

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

December 18, 2019

DRAFT Facilitator's Summary

Facilitator: Emily Stranz; Notes: 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. 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://www.nwdwc.usace.army.mil/tmt/agendas/2019/>.

Official Water Supply Forecasts

Joel Fenolio, BOR, reported that the water supply forecast (WSF) for Hungry Horse Dam would not be available until January 2020, although the ESP is currently forecasting an average water supply. Grand Coulee Dam's April to August WSF is below average due to low snowpack throughout the Snake River Basin and the Cascades. However, snowpack in Western Montana and British Columbia is good.

When asked about the outlook for Grand Coulee April elevation targets, Joel and Tony Norris, BPA, clarified that 1,280-1,285 feet an average elevation for Grand Coulee, and that with predicted precipitation the project should be on target.

Doug Baus, Corps, reported the official WSFs for Corps projects:

- **Libby:** April to August volume forecast is 5,050 KAF, or 86% of average.
- **Dworshak:** April to July volume forecast is 1,789 KAF, or 73% of average.
- **Lower Granite:** April to July volume forecast (10 days QPF) is 16 MAF, or 83 % of average.
- **The Dalles:** April to August volume forecast (10 days QPF) is 78 MAF, or 89% of average.

Chum Operation

Doug reminded the group that the 2019 chum operation coordinated on October 30 is posted on the TMT website. He noted that operations have stayed within the first step (11.3-13.0 feet) for the entire operation to date. At 0700 hours, Bonneville Dam project tailwater elevation was 11.6 feet, with outflows of 134.4 kcfs.

The 10-day inflow forecast shows an increase of flows to 140 kcfs over the next 3 days, which will decrease back down to 125 kcfs. Doug noted that precipitation for October and November were way below average for the water year, and the NWRFC shows seasonal precipitation below 50% for the entire basin. Temperatures are above normal throughout the Columbia River Basin.

The water year (October 1 through December 17) precipitation as measured at the Snake River Basin above Ice Harbor Dam observed 3.1 inches, which is well below normal. The

water year precipitation as measured at the Columbia River mainstem above The Dalles observed 4 inches, and western Oregon in the Willamette Basin above Portland observed 7.8 inches, or 36% of normal. Precipitation for the month of December shows improvement: seeing areas 130% of normal precipitation in the southern and northern parts of the basin.

The 10-day precipitation forecast shows heavy precipitation, about 150-175% of normal in the NW Columbia basin. The 5-day precipitation forecast is 150-175% of normal, with more than 3 inches of precipitation in the Cascades. This will likely cause an increase in tailwater elevation at Bonneville Dam due to flow increases throughout the Willamette.

The NWRFC 6-10 day climate outlook shows a probability of below average temperatures in the western part of the basin, near normal in the central, and a probability of above average in the east. There should be a significant drop in snow level later in the period, so precipitation could fall in form of snow, and further precipitation in Canada will help local snowpack.

Claire McGrath, NOAA, provided yesterday's spawning numbers from the Ives area; 72 live, 12 dead, 37 redds and 75 Chinook. Washington recommended an end date of chum operations for December 24, as spawning has been observed to be winding down. BPA concurred and noted the tailwater elevation of 11.3 feet would be maintained, allowing for continued spawning, however, 11.3ft minimum tail water elevation would be the only operational constraint. NOAA supported Washington's recommendation, pending any additional reports from the field of spawning at higher elevations. New counts next week will depend on weather conditions and visibility.

Salmon Managers expressed a desire for more discussion if spawning at higher elevations is indeed observed with higher tailwater levels. BPA clarified, as there are no further TMT meetings scheduled until after the holidays and as spawning winds down, setting a date to shift to the incubation phase is necessary. Tony explained that December 24th was chosen based on past chum spawning behavior, forecasted dry conditions, and work schedules. He also thought that if spawning is observed at the 12-foot level, those fish will be supported with up-welling ground water.

Charlie Morrill, WDFW, noted that Washington was comfortable with the proposed operation to shift to incubation phase on December 24th and will keep in touch with survey crews onsite for further data counts. Erick Van Dyke, OR, noted apprehension of ending the chum spawning phase of the operation prior to knowing more about adult use of Ives Island area.

→ **ACTION:** Charlie and Claire will reach out to Doug and Tony if further discussions need to be scheduled regarding the timing of shifting to the chum incubation operation.

Claire McGrath reported that this has been a good chum year for adults counted passing over Bonneville Dam. She noted a strange data point on Coho, and that the FPC is looking

into the issue. Additionally, she added that the DART website is having a lag in data uploads, so suggested people double check that the data posted are current.

Zero Generation

Tony reported the zero generation trigger has been hit, and is being implemented when feasible.

The next scheduled TMT meeting is a conference call on January 8 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.

Columbia River Regional Forum
Technical Management Team OFFICIAL MINUTES
December 18, 2019
Minutes: Melissa Haskin, FLUX Resources

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

1. Official Water Supply Forecasts - Doug Baus, Corps NWD, and Joel Fenolio, Reclamation

Joel Fenolio, Reclamation, reported that the official water supply forecasts for Hungry Horse will begin in January.¹ The ESP is forecasting average at this point for Hungry Horse and slightly below average for April-August at Grand Coulee. The snowpack is influencing those forecasts and is below average right now throughout the Snake and the Cascades. Western Montana and British Columbia have better snowpack.

Project	Forecast Period	Forecast ¹	Percent of 30-Year Average
Libby Dam	April-August	5,050 kaf	86%
Dworshak Dam	April-June	1,789 kaf	73%
Lower Granite Dam	April-July	15 kaf	83%
The Dalles Dam	April-August	79 kaf	90%

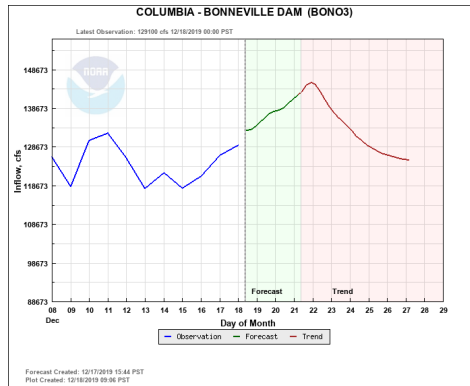
Paul Wagner, NOAA, asked how Grand Coulee’s elevation compares to average for this time of year. Joel reported that the elevation is slightly better than it was in November. The precipitation from the incoming storm and through the end of the month will affect the reservoir’s end-of-December elevation. Projections show the project ending at 1,275–1,280 ft. at the end of the month. Joel said that with the precipitation over the past few days, he is feeling a little better about the elevation, which came in 2.5 ft. below normal at the end of November at 1,272.4 ft., the second lowest end of November elevation since the 1950s.

2. Chum Operation - Doug Baus, Corps NWD; Claire McGrath, NOAA Fisheries, and; Tony Norris, BPA

Doug Baus, Corps, reported that the Corps and BPA are continuing to implement the chum operation as coordinated at the October 30 TMT meeting. The Corps is currently operating in Step 1 of the operation which states, “During all hours, operate project outflow to provide a tailwater elevation in the range of 11.3-13.0 feet”. BPA has not been moving water at night like it usually does during this operation. At 0700 today, the Bonneville tailwater was 11.6 ft. Outflow was 134.4 kcfs.

The 10-day inflow forecast for Bonneville Dam calls for increasing inflows to 140 kcfs, then a decrease down to 125 kcfs.

¹ NOTE: December Official Water Supply Forecasts are only produced for Libby and Dworshak. Other projects are provided for informational purposes only. See the 2020 Water Management Plan for the forecast schedule.

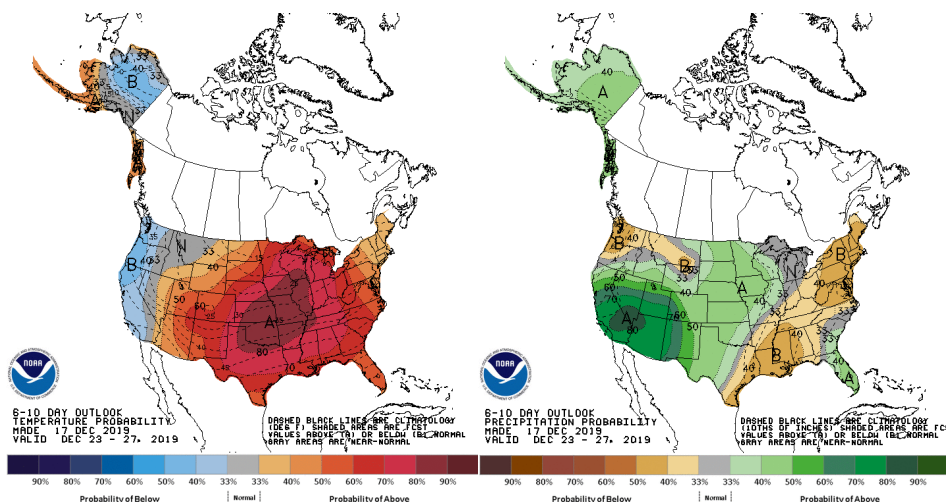


The NWRFC summary graphics and data show conditions well below average in both October and November. The RFC seasonal summary shows areas below 50% for the water year and temperatures about 6 degrees above normal. Doug mentioned a few specific points such as the Snake River Basin above Ice Harbor, which has had 3.1 inches of precipitation so far this water year, which is 53% of normal. The Columbia River Basin above The Dalles is at 53% of normal at 4 inches. In the Willamette Basin above Portland, precipitation so far this water year is at 7.8 inches or 36% of average. December has shown some improvement with areas of 130% of normal precipitation and cooler temperatures in the southern and northern part of the basin.

Looking at the 5 and 10-day forecasts, there is significant precipitation forecasted, up to 175% of normal in the northwestern portion of the Columbia Basin. About 3 inches of precipitation are expected in the Cascades portion of the lower Columbia River over the next 5 days. This should cause the Bonneville Dam tailwater to rise.

Tony Norris, BPA, shared that there is still a lot of uncertainty about how the precipitation will play out. There are a few rivers that flow into the Bonneville pool so air temperature will have a lot to do with stream flow in the immediate future.

The RFC climate forecast is slightly different than their 5 and 10-day forecasts. Doug reminded folks that the two models vary slightly due to different information sources. Cold temperatures in Canada should help build the snowpack.



Claire McGrath, NOAA, reported on chum counts. At the last Ives Island survey, there were 72 live, 37 redds, and 75 live fall Chinook.

Charles Morrill, WA, noted that based on their information that December 24 would be an acceptable end date for the spawning phase of the chum operation. The next phase is the incubation phase.

Claire expressed that if there was a survey next week that showed new chum spawning at higher levels, then TMT should have a conversation around that to inform what tailwater minimum is appropriate.

Erick Van Dyke, OR, expressed concern about a sudden rush to set an end date for the spawning phase of the operation.

Tony noted that there are no scheduled TMT meetings for the rest of the year and that this is the typical time for chum to end spawning. Doug also noted that this late in December, the weather conditions often do not allow for surveys. He said based on the 0 live count on December 13 that it looks like things are winding down. Transitioning to the incubation phase still means there will be water present for them to spawn, he said. Erick expressed concern if fish were to spawn above 11.3 ft that they would not be protected. Norris noted that fish that spawn above 11.3 ft will likely spawn in areas supported by groundwater upwelling so 11.3 ft. should support them.

Charles also said he would like to know how many people would want to support fish at higher elevations, if that were to happen. Scott Bettin, BPA, said it would be possible to discuss that right now and asked “We are in a dry year at the lowest point we have probably ever been at Grand Coulee, would you want to set a higher elevation if there were a few redds and if so what elevation is possible?”

Paul noted that the decision to end the spawning phase on December 24 is consistent with the Water Management Plan, which states that Washington will make the recommendation following their observations of spawning. He expressed support for the 11.3 ft. minimum elevation for the incubation phase of the operation. In the unlikely event there is a second wave of spawning chum, he said, then TMT can have a conversation.

TMT members were asked whether they supported transitioning from the chum spawning operation to the chum incubation operation of a minimum tailwater of 11.3 ft starting on December 24, with the caveat that if the survey next week showed new chum spawning at higher elevations, then there would be a TMT call on Friday, December 27, to discuss whether or not to set a higher tailwater minimum. Joel Fenolio, Reclamation; Paul Wagner and Claire McGrath, NOAA; Charles Morrill, WA; Tom Lorz, Umatilla/CRITFC; Jay Hesse, Nez Perce Tribe; and, Jen Graham, Warm Springs Tribe, were in support.

Charles reported that, as of now, fish are using Hamilton Springs and the slide WDFW put in. WDFW will watch the flows and remove the slide if necessary due to high flows.

Claire reported that there was a blip in coho count data that NOAA is looking in to. Additionally DART and FPC are having data issues where some data need to be uploaded manually. There is a note on the DART site but TMT members should be wary of this when looking up fish data.

3. Zero Generation - Tony Norris, BPA; Claire McGrath, NOAA Fisheries, and; Doug Baus, Corps NWD

Tony Norris reported that the trigger for zero generation was hit and BPA has been implementing the operation. Scott reported on an issue with the Lower Granite PIT-tag antenna installation that required increased outflow in order to lower the tailwater for emergency concrete repairs.

4. Next TMT

The next TMT meeting is a conference call on January 8, 2020, at 9 a.m.

Today’s Attendees:

Agency	TMT Representative
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	Claire McGrath, Paul Wagner
US Fish & Wildlife Service	N/A
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	N/A
Montana	N/A
Nez Perce Tribe	Jay Hesse
Umatilla Tribe/CRITFC	Tom Lorz
Colville Tribe	N/A
Warm Springs Tribe	Jen Graham
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Army Corps of Engineers – Dan Turner
 DS Consulting – Emily Stranz (Facilitator), Colby Mills
 FLUX Resources – Melissa Haskin (Note taker)
 Columbia Basin Bulletin – Mike O’Bryant
 Clearing Up – K.C. Mehaffey
 Snohomish PUD – Brian Zigler
 Douglas PUD – Andrew