

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 11, 2012

DRAFT Facilitator's Summary

Facilitator: Donna Silverberg

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 June 20 Meeting Minutes

Changes were requested to the Facilitator's Summary notes regarding the Fish report. The COE will revise and update the summary accordingly and then they will be final. With no comments, the Official Meeting Minutes were approved as final.

Libby Operations

Joel Fenolio, COE-NWS, told the group that operations related to the Kootenai Tribe's SOR-2012-01 was now underway and needed additional discussion at TMT. The SOR was requested and agreed upon in March—and part of that agreement at Libby Dam was to target 2449 feet August 31 but to manage through in-season coordination with TMT as forecasts and observed conditions develop. However, record breaking precipitation at Libby has inundated the region, causing pressure and stresses on both people and structures. As a result, the COE has proposed an alternative operating plan that could meet biological needs (to be detailed next week) while also protecting structures. Joel presented the alternative approach via a PowerPoint and asked that TMT members consider this for a discussion and decision at next week's TMT.

Discussion/questions:

There was not disagreement with the ramp down suggested at this time. But there were some questions that TMT would like answered next week:

- It looks as though the stepped approach in alternative 2 indeed has benefits. Is it possible to slightly increase the steps to hit 2449'? Can you add steps of 22 kcfs and 18 kcfs, make all steps equal in duration, and still hit 2449'?
- What are the biological benefits that the COE is trying to achieve? Please clarify these so that no one has to guess.

ACTION: Joel will develop another alternative that considers the input from the group and will get that to TMT by the end of this week. TMT will discuss at its July 18 meeting.

Lower Columbia Pool Operations for Summer Treaty Fishery

Tom Lorz, CRITFC/CTUIR, reviewed SOR 2012-C2, which was implemented July 3-6 and 9-12. He noted that the tribes appreciated the COE's work to hit the targets requested to support treaty fishing. Tom said there may be another request for continuing the fishery in the next week or two.

McNary Juvenile Transport

Paul Wagner, NOAA Fisheries, gave background about survival rates and reminded the group about decisions around transport that related to the old outfall at McNary Dam. He noted that survival rates with the new outfall are looking very promising. As a result, NOAA, in coordination with FPAC, would like to delay juvenile transport at McNary. At this point, NOAA and FPAC would be happy delaying transport until August 1, but they need to check-in with the Colville Tribe and Montana before being certain of this as a requested action.

Next Steps: NOAA will review the most recent biological data at McNary, including looking at lamprey information, which outfall location the data was recorded at, percentage points and error bands. NOAA will coordinate with FPAC and FPOM on this information prior to providing a request to the COE for the delay, as required in the FOP. The issue will be revisited at TMT on July 18.

Dworshak Operations

Steve Hall, Corps Walla Walla District, reported on final refill operations and the transition to temperature operations at Dworshak Dam. He noted that the project touched full on June 30 and began a gradual draft on July 1. On July 9, they began to increase drafts for temperature and flow augmentation. Steve reviewed the COE's proposed course of action to counter high temperatures predicted in the area in the foreseeable future. He clarified that the COE would be monitoring temperatures daily, would cut back sooner on the drafts if the temperatures moderate sooner than later, and, now that the project is in temperature augmentation ops, will stop fluctuations to focus on temperature needs. This plan was met with praise from all TMT members. Steve also pointed to the TMT homepage and noted that real time operations are listed under the Water Quality Data section at a link titled "Temp". Once there, go to Dworshak Summer Operations, if interested.

Operations Review

Reservoirs –

Hungry Horse July 10 midnight elevation of 3559.16 feet with inflows of 6.22 kcfs and outflows of 5.86 kcfs.

Grand Coulee 1289.5 feet with inflows at 248.5 kcfs and outflows 244.1 kcfs kcfs.

Libby at 2459.7', with 46.3 kcfs in and 43 kcfs out.

Albeni Falls at 2062.3' with 48.1 in and out.

Priest Rapids inflows were 301.3 kcfs.

Dworshak at 1597.9', with 5.2 kcfs in and 12.5 kcfs out.

Lower Granite inflows were 50.2 kcfs; and

Bonneville inflows were 330.2 kcfs.

Fish – Paul Wagner, NOAA, reported that sub-yearling Chinook peaked at Lower Granite on June 27 and are now at primetime in the lower river. Adult summer Chinook were still close to the 10-year average. Jacks counts remain low. Sockeye numbers are having a record year. Steelhead are doing fine, but the jacks are low also.

Water quality – Nothing to report—but heads-up that the spill priority list will be on the agenda next week!

Power system – BPA is doing the best to manage the system and TDG. Transmission system emergencies may continue in the Flathead Valley and Tony Norris will keep TMT apprised of this activity if it comes up.

TMT Schedule

July 18 Agenda items include –

- Libby Summer Operations
- McNary Juvenile Transport
- Spill Priority List
- Treaty Fishery Update
- Dworshak Temperature Operations
- Other?

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES

July 11, 2012

Notes: Pat Vivian

1. Introduction

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

2. Review June 20 Meeting Minutes

Russ Kiefer, Idaho, made two clarifications on the fish update section of the facilitator's notes: (1) Four PIT-tagged sockeye from Stanley Basin were detected at Bonneville Dam (not Lower Granite Dam, as the notes say). (2) The count of 6,847 spring chinook at Lower Granite as of April 20, cited by Paul Wagner, is questionable. The notes will be revised and reposted to the TMT page. There were no changes to the official minutes.

3. Libby Operations

The COE received System Operational Request 2012-01 (SOR) Kootenai River Habitat Restoration Project from the Kootenai Tribe of Idaho on March 28, 2012. In order to implement the SOR requesting Libby discharges of 6 kcfs during September and 4 kcfs during October the COE coordinated an operation during the March 28 TMT meeting that would allow for the implementation of the SOR. The operation coordinated during this meeting was targeting a Libby end of August elevation of 2449 feet but the final end of August elevation would be managed through in-season coordination based on forecast and observed conditions. Since this operation was coordinated during the March 28 TMT meeting there has been a significant amount of above average precipitation in Montana and western Idaho. Joel Fenolio, COE, gave TMT a slideshow presentation on the current situation in Libby basin.

In June, observed and forecasted conditions far exceeded expectations. Precipitation was 200-400% of normal throughout Libby basin, and Bonners Ferry set an 85-year record with 5.2 inches of rain in June. This situation pushed Libby inflow volume to its fourth highest in the past 50 years. The COE water supply forecast was anticipating about 7.2 MAF of April-August inflows during June, but this year it will probably be 8.5-9 MAF. Inflow volume for June was 3463.5 KAF, which is 166% of average.

As a result of this deluge, Libby ran out of storage space and Bonners Ferry elevation rose to 1766.6 feet, 2.6 feet above flood stage. The COE has a deviation request, in coordination with Canada, to surcharge the pool, up to 2461 feet elevation, which is a 2-foot surcharge above the normal full pool elevation of 2459 feet. The current elevation of Libby pool is 2459.7 feet.

Fenolio presented TMT with two alternatives for managing such high inflows to Libby Dam and target 2449 feet at Libby by 31-August as TMT discussed in March (Alternative 1), or shift to an operation that ramps down releases more gradually based on inflow triggers rather than an elevation target (Alternative 2). The COE proposed to implement Alternative 2, giving TMT members a week to review the proposal. This operation would involve following the inflow recession until inflows are the same as powerhouse capacity, then following a stepped approach: Release 20 kcfs when inflows are 20 kcfs, 16 kcfs when inflows are 16 kcfs, 14 kcfs when inflows are 12 kcfs, and 12 kcfs when inflows are 10 kcfs. A flow rate of 12 kcfs would begin on approximately August 22 and continue through the end of the month. The difference in flow volumes between the two alternatives is potentially around 200 KAF.

Greg Hoffman, COE Libby Dam, and Fenolio pointed out the gradual ramp down of Alternative 2 with lesser volume provides a more normative wetted perimeter throughout the summer, and incurs a lesser loss of accrued productive varial zone temporally as river is ramped down to 6 kcfs in September. This applies to the wetted perimeter below Libby Dam in Montana, as well as wetted perimeter treated by Kootenai Tribe of Idaho nutrient enhancement program. Alternative 2 would also minimize adverse impacts on the saturated levees below Libby and alleviate downstream seepage into farmland. This alternative still targets an outflow of 6 kcfs in September for the Kootenai SOR.

TMT members have a week to consider this proposal and will be asked for an in-season recommendation at the next TMT meeting July 18. Today's conversation focused on questions. If the reservoir elevation drops below 2449 feet because inflows are less than expected, Paul Wagner, NOAA, asked, would releases at the end of August remain 12 kcfs? Yes, Fenolio said, maintaining 12 kcfs releases through August would offer multiple benefits. The COE expects to spill through about July 22 at Libby and hold powerhouse flows until August 1, dropping outflows to 6 kcfs by August 31. However, targeting 2449 feet by end of August could require releases of 17-20 kcfs, which would result in a massive ramp down at the end of the month. This could have adverse impacts on aquatic resources associated with the wetted perimeter as well as damage the levees below Libby and would have adverse effects on bull trout and other species in the Kootenai River. Under the proposed alternative stepdown approach, the end of August elevation would be 2454-2459 feet.

TMT members expressed interest in seeing a third scenario modeled in which releases drop more gradually during August while still targeting 2449 feet by August 31. Rick Kruger, Oregon, suggested increasing the flow rates at each step of the ramp down in order to achieve both goals. Charles Morrill, Washington, also suggested

adjusting the steps depending on inflows and outflows. Dave Statler, Nez Perce, favored increasing the gradual ramp downs. Tom Lorz, Umatilla, requested an explanation of the biological benefits Alternative 2 would achieve. Russ Kiefer, Idaho, suggested adding a step down at 22 kcfs and 18 kcfs, making all the step downs equal in duration.

Sue Ireland, Kootenai Tribe, said her community has been seriously impacted by the high water levels. She urged TMT to consider the biological and levee impacts of its recommendation. The Kootenai Tribe strongly supports Alternative 2 as it allows for the implementation of the previously coordinated SOR while still managing to achieve a reasonable end of August Libby elevation based on the significant amount of above average precipitation that occurred during the month of June. The high lake elevation has raised the stage from Bonners Ferry downstream throughout the agricultural area, caused by a backwater effect. Hoffman said reducing the delivery of the volume of water above 2449 feet at this time will have biological and ecological benefits.

Baus noted that inflows in the lower Columbia River have been high throughout the summer. From June 20 to today McNary Dam inflows have ranged from a high of 423 kcfs to a current low of 332 kcfs. These high McNary Dam inflows have been well in excess of the 200 kcfs identified in the Water Management Plan. He reported that Montana, while not represented at today's meeting, has expressed support for the step-down methodology proposed by Alternative 2. TMT will revisit Libby operations next week.

4. Operation of the Lower Columbia Pools for Summer 2012 Treaty Fishery

Tom Lorz, CRITFC, presented SOR 2012-C2, linked to this item on today's agenda. The SOR calls for two treaty fisheries:

- 6 am, July 3 – 6 pm, July 6
- 6 am, July 9 – 6 pm, July 11

The SOR calls for Bonneville, John Day and The Dalles pools to be managed within a 1.5-foot band during these fisheries. Lorz will report back to TMT on planning for any further fisheries and will provide catch data when it is available.

5. Juvenile Transportation at McNary Dam

The BiOp and FOP indicate juvenile transportation at McNary will commence between July 15-30, based on in-season adaptive management, Wagner recalled. In past years, NOAA favored an early start for two reasons: (1) Survival at the outfall was low (around 75%, which is worse than the spillway and the turbines) because the outfall was in a poor location. The new location appears to be an improvement. (2) An early start to transportation enhances tracking of PIT-tagged Snake River fish.

However, in light of the high flows and improved outfall location, NOAA recommends delaying transport until July 30 (the latest default start date identified in the FOP) and possibly indefinitely. Statler requested that Pacific lamprey needs be considered in the transport recommendation. NOAA will provide additional biological data to justify its recommendation. The data analysis will be based on PIT tag detections of Snake River fish from June 1-28, 2012, and will address both trucking and barging, Wagner said. Wagner will coordinate with FPOM and FPAC.

Derek Fryer, COE Walla Walla, said more data analysis is needed, particularly of the confidence bounds. The outfall location will be integral to analyzing the data. Fryer said he will investigate the availability of data from performance standards testing to aid in this decision. Russ Kiefer said an evaluation of the outfall relocation would also be helpful in making a decision. TMT will revisit juvenile transportation next week in light of the new information.

6. Dworshak Operations

Steve Hall, COE, gave a slideshow presentation on Dworshak temperature operations, which is linked to this item on the agenda. Dworshak reservoir filled on June 30 and began drafting shortly thereafter, holding 7.5 kcfs releases through July 8 due to high inflows. Beginning July 9, the COE increased discharges for temperature and flow augmentation. The latest modeling analysis shows temperatures approaching 68 degrees F by July 13.

Hall showed TMT two modeled scenarios. This first depicts a constant outflow of powerhouse capacity (9.5 kcfs) beginning July 10. That operation would keep temperatures close to 68 degrees – perhaps too close. The second scenario shows outflows of 13 kcfs. To counteract the warming trend over the past few days, the COE has increased discharges to 13 kcfs per this scenario. To conserve water for later in the summer, the COE plans to reduce Dworshak discharges to 11-12 kcfs when the reservoir temperature approaches 66 degrees.

Russ Kiefer endorsed the COE plan to reduce discharges when temperatures reach 66 degrees, noting that Idaho's analysis led to a similar conclusion. Charles Morrill, Washington, also supported the COE's plan. Hall clarified that Dworshak flows will be reduced 2-3 days before temperatures are projected to reach 66 degrees at Lower Granite tailwater to account for the 3 days of travel time from Dworshak to Lower Granite.

Dave Statler, Nez Perce, commented that it can be advantageous to keep flows stable during hot periods on the Snake River and in Hells Canyon instead of ramping up and down as temperatures change. Even discharges also help to avoid stranding juvenile Pacific lamprey that rear in shallow areas below Dworshak. While there was load following at Dworshak during late winter and early spring, Hall replied, the focus has shifted to managing TDG levels. Now that the Dworshak temperature operation is in effect, flows will stabilize.

Hall referred TMT to a temperature graph on the TMT site, posted under Water Quality Data at the link titled "Temp". This can be a useful tool for TMT members to use in tracking temperatures at Dworshak.

7. Operations Review

a. Reservoirs. Hungry Horse is at elevation 3559.2 feet, passing inflows of 6 kcfs. The reservoir will probably remain a foot or two from full for the next few weeks. Flows will probably remain flat or decline through summer as the reservoir drafts toward a target elevation of 3550 feet. Grand Coulee is at elevation 1289.5 feet. Inflows and discharges continue to be well over 200 kcfs.

Libby is at elevation 2459.7 feet, with inflows of 46.3 kcfs and outflows of 43 kcfs. Albeni Falls is at elevation 2062.3 feet, passing inflows of 48.1 kcfs. Dworshak is at elevation 1597.9 feet, with inflows of 5.2 kcfs and releases of 12.5 kcfs. Priest Rapids inflows are 301.3 kcfs. Lower Granite inflows are 50.2 kcfs. Bonneville inflows are 330.2 kcfs.

b. Fish. Juveniles: Subyearling passage peaked on June 27 at Lower Granite with 30,000 fish, Wagner reported. Daily counts over the past week have subsequently declined to 3500. Little Goose is passing 3-5,000 fish per day, and Lower Monumental is passing 2-5,000 fish per day. Index testing for performance tests ended on July 6 or 8. McNary has passed an estimated 55,000-153,000 fish; John Day, 100,000 fish; and Bonneville, 100,000 fish. Lamprey passage at John Day reached 2,000 on July 3.

Adults: Summer chinook are passing Bonneville at the rate of 13,000 per day, with 53,000 to date, which is close to the 10 year average. Steelhead passage is picking up to 6-800 per day. Summer chinook are passing Bonneville at the rate of 60,000 per day. Sockeye passage has been phenomenal, setting a record of 500,355 fish. Summer chinook are passing Lower Granite at the rate of 10,000 per day, which is in line with the 10 year average. Kiefer reported that Ice Harbor summer chinook counts are 225 fish. There have been 28 Snake River sockeye PIT tag detections at Ice Harbor and 94 Snake River sockeye PIT tag detections at Bonneville.

c. Water Quality. A new proposed spill priority list reflecting the order of spill at projects after performance standard testing has been completed will be posted to the TMT site prior to the next FPAC meeting, Baus noted. The order will be consistent with past spill priority lists and prioritize projects in order sequentially from upstream to downstream (Lower Granite to Bonneville).

d. Power System. BPA has been doing its best to manage TDG in the lower river, Tony Norris reported. Also, BPA has been sending out summary emails on the recent transmission system emergencies in the Flathead Valley, but those should have come to an end. However, this problem could arise again if Libby and Hungry Horse

need to discharge close to full powerhouse during summer, when loads are low. BPA will keep TMT informed via email updates.

6. Next TMT Meeting

The next regular TMT meeting will be July 18. Libby operations, McNary transport, the new spill priority list, and Dworshak temperature operations will be on the agenda.

Name	Affiliation
Dave Statler	Nez Perce
Tony Norris	BPA
Lisa Wright	COE
Rick Kruger	Oregon
Paul Wagner	NOAA
Doug Baus	COE
Emily Plummer	DS Consulting
Russ George	WMC

Phone:

Dave Wills	USFWS
Charles Morrill	Washington
Russ Kiefer	Idaho
John Roache	BOR
Sue Ireland	Kootenai
Joel Fenolio	COE Libby
Greg Hoffman	COE Libby
Shane Scott	PPC
Dean Holecek	COE Walla Walla
Derek Fryer	COE Walla Walla
Margaret Filardo	FPC
Don Tinker	SCL
Barry Espenson	CBB
Richelle Beck	Grant PUD
Tom Lorz	CRITFC/Umatilla