

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

August 6th, 2008 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.

Dworshak Operations Update

Jim Adams, COE, provided updated information on Dworshak: outflows were at 14kcfs, the project elevation was 1573.3' and the tailwater temperatures were at 49.8°. Steve Hall, COE, provided an update as follow up from the July 30 TMT meeting regarding the Regulating Outlet (RO) issues at Dworshak: keeper plate pins were successfully installed 8/5 and the manhole tie down repair is expected to be completed by the end of today, enabling operations by 8/7. Hall added that the repairs that are needed for RO#2 are significant enough to take several months and said that the COE was unable to fully repair the seal on RO#1. He noted that the wear and tear on the RO's and bulkheads is due to years of operating outside of their intended design, which is why there is only one emergency bulkhead.

Temperature graphs were posted as link to the TMT agenda; the COE reported an average Lower Granite discharge temperature of 66.5° and said there were no temperature concerns at this point but they will continue to be closely monitored. Adams said the latest STP runs indicate that the COE will achieve the end of September elevation target of 1520', but clarified that actual conditions and operational recommendations will be factors in whether the project achieves an elevation of 1535' by the end of August. Hall added that STP runs indicated that holding outflows at 14 kcfs for another week, then shifting down later in the month might achieve an elevation within 2-3' of the elevation target.

Tom Lorz, Vice-Chair of the Salmon Managers, referred TMT to SOR #2008-5, posted as a link to the TMT agenda. The SOR was supported by ID, OR, CRITFC, the Shoshone-Bannock Tribes, CRITFC and the Nez Perce Tribe (*note: the State of Washington signed onto the SOR following the conclusion of the meeting*); it specified a request of the Action Agencies to analyze reservoir operations and system flexibility to provide migration conditions and benefits for juvenile migrants as specified in the 2004 BiOP and 2008 Water Management Plan. Lengthy discussion followed from TMT members about the uncertainties around the project's operational status currently and for the near-term, and the need to control flow temperatures Dworshak/Lower Granite to support hatchery fish. TMT members considered how to meet the need to provide flows that will support multiple species of fish migrating through the projects and the challenge in trying to prioritize temperature/flow benefits for fish.

The Nez Perce Tribe acknowledged the COE management efforts underway and stated that they recommend an operation that provides tailwater temperatures of no higher than 52° at Dworshak and 68° at Lower Granite and targets the end of August elevation of 1535' with as little negative impact to fish as possible. Several TMT members requested that the Action Agencies provide a list of all reasonable alternatives for providing desirable flows/temperatures for TMT members to consider at the 8/13 meeting. The COE indicated that policy makers would need to consider that request and clarified that senior level managers at Walla Walla District will weigh the risks of operating without full use of the emergency bulkhead and considering the potential failure of the seal on RO#1 via continued discussion over the next few days.

Action/Next Steps:

- The COE planned to continue operating Dworshak with outflows at 14 kcfs; should tailwater temperatures approach 52°, spill would be reduced through the spillway to manage temperatures as best can.
- The COE will follow up with TMT regarding policy-level COE consideration of the request to provide a list of all reasonable alternatives for providing desirable flows/temperatures for TMT members to consider at the 8/13 meeting.
- TMT representatives for USFWS and the Nez Perce Tribe will check in with the hatcheries to confirm the temperature criteria at Dworshak and Lower Granite.
- Flow and temperature benefit analysis will be a part of the continued Dworshak discussion at the upcoming TMT meeting on 8/13.

Libby/Arrow Swap

Tony Norris, BPA, referred TMT to two documents linked to the agenda, providing detail on the Treaty Storage Regulation (TSR) process. The 7/28 TSR indicated a 60 ksfd swap. The TSR will be revised each week, on 8/7 and 8/24, with adjustments made as necessary as the month progresses. Outflows at Libby were at 11 kcfs, with a shift down to approximately 9.5 kcfs planned for 1100 hours on 8/8. Cathy Hlebechuk added that it is possible that the project would ramp down earlier than Friday August 8th.

Action/Next Steps: BPA will stay mindful of the bull trout minimum. The swap agreement had been agreed to verbally at the time of the meeting and was expected to be signed by all parties involved within the next day. BPA will provide a final copy of the agreement to TMT members.

McNary Transport

Dan Feil, COE, reported that truck transport will begin on 8/16. They will notify TMT of any changes to this proposed operation.

Other:

- Dan Feil, COE, reported that fish pump 3 at McNary is leaking oil. He clarified that the leak is controlled and not going into the water and proposed using a 40%

spill on Thursday, 6/7 instead of Friday, 6/8. This 24-hour swap would entail four main units out for approximately four hours, from 12-4 pm. TMT members present on the call (NOAA, USFWS, BPA, BOR, MT, ID, OR) were polled and had no objections.

8/13 Face to Face Meeting

Agenda items will include:

- Finalize notes/minutes
- Dworshak Operations
- 2008 Summer Treaty Fishing Report
- Libby/Hungry Horse Operations Update
- Timing for end of MOP
- Operations Review

**Columbia River Regional Forum
Technical Management Team Conference Call
Aug. 6, 2008**

1. Introduction

Today's TMT call was chaired by Jim Adams (COE) and facilitated by Erin Halton (DS Consulting) with representatives of USFWS, COE, BOR, BPA, NOAA, CRITFC, the Nez Perce Tribe, Oregon, Montana, Idaho 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. Dworshak Operations

Current Situation: Outflows are still 14 kcfs, with a forebay elevation of 1,574.3 feet and a tailwater temperature of 49.8 degrees F.

Steve Hall (COE) gave an update on RO gate repair at Dworshak. That work will be completed by the end of today, meaning the RO gates could be operable by the end of today or early tomorrow. However, issues remain that make using the RO gates risky. There's no emergency bulkhead available, so if something goes wrong with the operation of the RO gates, the COE wouldn't have a way of stopping the flow and about 500 cfs would be released. That could put minimum flows below generation during the last half of September.

Now that the RO gates can be operated, a risk based analysis is needed of (1) potential impacts to the system if the RO gates fail without a bulkhead available, vs. (2) potential impacts to the environment if the reservoir doesn't meet elevation 1,535 feet by end August. The decision regarding use of the gates will be made by the District commander himself. Ron Boyce (Oregon) asked when a decision will be made regarding putting the RO's back into service. That will happen before spill either needs to be curtailed, or it's apparent the reservoir won't reach elevation 1,535 feet by the end of August, Hall replied.

Hall's presentation, attached to today's TMT agenda, shows modeled temperatures at Dworshak. With continued outflows of 14 kcfs through the end of next week and into the following week, spill will probably need to drop to 12.8 kcfs on Aug. 19 for elevation reasons, based on the current forecast. That would bring the reservoir to 1,535 feet at end August. However, as the pool elevation drops, the amount of water going over the spillway has to decrease due to lack of head. When the reservoir reaches 1,545 feet, the COE will cut outflows to full powerhouse. There isn't a model run available at this time that shows the elevation of the reservoir at end August if the RO gates remain unavailable. The

reservoir would still be able to meet the 1,520 foot elevation target around the middle of September without the RO gates.

Dworshak was designed for the pool to remain full through summer and be drafted for power, Hall said. The equipment wasn't designed to be operated on a daily basis, which is why there have been difficulties with opening and closing the gates frequently. This is also the reason only one bulkhead was built. Fabricating a new bulkhead would be a complicated and costly process taking at least 6 months. The Dworshak spillway stilling basin design requires that the spillway be operated with balanced flows. This means RO gates #1 and 3 have to be used in tandem; operating one or the other would create problems in the stilling basin.

The scenario presented to TMT today is a conservative assumption of water temperatures coming out of Dworshak. The modeling was based on 2002 water temperatures, and this year's temperatures have been consistently 2 degrees F colder than what was forecasted from 2002 data. Even with a conservative estimate, the modeling still shows Lower Granite tailwater below 68 degrees F. The current daily average for Lower Granite tailwater is 66.5 degrees F. Current release temperatures from Dworshak are about 49+ degrees F. Dworshak tailwater temperatures aren't expected to reach 52 degrees F until next week, when reservoir pool drop to within 10 feet deep of the spillway crest.

The COE's worst-case scenario puts the reservoir between 2 to 5 feet above elevation 1,535 feet by end August. The COE could bring the reservoir down to elevation 1,535 feet by end August without the 52 degrees F tailwater restriction. The COE is able to increase outflows now if the Salmon Managers choose, but pushing the temperature limit also increases the likelihood of TDG exceedances.

Based on modeling, the COE doesn't foresee a problem with temperatures; however, they can't predict beyond this weekend. Using only the powerhouse at Dworshak would provide a better chance of keeping Lower Granite tailwater temperatures below 68 degrees F than using the spillway and exceeding 52 degrees F tailwater temperatures.

Discussion focused on SOR 2008-5 submitted by the Salmon Managers this morning. The SOR asks the Action Agencies to provide a list of alternatives for implementing the intent of the BiOp if operations as planned in the BiOp can't be carried out. TMT members exchanged their views of the SOR.

USFWS – Temperatures above 52 degrees F would raise potential disease concerns for the hatchery. Also, it could be difficult to maintain tailwater temperatures at Lower Granite if warm water gets added to Dworshak outflows. Willing to inquire whether brief exposures of a specified length of time to temperatures above 52 degrees would be a problem for the hatchery, but doubts

that would be acceptable. Releasing Dworshak water of below 43 degrees F now would be the lesser of two evils because that would result in smaller hatchery fish, whereas temperatures above 52 degrees F would result in mortalities. The Nez Perce Tribe concurred with this analysis.

NOAA – The ability of Dworshak to control temperatures in the Snake River is a top priority. The volume of water spilled is of secondary concern. Two considerations – survival of summer migrants in the Snake River and survival of fish wintering over in Lower Granite reservoir – make temperatures more critical than flows.

The ability to operate Dworshak in the manner of the past 10 years is an important aspect of fish protection in the river. NOAA urged the COE to do an engineering review of the project and to consider substantial modifications so the project could operate safely for another 50 years in the manner currently envisioned. That would require congressional authorization and funding, the COE said. NOAA and the COE will discuss this further outside of TMT.

Oregon – Urged the Action Agencies to provide the Salmon Managers with a full suite of alternatives to consider at the next TMT meeting so the intent of the 2008 BiOp regarding conditions for Snake River fall Chinook in August can be implemented via other means than Dworshak.

Oregon suggested considering flow augmentation from Brownlee Dam or along the Columbia River as options. The flow requirements outlined in the 2004 BiOp are important to fish, so if they can't be provided, similar benefits should be provided. If the Action Agencies don't provide a list of alternatives as requested in SOR 2008-5, NOAA should take that into consideration in section 7 permits regarding this issue.

COE – Stated that it was impossible today to quantify the negative impacts of reduced flows at Dworshak, or of shifting those flows into September. The COE asked for more information from the Salmon Managers regarding relative biological impacts. The COE considered today's discussion to be the beginning of a review of alternatives for Dworshak water, and did not propose any specific operations at this time. Pointed out that if the reservoir doesn't meet elevation 1,535 by end August, that would not impact the Nez Perce Tribe's 200 kaf for flow augmentation in September. The volume of water to be shifted into September is 21 kcfs, or approximately 2.7 kcfs a day during the last 10 days of August. That water would be in addition to what the COE normally provides for the Nez Perce Tribe. Holding full powerhouse longer than the first 10 days of September is an option for getting more water out of Dworshak by end September.

If TMT's highest priority is to hit elevation 1,535 by end August, the COE can do so, but doesn't advocate that option because of hatchery effects. The

COE asked the Salmon Managers to consider the relative biological value of 2.7 kcfs flows a day out of Dworshak during the last 10 days of August versus the first 10 days of September.

Nez Perce Tribe – Stated that there are wild fish in the lower river now and will continue to be throughout September. The hatchery is an important mitigation tool for the tribe and provides a valuable fishery in the region, so temperatures over 52 degrees F at Dworshak tailwater would be highly undesirable. Keeping temperatures below 68 degrees F at Lower Granite tailwater is the tribe's top priority. The Nez Perce would like Dworshak reservoir as close to elevation 1,535 feet by end August as possible without risking life and limb or impacts to fish. If the reservoir is 1-2 feet off, the tribe can live with that, but 10 feet would be a problem.

Shifting the tribe's 200 kaf into mid-September won't work because the cooling influence is needed in the river beginning Sept. 1. In the past, BPA has paid for Idaho Power water for this purpose, although that might not be a good option now because it's warmer water. Development of a list of options beyond Dworshak is a good idea now in case something catastrophic happens and Dworshak is falling short of all its BiOp goals.

Idaho – Expressed concern about pushing temperatures up to the limit because impacts are incremental, beginning at lower temperatures than 68 degrees F. Recommended keeping Dworshak temperatures below 52 degrees F for at least another week. There may be opportunities to adjust operations to help out-migrating Snake River fall Chinook and not create problems for other fish in the basin. Pointed out that adult return rates are generally much higher for the few fish seen this time of year than the larger numbers seen earlier. The COE's worst case scenario isn't terrible but is still less spill than planned, and this is a good year, which should mean good conditions for fish.

The State of Idaho wants to see the options in written form. Russ Keifer the Action Agencies to consider increasing spill on the Snake River projects as one of these actions. **Oregon** and the **Nez Perce Tribe** seconded this request.

CRITFC – The next few days will be warm, but after that the weather should cool off for several days. Historically, the hottest time in the basin is mid July to mid August. Based on modeling a composite of 1970-76 and 1985-89 temperatures, CRITFC predicts that temperatures will rise in mid to late August. CRITFC does not have temperature concerns at this time.

BPA – Suggested that one option is to discharge more water from the spillway now while it is available. Tony Norris (BPA) asked for the status of run timing. Substantial numbers of migrants are still in the river, more than 2,000 fish per day according to Nez Perce Tribe counts. Norris noted that under the COE's

worst case scenario, approximately 35 ksf would come out of Dworshak reservoir in September instead of August.

Montana – Expressed doubt that a clear tradeoff can be made between volumes of spill and flow temperatures.

Next Steps: Until the risk analysis is done and the COE gets clearance to use the RO gates, the current Dworshak operation of 14 kcfs spill will continue until tailwater temperatures reach 52 degrees F, probably around Aug. 19. At that time, the COE will reduce spill to 12.8 kcfs and try to keep tailwater temperatures below 52 degrees F for as long as possible. The goal is to get as much water as possible out of Dworshak now without temperature exceedances. The COE will consult internally with policy makers and the COE office of counsel regarding possible development of a list of flow alternatives.

3. Libby-Arrow Swap Update

Tony Norris (BPA) presented two documents attached to today's agenda. The first gives an example of accounting for such a swap, while the second explains the swap. BPA is still on track for a 60 kcfs exchange, which equates to approximately 2.8 feet above elevation 2,439 at Libby by end August.

Norris reiterated Robyn MacKay's explanation at the last TMT of the method BPA and Canada use for computing treaty storage regulation elevations twice monthly. Currently, BPA is targeting 60 ksf below the Aug. 31 TSR level, based on the August 21 TSR. That elevation will be recomputed Aug. 7 and again on Aug. 21. The last 10 days of the month are used for truing up the operation. The trajectory is revised with each new TSR reading. At the end, 60 ksf will be delivered to Canada, and flows at McNary will be as they would have been otherwise. The final agreement was waiting to be signed, probably today.

Joel Fenolio (COE Seattle) discussed the COE's modeling of the swap. Libby has been releasing 11 kcfs, and flows will drop to 9500 cfs at 9 pm Friday, Aug. 8. At that point, the COE will evaluate flows, managing them to remain above the bull trout minimum through Aug. 31. The COE could begin outflow reductions at Libby tonight, based on the latest forecast.

Oregon expressed appreciation for the documentation BPA presented today, and did not object to the operation. The COE has received statements of support for the swap from the **Colville, Nez Perce, Warm Springs, Umatilla, Kootenai** and **Yakima** tribes.

4. McNary Transport Update

At the last TMT meeting, Dan Feil (COE) reported on modifications being done at the Bonneville truck release site in preparation for changing from barge

to truck transport, raising the possibility that trucking operations could begin early this year. The site modifications are complete, but the truck has not been tested yet, and additional work needs to be done before the site can be used. Therefore, the COE does not propose to begin trucking operations any sooner than Aug. 16, the date originally specified in the FOP. There were no objections to this operation.

5. Other

McNary Fish Pump 3 Update: Oil has been leaking from the unit 3 fish pump at McNary, and although the oil is being contained inside the unit, the COE is concerned the unit might fail, Feil reported. Dewatering the unit for inspection is planned for tomorrow, Aug. 7. That will require the tailwater elevations at McNary and John Day pool to be lowered, and will put first four main units at McNary out of service from noon to 4 pm. If the pump fails, Feil added, it would have a bigger impact on fish passage than taking the units out of service for 4 hours. McNary is currently on an alternating 40/60% spill regime, with today and tomorrow scheduled for 60% spill. The COE asked for TMT's concurrence to swap the 60% spill day for a 40% spill day tomorrow – a full 24 hour swap – and for the unit outage.

NOAA, Montana, Idaho, Oregon, USFWS, BPA and BOR had no objections to this operation. USFWS asked whether researchers had been contacted. The COE responded that the juvenile passage research study is complete, and no other research appears to be impacted by this operation.

MOP Operations: Tony Norris reminded the Salmon Managers that the WMP says TMT will consider ending MOP operations on the Snake in August when the numbers of juvenile salmon become small. The Salmon Managers will discuss this at the next FPAC meeting Aug. 12 in preparation for TMT to consider this issue at its next meeting Aug. 13.

6. Next Meeting

The next regular face-to-face meeting will be Aug. 13 at the COE's Portland offices. Review of facilitator notes and minutes, Dworshak operations, the 2008 summer treaty fishery report, the end of MOP operations, a Libby/Hungry Horse operations update, and the standard operations review will be on the agenda. A conference call is scheduled for Aug. 27 with the end of spill on the agenda. This summary prepared by consultant and writer Pat Vivian.

Name	Affiliation
Tina Lundell	COE
Dave Wills	USFWS
Jim Adams	COE
Russ Kiefer	Idaho

Tracy Schwartz	COE Walla Walla
Mary Mellema	BOR
Scott Bettin	BPA
Jim Litchfield	Montana
Ron Boyce	Oregon
Tony Norris	BPA
Steve Hall	COE
Richelle Beck	DRA
Greg Haller	Nez Perce
Rich Domingue	NOAA
Tom Lorz	CRITFC
Cathy Hlebechuk	COE
Robyn MacKay`	BPA
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Laura Hamilton	COE
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