COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
January 10, 2018
Facilitator's Summary
Facilitator & Notes: Emily Stranz and 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.nwd-wc.usace.army.mil/tmt/agendas/2017/

Dworshak Operations
Steve Hall, Corps, provided an update on Dworshak operations, noting that the current elevation is 1,521.7ft and rising. Inflows were up yesterday, and increased to 4,500cfs and are expected to peak this weekend around 10,000cfs. Steve noted that the Corps Official Water Supply Forecast for January is 2.94 maf (109% of normal), whereas the RFC forecast is 2.5 maf; he expects that the 2.5maf is more likely, however, the Corps is currently operating to the end of January target forebay elevation of 1,530.5ft, which is determined by the 2.94maf forecast. They plan to increase discharge to one full unit (Unit 1), which equates to 2.4kcfs (2.3kcfs through the turbine, 100cfs through the pipeline). Paul Wagner, NMFS, noted that FPAC discussed the operation and is okay with 2.4kcfs at this time.

Moving forward, Steve suggested that Salmon Managers consider providing their recommendations on target elevations instead of target flows, as conditions change rapidly and frequently and thus flows need to be managed in real time in order to meet elevation targets.

Jay Hesse, Nez Perce, requested that the Corps consider their flexibility in reaching the end of month target elevation, and avoid spilling if at all possible. He suggested that the end of month target need not be hit exactly if it requires spilling a half a foot of water for instance. Steve noted that the Corps does have some flexibility and ideally will be able to operate without spilling, however, will spill if necessary for flood risk management, depending on inflows.

Steve also noted that the current Unit 2 outage is expected to last until February 8th, as compared to the previous return to service date of February 1. More work is needed than expected on the unit. Unit 2 went out of service on January 9th.

Additionally, Steve noted that the longer term forecasts are calling for a wet and warm season, which likely means lower than average snowpack in lower elevations, and average or above average high elevation snowpack. This could mean that runoff is later in the season and could potentially impact spring flow augmentation. He cautioned the region from staying too low for too long, as it could pose risk to refilling.

The next scheduled TMT meeting will be a face to face meeting on Wednesday, January 17th.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

January 10, 2018
Minutes: Pat Vivian

1. Introduction

Representatives of the Nez Perce Tribe, Idaho, BOR, USFWS, NOAA, BPA, COE, Washington, CRITFC/Umatilla, and others participated in today's TMT conference call chaired by Doug Baus, COE, and facilitated by Emily Stranz, DS Consulting.

2. Dworshak Operations Update

2a. Hourly Data. Steve Hall, COE Walla Walla, reported the pool at DWR is at 1521.7 ft elevation and rising.

2b. January Runoff Forecast. The COE's official water supply forecast for DWR is 2.941 maf, which is 109% of the long term average and 121% of the more recent 30 year average. That's a higher forecast than the River Forecast Center's runoff prediction of 2.5 maf.

2c. NWRFC Dworshak Dam Inflow Forecast. Inflows rose overnight to about 4.5 kcfs and are expected to peak at 10 kcfs, due to a storm event that started last night and is expected to continue through Friday. The biggest driver of the disparity between the COE official water supply forecast and the River Forecast Center's runoff forecast is an estimated 167 kaf of precipitation in the Headquarters area.

Using alternative methods, the COE could reasonably make an inflow forecast of around 2.5 kcfs at DWR. Using the 2.9 kcfs inflow forecast as a guide, the January 31 flood risk management elevation at DWR would be 1530.5 ft. The COE considers this a conservative operation and plans to increase DWR discharges to full load using one unit as the storm passes. A complicating factor is the outage of unit 2, which is not expected to come back on line until February 8.

2d. NWRFC Dworshak Dam Water Supply Forecast. The attached graphic depicts an analysis of likely outcomes under various operating scenarios. The best option assumes 2.4 kcfs discharge from DWR through the end of January and a minimum discharge of 1.6 kcfs through June 30. In 9 cohort years of the past 30, this operation would have resulted in missing refill. All of these years had significantly lower volumes than this year's official water supply forecast of 2.9 maf.

Hall cautioned against keeping the reservoir elevation too low for too long, risking spring augmentation flows. The COE's recommendation is to operate to an end of January elevation of 1530.5 ft.

Yesterday FPAC discussed whether to recommend 1.7 or 2.5 kcfs with a preference for 2.5 kcfs discharges, Paul Wagner, NOAA, replied. Since the COE is essentially going to adopt this option with 2.4 kcfs out, the Salmon Managers are in agreement. Hall clarified the COE will increase Dworshak total outflow to 2.4 kcfs which is comprised of 2.3 kcfs in generation flow and 0.1 kcfs in flow to the hatchery. If the Salmon Managers would like a different elevation target than 1530.5 ft on January 31, Hall asked them to identify it, given that weather and inflow predictions keep changing constantly.

Jay Hesse, Nez Perce, asked whether the COE would spill at DWR if necessary to meet the flood risk elevation target. Yes, but only if absolutely necessary, Julie Ammann, COE, and Hall confirmed. A lot will depend on the shape of inflows and runoff in January. Hesse asked how much would be spilled. There doesn't appear to be a need for spill at present, but that could change if we have a large inflow event, Hall replied. In past years there have been inflows in excess of 50 kcfs in January. He clarified that the COE has a half ft or so of flexibility in meeting the end of month flood control elevation.

Wagner said it's difficult for the Salmon Managers to specify a desired flood control elevation and flow in the context of two differing forecasts. The current forecast would suggest a target elevation of 1511 ft at the end of February, which would require spill of about 2.5 kcfs for a good part of that month. The fact that the forecast keeps changing compounds the difficulty.

In light of today's conversation, the COE will increase DWR operations to full powerhouse at unit 1, targeting 1530.5 ft elevation by January 31. The long range forecast is calling for wet and warm conditions, Hall cautioned, which could mean less than normal low-elevation snowpack and normal or greater than normal high-elevation snowpack in April. This could challenge spring augmentation flows if runoff is delayed. He added that precipitation is extremely unpredictable. TMT will continue to monitor DWR operations.

3. Next TMT Meeting

TMT will meet next in person on January 17.

Name	***Affiliation***
Jay Hesse	Nez Perce
Russ Kiefer	Idaho
Pete Cooper	BOR
Dave Swank	USFWS
Paul Wagner	NOAA

Tony Norris	BPA
Doug Baus	COE
Julie Ammann	COE
Jim Litchfield	Montana
Chris Runyan	BOR
Charles Morrill	Washington
Steve Hall	COE Walla Walla
Wayne Jousma	COE Walla Walla
Alfredo Rodriguez	COE Walla Walla
Shane XX	Chelan
Ann Setter	COE Walla Walla
Lisa Wright	COE
Dan Turner	COE
Aaron Marshall	COE
Ruth Burris	PGE
Tom Lorz	CRITFC/Umatilla