

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

Friday, July 24, 2020

DRAFT Facilitator's Summary

Facilitator: Donna Silverberg; 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/2020/>.*

### Lower Monumental Dam Operations

Doug Baus, Corps, reported on current spill operations at Lower Monumental Dam. TDG in the Ice Harbor Dam forebay has been exceeding state Water Quality Standards (WQS) for the past three days. The Corps needs to check in with TMT members to inform and coordinate a plan moving forward to comply with state requirements.

Alexis Mills, Corps, reported that Lower Monumental has been consistently spilling at 17 kcfs (as written in the FOP). The last three days have seen TDG exceedances over 115% (WQS) in the Ice Harbor Dam forebay, due to higher air temperatures and low wind, which are forecasted to begin again on Sunday. As a result, the Corps needs to take immediate action at Lower Monumental to meet the state WQS in the Ice Harbor forebay and wishes to consult TMT about next steps.

The Corps presented three potential actions for reducing TDG in the Ice Harbor forebay (as posted on the TMT website):

1. (Default action) 2 kcfs reduction of the 115% forebay /120% tailrace spill cap (from 17 kcfs to 15 kcfs). As the LMN-07 (bulk with RSW) does not go below 16.3 kcfs, the Corps would change to spill pattern LMN-09 (bulk with no RSW) and reduce the spill cap if necessary.
2. Switch to the uniform spill pattern, which would likely result in a reduction in TDG without the need to go below 17 kcfs.
3. Extrapolate the current bulk spill pattern (LMN-07) and reduce the 115% forebay/120% tailrace spill cap.

Doug also noted that there is scheduled Doble testing next week at Lower Monumental Dam, which could create additional challenges. The default action represents implementation of the existing FPP, which provides a tool in the toolbox to comply with state WQS and can mitigate impacts on adult fallback. Recognizing that the other options could also reduce TDG, the Corps presented all three to the TMT for discussion.

After a lengthy discussion to clarify the options and weigh benefits and potential risks to fish, a new operation (as posted after the meeting on the TMT website) was proposed, with no objections from TMT Members. The new temporary spill patterns include:

1. LMN-10: Lower Monumental Dam Uniform Spill Pattern with RSW (down to 15.8 kcfs spill);
2. LMN-11: Lower Monumental Dam Uniform Spill Pattern with RSW (spill below 15.8 kcfs).

This temporary operation will be implemented effective today through Doble testing, and will revert back to normal when: 1) WQ modeling allows for a return to the bulk pattern (as stated in the FOP); or 2) when average project outflows are below 30 kcfs (trigger identified in the Fish Passage Plan) and can close the RSW. Doug clarified that if high levels of TDG remain in the Ice Harbor forebay and Lower Monumental tailrace, the Corps will work internally to see what a reduction below 15 kcfs might look like.

**The next scheduled TMT meeting is a conference call on July 29th 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**

**Friday, July 24, 2020**

**Minutes: Melissa Haskin, BPA (contractor, FLUX Resources)**

Today's TMT meeting was chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting, and was conducted via conference call and webinar. See the end of these minutes for a list of attendees.

#### **1. Lower Monumental Dam Operations - Alexis Mills, Corps & Doug Baus, Corps**

Today's unscheduled TMT was called by the Corps to check in with TMT members and representatives regarding operations at Ice Harbor dam, where TDG has been exceeding state water quality standards for 2 days.

Alexis Mills, Corps, reported that over the last 3 days, the forebay at Ice Harbor dam has exceeded the 115% state water quality standard. With incoming high temperatures and low wind expected Sunday, the Corps needs to take action at Lower Monumental dam to meet the state water quality standards at Ice Harbor.

The Corps offered 3 possible actions:

- **Option 1** (Default): 2 kcfs reduction of the 115% forebay/120% tailrace spill cap from 17 kcfs to 15 kcfs. As the FPP Table LMN-7 (bulk with RSW) does not go below 16.3 kcfs, the Corps would change to spill pattern Table LMN-9 (no RSW) and reduce the spill cap if necessary.
- **Option 2**: Switch to the uniform spill pattern Table LMN-8, which would likely result in a reduction in TDG without the need to go below 17 kcfs.
- **Option 3**: Extrapolate the current bulk spill pattern (Table LMN-7) and reduce the 115% forebay/120% tailrace spill cap, by adding 3 additional rows for spill rates below 16.3 kcfs.

Doble testing has been pre-coordinated at Lower Monumental for 7/27-7/31. During the day, forced spill above 17 kcfs may be required as units 1-6 are out of service and powerhouse outflow is limited to 5 kcfs for station service. After Doble testing, Lower Monumental spill can revert back to 17 kcfs under a bulk spill pattern if TDG is within state water quality standards.

Mills shared 3 tables with information on spill patterns and resulting spill with the group, available on the TMT website.

Per the FOP, spill at Lower Monumental is 17 kcfs. Currently there is plenty of wind and mixing in the forebay. Today and yesterday have been cooler than earlier this week but on Sunday and Monday, there is not a lot of wind in the forecast. On Sunday, temperatures are forecasted to hit 105 degrees. These two conditions will likely result in lower rates of degassing between the Lower Monumental tailrace and the Ice Harbor forebay. The travel time between the projects is currently almost 5 days.

Alexis Mills, Corps, reported that the gage at Ice Harbor was verified by USGS yesterday.

The group discussed the above options, with the Corps expressing that its default option to comply with state water quality standards and the FOP would be option 1. This option has been developed and would have a minimum impact on adult fallback for steelhead and sockeye traveling through the system.

At this point in the season, most fish passage is complete. Jonathan Ebel, IDFG, reported that steelhead have not experienced any fallback since April. As of today, 83% of sockeye had passed Ice Harbor. About 10% could still be moving through the project, he noted, saying the 105-degree forecast is a little concerning. Fish managers would prefer options that would not slow passage through the lower Snake, he said. Claire McGrath, NOAA, added that temperature differentials are a concern as air temperatures rise.

Today's discussion mostly centered around an option not mentioned above, but rather was proposed in-meeting:

- **Option 4 (developed in-meeting):** The following 2 new spill patterns (LMN-10 and LMN-11) not in the Fish Passage Plan or previously discussed above.
  - LMN-10 Lower Monumental Dam Uniform Spill Pattern with RSW - Down to 15.8 kcfs Spill
  - LMN-11 Lower Monumental Dam Uniform Spill Pattern with RSW – Spill Below 15.8 kcfs

This option was developed into a spreadsheet during the meeting, which is now available on the TMT website.

Discussion points during today's meeting included:

- Erick Van Dyke, OR, expressed confusion about why the only place close to exceeding state water quality standards is Ice Harbor. Since there is wind, he's confused why there is not more degassing. He commented that it is a pattern he believes has been present historically. The Corps responded that there is a 5-day travel time between the projects so there can be a delay in effects. Jonathan Ebel, IDFG, raised that it would be worth looking into the O2 data to see if photosynthesis is some of the issue. This was tabled for future discussion.
- Van Dyke asked if the raised MOP at Ice Harbor for navigation safety is creating gas. Laughery responded that as the forebay is lowered, gas production increases due to deflector performance.
- Van Dyke asked what TDG would need to be targeted in the Lower Monumental dam tailwater to get 115% in the Ice Harbor dam forebay. Mills said that TDG has been 118-119 for some time and that she would be more confident that a TDG of 117-118% in the Lower Monumental dam tailwater would not result in exceedances based on current conditions.
- At the start of the meeting, Claire McGrath, NOAA, reported that the general feedback from fish managers has been that option 1 would be the least preferable alternative. She did not want to speak for everyone but shared that a concern would be the decrease in spill.

- Laughery mentioned his suggestion, based on his experience, would be to use Table 7 (option 1), as it would maintain juvenile egress and southern ladder access, while providing safe conditions for navigation, and maintain higher spill passage efficiencies than Table 8 at comparable spill volumes. He noted Table 8 (option 2) would likely cause issues at the fish ladder and with navigation.
- Some concern was expressed about spill during a uniform pattern with regards to navigation. Historically, a uniform patterns at low spill volumes create conditions that make it difficult for operators to approach the navigation lock. Barge operators used to request spill be turned off to safely approach the navigation lock. Modeling efforts were conducted in the fall of 2015 to reduce the impact to navigation while maintaining good juvenile egress. Now, many operators are experienced with today’s conditions and it is typically only less experienced operators that may request spill be stopped. If operations deviate from the modeled conditions then requests to stop spill could happen about 1-2 times a day for a maximum time of about an hour in each instance.

After discussions and refinement, the group settled on Option 4, LMN Table 10 and 11, available on the TMT website. It will be effective today through the end of Doble testing. The RSW will be closed per the Fish Passage Plan. No one present at the meeting expressed objections to LMN 10 and 11.

**Today’s Attendees:**

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

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

Army Corps of Engineers – Eric Hockersmith, Chris Peery, Alexis Mills, Ryan Laughery

DS Consulting – Donna Silverberg (Facilitator), Colby Mills

D. Rohr & Associates, Inc. – Danny Rohr

Yakama Nation Fisheries – Tom Iverson