

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 29, 2011

FACILITATOR'S SUMMARY NOTES

Facilitator: 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.

Libby Operations

Joel Fenolio, Seattle District COE, provided an update on the sturgeon operation at Libby, reporting that there was about 258 kaf remaining of the full 1.2 MAF operation. The project would continue to operate 15 kcfs outflows through July 2, then ramp down to 13 kcfs and finally to a flat flow (expected to be 9-12 kcfs starting between 7/12 and 7/15). Refill was expected to top out around 2448-2452' in early to mid-August. Data on sturgeon movement will be shared later in August. TMT will check in on this operation in two weeks.

Spill Priority List

Doug Baus, COE, reported that he followed up the 6/24 TMT conference call on this issue with an email indicating that the COE would not implement the proposed change to move Chief Joseph to the top of Level 2 on the spill priority list that had been discussed at the 6/22 and 6/24 meetings. However, until this proposed change could be coordinated with TMT Chief Joseph would be operated to its 115/120% spill cap before any other projects would exceed their 115/120% spill caps. This would allow the Corps to manage TDG systemwide for involuntary spill situations consistent with levels described in the State TDG waivers.

In response to requests for information, the COE provided supplemental information and answers to questions in the form of two documents linked to today's agenda. This information was provided in advance of today's meeting so TMT members had an opportunity to review it before the discussion.

With that, Doug said the COE's proposed operation moving forward was to implement the spill priority list proposed over the last two meetings, and wanted to hear feedback from the region now that more information was in hand to inform the discussion.

The following bullets summarize the questions and clarifications discussed during today's call:

- Adding Chief Joseph to the bottom of the Level 1 list (it previously was not on the list) was very helpful in clarifying the intended progression through the list.
- Currently, all of the projects exceeding their water quality standards requirements were spilling due to lack of turbine capacity. Spill at projects not limited by turbine capacity is guided by the spill priority lists.

- Some salmon managers suggested that spill above the 115/120% standard should be spilled at Lower Monumental and Little Goose to provide the best biological conditions for juvenile passage.
- That said, concerns with adult fall back conditions in the Snake were a main driver for the COE's proposal to spill Chief Joseph up to the 120% tailrace standard before spilling Little Goose or Lower Monumental to the 120% in the tailrace, so as not to compound the adult fall back concern. (Questions were raised about whether or not adult fallback was a concern under the current conditions and that more data needed to be gathered on this issue.)
- This unique water year calls for a close look at impacts – from a water quality, biological and operations perspective. TMT agreed to follow up later in the season with more in-depth discussion of how the spill priority list is/was used, adult fall back impacts, and other issues associated with the current conditions in the system.
- The COE clarified that its justification for the proposed list was to manage TDG in the system and to lessen the impact on adult fall back issues in the Snake River.

Process/Next Steps: Doug Baus requested that TMT members express their level of support for use of the proposed spill priority list as a temporary (2-3 week) guide to manage lack of load in the system:

- Montana – It is always difficult to strike a balance of all needs, and this proposal considers adult passage and water quality standards. With the clear information provided today, this proposal makes sense – so we support it.
- Idaho – Appreciate the efforts of the action agencies to inform us and engage us in technical deliberation on this issue. We are very concerned with adult fall back but have not seen any technical information indicating significant fallback when flows and spill are in the range being discussed with this proposal. We don't want to see a TDG exceedance to state water quality standards, but do see a slight detriment to juvenile passage with this change, so we do not support the shift – and will not raise an objection.
- Oregon – Supports meeting water quality standards but does not agree with the use of the forebay gauge to manage TDG. Also agrees with the concerns raised by Idaho and so does not support the proposal, but will not raise an objection.
- USFWS – From a fisheries perspective, we do not support the operation but will not raise an objection.
- NOAA – This is a reasonable proposal that strikes a balance between meeting water quality standards and fish passage conditions. The process for deliberation on the spill priority list is always a challenge, and we should look closely post-season at the adult fall back data to discuss the impacts and consider future operations.
- Nez Perce Tribe – Agree with the comments from Idaho, Oregon and USFWS, and, still have questions about how this spill priority list will actually be implemented. More information on the adult fall back issue is needed in order to make an informed response to this new issue that has come up in discussions around the spill priority list. Given all this, do not support the shift. Nez Perce did not elevate the issue.

- CTUIR – Support Nez Perce concerns.
- Reclamation – No objections to the proposal.
- BPA – Support the proposal.

ACTION: The COE will consider the information and discussions from today and determine how to proceed. Doug Baus will email TMT with the final decision.

Operations Review

Reservoirs – Greg Bowers, COE, reported that Libby was at elevation 2421.78', and Bonners Ferry was below flood stage. Albeni Falls remained above flood stage at 2063.53'. Priest Rapids flows were 248 kcfs. Dworshak was at elevation 1592.06' and filling, with 18.5 kcfs inflows. A snow flight showed the snow covered area was 11%, so this was no longer a governing factor for Dworshak refill. McNary flows were 462 kcfs. Mary Mellema, Reclamation, reported that Hungry Horse was at elevation 3539.5' and filling, with 8 kcfs outflows. Grand Coulee was at elevation 1276.7' and will fill after the July 4th weekend. Doug Baus, COE, reported that Ice Harbor spill treatments over this weekend and next weekend would be altered to manage high inflows. This operation is identified in the 2011 Summer FOP and has been implemented in previous years.

Fish – Paul Wagner, NOAA, reported on adult passage. Summer Chinook was similar to the 10-year average as well as last year's counts. Jacks were much higher than the 10-year average and last year, and sockeye were close to the 10-year average at this point. Russ Kiefer, Idaho, reported that the Snake River sockeye return was looking good again this year, with a total of 95 PIT-tagged adults counted at Bonneville so far, with 29 of those detected yesterday the 28th. Paul reported on juveniles – the yearling run was complete. Subyearlings were showing up around 10,000-20,000 per day at Lower Granite; 120,000 at McNary (including Hanford Reach releases); and 50,000 at Bonneville (also including hatchery releases). Lamprey numbers remained low, with about 1,100 passing McNary and 1,000 passing John Day.

Water quality – Scott English, COE, gave the latest TDG report, and noted that the use of Grand Coulee drum gate for spill which began Friday was showing a positive impact downstream in terms of TDG abatement. Chief Joseph spill was helping to de-gas the river too, and the Warrendale gauge analog was still being used in place of the Bonneville tailwater gauge which is still off line. Scott acknowledged the work of the Seattle District and ERDC for assisting in producing data to inform water quality management decisions at Chief Joseph.

Power system – Nothing to report.

Next Meeting, 7/6 (Conference Call): 11:00 AM (NOTE THE NEW TIME!!)

TMT will discuss Dworshak operations. Participants were encouraged to check the TMT web page for schedule and agenda updates.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

June 29, 2011

Notes: Pat Vivian

1. Introduction

Today's TMT meeting was chaired by Doug Baus, COE, and facilitated by Robin Gumpert, DS Consulting. Representatives of BPA, Montana, Oregon NOAA, COE, USFWS, BOR, CRITFC/Umatilla, Idaho, Nez Perce Tribe and others attended. This summary is an official record of the proceedings, not a verbatim transcript. Any questions or comments should be directed to the TMT chair.

2. Review Meeting Minutes for June 22 and 24

There were no comments today on the official minutes or facilitators' notes so both sets are considered final.

3. Libby Operations

Since June 2 the COE has been counting Libby releases against the 1.2 maf sturgeon volume for 2011, Joel Fenolio, COE, reported. At present, 258 kaf of sturgeon volume accounting remains. Libby has been releasing 15 kcfs and that operation will continue through July 2. On June 17, the project ramped down to full powerhouse on the descending limb of the sturgeon pulse, holding 20 kcfs flows for 5 days and 17 kcfs for another 5 days. The project will continue to release 15 kcfs for another 5 days, then ramp down to 13 kcfs on July 2 until approximately July 12. At that point the operation will ramp down to 10.5-11 kcfs. Refill is anticipated from early to mid August when the project reaches elevation 2,448-2452 feet. There is no precipitation in the area at present. Fenolio estimated that the Libby April-August inflow volume will end up being around 7.5-7.6 maf.

Jim Litchfield, Montana, asked about sturgeon behavior this year. Researchers are still processing the data, Fenolio replied. Bonners Ferry stage reached 1,763 feet and held that elevation for about 6 days so the operation is generally going well. There will be an update on this in 2 weeks.

4. Spill Priority List Update

Baus updated TMT on what has occurred since the June 24 conference call regarding the proposed operation to modify the spill priority list. In response to questions from the region about the effects the proposal would have on spill and TDG levels, the COE has posted information to today's agenda. The attached spill priority list shows what the COE proposes to do starting today.

Chief Joseph is at the top of the Level 2 spill list at the 120 TDG spill cap level, just as it was on June 24. In addition, Chief Joseph has been listed under Level 1 spill to clarify the operation presented on June 24. The COE will manage Level 1 spill at Chief Joseph consistent with state water quality waivers. Litchfield and Paul Wagner, NOAA, agreed the Level 1 listing of Chief Joseph provides an important clarification to this operation. Baus then invited TMT members to ask questions and provide comments on the proposed operation to modify the spill priority list.

There was discussion of current conditions at the projects in terms of spill levels on the list. Rick Kruger, Oregon, reported that Little Goose forebay gas levels are around 119% TDG and the Little Goose tailwater is 117%, putting Little Goose in the Level 1 spill category. Chief Joseph spill is 100 kcfs, also Level 1. Gas levels are 120-121% in the Chief Joseph forebay and 115-116% in the tailrace. Scott English, COE, pointed out that at this point spill may be occurring due to lack of hydraulic capacity, not lack of load. Dan Feil, COE, noted that the spill priority list attached to today's agenda only comes into play when there is spill due to lack of demand. Spill due to lack of turbine capacity is limited to that project and can't be spilled elsewhere in the system.

At the 120% TDG spillcap level, Russ Kiefer, Idaho, said he sees biological benefits to spilling at Lower Monumental and Little Goose over Chief Joseph. Feil said the COE views the proposed change as a tool to eliminate problems with adult fallback on the Snake at high levels of spill. The COE has two main reasons for making this proposal: to manage TDG system-wide and to alleviate concerns with adult passage at high levels of spill. Feil emphasized that the proposal is a temporary response over the next 2-3 weeks to current conditions. Kiefer asked for technical data indicating that spill up to 40 kcfs at Lower Monumental in overgeneration mode would cause significant fallback. Fallback was a much bigger problem at uncontrolled spill than it is now. Tony Norris, BPA, replied that flows are exceeding the hydraulic capacity of the Lower Monumental powerhouse, a condition that is expected to continue. As flows drop, overgeneration spill under the proposed operation would follow the order in Level 1 in accordance with the Washington TDG waiver, beginning with Lower Monumental. At current flow volumes, the COE does not foresee that Level 3 spill will be an issue so the focus is on the Level 2 category, Feil said.

Dave Statler, Nez Perce Tribe, said adult fallback on the lower Snake is an issue worthy of consideration and asked whether data backup for that justification is part of the information the COE provided today. That was not an inquiry the COE received so it is not included in today's postings, Baus replied. Kruger said this is a new issue which changes the question.

Richelle Beck, DRA, asked whether moving spill to Chief Joseph would help minimize GBT injuries at Rock Island Dam. Using the drumgates at Grand Coulee has alleviated gas problems substantially – a 13% drop in the first 3 days

after switching to drumgate spill, Kruger replied. Norris agreed and pointed out that TDG levels at the Canadian boundary are 123% and degassing by the time flows reach Grand Coulee. The dissipated spill pattern at Grand Coulee is helping to strip gas out of the system.

David Wills, USFWS, asked what spilling Chief Joseph to 150 kcfs means in the Level 1 spill category. What TDG levels are expected at 150 kcfs and how is that measured? Level 1 spill is to the spill caps for 120% in the tailrace and 115% in the downstream forebay, Baus replied. Wells forebay TDG levels are primarily a function of Grand Coulee discharges. TDG that passes through the Chief Joseph powerhouse is primarily unchanged, thus the Wells forebay TDG levels are higher than those measured at the Chief Joseph tailrace gage.

Kiefer reported that PIT tag data on adult wild spring chinook in the Snake do not show any signs of a conversion problem to Ice Harbor, even with high flows and a turbine out at Little Goose.

There was general acknowledgement that the proposed change in spill priorities does not violate the BiOp or FOP, therefore it is ultimately a COE management decision. There was general consensus that Washington state water quality standards can not be deliberately violated. Recognizing this context, TMT members stated their views:

- **NOAA** – PIT tag information indicates that adult fallback is an issue this year, perhaps because of the RSWs. There have been observations of injured fish hanging around at Lower Monumental, particularly “head burn” injuries which are probably associated with exposure to high TDG levels. Because adults are of primary concern, it’s better to err on the side of caution. This proposal strikes a good balance between state TDG standards and adult passage. Spring chinook adults, the species of greatest concern, have adequate conditions under this proposal. Also, spill for juveniles is already well beyond that called for in the FOP.
- **Idaho** – Is concerned about adult passage but has not seen technical information that indicates adult fallback will be a significant problem in the range of spill volumes under consideration. There is no clear advantage to this operation and it would be slightly to the detriment of juveniles. Fallback was a problem at higher spill levels but that doesn’t necessarily apply to conditions over the next few weeks. Does not support the proposed operation, but does not want to elevate the issue.
- **Oregon** – Favors operating to 120% in the tailrace only, but would not endorse an operation that deliberately violates the Washington state standard. Does not support the proposed change in spill priorities; agrees with Idaho’s position.

- **Montana** – Adults have significantly more biological value than juveniles in terms of the life cycle, so an operation that benefits adult passage makes sense. The proposal is much clearer now than it was initially and Montana supports it.
- **USFWS** – Agrees with Idaho. Does not support the proposal, but doesn't want to elevate it for dispute resolution.
- **Nez Perce** – Agrees with Idaho, Oregon and USFWS. Benefits of this change for adults and juveniles have not been fully analyzed and vetted.
- **CRITFC/Umatilla** – Supports the Nez Perce concerns.
- **BOR** – No objection.
- **BPA** – Supports the change.

The COE will consider these comments and email its decision to TMT members. TMT will revisit this issue on its next conference call July 6.

5. Operations Review

Reservoirs. Libby is at elevation 2,421.78 feet. Flows to Bonners Ferry have been dropping, with a current elevation of 5,803 feet at the gage. Albeni Falls is at elevation 2,063.53 feet, still slightly above flood stage at the Hope gage. The project will remain on free flows for a few more days, maintaining the lake at elevation 2,065 feet or lower. Priest Rapids average flows are 248 kcfs.

Dworshak is at elevation 1,592.06 feet, expected to reach 1,594 feet by the end of June. Inflows are still 18.5 kcfs. McNary average flows are 402 kcfs. Hungry Horse is at elevation 3,539.5 feet, with 8 kcfs out.

Grand Coulee is at elevation 1,276.7 feet and is expected to fill after July 5. There's still 30 maf of snow in the headwaters, Greg Bowers, COE, reported.

Ice Harbor In past years the COE has modified treatment schedules at Ice Harbor to manage high inflows, as specified in the FOP. Over the next 2 weekends the COE intends to modify some treatment schedules consistent with the FOP and previous years' operations, Baus said.

Fish. Adults: Sockeye passage is coming on strong, with 70,000 passing Bonneville to date, Paul Wagner, NOAA, reported. Fall chinook adult passage totals are 75,000 at Lower Granite and 92,000 at Little Goose. Steelhead passage has yet to begin in earnest. Only one sockeye has passed Lower Granite so far, and 38 have passed Ice Harbor. Kiefer added that this year looks like another promising Snake River sockeye return. Yesterday 29 Snake River

sockeye were detected at Bonneville Dam, for a total season count of 95 to date. Feil noted that larger adult counts at Little Goose than at projects downriver indicate that fallback at Goose is a problem.

Water quality. Scott English showed TMT the TDG data for June. High levels of involuntary spill have been causing exceedances in recent weeks. Conversion from RO to drumgate spill at Grand Coulee on June 24 has been a significant benefit. When flows at Bonneville go below 235 kcfs, USGS will be ready to get the tailwater gage back on line. In the meantime, the COE is using the Warrandale gage to evaluate tailwater conditions at Bonneville. Gas coming over the border at the Boundary gage has been stable at 132%, Norris added.

Power. There was nothing to report today.

6. Next Meeting

There will be a conference call at 11 am on July 6 to check in on Dworshak operations and update today's discussion of spill priorities. The next regular TMT meeting will be on July 13.

Name	Affiliation
Tony Norris	BPA
Jim Litchfield	Montana
Doug Baus	COE
Rick Kruger	Oregon
Paul Wagner	NOAA
Greg Bowers	COE
Dan Feil	COE
Scott English	COE
 <i>Phone:</i>	
David Wills	USFWS
Mary Mellema	BOR
Scott Bettin	BPA
Kyle Dittmer	CRITFC
Russ Kiefer	Idaho
Joel Fenolio	COE Seattle
Bill Rudolph	NW Fish Letter
Margaret Filardo	FPC
Tim Heizenrader	Centaurus
Ruth Burris	PGE
Russ George	WMC
Bruce McKay	consultant
Barry Espenson	CBB
Rob Allerman	Deutsch Bank
XX	Puget Sound Energy

XX
Dave Statler
Glen Trager
Steve Hall
Laura Hamilton
Richelle Beck

Snohomish PUD
NPT
Iberdrola Renewables
COE Walla Walla
COE
DRA