

COLUMBIA RIVER REGIONAL FORUM TECHNICAL MANAGEMENT TEAM

July 21, 2010

FACILITATOR'S SUMMARY NOTES

Facilitator: Erin Halton

Notes: 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.

McNary Transportation Operations

Doug Baus, COE, reported that McNary fish collection began on 7/15 and transportation began on 7/16, as was the plan described at last week's face to face TMT meeting. He reminded TMT that changes coordinated through FPOM were made to the Fish Passage Plan (and described in an FPOM Change Form posted to the TMT webpage) to address mortality issues that had arisen last year. The changes included a commitment to include TMT in discussions and adaptive management decisions and a trigger to change operations based on a threshold temperature deviation greater than 6°F and greater than 6% fish mortality for any “3 days in a rolling 5-day period” at the area between the forebay and gatewell, and gatewell and collection channel. Doug noted that temperatures were moderate this year (in part due to better wind conditions, which helps mix water temperatures), and that north powerhouse loading was thus far helping to keep mortalities down this year. The COE said they are committed to working closely with TMT to monitor the situation and make any necessary adaptive management changes as needed.

Action/Next Steps: The COE will convene TMT as necessary to discuss any conditions that might elicit a change in McNary transportation operations. TMT will revisit this issue at the 7/28 meeting.

Treaty Fishing

Tom Lorz, CRITFC, reported that the latest requested operations for treaty fishing were underway and would continue through 7/22. Tom thanked the COE for implementing operations favorable to the fishery this year, and said no problems had been reported. All treaty fishing SOR's are posted to the TMT web page.

Action/Next Steps: A full catch report will be shared at a future TMT meeting. Depending on the latest catch counts, an additional SOR for continued treaty fishing may be sent to the COE later this week. Doug Baus, COE, said the request would be implemented if submitted.

Dworshak Operations

Doug Baus, COE, reported that the project was currently operating at 12 kcfs outflows. He turned to Steve Hall to discuss the details of modeling and proposed next steps. Steve referred TMT to a graph of water temperatures and noted a gradual trend upward, with one brief decline in temperatures due to increasing wind. He shared a second graph that

showed a modeled 12 kcfs outflow operation at Dworshak and resulting temperatures at Lower Granite. Using conservative inputs from 2006, the model showed temperatures beginning to rise toward the 68°F threshold around 7/24 (Saturday). Hall said that with 2010 actual temperatures being lower than what was modeled and because temperatures are not expected to rise until later in the weekend or next week, the COE was comfortable maintaining 12 kcfs outflows until next week.

Paul Wagner, NOAA, reported that yesterday's FPAC discussion focused on STP runs and not the model shared by the COE today. At that time, FPAC agreed to maintain 12 kcfs through this week. However, given the forecast at Lewiston over the coming weekend and in to next week, with temperatures expected to reach 100°F, NOAA, USFWS, Idaho and Nez Perce representatives refined the recommendation to increase outflows to 14 kcfs on Saturday 7/24 in order to stay ahead of the rising temperatures. After further discussion, TMT members shared their representative position:

- USFWS: No objection to the proposal to increase outflows to 14 kcfs on 7/24.
- Idaho: No strong opinion either way, but better to get ahead of temperatures by increasing to 14 kcfs on 7/24. Suggested looking at a trigger on 7/23 to determine whether to ramp outflows up or maintain at 12 kcfs through the weekend.
- Nez Perce: Increase to 14 kcfs on 7/24 to account for water travel time and stay ahead of rising temperatures. Revisit conditions at FPAC on 7/27 to observe impact from this change. Continue to use adaptive management throughout the operation.
- CTUIR/CRITFC: No objection to the proposed operation of 14 kcfs outflows on 7/24.
- Oregon: No objection to the proposed operation.
- COE: Given the flexibility available in the system, not concerned with ramping the project up to 14 kcfs on 7/24, and would rather plan this change now than look at triggers later in the week.

Action/Next Steps: The COE will increase Dworshak outflows to 14 kcfs at 0000 hours on 7/24 and plan to hold through 7/27. FPAC will check in on the operation and conditions during their meeting on 7/27, and TMT will revisit the operation on 7/28. The COE will develop model runs depicting two operating scenarios for next week: 14 kcfs outflows continuing through 7/28 and a shift down to 12 kcfs outflows starting on 7/28. The COE will do its best to post them to the TMT web page in time for use at the 7/27 FPAC meeting.

Ice Harbor Pool Gauge Issues

Doug Baus, COE, followed up from the 7/16 unscheduled TMT call regarding issues observed at the Ice Harbor pool gauge and reminded everyone that the project had been cleared to operate outside MOP through the weekend to address the issue.

Steve Hall, COE, went on to describe the COE's actions to investigate and correct the problem: project staff had verified that the gauges were transmitting accurate data. GDAC data was pulled to investigate why the adverse slope effect at the Ice Harbor tailwater vs. forebay was happening, and found that the problem occurred when the total river flow was below 40 kcfs. Hall said potential causes included debris at the Ice Harbor

forebay causing a higher than actual reading, or a whirlpool causing varying elevations laterally across the pool. Hall noted that the COE was in the process of investigating the depth at the navigation lock sill – it requires 15’ depth for safe barge passage. In addition, the COE is looking to mount an additional gauge at the navigation lock entrance to provide a reading of the depth at the sill. The COE will also conduct a hydraulic modeling exercise to better understand under what conditions the issue occurs, and is pulling historic data to determine how often the problem occurs.

Action/Next Steps: The COE will continue its investigation and share updated reports at the 7/28 TMT meeting, including when a return to regular MOP operations did or will occur. The COE hopes to return to regular MOP operations at the project as soon as possible.

Next Meeting, 7/28 face to face at 9:00 am

Agenda items include:

- Review meeting minutes
- Dworshak Operations
- Libby Accounting
- Ice Harbor Gauge Issues
- Upper Snake Flow Augmentation
- Operations Review

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

July 21, 2010

Notes: Pat Vivian

1. Introduction

Today's TMT conference call was chaired by Doug Baus (COE) and facilitated by Erin Halton (DS Consulting). Representatives of the COE, Oregon, USFWS, NOAA, Nez Perce, Montana, BPA, BOR and others attended. This summary is an official record of the proceedings, not a verbatim transcript. Anyone with questions or comments about this summary should give them to the TMT chair or bring them to the next meeting.

2. McNary Transport

As discussed at last week's TMT meeting, collection at McNary began at 7 am on July 15, with transport beginning July 16, Baus reported. He gave TMT a heads-up that last year, elevated mortalities were associated with McNary transport. The mortalities occurred due to temperate differentials in excess of 6 degrees Fahrenheit between the forebay and gatewells and a lack of wind exacerbated this problem..

The issue was resolved when the COE adopted a change to the Fish Passage Plan that CRITFC submitted, identifying triggers for altering McNary transport operations. Language was added to the Fish Passage Plan defining the triggers for changing McNary turbine operations. When triggered, the project immediately reverts to north powerhouse loading, which uses cooler water. The FPP change form used to make this change is available on the TMT website under the 2010 FPP link.

The 6% collection mortality threshold that triggers a change in McNary operations is more than 6% mortalities of daily collections for any 3 days in a rolling 5-day period, Baus said. The 6 degrees Fahrenheit (not Centigrade as assumed last year) temperature differential threshold compares temperatures in the forebay to the gatewell, and in the gatewell to the collection channel. This threshold applies when river temperatures are above 68 degrees Fahrenheit.

This year, there has been more wind to mix cooler water into the slow, stagnant pond that forms along the south shore at McNary. Baus emphasized there have been no spikes in mortalities despite temperature differentials in excess of 6 degrees F. That can be attributed to wind and cooler temperatures, plus use of the north powerhouse because several units are down. Tom Lorz (CRITFC) cautioned that most mortalities in the past have occurred when temperatures exceed 68 degrees, and that hasn't happened yet this year.

With warm weather coming this weekend, Baus alerted TMT members that an emergency TMT call might be needed sometime in the next several days to address the McNary transport operation. TMT will revisit this at its next meeting.

3. Treaty Fishing

Last week CRITFC submitted an SOR to the COE for a tribal fishery that runs through tomorrow evening, July 22, Tom Lorz reported. If catch counts support another week of tribal fishing, CRITFC will submit another SOR to the COE this Friday, July 23. Lorz expressed appreciation for the COE's ability to maintain SOR criteria consistently during tribal fishing season. The COE implemented the latest SOR as written. TMT will check in on treaty fishing at its next meeting July 28.

4. Dworshak Operations and Temperature Modeling

Currently Dworshak is releasing 12 kcfs. Steve Hall (COE) showed TMT two attachments to this agenda item to aid in deciding how to use Dworshak flows for temperature management.

The first link is a chart and graph of current Snake River (Anatone) and Clearwater River (Spaulding) temperatures, which have been slowly climbing despite the cooling effects of wind. Temperatures peaked at 70 degrees F and are hovering at around 68 degrees F. To project future temperatures, the COE based its modeling on observed temperatures in 2006, which have been warmer than actual temperatures so far in 2010. The model is conservative, using higher input temperatures than the COE believes will actually occur over the next few days. The model shows temperatures remaining in the 64 degrees F range until July 24 when a warming trend begins.

Next week, it might be necessary to adjust Dworshak outflows, Hall said. For now, model results indicate that continuing 12 kcfs outflows would be sufficient for temperature management. Real time readings show a Lower Granite tailwater temperature of 65.6 degrees F. Paul Wagner (NOAA) questioned why the model appears to contradict real time TDG data on the TMT website. The model run doesn't reflect data for July 20, which are included in the latest TDG reports, Hall explained.

At yesterday's FPAC meeting, the Salmon Managers agreed that continuing 12 kcfs outflows at Dworshak would be fine, Wagner reported.

However, this morning Lewiston temperatures were forecasted to exceed 100 degrees F over the weekend, and the 10-day forecast showed no cooling in sight. So the Salmon Managers are taking a precautionary approach and recommending 14 kcfs outflows beginning July 24. This time of year is typically a difficult one for maintaining temperature control, so the recommended strategy is

to continue 14 kcfs outflows until at least July 27-28, when FPOM and TMT can consider a return to 12 kcfs to conserve volume for later this summer.

Wagner asked the Salmon Managers if anyone today had misgivings about the last-minute proposal to increase Dworshak outflows to 14 kcfs from July 24 until at least July 27. Dave Wills (USFWS) and Kiefer said that would be acceptable. Kiefer added that it wasn't a strong recommendation from the Salmon Managers and suggested that TMT develop a trigger for increasing Dworshak flows to 14 kcfs on July 23, rather than doing so automatically.

Increasing Dworshak outflows to 14 kcfs over the next few days with a heat wave coming is a reasonable approach, Hall replied. A trigger might not be necessary. **USFWS**, the **Nez Perce Tribe, Oregon, Idaho**, and the **Umatilla Tribe** all endorsed this approach.

The COE will increase Dworshak outflows to 14 kcfs on July 24 and continue that operation until at least July 27, when FPOM next meets. The COE will attempt to post modeling results by the evening of July 26 that compare the effects of 12 vs. 14 kcfs outflows at Dworshak for the remainder of next week. TMT will revisit this operation at its next meeting July 28.

5. Ice Harbor Pool Gauge Issues

On July 16, TMT had an emergency call to discuss gage issues associated with the Ice Harbor forebay and Lower Monumental tailwater measurements, Baus said. Accurate data is a key component for safe navigation. As a short-term solution (until the source of the errors can be identified and a solution developed) the COE gave BPA and the project staff clearance to operate Ice Harbor at half a foot higher than MOP (MOP +.5) if necessary to assure sufficient water depth for safe navigation.

Steve Hall (COE) reported on efforts to resolve this problem. At various times, the tailwater elevation at Lower Monumental is apparently half a foot below the Ice Harbor forebay elevation. The COE is investigating the cause of these gauge disparities. Project staff immediately verified that the electronic gauges were in close agreement with actual values observed on the staff gages. The COE will use GDACS 5-minute interval data to study causes and solutions using hydraulic modeling. It appears that flows below 40 kcfs were a factor in incidents that occurred on July 8, 9, 10, 12 and 14. The COE is working to understand these incidents. The gauge disparities could be happening for a number of reasons including:

1. Debris in the Ice Harbor pool forebay causes elevation readings to be abnormally high.
2. Sometimes unit loadings and spillway patterns set up a whirlpool effect that creates elevation disparities across the tailwater area. For example, the tailwater elevation might be higher on one side of the powerhouse than the other.

COE staff are investigating this phenomenon while working to assure safe barge clearance over the sill of the Lower Granite navigation lock. To monitor that more closely, the COE has plans to install a permanent a gage at the navigation lock entrance. The goal is to return to the normal MOP operation as soon as possible. The normal MOP operating range is 437-438 feet elevation.

At this point there's no "smoking gun" that could be causing the navigation problems. Rick Kruger (Oregon) asked for information on how many lockages have occurred when the apparent differential is negative. The COE intends to have more detailed information for TMT on this next week.

6. Next Meeting

The next TMT meeting will be in-person on July 28, with Dworshak operations, Libby deviation accounting, McNary and Ice Harbor operations, and upper Snake River flow augmentation included on the agenda.

Name	Affiliation
Rick Kruger	Oregon
Russ Kiefer	Idaho
David Wills	USFWS
Paul Wagner	NOAA
Dave Statler	Nez Perce
Jim Litchfield	Montana
Doug Baus	COE
Scott Bettin	BPA
John Roache	BOR
Steve Hall	COE Walla Walla
Scott English	COE
Margaret Filardo	FPC
Greg Lawson	Point Carbon
Russ George	WMC
Tom Le	Puget Sound Energy
Barry Espenson	CBB
Bob XX	Seattle City Light
Richelle Beck	DRA
Mike Shafley	Snohomish PUD