posted once Hesse has access to his email.

4. Fall Treaty Fishing SOR – Kyle Dittmer, CRITFC

SOR 2022-C2

- The tribes are requesting an initial three weeks of fall fishing:
 - Monday, August 22, 2022, 6 am, through Thursday, August 25, 2022, 6 pm
 - Monday, August 29, 2022, 6 am, through Friday, September 2, 2022, 6 pm
 - Monday, September 5, 2022, 6 am, through Saturday, September 10, 2022, 6 pm
- Expected fish forecast about the same as 2021 for fall Chinook and steelhead.
- CRITFC sponsored a net flight for Tuesday, August 23. They are processing the data and should be available Thursday or Friday.
- After third week, CRITFC staff will go through the catch data to-date and fine tune the model and predict how many more fishing seasons they can have. Typical is through late-September and early-October.

Questions and Comments:

Doug Baus, Corps, asked for clarification the first week are as identified (August 25) not August 26.

Dittmer clarified that it is as identified in the SOR, August 25.

Scott Bettin, BPA, asked when the next Compact is planned.

Dittmer responded that it will be the week of September 5 – 10; typically the tribes decide on the Monday or Tuesday and will meet on the Wednesday or Thursday after.

Bettin asked whether Labor Day would affect the schedule.

Dittmer said that it should still be the same.

Emily Stranz, DS Consulting, reminded everyone that this was given as a heads-up last week and asked if the Corps and BPA have been implementing.

Baus responded yes, they are currently implementing the first week and plan to implement week two and three as requested.

Dittmer added that the tribes are selling their fish harvest to the public. On CRITFC.org, there is a link to a list of vendors and where they are located. Cascade Locks and Hood River are the typical locations. There are more sales are being made than the beginning of the pandemic, the tribal fishers are feeling more emboldened to make sales. Looking to be a better year than both 2020 and 2021.

5. Operation Review –

a. Reservoirs – Reclamation, Corps

Reclamation – Joel Fenolio

- Grand Coulee Dam
 - Midnight elevation of 1283.2 feet.
 - Inflows have been around 110 kcfs and released of 126 kcfs.
 - On track to be at elevation 1279 feet for the flow augmentation operatin.
- Hungry Horse
 - Midnight elevation of 3553.4 feet.
 - Releasing 2100 cfs. Dropped on Monday to target 10 feet from full by the end of September.

- Banks Lake
 - Draft requirement by the end of August.
 - Midnight elevation of 1561.5 feet.
 - About 3.5 feet from full.
 - On track to be at 1564.7 by end of August.

Corps – Lisa Wright

- Libby Dam
 - Midnight elevation of 2452.5 feet.
 - Yesterday's average inflows 8.1 kcfs
 - Project is holding outflows of 9 kcfs.
- Albeni Falls
 - Midnight elevation of 2062.3 feet.
 - Yesterday's average inflows 10.1 kcfs
 - Outflows of 10.1 kcfs.
- Dworshak Dam
 - Midnight elevation of 1546.7 feet.
 - Yesterday's average inflows 0.9 kcfs
 - Outflows of 10.2 kcfs.
- Lower Granite average outflows 27.3 kcfs
- McNary average outflows 168.2 kcfs
- Bonneville average outflows 173.2 kcfs

b. Water Quality – Douglas Baus, Corps

- Nothing significant to report.
- There are missing data at Chief Joseph. There is no date available on when the data will become available, they are aware of the issue and are working on fixing it.

c. Fish – Trevor Conder, NOAA Fisheries

- Juveniles
 - Subyearling Chinook coming through Lower Granite in significant numbers. This is unusual for this time of year. The fish appear to be holding up at Little Goose.
 - McNary also showed a bump on August 16, with 16,789 coming through.
 - Bonneville index is between 200 and 1000.
 - Note: Switch to late summer spill on August 15.
 - Lower Granite there was an increase in PIT-tag fish in the bypass system as compared to the RSW. They continue to track this.

- Adults
 - Bonneville
 - We are in the fall Chinook period. On August 22nd, there were about 900 and then on the 23rd, there were about 3000 adult fall Chinook.
 - This is tracking fairly close to the ten-year average at Bonneville.
 - For Steelhead, it is between 88 and 611. It is the trough between A-run and B-run so they expect them to pick up again.
 - Total Steelhead were 352 on August 23rd and 2496 on August 16th.
 - McNary
 - Things are similar, a reduction as the fish move through the system.
 - Close to a thousand fall Chinook and one to two hundred Steelhead.
 - Lower Granite
 - Seeing good numbers of fall Chinook at Lower Granite.
 - Numbers in the 400s as of August 23.
 - Looking at the 10-year average the number is high. Shows the run reaching Lower Granite earlier than normal. At Bonneville, it was on track. It shows either that the fish are moving faster than normal or the Snake River fish are moving earlier than normal.
 - Steelhead are still slow. Might be due to thermal refugia and they will begin to move as it cools down.

Charles Morrill, WA, posted the latest TAC update in the chat: *“TAC met on August 22, 2022 and reviewed information for the A/B-Index summer steelhead run. As of August 21, 2022 the cumulative of summer steelhead passage since July 1 at Bonneville Dam was 66,269 (42,166 clipped and 24,103 unclipped). Based on the recent 5-year average run-timing and the pre-season forecast both the clipped and*

unclipped steelhead passage are higher than expected to date. TAC updated the total A-Index return to 112,000 (80,000 clipped and 32,000 unclipped) based on the recent 5-year average run timing for the A-Index components. The unclipped return includes hatchery origin steelhead that were released without an adipose fin clip. The majority of the B-Index steelhead return in September and October, therefore it is too early to provide an update for the B-Index components.

As of August 21, 2002 there were 23,219 adult fall Chinook and 610 adult coho counted at Bonneville Dam. In 2021, the adult fall Chinook count as of August 21 at Bonneville Dam was 12”

He highlighted that they updated the steelhead run site.

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

- Juveniles
 - They are still getting some juveniles, especially at Lower Granite and McNary.
- Adults
 - On the descending arm of the run but this year is a slower than average rolling wave of lamprey.
 - Numbers at Bonneville, nighttime ladder counts are up to 45650. Essentially the same to two weeks ago when compared to the ten-year average.
 - McNary, now at 3415, and is 302% of the ten-year average. Two weeks ago, it was 178% of the ten-year average. The wave has reached McNary.
 - It has also reached Ice Harbor; the count was 925, which is 196% of the ten-year average. Two weeks ago, it was 116% of the ten-year average.

Hesse added a reminder that the counts are indices and that not all lamprey are enumerated or observed at the windows. There are likely more than what these numbers represent.

Swank confirmed this. He also brought up the counts at The Dalles vs. John Day. The count posted on the main table for ladder counts shows John Day a thousand greater than The Dalles. This is most likely because the lamprey that are passing through The Dalles are passing at night and are not being counted.

Hesse also wanted to add that given the conversion rate struggles of adults going upstream the Nez Perce tribe continue to do the translocation program, hauling the adult lamprey into the upper basin. As of today, they have trucked 2332 adult lamprey from Bonneville, The Dalles, and John Day up into the upper basin with over half being direct release and 600 of those being held for release this spring. The Umatilla tribe is also transporting a similar number of fish upstream.

Hesse wanted to remind everyone that the majority of the adults getting upstream into the natal spawning habitat are getting there via truck transport.

Morrill wanted to add that they have seen more lamprey at Lower Granite, it may have picked up from last season, and it may reflect the success of the release of lamprey above Lower Granite. He believes that this is something worth noting.

e. Power System – Scott Bettin, BPA

All has been good, no fires and no problems. McNary spilled more than 20 kcfs past August 15th due to limited powerhouse capacity. It is now back to 20 kcfs per the FOP. It is nice to have the extra water from the delayed runoff show up now.

6. Public Comments:

None

7. Set agenda for next meeting - August 31, 2022

a. Dworshak Update

Today's Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Scott Bettin
Bureau of Reclamation	Joel Fenolio
NOAA Fisheries	Kelsey Swieca, 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	
Colville Tribe	Kirk Truscott
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

Corps – Jonathan Roberts, Scott St. John, Elizabeth Holdren

BPA – Ben Hausmann

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CRITFC – Kyle Dittmer

Chelan PUD – Jay Fintz, Melissa Lesser

Portland General Electric – Ruth Burris

Oregon DEQ – Marilyn Fonseca