

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

July 22, 2009 Conference Call

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator/Notes: Erin Halton

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.

Review of Minutes/Agenda

Russ Kiefer, ID, made the following edit to the 7/15 facilitator's notes:

- In the third paragraph under Dworshak operations, clarify that Kiefer said outflows of 12 kcfs also provides a benefit for power production.

No other changes to the facilitator summary or official meeting minutes were mentioned during the meeting. TMT will look to confirm these sets as “final” at the 7/29 face-to-face TMT meeting.

Dworshak Operations

Dan Feil, COE, reminded TMT members of the prior weeks' operations for Dworshak, per the discussion by TMT members during the July 15th TMT meeting. He noted that on Monday, the COE dropped the temperature target for outflows from 45°F down to 43°F. The COE clarified that the most recent modeling results had been emailed to FPAC members but had not yet been posted to the TMT agenda. Steve Hall, COE, said that the COE had discussed outflow and temperature target options with FPAC members. Hall clarified that the models emailed to FPAC members had assumed outflows of 12 kcfs and outflow temperatures of 45°F. Feil reported that temperatures at the Lower Granite tailrace were 67.7°F on 7/21 and said that modeling results indicated that temperatures would continue to rise up to the 68°F criteria.

Dave Wills, USFWS, and Russ Kiefer, ID, said on behalf of the Salmon Managers that the discussion of Dworshak operations at the FPAC meeting on 7/21 included considerations of reducing the outflow temperature target to 39°F and of increasing outflows to 14 kcfs. Kiefer acknowledged the challenge in making operational recommendations on how much water to release at this point in the season, given the uncertainty of how much longer the hot weather will continue and the knowledge that increasing outflows to 14 kcfs would drain a cool water resource that could last a little longer if outflows were held at 12 kcfs for another week. Dworshak Hatchery staff clarified that they would prefer cooler temperatures rather than elevated gas levels. The FPAC conversation resulted in a consensus recommendation to drop the temperature target for Dworshak outflows 41°F, with the hope that the cooling releases will keep temperatures at the Lower Granite tailrace below the 68°F criteria. The COE responded that they agreed with the recommendation, especially given the temperatures in the Brownlee/Lewiston area, which are expected to be over 100°F through the weekend.

TMT members discussed data/modeling that would be helpful for future Dworshak discussions; the COE offered to produce updated mass/balance and remaining volume data and also updated models that assume outflows of 12 kcfs and the shaping that would be associated with holding those outflows for shorter/longer amounts of time.

Action/Next Steps:

- The COE will reduce the Dworshak outflow temperature target to 41°F with outflows of 12 kcfs and the big unit in undershot mode.
- TMT members agreed to continue discussion of Dworshak operations via a conference call at 9 a.m. on Friday morning.
- Between now and then, the COE will be closely monitoring temperatures at the Lower Granite tailrace and will be watching for instantaneous reads on whether temperatures rise above 68.0°F.
- Additional data produced by the COE's Walla Walla District office will support TMT's discussion and help them determine criteria for the COE to use in managing Dworshak.

SOR 2009-3

Tom Lorz, on behalf of the signatories to SOR #2009-3 (IDFG, ODFW, the Shoshonne-Bannock Tribes, CRITFC and the Nez Perce Tribe), reviewed the request which was posted as link to the TMT agenda. The request was drafted in response to McNary's observed mortality rates of 17% on 7/20 and 9% observed on 7/21. Lorz clarified that the request to increase spill at McNary was intended to remain in effect until such time that mortality rates returned to historical average mortality rates of ~ 3% and that the signatories to the SOR felt that increasing spill would be the best way to remedy the high mortality rate.

The COE responded by saying they would increase spill to the gas cap (155 kcfs) beginning immediately. Dan Feil, COE, clarified that efforts to clear debris screens were underway at the project and noted that the COE suspected that heat shock was playing a role in the high mortality rates observed on 7/20 and that temperatures had since returned to closer to average levels. He also said that the COE was working on amending the transportation contract, to enable transportation to occur every day instead of every other day. Feil said that the contract might be in place by as early as 7/25. Feil said that once transportation is taking place everyday, the COE proposed triggers as follows: if the temperature gradient in the bypass system was greater than 3°C, or – per the Fish Passage Plan's Appendix B – if there are mortalities of 6% or greater observed for 3 consecutive days, the COE will return to spilling to the gas cap. The COE asked for TMT members to weigh in on the COE's response to the SOR:

- NOAA: no objection
- BOR: no objection
- BPA: no objection
- USFWS: no objection, appreciate the COE's ability to respond quickly to the request.
- ID: no objection, and recommend that the COE consider using three day average mortality rates for criteria described in the 2010 FPP.
- Also: CRITFC: no objection.

Action: The COE planned to spill to the gas cap at McNary beginning immediately. Updates regarding McNary Fish Operations will be shared by the COE as they are known.

Little Goose Low Flow Operations

Dan Feil, COE, reported that flows at Little Goose were at 46 kcfs and that operations have not reached MOP +1 as previously discussed at TMT meetings. He clarified that the COE planned to operate Little Goose at MOP and noted that the unit switch performed at 0800 hours on the morning of 7/22 had not presented any navigation issues thus far. The COE clarified that the minimum elevation for safe navigation – per the Fish Operation Plan - was 633' and said they would take whatever action(s) necessary to make sure conditions at Little Goose was safe for navigation.

Action/Next Steps: the COE will operate Little Goose pool elevation to MOP.

TMT Schedule:

- Conference call to discuss Dworshak operations at 9 am on 7/24.

- Face-to-face on July 29th at 9:00am.
Agenda items will include:
 - Dworshak operations update
 - Libby operations update
 - Seasonal Treaty Fishing Review
 - Operations Review

**Columbia River Regional Forum
Technical Management Team Conference Call
July 22, 2009**

1. Introduction

Today's TMT call was chaired by Dan Feil (COE) and facilitated by Erin Halton (DS Consulting), with representatives of COE, BPA, NOAA, BOR, USFWS, CRITFC and others participating. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at the meeting. Anyone with questions or comments about these notes should provide them to the TMT chair or bring them to the next meeting.

2. Review Meeting Minutes for July 15, 2009

Russ Kiefer (Idaho) commented on the July 15 facilitators' notes under Dworshak Operations. When the COE asked the Salmon Managers whether they would recommend dropping outflows to a two-unit operation, Kiefer gave two reasons for maintaining full powerhouse. Reducing outflows to two units would have meant more spill later, which is bad for both fish operations and power production, but only fish benefits were mentioned in the notes. They will be reposted to the TMT web page with this change.

3. Dworshak Operations

Last week's TMT discussion recommended a full powerhouse operation at Dworshak, with an increase in flows to 12 kcfs if temperatures at Lower Granite tailrace increased to 66 degrees F (45 degrees F at Dworshak), Dan Feil (COE) said. Lower Granite tailrace temperature reached 66 degrees on July 18th. Due to rising temperatures, the COE dropped Dworshak outflows to the 42.5-43.5 degrees F range in light of rising temperatures on July 20th. This operation continues, with Dworshak outflows remaining at 12 kcfs.

Both the COE and Idaho modeled Dworshak operational scenarios, which were not yet posted online as of this meeting. The COE model is based on Dworshak outflows of 45 degrees F, while the Idaho model is based on outflows of 41 degrees F.

Steve Hall (COE Walla Walla) described the COE modeling results. The model is tracking about one degree F below observed temperatures at Lower Granite tailwater, which have been hovering above 67 degrees F and could potentially to hit 68 degrees F in the coming heat wave this week. Under these conditions, the COE planned to drop Dworshak outflows temperatures even further to a 41 degrees F target. The main consideration is limited volume, Karl Kanbergs (COE) said. The modeling indicates there may be a few more weeks left of 12 kcfs outflows, and maybe one week of 14 kcfs outflows at best.

A review of the COE modeling results found that flows this year at Anatone gage are quite a bit higher than average (about 10 kcfs higher), Hall said. When STP flow projections were blended into this analysis, a drop of about 10 kcfs over a few days occurred in the model forecast, which is unlikely. What is more likely to occur during this heat wave is sustained high volume warm releases of Snake River flows from the Brownlee and Hells Canyon reservoirs, which will have a negative (bad) effect on temperatures downstream. The most recent Weather Service forecast indicates that temperatures over 100 degrees F are expected in the Hells Canyon area and downstream to Lewiston, Idaho.

Feil asked the Salmon Managers for their recommendation on Dworshak operations at this point, with the possibility of dropping Dworshak outflow temperatures even further. Yesterday the Salmon Managers modeled several different scenarios, including gas cap spill (14 kcfs spill), and dropping outflows to 39 degrees F, Kiefer said. There was a tentative recommendation to maintain 12 kcfs outflows and drop the outflow temperature target from 43 to 41 degrees F.

The COE is in agreement with this recommendation and will implement it as soon as possible, Feil said. There was no clear FPAC consensus on an operational recommendation, but there was general agreement to wait until the 43 degrees F outflows from Dworshak take effect downriver before considering using 68 degrees F at Lower Granite tailwater as the trigger to increase Dworshak outflows to 14 kcfs, Kiefer and Dave Wills (USFWS) noted.

TMT members agreed that Friday morning two days from now is a good time to check in on how the outflow temperature changes are affecting Lower Granite outflows. There was discussion of whether the 68-degree trigger at Lower Granite tailwater should be an instantaneous reading or a 12-hour rolling average. An instantaneous reading of 68 degrees was chosen as the trigger to hold a Friday morning meeting. In the meantime, exceedances of 68 degrees F in the Lower Granite tailwater will be considered acceptable until cooler outflows have had a chance to take effect. The current tailwater reading at Lower Granite is 67.5 degrees F.

Until Friday, the COE will operate Dworshak at 12 kcfs outflows and drop outflow temperatures to 41 degrees F, using both the spillway and the regulated outlet gates and pulling more water from the RO gates as cooler temperatures as needed. Current operations are; Full powerhouse flows (9.5 kcfs) plus 2.3 kcfs through the spillway and 2.3 kcfs through the RO gates. Attention turned to the effects of such low water temperatures on fish production at the Dworshak hatchery. A loss of growth now would be preferable to the TDG effects of spilling to the gas cap, a hatchery spokesperson said. TMT scheduled a conference call for 9 am, July 24, to revisit the Dworshak operation in light of current data.

4. McNary Emergency Fish Operations – SOR 2009-09

Tom Lorz (CRITFC) presented this SOR, which is a response to increases in mortality at the McNary Dam juvenile bypass system. Mortalities have been as high as 17% of the fish passing in one day (the average is about 9% of fish passing per day), as compared to a typical background level of 3% mortality. The SOR asks the COE to increase spill at McNary until the rate of mortalities returns to normal. Fish are arriving downstream dead or morbid, but not descaled, which indicates that the mortalities are not caused by debris that has accumulated in the trash racks and juvenile bypass system. While the trash racks are now being cleaned of debris, that is not the primary issue, Feil agreed. The likely cause of the deaths is heat shock due to a temperature gradient of 6 degrees C throughout the bypass system.

In response to the SOR, the COE plans to begin spilling to the gas cap at McNary as soon as possible, Feil said. Also, the COE is working toward daily transportation of fish at McNary. Transported every other day now, fish wait longer in the raceways at McNary than at any other project. Until daily barging begins, the COE plans to bypass fish to the river.

The COE will use the trigger established in appendix B to the transportation portion of the Fish Passage Plan, which is 6% mortality for 3 consecutive days. If that occurs, the COE will consider spilling to the gas cap at McNary. The current McNary gas cap is 155 kcfs, Laura Hamilton (COE) said. Spill will range between 80-110 kcfs, with resulting TDG levels of around 115% in the tailrace, which is below the 120% state water quality limit. Once daily barging begins, which is expected July 24-27, the COE will end gas cap spill.

CRITFC, NOAA, BOR, BPA, USFWS, and Idaho expressed support for this plan. In addition, Idaho recommended that the COE consider making the 6% trigger a 3-day moving average, with the prospect of making this amendment to the Fish Passage Plan when it is updated.

5. Little Goose Low Flow Operations

The total river flow is now 46 kcfs, but the COE has not moved Little Goose to a MOP+1 operation yet, Dan Feil (COE) said. The Lower Granite tailrace gage has been adjusted and appears to be providing adequate depth over the sill for barges to pass the navigation lock. Therefore, the COE is not proposing a MOP+1 operation at this time. However, that could change at any time with an instantaneous reading of 633 feet elevation at the Lower Granite tailrace gage.

There was discussion of the effects of switching back and forth between a 1- and 2-unit operation at Lower Granite, which began at 8 am today. The resulting waves in the Little Goose pool could cause the elevation to dip below 633 feet, Feil said. The COE will monitor these data very closely and go to a MOP+1 operation at Little Goose if the tailwater elevation hits 633 feet as specified in the Fish Operations Plan.

There was a suggestion that barges be asked to wait if necessary, but the COE said that's not feasible for two reasons. There's no provision in the agreement with tow boaters allowing the COE to ask them to wait, and even if there were, it would be difficult for project operators to predict wave effects.

Feil reminded everyone why this came to TMT for discussion. Problems were occurring when river flows hit 50 kcfs instead of the 40 kcfs trigger identified in the Fish Operations Plan. Adjustments to the Lower Granite tailrace gage seems to have solved that problem at present, but the COE emphasized that a reading of 633 feet elevation would trigger the MOP+1 operation.

6. Next Meeting

The next scheduled TMT meeting will be a conference call on July 24 if needed to revisit Dworshak operations. The next meeting will be in person July 29, with transportation planning, navigation at Little Goose, Libby operations, and review of meeting minutes on the agenda. This summary prepared by consultant and writer Pat Vivian.

Name	Affiliation
Tony Norris	BPA
Rich Dominigue	NOAA
John Roache	BOR
Dan Feil	COE
Steve Barton	COE
Laura Hamilton	COE
Steve Hall	COE
Tracy Schwartz	COE
Dave Wills	USFWS
Kyle Dittmer	CRITFC
Barry Espenson	CBB
Ruth Burris	PGE
Tim Heizenrader	Centaurus
Richelle Beck	DRA
Karl Kanbergs	COE
Margaret Filardo	FPC
Dave Benner	FPC
Rob Diaz	Integral Renewables
Tom Le	Puget Sound Energy
Rob Allerman	Deutsche Bank
Scott Bettin	BPA
Russ Kiefer	Idaho
Rudd Turner	COE
Tom Lorz	CRITFC
Glen Trager	Shell Energy