

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 30, 2021

DRAFT Facilitator's Summary

Facilitator: Emily Stranz; Notes: Colby Mills

*The following Facilitator's Summary is intended to capture basic discussion, decisions, and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members. Official minutes can be found on the TMT website: <http://pweb.crohms.org/tmt/agendas/2021/>.*

### **Review Meeting Summaries & Minutes**

TMT Members approved the official meeting minutes and facilitator's summary for the June 16 meeting. Minutes and summary for June 23 will be reviewed at the next regularly scheduled meeting.

### **Dworshak Dam Operations**

Jon Roberts, Corps, reported on the current heat wave progressing through the Northwest. Temperatures could potentially peak today, with some relief from the heat on Thursday, although temperatures around 100-degrees F are still expected in the Lower Snake area. Potential cloud cover in the headwater portions of tributaries in the Grande Ronde, Salmon, Clearwater, and potentially the Imnaha, may help cooling. The July 4 weekend looks a little cooler west of the Cascades, with intense heat everywhere else. The heat wave is expected to start dissipating around 6 July, although temperatures will likely remain high through the end of the 10-day forecast.

The temperature gauge at Anatone is currently out and the Corps is working to update the database. Temperatures at Anatone and Orofino have risen to the 74-degree F range. These will continue to climb with another 2 days of intense heat in the region. The warm water passing Anatone is starting to be registered entering the Lower Granite forebay, and warmer tailrace temperatures are expected in the next couple days.

The temperature string in the Lower Granite forebay shows the hottest surface temperatures between 1400-2100 hours (could tip over 80 degrees F at the surface). The Corps will continue to try and influence water temperatures in the 15–20-meter range by releasing water from Dworshak, keeping a buffer in the 10-meter-deep range in an effort not to lose the stratification of the pool. The operation is holding the 15-meter mark steady, currently at 67.9 degrees F. The fish ladder pump pulls cool water from just under the 15-meter mark, keeping the ladder relatively cool compared to the surface temperature.

Jon presented updated modeling that shows the modeled results and projected results are closer; these will continue to be refined. The planned operation (to maintain the Lower Granite tailrace to not exceed 68 degrees F) is to continue 12.5 kcfs releases potentially through July 9. With the continued heat, the tailrace could progress over 68 degrees F into the 69 range for a 4–5-day period. The Corps will continue releasing water out of Dworshak and will continue to evaluate every day for a chance to make a flow reduction as soon as possible.

Considering TDG in the Dworshak tailrace is currently around 108.5% there is a little room to spill more at night when TDG production is lower due to cooler air temperatures, as well as a reduction in daytime highs. Model results of this scenario show no improvements in temperature, and it shortens how much water is available for the entire summer by about a day. The Corps will continue to look at alternatives to be as most efficient to meet requirements of the BiOp.

Doug Baus, Corps, reported on an MOC that went out to FPOM yesterday (21NWW01) for early surface spill closure at Lower Granite and Little Goose dams. The MOC was sent to FPOM yesterday, with up-to-

date information based on extensive modeling. Changes at Little Goose will be coordinated with FPOM, and the Corps will continue documenting the MOC in tandem with the TMT due to the overlapping conversation with Dworshak. Salmon Managers may have more to say on this after their FPAC call tomorrow. Temperature modeling results will be provided to inform recommendations on potential operations.

Jon reported on the MOC and expected impacts at Lower Granite if the RSW was closed immediately. The TMT has utilized the RSW closure during short duration heat waves to provide improved temperatures (up to 1 degree F difference) in the tailrace, however, this benefit depends on the correct conditions. At this point, if the RSW is closed it would be expected to provide a potential relief of about 0.5 degrees F. However, with the heat wave extending through July 7, the forebay will continue to heat through the day, without much of a cooling effect at night. If the heat wave is extended, closing the RSW could have a potential negative effect of raising the 15-meter mark temp by a degree. The model runs shown at the meeting today assume the Lower Granite RSW will remain open, per the default operation in the FPP to keep the RSW open through August 31 to maintain PIT-tag detection, unless otherwise coordinated. The FPP closure criteria for the Little Goose ASW are flows below 35 kcfs starting August 1.

The near-term plan is to leave the Lower Granite RSW open, and continue to monitor environmental conditions to inform decisions. The Corps will continue to update the MOC via FPOM and the TMT, and will evaluate comments received. Chris Peery, Corps, noted that the higher temperatures raise concerns about adult passage delays at Ice Harbor and Lower Monumental dams, and that closing the spillway weirs may not provide the desired temperature improvements.

→ **ACTION: Doug will post the FPOM MOC on the TMT website.**

### **Upper Snake Flow Augmentation**

Joel Fenolio, BOR, updated the group on the Upper Snake flow augmentation. The intent in the Boise system is to release 427 kaf for flow augmentation this year. The Boise system ran about 36,000 cfs between May 17 and June 7. The main issue is the Payette system, which missed refilling, decreasing allocations and necessitating supplemental flows to make up for the lost 17 kaf. These flows will come from Milner Dam through the Palisades powerhead at about 750 cfs, from June 28 through July 9-12. Adjustments may be made over the next 10 days to make sure the 17 kaf comes out of Milner by mid-July. Payette releases were started back on June 14 and will continue through August 31.

Jonathan Ebel, ID, asked if there was a plan or timeline to put this water back in American Falls reservoir. Joel confirmed that the Corps will likely be shifting more water down there throughout the summer in mid-July into August. In response to a query from Erick Van Dyke, OR, Joel said he will report back at the next meeting with information regarding water temperatures coming from the Hells Canyon complex or BOR projects that may be impacting the Lower Granite tailwaters. Jonathan did note that it is tough to get temperature data, as the USGS gauge is out at Weiser.

→ **ACTION: Joel will look into water temperature coming from the Hells Canyon complex that may be affecting the Lower Granite tailrace. He will report back at the next TMT meeting.**

### **Snake River Trap & Haul**

Jonathan Ebel, IDFG, notified the group that IDFG is implementing emergency sockeye trap and haul at Lower Granite Dam. They will begin trapping fish and transporting on July 6, through July 23, and will extend this date out as needed to support sockeye passage. Rationale for this operation is high temperatures in the Salmon River at Shoup and the Snake River at Anatone, with peak temperatures in the

Salmon River at Shoup close to 76 degrees F yesterday. The peak of the sockeye run is expected soon, with 10-15% likely already passed.

IDFG plans to trap on Monday through Thursday, and will increase the daily trap rate to 70%, which should equate to 50% trap rate of the run (upper limit in the CRS BiOp). Jonathan noted that IDFG will not be proposing trap and haul from Ice Harbor Dam, and that their strategy is to do everything necessary to get them to Lower Granite. If temperatures rise, crews may need to adapt and make adjustments at the trap. Transport staff is lined up and ready, and if help is needed other entities in the basin will be notified. The final trap and haul plan is posted on the TMT website.

### **Adult Sockeye Passage**

Claire McGrath, NOAA, reported that sockeye began arriving late to Bonneville this year, although passage has picked up in the last week, at 46% of the 10-year average, and 42% of the 10-year average at McNary. As of June 29, there have been 20 PIT-tagged Snake River sockeye at Bonneville, with 65% of those detected at The Dalles, 35% at John Day, and 20% at McNary. IDFG estimated that YTD 428 Snake River sockeye have passed Bonneville based on window counts. From conversion rates from Bonneville to McNary, it appears that travel time is slower than average in the lower Columbia this year. YTD count at Ice Harbor was 57 fish, and Chris noted that 3 of the PIT-tagged sockeye have been counted. Claire noted that there is great concern over the continued heat, and conditions will continue to be closely monitored for fish passage.

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

**The next scheduled TMT meeting is a conference call on July 7, 2021 at 9:00 AM.**

*This summary is respectfully submitted by the DS Consulting Facilitation Team. Suggested edits are welcome and can be sent to Colby at [colby@dsconsult.co](mailto:colby@dsconsult.co).*

**Columbia River Regional Forum**  
**Technical Management Team**  
**DRAFT OFFICIAL MINUTES**  
**Wednesday, June 30, 2021**  
**Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)**

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting.

## **1. Meeting Minutes and Summaries**

The official minutes and summary from the June 16 TMT meeting are approved with no additional edits.

## **2. Dworshak Dam Update - Jon Roberts, Corps NWW**

### ***2a. 10-Day Weather Forecast***

The region has been experiencing a heat wave. The 10-day forecast calls for air temperatures peaking at Lewiston today and then lowering slightly but still near the 100s. Cloud cover may provide some slight relief in the tributaries of the Upper Snake including the Grande Ronde, Salmon, Clearwater, and possibly the Imnaha. Hopefully incoming thunderstorms will not lead to any fires in the area. Heading into the holiday weekend, temperatures will be slightly cooler west of the Cascades and still warm east of the Cascades.

### ***2b. Snake and Clearwater River Water Temperatures***

Over the past week, temperatures in the Lower Granite tailrace have hovered around ~67-68°F; however, warmer water is beginning to make its way down the system. Roberts reminded TMT that the gauge at Anatone was out for a while and the web report is still catching. Anatone was at 72°F a few days ago and is now at 74°F. Orofino is now at 74°F as well. Temperatures will rise over the next few days and then plateau, according to forecasts. Water temperatures will likely recede at the end of the 10-day period.

### ***2c. LWG Forebay Temperature***

Data show that the Lower Granite forebay tends to be warmest from ~1400 to ~2100 hours. At the surface, temperatures may rise over 80°F today. The Corps targets water at the 15 to 20-meter depth to maintain stratification. Yesterday morning, the pool started at 68.3°F at the 15-meter depth yesterday. Today it is at 67.9°F. The fish pump sits right below the 15-meter depth.

### ***2d. Operation Scenarios***

The Corps shared 2 operational scenarios with TMT:

***Scenario 1.*** Meet current temperature requirement of not to exceed 68°F in the Lower Granite tailrace by releasing 12.5 kcfs through potentially July 9.

***Scenario 2.*** Increase spill by 750 cfs at night through July 9 to spill to the 110% TDG limit for all 24 hours of the day, similar to last year's operation. Model results of this operation consistently show no improvement to overall temperatures in the tailrace, nor

any reduction in the duration of higher temperatures. Flow augmentation through ~mid-Aug. would be shortened by 1 day with this operation.

Erick Van Dyke, OR, asked how much Dworshak water it would take to keep the Lower Granite tailrace temperature at 68°F. Roberts replied it would take an outflow of 15.5 kcfs, almost double the current spill rate. This would put TDG at 118% in the Dworshak Dam tailwater.

Jay Hesse, Nez Perce Tribe, asked what would happen if Dworshak dropped down to powerhouse capacity. Roberts replied that would increase the Lower Granite tailwater temperature to 70°F.

The Corps sent a Memorandum of Coordination (MOC) to FPOM yesterday that proposed closing the spillway weirs early at Lower Granite and Little Goose. The Fish Passage Plan has flow and date criteria for closing the spillway weirs, and any adjustments must be coordinated through FPOM. Thus, the Corps coordinated through FPOM yesterday and received comments back. Since yesterday, the Corps Walla Walla district has completed additional, extensive modeling with more up-to-date information. This information will be added to the MOC. Charles Morrill, WA noted that some FPAC members have not had time to review it yet. There is an FPAC meeting scheduled for tomorrow.

Roberts took TMT through some of the modeling results comparing Lower Granite RSW operations. In the past, the RSW has been closed for short periods during heat waves to keep from spilling hot surface water into the tailrace. Typically, for the operation to be successful, the forecast must include lower incoming temperatures in the 48-72 hours following RSW closure, commented Roberts. Additionally, temperatures are not expected to dip until at least July 7. Modeling results show that closing the RSW by July 2 (Roberts anticipates this would be the earliest coordination would occur, based on when FPAC meets and how long it takes to coordinate the closure) would result in a 0.5°F benefit in the Lower Granite tailwater. The forebay would continue to heat up through July 7, raising the temperatures at the 15-meter depth by ~1°F. This means that the water being pulled into the fish pumps would be affected.

Based on that information, the Corps is releasing cool water from Dworshak Dam as needed to provide relief in the Lower Granite tailwater.

Questions and comments from TMT members:

1. Morrill wondered if an extended closure of the RSW would impact the pool stratification at Lower Granite. Roberts replied that stratification would be a concern that would need to be considered.
2. Hesse asked if the model runs presented were based on the RSW being open or closed. Since the FPP criteria to close the RSW have not been met, the model runs were based on the RSW being open.

Baus reminded TMT that the Lower Granite RSW default operation is to remain open through August 31 as flows allow unless otherwise coordinated with FPOM, as described in the Fish Passage Plan. Lower Granite closure criteria differs from Little Goose, Lower Monumental, and Ice Harbor due to the PIT-tag system that was installed in 2020, as recommended by TMT and FPOM.

Based on the current modeling, the Corps does not believe it would be prudent to close the Lower Granite RSW and will continue to update the MOC through FPOM and update TMT on any changes. Chris Peery, Corps, added that current temperatures and forecasts may result in fish passage delays at Ice Harbor and Lower Monumental. He agreed that closing the RSW may provide short-term improvements but will likely not provide a long-term temperature benefit.

Jonathan Ebel, ID, shared concern that leaving the RSW open and closing the ASW at Little Goose could increase the ladder temperature differential at Little Goose.

### **3. Upper Snake Flow Augmentation**

Joel Fenolio, Reclamation, updated TMT on Upper Snake flow augmentation. Currently, the total estimated 2021 augmentation volume is ~427,000 acre-feet. In the Boise, releases began on May 17 and ended on June 7 with a total volume of 36,193 being released between those two dates. There have been some changes to allocations in the Payette system. Last time Fenolio touched base with TMT, Reclamation was expecting to have the full contract space available, as well as 40 ac-ft. from WD65. Unfortunately, the reservoir missed refill for the first time since ~2001. This is a rare situation and the loss had to be supplemented with 17 ac-ft. of releases out of Milner Dam. Allocations from the Payette did start on June 14 and will continue through August 31 due to water quality issues in the Cascades. An additional release of 17,292 ac-ft. will be necessary past Milner and will begin on June 28 at approximately 750 cfs due to dry conditions in the Payette system. Currently, these releases are planned to end as early as July 9 and as late as July 12.

Questions and comments from TMT members and representatives:

1. Ebel noted that American Falls is running towards dry. With flow augmentation coming from that area right now, he wondered if there is a plan for refill, adding that when the reservoir dips too low there can be anoxia. Fenolio said it is probable that more water will be shifted to the region in July and August.
2. Van Dyke wondered about temperatures above Hells Canyon.  
→ Action item: Fenolio will look into this and report back next week.

### **4. Snake River Sockeye Trap and Haul at Lower Granite Dam**

Jonathan Ebel, IDFG, reported that ID will be implementing an emergency sockeye trap-and-haul operation at Lower Granite between July 6 and July 23. At this time, an estimated 10-15% of this year's sockeye run has occurred, so ID's hope is that this operation will occur during the peak of the run.

ID will trap and haul at a 70% rate Monday-Thursday during the operation. This puts the weekly trap rate somewhere near 50% once non-trapping days are factored in. This is the upper limit allowed by the CRS BiOp.

Tom Lorz, Umatilla, asked if ID will be asking for additional operations at the Ice Harbor trap if conversion rates are not what ID is hoping for. Ebel replied his agency will not be asking for that, adding that his agency will do everything necessary to get the species to Lower Granite.

Today's discussion included comparisons to the 2015 season, which was also a hot water year. Claire McGrath, NOAA, noted that there are several key differences between 2015 and this year.

One difference is that the agencies are more prepared, with staff lined up and plans in place to address potential issues. Additionally, temperature mitigation and fish protection measures are starting earlier this year than they did in 2015.

Ebel added that IDFG will monitor the situation and temperatures and may need to adapt in real time. If that needs to occur, there are plans in place to make adjustments at the trap. Crews have been lined up and are ready, should this need to happen. He also reminded TMT that the IDFG trap and haul plan is posted on the TMT website under “Related Links” (bottom right).<sup>1</sup>

### **5. Adult Sockeye Passage - Claire McGrath, NOAA Fisheries**

Claire McGrath, NOAA, shared an update on sockeye passage, which is late at Bonneville this year, but starting to pick up.

At Bonneville, the YTD is ~80,000, which is 55% of last year and 46% of the 10-year average. The species is passing in rates of 8,000 to 10,000 per day right now.

At McNary, daily counts are between 1,700 and 6,500 and the YTD total is currently 35,703, which is 57% of last year and 42% of the 10-year average.

On June 29, at Bonneville, 20 PIT-tagged Snake River sockeye had been detected at the project, with 65% of those detected at The Dalles, 35% at John Day, and 20% at McNary.

Ebel reported that, based on the PIT-tag data, a total of 428 Snake River sockeye have passed Bonneville as of yesterday. Conversion rates from Bonneville to McNary are similar to prior years. PIT-tag data, however, show that travel times are slower than average through the Lower Columbia River system.

Passage in the Snake River is about a week later than typical. On June 19, 1 sockeye had passed Ice Harbor. Passage picked up on June 24. Daily counts are at 5-17 per day. The YTD total at the project is 57. None of the PIT-tagged fish have been detected at Ice Harbor yet. However, window counts are 17 at Lower Monumental, 22 at Little Goose, and 6 at Lower Granite.

Morrill commented that high temperatures may impact passage of adult sockeye, summer Chinook, and other species and will need to be closely monitored.

Peery added that 4 PIT-tagged sockeye had been detected at McNary as of today, as well as 3 at Ice Harbor.

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<sup>1</sup> [http://pweb.crohms.org/tmt/20210521\\_Emergency\\_Trap\\_and\\_Haul\\_Plan\\_2021\\_update\\_Final.pdf](http://pweb.crohms.org/tmt/20210521_Emergency_Trap_and_Haul_Plan_2021_update_Final.pdf)

**Today's Attendees:**

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

**Other Attendees (non-TMT members):**

Corps – Aaron Marshall, Alexis Mills, Chris Peery, Dan Turner, David Bogema, Elizabeth Holdren, Eric Chow, Jonathan Roberts, Michelle Yuen, Scott St. John

DS Consulting – Emily Stranz (Facilitator), Colby Mills

Columbia Basin Bulletin – Mike O'Bryant