

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

August 22nd, 2008 Conference Call

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Gumpert

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.

Libby Operations Update

Cathy Hlebechuk, COE, provided updated information on Libby: outflows were at 8 kcfs and the project elevation was close to 2443'. Due to greater than forecasted precipitation, continued outflows of 8 kcfs would likely result in an end of August elevation of 2442.8', one foot higher than previously estimated. TMT members recalled the series of meetings that resulted in the operational decisions made for both Libby summer operations and the Libby/Arrow swap agreement. Questions were raised regarding the interpretation of flow/volume neutrality and whether biological benefits were factoring into TMT feedback on whether to maintain the 8 kcfs outflows at the project. Tony Norris, BPA, clarified that the Swap Agreement's 60 kfsd will be represented in the Lower Columbia regardless of whether the project was at, above or below the 2441.8' end of August target elevation. Norris reframed the question to TMT members as follows: should the 8 kcfs outflows be maintained even if the end of August elevation will be above 2441.8'? The COE clarified that they planned to meet the targeted 2441.8' elevation per the Libby/Arrow Swap Agreement and the need to remain flow neutral – unless there was regional consensus to operate differently. The following parties provided input:

- NOAA: neutral on this issue; alternate TMT representative Rich Domingue, on the call for NOAA, was not part of previous TMT discussions.
- BPA: Support holding Libby outflows at 8 kcfs; believe this will honor the Libby/Hungry Horse summer operations plan set forth from previous TMT discussions and achieve the 60 kfsd in the Libby/Arrow swap agreement.
- USFWS: Support holding Libby outflows at 8 kcfs; recall Swap Agreement portrayed as a volume neutral operation that would equate to a flow neutral operation. To honor TMT agreements around Libby/Hungry Horse summer operations agreement, hold the 8 kcfs outflows at Libby.
- BOR: Support holding Libby outflows at 8 kcfs.
- MT: Support holding Libby outflows at 8 kcfs; desire for as little “double peak” in flows as possible. Recall that TMT agreed to flat outflows at Libby with storage of any additional water. Added that MT did not understand the Libby/Arrow swap agreement as superseding the previously set summer operations plan and that today's deliberation on whether to adjust Libby outflows was not technically/biologically based.

- OR: Support an operation that is “flow neutral” for the Lower Columbia River; if there is any deviation from downstream flow targets, OR requests that the Action Agencies pursue water from other sources. Noted that OR neither supported nor objected to agreement reached in July regarding Libby/Hungry Horse summer operations.
- Nez Perce Tribe: Support a flow-neutral operation. The amount of flow increase needed to reach the target elevation might not be considered a “double peak” in terms of a biological impact.

After TMT members provided input, the Action Agencies held a caucus. Rudd Turner, COE, read from the COE’s July 2008 court report, by which the COE is held responsible for a “flow neutral” Libby operation that meets the end of August elevation target of 2441.8’.

Action/Next Steps:

- The COE planned to coordinate with BPA to compare forecasts and set flow targets to meet the end of August elevation target of 2441.8’ and the 60 kfsd in the Libby/Arrow Swap Agreement.
- The COE will send out an email to TMT regarding Libby operations; ramp rates will follow those set in the Biological Opinion
- Libby Operations will be on the agenda for the TMT meeting on 8/27.

Lower Snake River Navigation

Ann Glasley and John Heitstuman, COE Walla Walla District, reported that low and fluctuating flows in the Lower Snake River were causing some concern around the ability to meet MOP elevation in the Little Goose pool and provide adequate clearance in the navigation locks at Lower Granite. As with other deviations from the FOP, the COE polled TMT members for their input on whether the COE should increase the elevation range at Little Goose pool to MOP +.5’ – MOP +1.5’ (3633.5’-3634.5’) as a safety measure for navigation. The following parties weighed in:

- USFWS: As this is a safety issue, no position and defer to COE to make appropriate adjustments.
- NOAA: no major concerns, defer to COE.
- OR: defer to COE. Request that the COE capture and further evaluate the options for dealing with wave action and staying within MOP.
- Nez Perce Tribe: defer to COE, but noted this is not a preferred long-term solution. Request further analysis to find a long term solution.
- BPA: no objection to the COE’s suggested elevation range. Offered to share information with TMT members regarding the “dead band” and wave action.
- *Note: the BOR and MT representatives were no longer on the call and did not weigh in on the above proposal. ID and WA were not present on the call for any time.*

Action/Next Steps:

- The COE planned to coordinate with all TMT members and additional Columbia River tribes that were not on the conference call and will send TMT members an email if/when the proposed operation is implemented.
- Lower Snake River Operations will be on the agenda for the 8/27 TMT meeting.

Other:

Cathy Hlebechuk, COE, reported that Dworshak was shifting to all Regulating Outlet (RO) spill at 1600 hrs on 8/22. Outflows were expected to be 12 kcfs and the project is expected to reach elevation 1536' – 1537' at the end of August.

8/27/08 TMT Face to Face Meeting

Agenda items will include:

- Finalize notes/minutes
- Libby Operations
- Lower Snake River Navigation
- Timing for end of MOP
- Operations Review

**Columbia River Regional Forum
Technical Management Team Conference Call
Aug. 22, 2008**

1. Introduction

Today's conference call was chaired by Cathy Hlebechuk (COE) and facilitated by Robin Gumpert (DS Consulting), with representatives from USFWS, COE, NOAA, FPC, the Nez Perce Tribe, BPA, Montana, Oregon, NOAA, BOR, and others attending. 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. Libby Operations – Increased Inflows

One of the main goals of today's unscheduled call was to discuss the effect of unusual precipitation on Libby operations. Libby is currently releasing 8 kcfs, Hlebechuk reported. The latest forecast shows the reservoir at elevation 2,442.8 feet at end August if this outflow continues, overshooting the target reservoir elevation of 2,441 feet by about a foot.

At this point, B.C. Hydro doesn't want to swap more than 60 ksfd because they don't want to spill any more than they are at present. In order to maintain flow neutrality, the COE estimates that an additional 1-2 kcfs will need to be released from Libby reservoir. Hlebechuk indicated that outflows would need to increase from 8 to approximately 10 kcfs for the reservoir to reach elevation 2,441.8 feet by end August, which is exactly 60 ksfd above the original target elevation of 2,439 feet. Of course, inflows would need further adjustment between now and the end of August.

Jim Litchfield (Montana) asked how many days in September it would take for the reservoir to reach its target elevation with and without the swap. The COE doesn't have that information now, Hlebechuk replied. The COE's understanding was that flow neutrality was the basis on which most TMT members agreed to the swap. Montana's understanding was that maintaining flat flows out of Libby is part of the original swap agreement. There was discussion of flow neutrality in relation to the summer operation alone vs. with the swap. If Arrow reservoir is below its TSR elevation and Libby reservoir is at a higher elevation than 2,439 feet by end August, we have not delivered the water we should have, and the operation isn't flow neutral, Hlebechuk said.

In order to release 60 ksfd and honor the agreement with Canada, Tony Norris (BPA) asked TMT members to consider today whether they could agree that the reservoir target elevation for end August should be 2441.8 feet instead of

2,439 feet. The actual magnitude and duration of the change would be reevaluated and adjustments made as the end of the month approaches.

TMT members responded to the question: Does TMT agree that Libby operations should be maintained with flat flows of 8 kcfs, allowing the reservoir elevation to end at whatever that operation yields by Aug. 31?

Montana – Questioned the biological benefits of maintaining flow neutrality. Expressed concern that fluctuating flows would result in a double peak which, although small this time, is generally bad for fish in Montana. The original agreement specified that flat flows would be maintained, and if it appeared the reservoir would be drafted below elevation 2,439 feet, outflows would be reduced. Otherwise, flows were to be held level and extra water stored in Libby reservoir if there was additional precipitation in August. Stated that this would be a rollover of 2007 Libby operations. Given the extra foot of rainfall this month, it appears the reservoir would have ended at 2,440 feet by Aug. 31 under the original agreement without the swap. Therefore the end of August elevation with the swap should be 2,441.8 feet plus 1 foot, or 2,442.8 feet.

Oregon – If the base operation of 8 kcfs outflows is to continue, Oregon requested that the Action Agencies identify alternative water sources to maintain flow neutrality and provide the water that would otherwise come from Libby. Drafting Libby to its target elevation was part of the original agreement. The benefits of providing water to migrating fish have been well documented. Asked whether the COE would have dropped outflows to 8 kcfs without the swap; the answer was that outflows wouldn't have dropped as quickly.

Nez Perce – Stated that flow neutrality needs to be honored as one of the conditions of the original agreement. Questioned the description of the proposed operation as a double peak, given that the range of variations in the month of August would be only 1-2 kcfs, which is within the range of natural variations.

NOAA – Is neutral on this issue.

USFWS – Agreed with Montana's view that honoring the original agreement means maintaining outflows of 8 kcfs from Libby. That would be equivalent to receiving the agreed-upon 60 ksf from Canada; the swap appears to have worked well. The COE noted that their calculations show the water volume stored with flat flows of 8 kcfs would be 100 ksf, not 60.

BPA – It's possible to maintain flat flows of 8 kcfs from Libby and meet the swap agreement as long as the reservoir is not drafted below elevation 2,441.8 feet – which amounts to 60 ksf above elevation 2,439. Tony Norris emphasized that the Libby-Arrow swap and the flat flow discussion are really two separate issues. BPA advocated honoring the agreement made at TMT in July by holding

flat flows and allowing the reservoir to come in above elevation 2,441.8 feet if that's where it ends up.

COE – The agreement to operate Libby reservoir to elevation 2,439 feet by end August included an understanding that the elevation could be above elevation 2,439 feet if there was additional inflow. Determined that maintaining 8 kcfs outflows would result in storing more than the 60 agreed to for the swap.

BOR – Did not object to maintaining a flat flow operation of 8 kcfs. Agreed with BPA's position that if the Libby reservoir elevation ends up above 2,441.8 feet by end August, that would be acceptable.

After hearing these views, the COE caucused briefly, and then announced that it would keep operations consistent with the July court report, which states in relation to the swap agreement, "The COE will provide accounting of the operation plan to demonstrate that it was flow neutral." Given that elevation 2,441.8 feet has been reported to the court as a goal, the COE will make an effort to achieve that elevation by the end of August. In order to keep the operation flow-neutral, the COE will need to increase discharges. Next steps include meeting with BPA to discuss forecasts, then determining how to manage discharges. The COE will email specifics of the operation to TMT members. TMT will revisit this issue at its next meeting Aug. 27.

3. Lower Snake Navigation Issues

Low flows and wave action have raised concerns regarding the elevation of Little Goose forebay for navigation. Ann Glassley and John Heitstuman (COE Walla Walla) presented data showing pool fluctuations from Aug. 14-19 and described the current situation. A recently installed gage at the Lower Granite navigation lock revealed that the elevation of Little Goose forebay has dropped as low as 632.6 feet. The forebay elevation should be no lower than 633 feet for safety reasons.

Varying turbine discharges combined with very low flows tend to cause wave action that travels the pool at approximately 11 mph and causes the elevation to dip below the required 15 feet of clearance over the navigation sill. While there have been low flows such as these in the past, the presence of the recording gage now makes the situation apparent. Little can be done to control wave action once flows drop below 32 kcfs, except to raise the pool elevation. These fluctuations are occurring in addition to the complexities BPA faces in trying to keep the project at MOP and maintain minimum generation requirements under such low flows.

In an effort to maintain a minimum elevation of 633 feet throughout the entire pool, the COE proposed to operate the Little Goose forebay to MOP+0.5 to MOP+1.5 feet, which would maintain an elevation of 633.5-634.5 feet in Little

Goose forebay. Because this operation isn't included in either the court report or the 2007 rollover operation, the COE requested TMT's participation and consensus.

USFWS –The proposed operation is apparently necessary for safety reasons. Deferred to the COE's expertise and took no position.

Oregon – Wanted a clearer understanding of the causes of wave action. Ron Boyce agreed with USFWS that the operation this year is a safety issue, and is the COE's call. Nevertheless, this operation will impact juvenile fall Chinook migrating in the Snake. Requested that the Action Agencies identify ways to reduce wave action in future so it won't be necessary to operate outside of MOP.

BPA – Did not object to the operation proposed by the COE today. Noted that the Snake project units are currently on local control and are not load-following. When flows are low, it can be very difficult to meet spill percentages, stay within 1% efficiency and make adjustments using the available spill stops. Some inflows mean project staff have to alternate between using 2 units at the low end of 1% efficiency and one unit at the high end of 1% efficiency in order to achieve required flows. This "dead band" phenomenon is unique to Little Goose.

NOAA – Had no objections to the proposed operation.

Nez Perce – Understands the safety concern and did not object to the proposed operation this year. Does not see it as a long term solution, however. Dworshak continues to contribute a considerable amount of water for flow augmentation, which depends on the operation of Little Goose. There is a need to review alternative operational scenarios in order to deal with this problem.

The COE will do further coordination on this operation with the Nez Perce, Umatilla, Yakima, Colville, Spokane, Warm Springs and Kootenai tribes, as well as the states of Montana and Idaho. TMT will revisit this issue at its Aug. 27 meeting.

4. Dworshak Operations

Hlebechuk reminded TMT that the Dworshak spill gates are being closed this afternoon at 4 pm. Based on current forecasts, Dworshak will reach elevation 1,537 feet by end August. Total outflows are expected to be around 12 kcfs.

7. Next Meeting

The next meeting will be in person on Aug. 27, with an update on Libby operations and Lower Snake navigation on the agenda. This summary prepared by consultant and writer Pat Vivian.

Name	Affiliation
Dave Wills	USFWS
Mark Bagdovitz	USFWS
Ann Glassley	COE Walla Walla
Bob Walls	COE Walla Walla
Andrea Valentine	COE Walla Walla
Howard Burge	USFWS
Margaret Filardo	FPC
XX Matthews	Hira Energy
Dave Statler	Nez Perce
Daniel Spear	BPA
Cathy Hlebechuk	COE
Jim Litchfield	Montana
Tony Norris	BPA
Ron Boyce	Oregon
Rich Domingue	NOAA
Mary Mellema	BOR
John Piggott	Tow Boaters Association
Dan Feil	COE
Rudd Turner	COE
John Heitstuman	COE
Joel Fenolio	COE Seattle