

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 5, 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 March 15 official meeting minutes and facilitator's summary. Minutes and summary from the March 22 meeting will be reviewed at the next TMT meeting.

Chum Operation – Doug Baus, Corps, reported on the chum operation at Bonneville Dam. Total outflow at 0600 hours was 112 kcfs, with a project tailwater elevation of 10.6 feet.

The NWRFC inflow forecasts for Bonneville Dam over the next 10-day period range from a low of 108 kcfs on April 7, to a high of 143 kcfs on April 12. As previously coordinated at TMT, Action Agencies will end the chum operation at 0001 hours on April 10, concurrent with the commencement of spring spill. Doug noted that spring spill on the Snake River started on April 3. Tony Norris, BPA, added that with Grand Coulee running close to Vernita Bar, Bonneville's tailwater is expected to be variable but remain above 10.2 feet, even after April 10.

Charles Morrill, WDFW, noted that he has not yet been able to access spring trap and emergence data; once available, he will add a cumulative graph to the table presented previously at TMT.

MOP Operations – Aaron Marshall, Corps, provided a real time update on Minimum Operating Pool (MOP) operations. MOP operations began on the four lower Snake River projects on Monday, April 3. At Lower Granite on Monday, the tailwater elevation dropped below the minimum; operators have made adjustments over the past couple days to keep the tailwater above the minimum elevation, which is increasingly difficult. The Little Goose forebay range has been constrained to a narrow band near the top of the MOP range to help maintain the minimum tailwater elevation at Lower Granite, (minimum tailwater is a hard constraint). The Corps will be making an adjustment to the Little Goose forebay range, to a 0.5-foot raised MOP range at the project, beginning today and likely until flows increase in the Lower Snake River to above 75 kcfs.

Aaron confirmed that the rest of the projects are within the MOP operating range. The MOP adjustment at Little Goose is needed to keep the powerhouse tailwater gauge above the minimum elevation. There is a separate tailwater gauge closer to the navigation lock entrance as well. Aaron was not aware of any issues with the fish ladder entrance criteria.

TMT representatives from the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, Washington, Montana, and Oregon voiced concern of a raised MOP operation, shortly after Snake River dredging efforts, noting that adjusting MOP operations are not the best conditions for fish. They requested more clarity on the impacts of this adjustment. The Corps reminded the TMT that the operation has been implemented for many years and is within the Fish Operations Plan. Dredging was conducted in the Lower Granite pool, and the minimum tailwater elevation concern is in the Lower Granite tailrace. It was noted that concerns around MOP operations were previously raised to RIOG, however, no response has been provided to date.

- **ACTION**: TMT Members will check-in with their agency RIOG reps regarding policy-level clarity on this issue.

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Question 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 April 12, 2023 at 9:00 AM.

**Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, April 5, 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 Meeting Summary and Minutes – March 15, 2023 (March 22, 2023 pending)

- March 15 – Summary and Minutes were approved. March 22 still pending.

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

a. Bonneville Dam - Hourly Data – *Doug Baus, Corps (Hour ending 6)*

- Total Project Outflow: 112 kcfs
- Project Tailwater Elevation: 10.6 feet

b. Bonneville Dam – NWRFC Inflow Forecast (10-Day)

- Low: 108 kcfs (April 7)
- High: 143 kcfs (April 12)

c. Summary of 2022/2023 TMT Coordinated Chum Operations

- End of Chum Operation: April 10 at 0001 hours, commensurate with the start of FOP spring spill.

Baus noted that spring spill started at the lower Snake River projects on April 3.

Tony Norris, BPA, shared that Grand Coulee is running close to minimums needed to support Vernita Bar. The flow at Bonneville Dam will increase with increases in Snake River flow.

Charles Morrill, WA, shared that he has access to the trap and emergence data from the spring and will be able to provide these data in the future.

3. MOP Operations Update – Aaron Marshall, Corps

- MOP operations on the four Lower Snake projects began on Monday, April 3.

- Since then, the Lower Granite tailwater elevation has dropped below the minimum.
 - Operators were able to make some adjustments over the past few days to operate the Little Goose pool near the top of MOP to keep the Lower Granite tailwater above the minimum. However, it is becoming increasingly difficult at these low flows.
- Little Goose forebay range has effectively been constrained to a narrow band near the top to help maintain the minimum tailwater elevation at Lower Granite.
 - The Little Goose turbine unit dead bands are causing additional issues.
 - As a result, the Corps will adjust the Little Goose forebay operating range to a half-foot raised MOP range beginning today, April 5.
 - This 0.5-ft raised MOP operation at Little Goose will likely be needed until flows increase in the Lower Snake up to ~75 kcfs.

Jay Hesse, Nez Perce, asked if they are in within the MOP operating range at Ice Harbor, Lower Monumental, and Lower Granite.

Marshall answer in the affirmative.

Hesse asked which gauge or criteria was insufficient in the Lower Granite tailwater that is being adjusted for.

Marshall said that it was the Lower Granite powerhouse tailwater gauge.

Hesse asked if there were observations of issues with ladder entrance criteria.

Marshall said he does not have information on ladder entrances.

Tom Lorz, Umatilla/CRITFC, asked if the powerhouse tailwater gauge measures depth at the navigation lock.

Marshall replied that there is a separate tailwater gauge closer to the navigation lock entrance. The powerhouse gauge measures elevation adjacent to the powerhouse and spillway.

Lorz asked if this is something that needs to be tackled later. If navigation requirements are being met but the powerhouse is lower, what are the impacts and what is the rationale for increasing above MOP?

Marshall understands and explained that the Corps has minimum tailwater requirements at the projects and they are hard constraints, similar to the minimum forebay elevations. They are intended to meet all the multiple purposes that these projects provide.

Lorz said that it appears that most critical being navigation is being met. He would like to know what the others might be and it may be something to talk about in future meetings.

Stranz said that she appreciated Lorz provided the “why” behind his question. It is helpful for people to know the why behind the question.

Hesse said he appreciated Lorz's inquiries and he shares the same questions. He said that he feels that there is more urgency and is something that he will look into sooner than the next meeting. Deviating from MOP is something that is not desirable for fish conditions. He needs to understand better if there is an actual impact to the many purposes.

Morrill agrees with Lorz and Hesse and believes it needs to be addressed sooner rather than later.

Brian Marotz, MT, asked for a repeat for the rationale and/or problem with the tailwater elevation that is resulting in the raised MOP operation.

Julie Ammann, Corps, responded that the operation is something they have been doing many years, adjusting the downstream project forebay elevation to meet the minimum tailwater elevation requirement. As has been described in the FOP over the past several years and reported real-time at TMT, there is volatility when spill operations begin, especially during low flows. It is not a new operation.

Lorz said that they thought the dredging this year at Lower Granite would alleviate these problems. Some of the salmon managers have submitted comments about the FOP about this issue and unfortunately have not had a response or a RIOG meeting scheduled yet. They are stuck with either talking about it in TMT or not at all. They are putting a marker down saying that this is a concern and an issue and they would like higher clarity provided.

Ammann commented that the dredging was done in the Lower Granite pool and they were able to end that variable MOP operation and implement the Lower Granite MOP. This is an issue in the Lower Granite tailrace. As has been observed in the past and described in the FOP, when unable to meet minimum tailwater elevation requirements at Lower Granite, Little Goose, and Lower Monumental, the Corps has adjusted the MOP operation at the downstream project. She added that she hears Lorz's concern and will talk to their RIOG members. She believes that TMT should pause there and circle back after talking to their policy teams. Ammann added that the Fish Operations Plan includes this requirement to meet the minimum tailwater. It is a hard constraint. The projects were designed around the minimum tailwater so it is taken seriously and a hard constraint.

Stranz said that the action that Ammann called out would be a helpful one. Any member with strong concerns check in with your RIOG member.

Marshall answered Marotz's question from earlier. He said that the difficulty was that the tailwater elevation dropped below the minimum at Lower Granite on Monday when they began the spill operations. Operators were able to make some adjustments and raise the Little Goose forebay range to help maintain the Lower Granite minimum tailwater elevation. However, Little Goose is being constrained to a very narrow range near the top of the MOP operation in order to meet the minimum tailwater at Lower Granite. They are also having some additional challenges with the dead bands at the Little Goose units.

Marotz said that there is always more information that could help him to understand and learn. He just needs to look into this further.

Stranz asked where the best resources are to look into this further.

Marshall said that the best place would be Fish Operations Plan (FOP) and there is also the hourly project data that is available through TMT website.

Erick Van Dyke, OR, asked whether the minimum tailwater is same as the navigation channel.

Marshall said that the minimum tailwater elevation at Lower Granite is 633’. That is the same as the minimum forebay elevation at Little Goose. The depth requirement at the navigation lock entrance in the Lower Granite tailrace the project was designed to provide a minimum of 15 feet over the sill of the navigation lock entrance, corresponds to the 633’ minimum tailwater elevation.

Ammann added that the 633’ also provides the required depth in the federal navigation channel throughout the reach.

Van Dyke requested a link to all the criteria provided.

Action Item: TMT members reach out to RIOG representatives to try to move the policy level conversation forward

Action Item: If needing more information, look in the FOP and the hourly project data available on the TMT website.

4. **Public Comments:** None

5. **Set agenda for next meeting – April 12, 2023**

Today’s Attendees:

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

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Other Attendees (non-TMT members):

Corps – Dan Turner, Aaron Marshall, Chris Peery, Elizabeth Holdren, Alexis Mills, Ashlynn Tate, Greg Hoffman

NOAA – Chris Magel

Reclamation – Jen Johnson

DS Consulting – Emily Stranz (Facilitator), Colby Mills

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

Clearing Up – K.C. Mehaffey

Oregon DEQ – David Gruen, Marilyn Fonseca

Grant PUD – Peter Graf