

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
February 27, 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://pweb.crohms.org/tmt/agendas/2018/>

Welcome, Introductions & Review Meeting Minutes and Facilitator Summaries

Emily conducted a round of introductions for participants in the room and on the phone. The TMT then approved minutes and facilitator summaries for its December 12, January 2, January 16, January 30, and February 13 meetings. The December 19 Year End Review minutes and summary have not yet been posted for review, however, will be soon.

Water Supply Forecasts

Doug Baus, Corps, began by providing the TMT with an update on the current water supply forecasts for Corps projects, noting that while Portland and the southern portion of the Columbia River Basin has been experiencing higher amounts of precipitation, the Upper Basin is still below average.

- Lower Granite: NWRFC April to July volume forecast (5 days QPF) is 99% of average.
- The Dalles: NWRFC April to August volume forecast (5 days QPF) is 90% of average.

Tony Norris, BPA, clarified that due to the low temperatures, and precipitation presenting as snow, natural stream flows are low.

Chum Operation

Doug reported no operational changes to the chum incubation operation since it began on December 21, 2018. Operations at Bonneville Dam continue to maintain a project tailwater elevation no lower than a minimum of 11.3 feet at all hours, and will do so until otherwise coordinated with the TMT. Current hourly data at Bonneville show a total outflow at 0700 hours of 156.2 kcfs and a project tailwater elevation of 13 feet. RFC inflow forecasts show a slight decrease, with a high of 135 kcfs down to a low of 115 kcfs at end of the next 10-day period.

Paul Wagner, NOAA, emphasized that the current water supply forecast at The Dalles is weighing the decision on whether to maintain the chum minimum elevation or not. The plan for the moment, as discussed at FPAC by salmon managers, is to maintain chum operations and revisit the conversation next week when final March forecasts are available. He noted the importance of watching things closely and to not overdraft spring water. Tony added that low elevation snow is included in the ESP adjustments for forecast modeling.

The TMT will have a call to discuss current conditions, forecasts, and the chum operation on March 6 at 9:00 AM.

Charles Morrill, WA, noted a concern held by Washington and other salmon managers, to protect the 14,000 bright fall Chinook spawning below Bonneville Dam, and protected by the 11.3 feet minimum tailwater elevation.

Operations Review

Reservoirs

Chris Runyan, BOR, reported on Bureau of Reclamation projects:

- Hungry Horse: inflow of 763 cfs, outflow of 3,119 cfs, midnight elevation of 3,526.4 feet, and currently operating to Columbia Falls minimums of 3,450 cfs. Snowpack is 91% of average;
- Grand Coulee: midnight elevation of 1,270.7 feet and operating to provide chum flows.
 - Based on the current forecast, for April 10, the projected April 10 reservoir elevation is 1,254 feet, which is well below the flood risk management elevation of 1283.3 feet. The official April 10 comes from the final March forecast, which comes out on March 5.

Lisa Wright, Corps, reported on Corps projects:

- Libby: midnight elevation was 2,410.8 feet, with average inflows of 0.7 kcfs, and outflows of 4 kcfs (the minimum);
- Albeni Falls: midnight elevation was 2,051.6 feet, with average inflows of 13.6 kcfs, and outflows of 14 kcfs;
- Dworshak: midnight elevation was 1,524.3 feet, with average inflows of 1.4 kcfs, and outflows of 1.7 kcfs;
- Lower Granite: average outflows were 29 kcfs;
- McNary: average outflows were 125.2 kcfs; and,
- Bonneville: average outflows were 146 kcfs.

She also informed the TMT that the final 2019 Fish Passage Plan that goes into effect this Friday, March 1, can be found linked on TMT homepage.

Water Quality

Dan Turner, Corps, reported that tailwater gauges are operational and TDG is right around 100% at the gauges.

Fish

Paul updated the TMT on the 2019 juvenile sampling program that was planned to start March 1 this year at Lower Monumental and John Day dams but has been delayed as conditions are too cold (due to risk of pipes freezing). Bonneville is still expected to start sampling on schedule March 1, which is the routine yearly start date. Except for at Bonneville Dam, this is a rotating program between the projects to determine if fish are migrating earlier and thus not accounted for with the typical sampling start date of April 1.

Ann Setter, Corps, clarified that the actual physical handling for condition of fish is what's being impacted. John Day and Lower Monumental are in primary bypass and are still able to get the PIT-tag data. They are not, however, able to collect fish for condition monitoring.

Power System

Tony Norris, BPA, reported that the winter storms have brought more wind into the system, and that energy use (load) has increased with the cold temperatures.

The next scheduled TMT meeting is a conference call on March 6, 2019, at 9:00 AM to check-in on chum operations.

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
February 27, 2019
Minutes: Melissa Haskin, FLUX Resources

1. Introduction

Representatives of Reclamation, Corps, NOAA, USFWS, BPA, the Umatilla Tribe, the Colville Tribe, WA, ID, OR, MT, and others participated in today's TMT meeting chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. See the end of these minutes for a list of attendees.

2. Meeting Minutes and Summaries Approval

Meeting minutes and summaries for 12/12, 1/2, 1/16, 1/30, and 2/13 were approved.

3. January Water Supply Forecast - Doug Baus, Corps

Doug Baus, Corps updated TMT on the January water supply forecast. **Lower Granite Dam (LWG)** has increased since the official forecast in February to 99% of average. **The Dalles Dam (TDA)** volume forecasts are still only 90% of average. Some TMT members expressed surprise that the TDA forecast has not increased significantly. Some of this is explained by recent snow events in the Snake River Basin, which experienced 173% (3.19 inches) of normal precipitation in February. However, the Upper Columbia above Arrow Dam only received 65% of normal February precipitation. Tony Norris, BPA, noted that with below average temperatures, natural stream flows are low.

4. Chum Operations

There is nothing new to report. The chum incubation operation continues with a Bonneville Dam tailwater minimum of 11.3 ft all hours. Today at 0700, the tailwater elevation was 13 ft and outflows were 156.2 kcfs. The inflow forecast is for a slight decrease from today's high of 135 kcfs down to 115 kcfs by the end of the 10-day period.

Paul Wagner, NOAA wondered if 115 kcfs was enough to maintain chum. He noted that the next 10 days does not look promising precipitation-wise and that salmon managers have decided to hold the course for chum and revisit next week. They do NOT want to risk overdrafting Grand Coulee based on the forecast. **Due to this, an additional TMT meeting was scheduled for next Wednesday, March 6.**

Aaron Marshall, Corps said 115 kcfs was an artifact of the changing forecast and that his expectation is that 120 kcfs will likely be needed to maintain the minimum chum elevation.

Russ Kiefer, Idaho, wondered if low elevation snow is taken into account for the forecast. Tony Norris, BPA, responded that low elevation snow is included in ESP volumes. Thus, any

low level snow that may melt off over the next 10 days has likely been accounted for in the NWRFC models.

Charles Morrill, WA, noted that at Dworshak Dam, the information on low elevation snowpack can be a wild card. He also brought attention to the 14,000 Bright Fall Chinook which also spawned downstream of Bonneville Dam. The 11.3 ft. elevation is a minimum to protect these redds from being dewatered. These fish are of concern to WA.

Dave Swank, asked is there are data available comparing the current forecasted flow at Bonneville Dam to the historical range of flows. Doug Baus, Corps, said he would follow up with Dave to provide that information offline.

Charles Morrill, WA, asked for a quick update on weather forecast. Doug Baus, Corps, pulled up the NOAA forecasts, which showed precipitation throughout the Basin but colder than average temperatures. Baus noted the precipitation summary shows the Snake River basin with above average precipitation in both the 5 and 10-day forecasts.

5. Operations Update

5a. Reservoirs – Chris Runyan, Reclamation, and Lisa Wright, Corps

Hungry Horse: Inflows 763 cfs; outflows 3,119 cfs; midnight elevation 3,526.4 ft. Operating to Columbia Falls minimums of 3,450 cfs. Snowpack trending at 91%.

Grand Coulee: Midnight elevation 1,270.7 ft. Doug Baus, Corps, asked for an update on what conditions look like on April 10. Chris Runyan, Reclamation, replied that the current projection for April 10 is 1254 ft, quite a bit below the flood risk management elevation of 1283.3. That said, the official April 10 forecast is not released until March.

Libby: Midnight elevation 2,410.8, inflows 0.7 kcfs, outflows 4.0 kcfs (the bull trout minimum).

Albeni Falls: Midnight elevation 2,051.6 ft, inflows 13.6 kcfs, outflows 14 kcfs.

Dworshak: Midnight elevation of 1,524.3 ft, inflows 1.4 kcfs, outflows 1.7 kcfs.

Lower Granite: Outflows 29 kcfs.

McNary: Outflows 125.2 kcfs.

Bonneville: Outflows 146 kcfs.

5b. Water Quality – Dan Turner, Corps

Tailwater gauges are operational and reporting around 100% TDG. There is no spill of note on the system.

5c. Fish – Paul Wagner, NOAA Fisheries

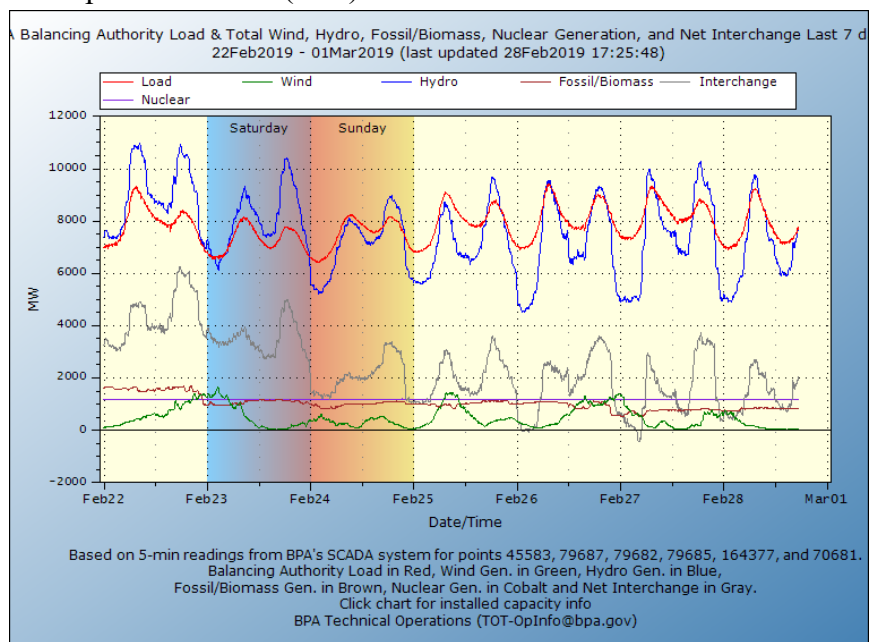
Juvenile Sampling Program. The juvenile sampling program was supposed to begin March 1 at Lower Monumental and John Day in 2019. However, sampling has been put on hold

because of freezing conditions that prevent the operation of pipes that supply the smolt monitoring facilities. The program at Bonneville is on track to begin March 1, which is the routine operation every year at this project. The program should show if fish are migrating earlier than is being accounted for with the typical start date of April 1. Ann Setter said the delay means that fish won't be collected for condition sampling due to the cold temperatures, but PIT-tag data will still be collected as fish pass through the bypass system. . She mentioned that putting water through pipes during freezing temperatures could damage the pipes.

2019 Fish Passage Plan. Lisa Wright, Corps, updated TMT that the final 2019 Fish Passage Plan that goes into effect Friday, March 1, is now posted on the TMT website.

5d. Power – Tony Norris, BPA

With storms coming through, there has been wind on the system. Cold temperatures have resulted in increased power demand (load).



7. Next TMT. The next TMT meeting is a conference call to discuss chum operations on Wednesday, March 6 at 9 a.m.

Today's Attendees:

TMT Members:

Agency	TMT Representative
Army Corps of Engineers	Doug Baus (Chair), Lisa Wright, Julie Ammann
Bonneville Power Administration	Tony Norris, Scott Bettin
Bureau of Reclamation	Chris Runyan
NOAA Fisheries	Paul Wagner
US Fish & Wildlife Service	Dave Swank

Agency	TMT Representative
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Russ Kiefer
Montana	Jim Litchfield
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz
Colville Tribe	Sheri Sears
Warm Springs Tribe	N/A
Kootenai Tribe	N/A
Spokane Tribe	N/A

Other Attendees (non-TMT members):

Corps – Dan Turner, Aaron Marshall, Alexis Mills, Steve Burrell, Steve Hall, Jon Roberts, Ann Setter, Alfredo Rodriguez, Eric Chow

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 – Mike Shapley