

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

March 21, 2012

Facilitator's Summary

Facilitator: Robin Gumpert

The following notes are a summary of issues that are intended to 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.

Meeting Minutes

The notes from 3/7 and today's meeting will be posted for review and finalized at the next, 3/28 TMT meeting.

Forecast Update

John Roache, Reclamation, reported that the March 6 official final water supply forecast had shown The Dalles at 97% of average, which would translate to a 1237 foot flood control target for Grand Coulee at the end of April. Since then, forecasts have changed considerably and The Dalles is now showing a 103% of average water supply forecast, which impacts the flood control target at Grand Coulee. To meet the flood control elevation need, John said the action agencies would need to begin drafting Grand Coulee now by about a foot per day to minimize or avoid spill later in the season. Tony Norris, BPA, added that conditions this year are even more extreme than were seen last year at this time. Paul Wagner, NOAA, said drafting Grand Coulee lower than the April 10 elevation (based on The Dalles March final forecast) due to a rising March water supply forecast is consistent with the BiOp as long as these details are coordinated with TMT. Additional graphs were linked to the agenda including SNOTEL and RFC snow, showing additional data being used to determine flood control elevation targets. TMT will receive updates at each upcoming meeting as the region continues to closely monitor changing water supply conditions.

Libby Operations

Joel Fenolio, COE-Seattle District, described the conditions at Libby as 'similar to Grand Coulee': With an April-August forecasted water supply of about 6.2 MAF (107% of average) and a lot of snow pack above and below the dam, Libby was beginning to draft to stay ahead of the likely increase in water supply (anticipated to go up to 6.5 MAF. The plan is to draft Libby to 2396 feet by the end of April which is 10 feet below the current elevation. The COE was proceeding while acknowledging they still had the flexibility to scale this draft back later, if the April final forecast is below this projection.

John Roache, Reclamation, and Steve Hall, COE-Walla Walla District, added that these rising water supply conditions were also impacting operations at Hungry Horse and Dworshak.

Chief Joseph Spill Test

Joel Fenolio, COE-Seattle District, reported that a spill test was being planned at Chief Joseph for next week – 60 kcfs (30 kcfs through two spill bays) – to test uplift pressures and how well the dam would hold up during this “1% event” scenario. The test will run for 24-48 hours and if the criteria are met, a second test at 40-50 kcfs (20-25 through two spill bays) will be conducted. The actual duration of the test is subject to change based on real time conditions. The test will be extended if the test data suggests a need to extend the duration of the test. The results of the test (with visual representations as requested from a TMT member) will be shared at a TMT meeting in April.

Spill Priority List

A draft spill priority list was linked to today’s agenda and presented by Scott English, COE. TMT members provided initial feedback:

- Paul Wagner, on behalf of the salmon managers, said they had discussed the list and thought it looked like a good strategy at this point in terms of starting with projects on the Snake River, and the placement of Chief Joseph on the list. He said they might offer recommended changes to the list later in the season.
- Question – why is the spill cap for Ice Harbor 90 kcfs at Level 1 and only 75 kcfs at Level 2? Response: The spill caps for all projects are based on current expected capacity based on outages, system flows, etc. If system flows are such that require a move up to Level 2, spill capacity goes down due to elevated TDG in the river.
- The current spill list assumes one outage at each project – the spill cap amounts will adjust according to actual outages/capacity at the projects, but the spill priority order will not change.

Next steps: The spill priority list will be revisited at next week’s TMT meeting, and if no changes are recommended, will go in to effect in time for the start of the spill season.

Next Meeting, 3/28: Face to Face, 9:00 am

Agenda items include:

- Updated Water Supply Forecasts
- Hanford Reach Update
- Bonneville Turbine Operations/Spring Creek Hatchery Release
- Operations Review
- Other?

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES

March 21, 2012

Notes: Pat Vivian

1. Introduction

Today's TMT conference call was chaired by Doug Baus, COE, and facilitated by Robin Gumpert, DS Consulting. Representatives of BPA, COE, USFWS, NOAA, BOR, CRITFC/Umatilla Tribe, Colville Tribe, Oregon, Washington, Idaho and others attended. This summary is an official record of the proceedings, not a verbatim transcript.

2. Update on Water Supply Forecast

John Roache, BOR, reported that the April-August forecast for The Dalles, which is used to calculate Grand Coulee's flood control requirement, has increased significantly. Based on the March 6 forecast of 90.6 MAF (97% of average), the end of April flood control elevation at Grand Coulee was 1237 feet, with an April 10 BiOp elevation objective of 1257.7 feet. However, based on the latest available ESP forecast from the Northwest River Forecast Center (NWRFC) of 95.5 MAF (103% of average), the end of April flood control target is likely to be in the range of 1220-1230 feet. (The official forecast used to determine the end of April target will be available on April 5.) If Grand Coulee were on track to meet this target, the reservoir should be at 1260 feet now instead of its current elevation of 1268 feet. This calls for a significant draft beginning immediately. The situation is similar to last year, except the current Grand Coulee elevation is about 15 feet higher than last year, Tony Norris, BPA, added.

The current April 10 objective of 1257.7 feet is based on the March forecast and will probably be attained before April 10 as the reservoir drafts toward a lowered flood control target, Roache said. Because April is probably too late to start drafting to such a low elevation, the draft needs to begin in March. The actual date on which 1257.7 feet is attained won't be known until early April. Paul Wagner, NOAA clarified that drafting Grand Coulee lower than the April 10 elevation (based on The Dalles March final forecast) due to a rising March water supply forecast is consistent with the BiOp as long as these details are coordinated with TMT. Roache said the BOR will monitor the situation closely. TMT will revisit this topic throughout spill season.

3. Libby Operations

Joel Fenolio, COE, reported a similarly increasing forecast at Libby Dam. The Corps March 1 forecast of 5635 kaf was 96% of average (based on 1975 – 2009); the projected April 1 forecast is going to be around 6.0 MAF. While precipitation so far has been below average, snowpack is about the same as last

year. Fenolio showed TMT the latest ESP traces and SNOTEL site information for Libby, linked to today's agenda. The SNOTEL data indicates less snowpack than last year in southeast portion of the watershed above the dam, but snowpack throughout the rest of the Kootenai basin is similar or above last years snowpack. Areas below the dam have higher than average snowpack, like last year which was 108% of average.

Given the rising forecast due to accumulating snowpack in the Libby Basin, Seattle District is assuming that this will be a 6.5 MAF year at Libby, the COE Seattle District will begin drafting soon, Fenolio said. ESP traces and the NRCS March 1 forecast indicate that the COE forecast for Libby is probably low, which increases the need to draft. So the plan is to draft Libby to 2396 feet by around the middle of April, 10 feet below the current elevation. An April forecast of 6 MAF (an average year) would put the end of April flood control target at 2411 feet. For comparison sake, last year's March forecast for Libby was 7.1 MAF and its April forecast was 7.2 MAF.

In light of the available information, the COE will operate Libby to a 6.5 MAF assumption for the Apr-Aug Inflow volume and draft another 10 feet during the first part of April. John Roache added that Hungry Horse is following the same pattern of an increasing forecast and said he will give an update on Hungry Horse operations at the March 28 TMT meeting. Steve Hall noted that the Dworshak forecast has also increased.

4. Chief Joseph Spill Test

To test uplift pressures on monoliths in the Chief Joseph spillway, the COE plans next week to spill 30 kcfs through bays 12 and 13 for a continuous period of 24-48 hours (potentially longer if needed), beginning at 6 am on March 27, Fenolio reported. The spill test is needed because many of the surface seals between monoliths in the spillway were damaged by last year's high flows, allowing water to get in and potentially move the monoliths. The 48-hour test period will be extended if necessary so uplift pressures have time to stabilize. There is also a possibility of testing at 20 and 25 kcfs spill per bay, depending on the results at 30 kcfs.

If uplift pressures become critical, the COE will begin engineering design for repairs of the surface seals between monoliths, Fenolio said. Bays 12 and 13 were chosen for the test because there is already existing instrumentation there. An important goal of the test will be operation of the Chief Joseph powerhouse to try and mitigate TDG levels downstream caused by releasing water over the spillway. The test will provide TDG data at Chief Joseph, which will probably be available in April. Fenolio will report back to TMT after the test is completed.

5. Spill Priority List

Scott English, COE, outlined the provisions of the draft spill priority list attached to today's agenda. Level 1 spill is within the TDG waivers of 115% in the forebay or 120% in the tailrace, while Level 2 includes short durations of higher spill, and the volumes increase with Levels 3 and 4. The spill priority list contains estimated spill caps for each project at each level of spill. These are subject to change as conditions develop.

Wagner said the spill priority list is acceptable at present, although it may need adjustments as spill season unfolds. The COE's plan is for TMT to discuss and finalize this list at the March 28 meeting.

Russ Kiefer, Idaho, asked why increasing levels of spill on the list contain lower spill caps for the same project. That is because the level 2 spill caps must generally be lower to accommodate elevated TDG levels entering the forebay from the next dam upstream, Laura Hamilton, COE, explained. That is true at both Ice Harbor and The Dalles.

Charles Morrill, Washington, asked whether the spill caps on the list reflect full powerhouse operations. No, Hamilton said, they are based on an assumption of at least one unit outage. Outages are an important factor especially on the Snake River, where having two units out at the same project can cause water quality problems.

6. Next TMT Meeting

TMT will meet next in person March 28. Water supply forecasts and flood control operations, Libby operations, Hungry Horse operations, the spill priority list, Bonneville turbine operations for the Spring Creek Hatchery release, a Hanford Reach update, and the usual operations review will be on the agenda.

Name	Affiliation
Rick Kruger	Oregon
Tony Norris	BPA
Doug Baus	COE
Scott Bettin	BPA
David Wills	USFWS
Paul Wagner	NOAA
Tom Lorz	CRITFC/Umatilla
John Roache	BOR
Glen Trager	Iberdrola
Steve Hall	COE Walla Walla
Joel Fenolio	COE
Heather Dohan	Puget Sound Energy
Margaret Filardo	FPC

Lisa Wright	COE
Scott English	COE
Bill Proctor	COE
Rob Allerman	Deutsch Bank
Stu Leavitt	Salish-Kootenai
Richelle Beck	Grant PUD
Barry Espenson	CBB
Don Tinker	SCL
Bruce McKay	hydropower consultant
Sheri Sears	Colville Tribe
Greg Otting	Merrill
Charles Morrill	Washington
Russ Kiefer	Idaho
Laura Hamilton	COE