

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 6, 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.

Introductions

Tom Skyles, CRITFC Hydro Team, was introduced and welcomed. He will serve as an alternate on TMT to represent CRITFC and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR).

Meeting Minutes

No comments were raised on the 5/23 or 5/30 Official Meeting Minutes or Facilitator's Notes, but some TMT members asked for more time to review the 5/30 set. If no additional edits are sent in, they will be considered final.

Water Supply Forecasts

Doug Baus, Corps, noted that the official June final forecast would be published at COB today and linked to today's agenda item. The latest forecasts, which were expected to be close to the final, were as follows: Libby April-August was at 7,240 kaf (123% of average); Dworshak April-July was 3,236 kaf (121% of average); and The Dalles April-August was 113 MAF (122% of average).

Bonneville PH2 Operations

Doug updated TMT about the special operation at Bonneville being implemented to minimize descaling and mortalities of juvenile sockeye passing the project, resulting impacts. The operation had continued, per coordination with NOAA on Monday, and was scheduled to end tonight at 6:00 pm. During the last iteration of this special operation, descaling ranged from 15.8% on 5/28 to 3.4 % on 6/1. Mortalities ranged from 2.5% on 5/27 to 0% on various days during the operation. The summary of these results was shared as a link to the agenda.

Russ Kiefer, Idaho, reported that, according to estimates from sockeye researchers, 20-25% of the fish that have passed Lower Granite have not yet reached Bonneville, and their migration could continue through mid-June. Given this, Russ recommended that the special operation continue through Monday 6/11 at 6 pm to try to minimize descaling at the project. Charles Morrill, Washington, added that descaling is a concern because it impacts a juvenile's ability to move through the stressful transition from a freshwater to salt water environment.

TMT members looked at the latest TDG data. The Corps' official management gauges, Cascade Island, read 117.7% and Camas/Washougal read 117.6. It was also noted that involuntary spill was occurring at every project upstream and these high flows were expected to reach Bonneville soon. Also, Doug clarified the Corps' management position, which is to operate Bonneville to 115%/120% TDG or up to 100 kcfs, whichever is less.

TMT explored the option of revising the spill priority list to try to gain some operating flexibility. With the caveat that the forecasted high flows coming in to the system would likely result in the action agencies' inability to control the project any more than it had been, there was no objection to putting a temporary spill priority list in place that moved Bonneville, at all tiers, up to the 3rd spot above The Dalles for the duration of this special operation.

Planned Operation:

The Action Agencies agreed to implement the same operation that had been implemented over the past few weeks, effective today through Monday, 6/11 at 6:00 pm:

- Operate PH 2 up to the 25% of 1% of Best Efficiency Operating Range
- Operate PH 1 up to the upper limit (100%) of 1%
- As needed, operate PH 2 within the 25-50% range of 1%
- As needed to remain flow neutral, operate PH 1 up to best geometry
- As necessary, involuntary spill above the TDG spill cap.

In addition, they will revise the spill priority list to place Bonneville, at all tiers, up to the third spot in front of The Dalles during this temporary operation.

Next Steps/Post Operation Analysis:

TMT members expressed a desire to review, analyze and learn from this year's special operation to help inform future decision making around efforts to minimize descaling and mortalities of juveniles at Bonneville during high flow periods. To that end, TMT members agreed to pull the data together and convene a discussion (either at the TMT Year End Review or special session sooner than that) on this issue. The review will look at the impacts from the operation on descaling, so the data should be as precise as possible (daily/hourly operations, daily/hourly descaling sample data). It should also include analysis of use of the temporary spill priority list if applicable.

As needed, TMT will reconvene for a conference call on 6/13 to discuss whether to extend the operation; otherwise this issue will be revisited at the next face to face meeting on 6/20.

Operations Review

Reservoirs – John Roache reported on Reclamation projects. Grand Coulee was at elevation 1263' and the expected high inflows coming in would impact the project's elevation and outflows. Hungry Horse was at elevation 3548.2', with inflows around 30 kcfs; the project may need to adjust for local flood control. Lisa Wright reported on Corps projects. Libby was at elevation 2426' with 52.7 kcfs inflows and outflows dropping to 12 kcfs to manage to local flood control elevation 1,764' at Bonners Ferry. Natural flows have provided good conditions for the sturgeon, and to date, temperatures were still within an acceptable range of 8° C or higher. Future adjustments to the selective withdrawal system at Libby may need to be made to manage temperatures for sturgeon. Albeni Falls was at elevation 2060.1', with 73.1 kcfs inflows and 74 kcfs outflows. Priest Rapids inflows were 159.0 kcfs. Dworshak elevation was 1586.6', with 22.1 kcfs inflows and 9.6 kcfs outflows. Lower Granite inflows were 119.9 kcfs; 306.4 kcfs at McNary; and 305 kcfs at Bonneville.

Fish – Paul Wagner, NOAA, reported on fish. Yearling Chinook passage numbers were less than 1,000 at Lower Granite, 2,000 at Little Goose, 10,000 at McNary and 3,400 at Bonneville. Paul described this as a protracted run. Subyearling Chinook passage numbers were 43,000 at Lower Granite, about 45,000 at Little Goose, 16,000 at Lower Monumental, 5,000 at McNary, 2,000 at John Day and 7,000 at Bonneville. Juvenile steelhead passage counts were 8,000 at Lower Granite and 8,000 at Little Goose –indicating a very late run. Juvenile sockeye at John Day were 2,500-3,500 and 1,800 at Bonneville; and juvenile lamprey counts at John Day were down to 2,000/day.

Doug Baus, Corps, shared a heads up that with performance standard testing beginning and fish arriving at the projects, the action agencies intended to shift from spring to summer operations as soon as hydraulic conditions allowed for it. SRWG and FPOM would be notified as to the specifics of the operations. An FPOM meeting was scheduled for next week. There was some discussion and disagreement about the date for making this change – the Fish Operations Plan indicates June 20 and it also says that presence of fish and flow criteria should be used to make the change and should be coordinated through the region.

A concern was raised that there had not been enough lead time to respond to pending changes to the Little Goose surface weir height, and there also was not a clear rationale for making this change. While substantively this is an FPOM issue, TMT members urged the Corps to provide a better coordination process on the changes for shifting from spring to summer operations – by giving the region enough time to provide input and then by clearly articulating the rationale for the change.

Paul resumed his report on fish, with an adult passage update. The season total for spring Chinook was 158,089 and the total to date passage of summer Chinook was 10,000. Spring jacks totaled 7,500 (a very low run), but summer jack counts were high so far. Sockeye numbers were about 200-300/day. Further downstream, spring chinook counts at Lower Granite were 56,000; and jacks were 2,800.

Water quality – Scott English, Corps, reiterated that flows are coming up and involuntary spill was expected to come through the system, but just for a short duration. The Cascade Island tailwater fixed monitoring station was being fixed (some equipment was being completely replaced) and they hoped to have it back on line in the next day or two. Meanwhile, information was being logged and will be posted ASAP.

Power System – Tony Norris, BPA, reported that the system experienced another wind peak earlier this week, over 4,100 MW of power. The graph showed a dramatic upswing in wind on to the system over a short period of time.

Next Meeting, Wednesday, June 20

Agenda items include:

- Bonneville PH 2 Operations Update/Report
- Dworshak Operations
- Libby Operations
- Shift from Spring to Summer Spill

- Grand Coulee Refill
- Upper Snake Flow Augmentation Update
- Other?

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES

June 6, 2012

Notes: Pat Vivian

1. Introduction

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

2. Review May 23 and 30 Meeting Minutes

The May 23 facilitator's notes and minutes were approved as final, pending any further comments. Review of the May 30 notes and minutes was postponed until the next TMT meeting.

3. Water Supply Forecast

The final NWRFC water supply forecast for June will be released at 5 pm today and posted to the TMT website tomorrow, Baus reported. The final June forecast is not expected to differ much from today's forecast. Current volume forecasts for individual projects are:

- Libby (April-August)– 7240 KAF, 123% of average
- Dworshak (April-July – 3236 KAF, 121% of average
- The Dalles (April-August) – 113 MAF, 122% of average

4. Bonneville Operations

Baus led a discussion of the special operation approved by TMT to reduce descaling of juvenile sockeye at Bonneville Dam. That operation was scheduled to end today, but Russ Kiefer, Idaho, requested that it continue through 6 pm, June 11, because an estimated 20-25% of the PIT tagged Snake River sockeye that passed Lower Granite have yet to pass Bonneville. Last year, juvenile sockeye showed up in significant numbers in June. Charles Morrill, Washington, concurred with Idaho's recommendation.

Baus showed TMT a summary of the mortality and descaling rates for juvenile sockeye at Bonneville, linked to today's agenda. Since the special operation was implemented on May 25, the highest observed rate of descaling was 15.8% on May 28, and the lowest was 3.4% on June 1. The highest observed mortality rate was 2.5% on May 27, and there were several days with a mortality rate of 0.0%.

Tom Lorz, CRITFC, asked about current gas levels at Bonneville. Morrill pointed out that fish passing Bonneville are two days' travel from entering saltwater, a stressful transition. Descaling makes survival more difficult at this stage and mortality may result. Paul Wagner, NOAA, said the relationship between descaling and prior injury is still unclear. Margaret Filardo, FPC, reported that none of the descaled sockeye observed this year had predator marks on them. The samplers look only for fresh descaling; fish with wounds that are beginning to heal are not counted as descaled.

Dan Feil, COE, asked whether there are clear indications that the special operation at Bonneville reduces sockeye descaling. Lorz urged the COE to take advantage of this opportunity to test a cap of 25% of the 1% operating range at Bonneville powerhouse 2 in light of previous findings that operating at the lower end of 1% significantly reduces descaling.

Kiefer said the operation currently in effect has clearly reduced impacts to sockeye up to this point. He asked whether gas levels at Bonneville would allow spill of 110-120 kcfs without causing a significant increase in adult fallback rates. Baus replied in accordance with the FOP spring spill rates at Bonneville Dam have been and continued to be a function of the lower rate as governed by: 1) 120%/115% TDG limits, or 2) 100 kcfs. TDG readings at Bonneville have been and continue to exceed TDG limits. Scott English, COE, said a wave of involuntary spill is working its way downstream toward Bonneville. The Dalles is already spilling to 123.8% TDG in the tailwater, Laura Hamilton, COE, reported.

In light of these flow increases, Kiefer suggested moving Bonneville up to third place on the spill priority list for any involuntary spill needed at all levels of spill. That would be acceptable as long as it doesn't interfere with performance testing, Bill Proctor, COE, said.

Inflow forecasts and gas levels can only be expected to increase over the next several days, Baus said. It's highly unlikely that the COE will be able to cap PH2 operations at 25% of the 1% operating range, as requested in the SOR to reduce sockeye descaling. However, every effort will be made to meet the conditions outlined in the SOR by using the same four-step approach to previous operations of this nature over the past several weeks.

The COE will implement Idaho's request to move Bonneville up to third place on the spill priority list until 6 pm on June 11, although it was noted that flows may be too high for the change to provide any benefit. The COE also agreed to extend the special operation at Bonneville through 6 pm, June 11, as requested.

Dave Statler, Nez Perce, asked whether there will be an analysis of impacts after the Bonneville special operation has ended. Kruger and Filardo agreed that an hourly analysis of turbine operations would be particularly useful. Litchfield suggested a biological assessment of the extent to which the Bonneville operation actually improved

conditions for fish. Some TMT participants suggested this operation would be a good topic for the TMT year end review.

TMT scheduled a tentative conference call on June 13 if needed to wrap up coordination on this issue.

5. Operations Review

a. Reservoirs. Grand Coulee is at elevation 1263 feet, and inflows are forecasted to be high over the next few days. Hungry Horse is at elevation 3548.2 feet, discharging 6.4 kcfs. Releases will be ramped down if needed for flood control at Columbia Falls.

Libby is at elevation 2426 feet, with inflows of 52.7 kcfs and releases of 12 kcfs, which have been sharply reduced over the past few days because inflows are rising and flood control is needed for Bonner's Ferry. Current elevation at Bonner's Ferry is 1763.57 feet. There was discussion of possible impacts of flood control on the sturgeon operation. Brian Marotz reported that Montana is working on maintaining a water temperature of 8 degrees C at Libby for sturgeon. Discharges were reduced to accommodate the flood stage (1764 feet) at Bonner's Ferry and temperatures at Libby stayed in the targeted temperature zone. In order to ensure water temperatures remain in the targeted range signatories to the sturgeon SOR for Libby are considering requesting the use of selective withdrawal gates to manage temperatures during the current operation.

Albeni Falls is at elevation 2060.1 feet, with inflows of 73.1 kcfs and discharges of 74 kcfs. Dworshak is at elevation 1586.6 feet, with inflows of 22.1 kcfs and discharges of 9.6 kcfs.

Priest Rapids inflows are 159.0 kcfs, Lower Granite inflows are 119.9 kcfs, and Bonneville inflows are 305 kcfs.

b. Fish. Juveniles: Yearling chinook passage is winding down with less than 1000 fish per day passing Lower Granite, Wagner reported. Daily passage counts indicate a remarkably protracted run – approximately 2000 at Little Goose, 1000 at Lower Monumental, 10,000 at McNary, 6000 at John Day, and 3000-4000 at Bonneville. Meanwhile, subyearling passage is on the increase, with daily counts of more than 43,000 fish passing Lower Granite and a similar number at Little Goose, 16,000 at Lower Granite, 5000 at McNary, and 7000 at Bonneville.

Based in the increase in subyearling counts at Lower Monumental Dam (LMN) Baus informed TMT the Action Agencies are planning to implement the LMN spill operation (17kcfs) as soon as conditions allowed in order to facilitate performance standard testing as identified in the FOP. Furthermore, consistent with FPOM coordination a change from the spring (40%) to the summer (50%) spill operation at McNary Dam (MCN) would be forthcoming soon. Changes from spring to summer spill

operations at LMN and MCN are being coordinated at this time for performance standard testing. Some TMT members expressed concern regarding the timing of the change of spill operations at LMN and MCN for performance standard testing. Final dates of these operational changes will continue to be coordinated with the region as soon as possible via SRWG and FPOM.

Adults: Steelhead passage is nearing its end, with daily counts of around 8000 fish at Lower Granite and Little Goose, 2000 at Lower Monumental and 1500 at Bonneville, Wagner reported. Spring chinook passage is finished, with a total count of 158,000 fish. Summer chinook are on their way – 10,000 have already passed Bonneville to date. Although jack counts have been high in recent years, Wagner noted that hasn't always translated into large adult returns. This year's jack counts are low, with 7500 jacks returning to Bonneville, which is about 40% or less of the 10-year average. Sockeye are passing Bonneville at the rate of 200-300 per day, which is expected to increase.

c. Water Quality. As Scott English reported earlier, a short period of involuntary spill is anticipated system-wide. Gas levels are currently under the waiver limits, but that is expected to change soon. Restoration of the Cascade Island monitoring station below Bonneville Dam will be finished today or tomorrow with the installation of a new communication cable.

d. Power System. A peak in wind power production over the past few days set another record of 4100 MW, Tony Norris reported. BPA was able to manage overgeneration without curtailing wind power.

6. Next TMT Meeting

There will be a TMT conference call on June 13 if needed to discuss Bonneville operations. The next regular TMT meeting will be on June 20. That agenda will include updates on Dworshak operations, Libby operations, the sturgeon pulse, the shift to summer operations, treaty fishing, Grand Coulee flow objectives, and upper Snake flow augmentation.

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