

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 18, 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.

Vernita Bar Update

Russell Langshaw, Grant County PUD, referenced TMT to a hyperlink containing the latest Vernita Bar update. He noted there had not been much change since his last update to TMT – protection flows are still scheduled to begin the weekend of 4/28 and there have been no exceedances to date. Temperatures are tracking well with normal temperatures for this time of year. Russell pointed out the cells showing the first 30 days of this year's operation, with daily constraints and actual daily deltas; and showed current operations for the period 4/7-4/16. He added that some work happening at Priest Rapids will require reduced spill – all signatories have agreed to operate to a 60 kcfs delta if spill levels drop below 150 kcfs. Russell will continue to provide updates at upcoming TMT meetings.

Spring Creek Hatchery Release Update

Dave Wills, USFWS, recapped the Spring Creek hatchery release, including the timing of the release, conditions at Bonneville, and operations at Bonneville from last week. (Summary notes from the 4/11 and 4/13 TMT meetings describe the discussion in more detail.)

Updates for today included:

- The stuck log at Bonneville was successfully removed on Thursday 4/12.
- The rest of the Spring Creek Hatchery fish were released on Friday, 4/13.
- During an unscheduled conference call on 4/13, the salmon managers put forth SOR 2012-1, requesting a special operation for a 5-day period to accommodate passing Spring Creek Hatchery fish. The request was to run Powerhouse II at no greater than the mid-point of 1% efficiency during these very high flows in the system. During the course of that call, the action agencies offered an alternative operation that they felt was implementable and would meet multiple obligations and needs. That operation, while not preferred by the salmon managers, was met with no objection, so the COE planned to implement it as described below:

1. Bonneville (BON) powerhouse 2 (PH2) units will be operated at the 25% of the 1% operating range.

2. To pass additional flows, operate powerhouse 1 (PH1) units up to the 100% (full capacity) of the 1% operating range.

3. To pass additional flows after PH1 is fully loaded, increase PH2 units one at a time in the order of priority within 25-50% of the 1% operating range.

4. To pass additional flow after PH1 is fully loaded and all available PH2 units are operating at 50%, increase operation of PH1 units up to best geometry.

5. To pass additional flow after all available PH1 units are operating at best geometry, increase PH2 units one at a time in the order of priority within 50-75% of the 1% operating range.

6. To pass additional flow after all available PH2 units are operating at 75%, decrease PH1 unit operation to 100% of the 1% operating range and increase PH2 units one at a time in the order of priority within 75-100% of the 1% operating range.

Dave Wills reported that since Friday, mortality rates went from a high 15% on 4/13, to 'normal' on 4/14, to a range of 2-5% on 4/15. He reported that as of today, the bulk of the Spring Creek Hatchery fish have passed the dam. The next release, of about 4.8 million fish, is scheduled for 5/2.

Doug Baus, COE, reported that the action agencies implemented the above described operation after the 4/13 meeting. This special operation to facilitate the passage of Spring Creek releases ended on 4/17, since the bulk of the Spring Creek hatchery run had passed the dam. He added specific mortality data for the period of this special operation and said, from the COE's perspective, it was a success:

- 4/13 0700 – 4/14 0700: 1,692 sampled fish; 9 mortalities; 0.5% mortality rate
- 4/14 0700 – 4/15 0700: 330 sampled fish; 18 mortalities/5.5% mortality rate
- 4/15 0700 – 4/16 0700: 322 sampled fish; 8 total mortalities/2.5% mortality rate
- 4/16 0700 – 4/17 0700: 438 sampled fish; 17 mortalities/3.9% mortality rate

Additional questions and comments were raised about the operation –

- While it is clear that the mortality rates went down in PH2, it is not clear whether the PH1 open geometry operation (that which was implemented) was the reason for that, nor whether the salmon managers' request would have been a better operation to minimize mortality rates.
- Is there any empirical data on increases to mortality at Powerhouse I from the operation that was implemented? COE response: ERDC modeling has demonstrated survival benefits when operating PH1 at open geometry when compared to the 1% operating range.
- Special thank you to RCC and the dam crews for their efforts to remove the log in the trash and ice sluiceway in such a timely manner. This helped minimize hazards to the hatchery fish that were passing through that route as well as those that would be passing through the B1 sluiceway once released from the hatchery.
- Is there any data on current TDG levels below Bonneville? COE response: Yes, this information can be found as a link to the TMT page – <http://www.nwd-wc.usace.army.mil/report/total.html>.

TMT will revisit and plan for the next, 5/2, Spring Creek hatchery release at their next meeting on 4/25.

Spill priority list: Paul Wagner, NOAA, commented that since the current Spring Creek Hatchery Release has been completed, Bonneville no longer needs to stay at the top of Levels 3-7 of the spill priority list, and the list can revert back to the order coordinated at TMT on 3/28. So, the order for Level 3 of the Spill Priority List that is now in effect is as follows: Lower Granite, Little Goose, Lower Monumental, Bonneville, John Day, Ice Harbor, McNary, The Dalles, Chief Joseph and Grand Coulee.

Tom Lorz, CRITFC/Umatilla, asked for further clarification from the action agencies on how spill is being managed. Doug Baus replied that they are managing to TDG standards and FOP spill rates. Spill rates at projects are governed by the rates identified in: 1) the FOP, and 2) 120/115% TDG limit. When there is a difference in the two rates, project spill is governed by the lower rate.

Transportation: Paul Wagner also noted that the FCRPS BiOp describes transportation operations to begin at Lower Granite between 4/20 and 5/1. He reported that the salmon managers have discussed this at FPAC and will likely not recommend beginning transportation until 5/1. TMT will revisit this issue at the 4/25 TMT meeting.

Next Meeting, 4/25: 9:00 am at the COE

Agenda items include:

- Spring Creek Hatchery Release
- Operations Review
- Other?

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES

April 18, 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, Colville Tribe, USFWS, Washington, COE, BOR, NOAA, Umatilla Tribe/CRITFC and others attended. This summary is an official record of the proceedings, not a verbatim transcript.

2. Vernita Bar Update

Russell Langshaw, Grant PUD, gave an update on the Hanford Reach fall chinook protection program. The latest information on this year's program is posted to today's agenda. Conditions have not changed much since Langshaw last updated TMT on the Hanford Reach operation. Weekend protection flows are still expected to begin the weekend of April 28. A comparison of this year's temperatures to the mean from 1988 to the present shows this year's temperatures are about a degree F below average. Recent flows have conformed to a combination of the 150 kcfs minimum discharge constraint and the 60 kcfs daily delta constraint. Over the past week, Priest Rapids mean discharges have been 149 kcfs with no exceedances.

Repair work in progress at Priest Rapids Dam requires reduced spill, so Grant PUD has requested flexibility on the 150 kcfs minimum to allow the work to proceed. Signatories agreed that the dam will operate under the 60 kcfs daily delta constraint if releases drop below the 150 kcfs minimum while repairs are underway. To date, the work is proceeding well, and Grant PUD hasn't yet had to make use of this provision. Chinook counts remain low, but passage is expected to pick up in the next week. Langshaw will report again to TMT in a few weeks.

3. Spring Creek Hatchery Update

David Wills, USFWS, gave a recap of challenges the Spring Creek hatchery release has encountered within the past week. Spring Creek and Little White Salmon hatcheries were scheduled to release some 8 million subyearling tule chinook on April 11. The Corps notified the USFWS on the morning of April 11th that the log was still stuck in the powerhouse 1 ice and trash sluiceway, potentially jeopardizing safe passage for fish taking that route. Fortunately only 900,000 of the 8,000,000 fish had already been released. The log was removed on the morning of April 12 and the release was finished on April 13th.

During the afternoon of April 13, in response to rising flow projections, the Salmon Managers requested an unscheduled TMT meeting and presented an SOR to the Action Agencies requesting that Powerhouse 2 be operated to no greater than the midpoint of the 1% operating range. That component of the SOR was declined by the Action Agencies in order to adhere to spill limitations associated with the gas cap, Wills reported. The Salmon Managers did not object to Action Agency plans to increase Powerhouse 1 operations to the open geometry position in order to redirect flows from Powerhouse 2 to Powerhouse 1. This operation was in effect over the weekend, and was used for a portion of the time when the hatchery fish passed.

Wills reported that mortalities were higher than normal except on April 14. The normal rate of mortality for Spring Creek releases is 0.5% of fish passing per day. On April 13, mortalities peaked at 15% of the fish passing. The rate of mortality dropped over the next few days ranging from 0.5%-5% of the fish passing, which is still more than normal. The latest reports from smolt monitoring crews indicate that the bulk of the April hatchery release has already passed Bonneville. The next release will be 4.8 million fish, scheduled for May 2.

Baus reported the operational changes implemented to facilitate the Spring Creek Hatchery release ended on April 17th. These changes included components of operations identified in the SOR as well as changes to the spill priority list. The following data were collected on mortality rates during the operation:

- From 7 am April 13 to 7 am April 14, 1692 Spring Creek fish were sampled with a mortality rate of 0.5% (9 fish).
- From 7 am April 14 to 7 am April 15, 336 Spring Creek fish were sampled with a mortality rate of 5.5% (18 fish).
- From 7 am April 15 to 7 am April 16, 332 Spring Creek fish were sampled with a mortality rate of 2.5% (8).
- From 7 am April 16 to 7 am April 17, 438 Spring Creek fish were sampled with a mortality rate of 3.9% (17).

Tom Lorz, Umatilla/CRITFC, emphasized that while the Salmon Managers didn't object to best-geometry operations at PH1, neither did they agree to it in the April 13 conference call. There is a difference of opinion about what the preferred operation would have been, and the SOR submitted by the Salmon Managers requested a different operation than what was implemented. Wills agreed with these comments and said it was clear on the April 13 call that the SOR as presented by the Salmon Managers was not implemented.

Baus replied that the operation implemented as a result of the April 13 call decreased hydraulic output from PH2, which minimized mortality in the gatewells of PH2. Modeling results at ERDC have demonstrated likely survival benefits

when operating PH1 at open geometry when compared to the 1% operating range.

Wills expressed appreciation for the efforts of Reservoir Control Center and Bonneville Dam employees who successfully removed the log from the PH1 ice and trash sluiceway in time for the Spring Creek arrivals.

4. Other

Spill priority list. Now that the Spring Creek release operation is ended Wagner requested that Bonneville be moved back to the initial position on the spill priority list. Baus reported that Bonneville has been moved from top priority Level 3 spill to its initial position after The Dalles, according to the spill priorities TMT coordinated on March 28. Spill priorities for Levels 3 through 7 have reverted to their initial order: Lower Granite, Little Goose, Lower Monumental, Bonneville, John Day, Ice Harbor, McNary, The Dalles, Chief Joseph and finally Grand Coulee.

Lorz questioned whether Bonneville should be at the top of the Level 3 list, since it is not spilling to its FOP level of 100 kcfs. Wagner and Scott Bettin, BPA, clarified that the FOP spill level of a given project is defined as either the gas cap for 120/115% TDG in the tailrace (now 96 kcfs at Bonneville) or the FOP spill target, whichever is lower.

Start of transportation. The FOP says transportation will begin on the lower Snake projects between April 20 and May 1. At this point FPAC foresees no need to begin transportation until May 1. Baus will convey this information to the Walla Walla District in preparation for transport operations. TMT will revisit this issue at its next meeting April 25.

5. Next TMT Meeting

TMT will meet in person on April 25, with preparations for the May 2 Spring Creek hatchery release and the May 1 start of transportation on the agenda.

Name	Affiliation
Scott Bettin	BPA
Sheri Sears	Colville Tribe
David Wills	USFWS
Cindy LeFleur	Washington
Doug Baus	COE
John Roache	BOR
XX	Thompson Reuters
XX	PPL
John Rector	PPS

Heather Dohan	Puget
Alex Cibarra	Grant PUD
Margaret Filardo	FPC
Ruth Burris	PGE
Bruce McKay	consultant
Russ George	WMC
Steve Hall	COE
Richelle Beck	Grant PUD
Barry Espenson	CBB
Kristi XX	Cargill
Rob Allerman	Deutsch Bank
Paul Wagner	NOAA
XX	Grant PUD
Tom Lorz	Umatilla/CRITFC
Mike Shapley	Snohomish PUD
Shane Scott	PPC
Josh McCall	Puget
Don Tinker	Seattle City Light
Harvey Hall	EWEB
Russell Langshaw	Grant PUD