

**COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM**  
**July 25, 2012**  
**DRAFT Facilitator's Summary**

**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.*

**Lower Granite STP Inflow Forecast/Little Goose Spillway Weir**

Doug Baus, Corps, updated TMT on the Lower Granite forecast for today, 10 days out and 15 days out. Snake flows are dropping and we are entering the low flow season on the Snake River. He also shared language from the Fish Operations Plan regarding Lower Snake operations during low flow conditions, as well as navigation safety. In 2010, a MOP adjustment was implemented (MOP+0.5ft) at Little Goose and Ice Harbor dams to provide safe passage conditions for barge traffic into the downstream entrances of the navigation locks at Lower Granite and Lower Monumental, and something similar may need to happen again soon, depending on actual conditions. Doug provided this as a heads up per forecasts as well as recent concerns about navigation safety. Also, the Corps Walla Walla District has suggested that the Little Goose spillway weir closure may be implemented pending satisfaction of flow triggers as defined in the FPP and coordination with FPOM. Paul Wagner, NOAA, raised this to make people aware of the issue and emphasized the need to monitor forecasts closely.

**Libby Operations Update**

Kevin Shaffer, Corps Seattle District, updated TMT on planned Libby operations per discussions and agreement at the 7/18 TMT meeting. His slides outlined the inflow triggers and 12 kcfs release during the final week of August that will be used to guide operations, and showed a graph of what the operation would look like based on current forecast conditions (subject to change with updated forecasts). Kevin noted that there was very little change from last week as forecasts have remained stable. Spill has decreased at this point and will ramp down to powerhouse capacity tomorrow. In response to a question about September flows, the Corps said it will use flow flexibility offered by the Kootenai Tribe as a tool only if needed, but the current graph shows 6 kcfs flows per the Kootenai SOR for habitat work. Any additional water stored above 2449 feet in August will be released around mid-November through December, recognizing an end of December flood control target elevation. Rick Kruger, Oregon, said TMT will need to watch this closely to ensure timing of the release to support chum. The Corps responded that they would be drafting the reservoir in November and December according to the VARQ flood control procedures and any draft, including any additional water stored above 2449 feet at the end of August, could be expected for release into the Columbia system and Grand Coulee at that time.

Planned Operation: The Corps will proceed with the operating plan outlined today, and Doug Baus will double check with TMT members not present on today's call to complete the coordination.

### **Dworshak Operations Update**

Doug Baus, Corps, shared an update on Dworshak. All efforts have been made to keep temperatures below 68 degrees at Lower Granite. At one point Lower Granite hovered just above 68 degrees, but the 12-hour average remains below 68 degrees. The slight incursion above 68 degrees was caused by unusually high winds mixing warmer water, as well as by higher releases from the Hells Canyon complex due to system load demands. Current operations at Dworshak are 13.3 kcfs outflows, with 3.6 kcfs spill. The increased discharges are in response to an unexpected heat wave and resultant warmer water temperatures. As a response, the project increased discharges and managed outflows up to the 110% TDG standard. The project will decrease discharges at such time that temperatures and flows decrease sufficiently. TMT question: Why does Anatone hourly data go to 0 from time to time? Doug responded that this is likely due to an anomaly – missing or incorrect data. Russ Kiefer, Idaho, noted that he had coordinated with Walla Walla District last week, and because actual conditions were warmer than had been forecasted, the Corps was prompted to increase discharges to 13.3 kcfs.

Planned Operation: The graphs showed three options for moving forward: 10.5 kcfs, 12.5 kcfs or 13 kcfs. Doug said the current plan for the near term is to continue with higher than powerhouse discharges out of Dworshak (approximately 12-13 kcfs without exceeding 110% TDG) to keep temperatures below 68 degrees at Lower Granite. The project also has the ability to switch to undershot mode on unit 1 as needed to provide cooler temperature outflows but will likely be reserved for later in the season. TMT members offered suggestions to make the graphics clearer, and Doug will pass these on to Walla Walla District.

Action: Doug will follow up with Steve Hall and Russ Kiefer after today's call to discuss and clarify the operation. Doug will share an operation update with Russ Kiefer before next Tuesday's FPAC call so he can discuss with the salmon managers. Russ will continue to coordinate directly with Corps Walla Walla on Dworshak operations. Russ will help coordinate adding FPAC members to the District's email distribution list re: Dworshak operations updates.

### **TMT Meeting Schedule**

- Coordination will be important this time of year as conditions and operations are in flux.
- The Corps will continue to keep TMT apprised of changing conditions/operations in a timely manner. TMT conference calls will be convened as needed to have more robust discussion of operations.
- TMT will reserve **August 8** for a Conference Call to provide updates on operations as needed.
- TMT will meet face to face on **August 15**.

**Columbia River Regional Forum**  
**TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES**

**July 25, 2012**

Notes: Pat Vivian

***1. Introduction***

Today's TMT conference call was chaired by Doug Baus, COE, and facilitated by Robin Gumpert, DS Consulting. Representatives of Idaho, Oregon, Montana, Washington, the COE, BPA, USFWS, NOAA and others attended. This summary is an official record of the proceedings, not a verbatim transcript.

***2. Lower Granite Inflow Forecast and Little Goose Weir Change***

The latest STP inflow forecast for Lower Granite is at 39.7 kcfs as of today, then dropping to 35 kcfs 10 days out, and then to 32.9 kcfs 15 days out (August 8). Baus presented this information in light of three issues regarding low flow operations at Snake River projects that are identified in the FOP – percent spill at Little Goose and navigation safety at Lower Granite and Lower Monumental dams. When flows are less than 32 kcfs in the Snake River, it can be difficult to maintain 30% spill rate at Little Goose Dam. Flows less than 50 kcfs can negatively impact navigation into the downstream entrance to the Lower Granite and Lower Monumental locks.

In the summer of 2010, the 30% spill rate at Little Goose Dam was modified to a constant spill rate of 7-11 kcfs in response to low flows on the Snake. Also in 2010, the COE increased the forebay elevation at Little Goose and Ice Harbor to MOP+0.5' in order to provide safe navigation at the entrance to Lower Granite and Lower Monumental when flows were low. Such adjustments might need to be made again this year, Baus said, noting that these scenarios are based on forecasts of low flows that may or may not materialize. Little Goose might need to go to constant spill rate instead of 30%, and/or Little Goose and Ice Harbor might need to operate above MOP if Snake flows are low in August. There was also a MOP increase at Ice Harbor in 2010. The COE is watching the situation closely and will notify TMT immediately via email if it becomes necessary to adjust MOP operations for the sake of navigation safety.

Paul Wagner, NOAA, alerted TMT that the RFC forecast, as it impacts Little Goose operations, differs slightly from the STP forecast. A difference of 1 kcfs in inflows could be significant. So it's important to keep an eye on the forecasts with regard to deciding when to close the Little Goose spillway weir that is being coordinated at FPOM.

***3. Libby Operations***

Kevin Shaffer, COE, gave an update on last week's TMT discussion of alternative scenarios for Libby in August. TMT chose Alternative 3 as the preferred operation. That alternative is depicted this week updated with the most recent STP information.

With six inflow triggers for gradual reductions in Libby outflows, followed by a week of 12 kcfs flows at the end of August, Alternative 3 looks essentially the same as it did when TMT reviewed Libby operations last week. Inflow forecasts for Libby are stable, Shaffer reported. On August 24, Libby will ramp down to 12 kcfs outflows for the rest of the month, regardless of inflows.

Current forecast projections put Libby at elevation 2453.4 feet by end August, which is higher than the previously planned elevation of 2449 feet. Libby would then ramp down to 6 kcfs flows for the Kootenai sturgeon habitat restoration work in September. Any excess water stored above 2449 feet will be released starting around mid November. Rick Kruger, Oregon, recalled that this water will be used to benefit chum in November. Shaffer noted that the Corps will be drafting the reservoir in November and December according to the VARQ flood control procedures and any draft, including of any additional water stored at the end of August, could be expected for release into the Columbia system and Grand Coulee.

There has been discussion of whether the Kootenai Tribe will be able to perform the habitat work with flows of 6.5-7.5 kcfs instead of 6 kcfs, Paul Wagner, NOAA, said. Shaffer noted that the current plan is to release 6 kcfs in September, but that the potential for higher allowable could provide flexibility in real-time operations. TMT members present today agreed that the Libby operation depicted in Alternative 3 looks like a good one. The COE plans to implement Alternative 3, with updated forecast information, after coordinating with TMT members who did not participate in today's call.

#### ***4. Dworshak Operations***

Baus showed TMT the latest data on Dworshak release temperatures vs. temperatures at Lower Granite tailwater. Lower Granite temperatures slightly exceeded 68 degrees F on a couple of hourly readings over last weekend due to mixing of warmer water than anticipated, but the 12-hour average temperature remained below 68 degrees. The current temperature at Lower Granite tailwater is 67.6 degrees F.

Also linked to today's agenda are three scenarios for Dworshak operations: outflows of 10.5 kcfs, 12 kcfs and 13 kcfs, all beginning July 24. Rick Kruger, Oregon, pointed out a data anomaly with the reporting of Snake River/Clearwater temperatures at Anatone gage, which the COE will clarify. Kruger also suggested displaying 68 degrees F at Lower Granite tailwater as a solid line on the graphs.

Baus said the COE's plan is to provide cooler water temperatures with releases of 12-13 kcfs from Dworshak, per scenarios 2 or 3 of 12-13 kcfs. Russ Kiefer said Idaho would concur with 13 kcfs outflows now because the weather has been much hotter than predicted. The combination of hot weather and dropping back to full powerhouse flows at Dworshak have put Lower Granite tailwater briefly over its temperature limit of 68 degrees, where it remains close to the limit.

The planned operation for the near term is to hold Dworshak outflows as high as possible for temperature control without exceeding the 110% total dissolved gas water quality standard, Baus said. Accordingly, current Dworshak releases are 13.3 kcfs with spill of 3.6 kcfs, the maximum outflow possible while remaining in compliance with the 110% TDG downstream standard. Karl Kanbergs, COE, pointed out that cooler water is still available using undershot mode. Once Lower Granite temperatures are safely below 68 degrees F, flows from Dworshak will be conserved for later in the summer.

Wagner said NOAA would be happy with a flow range of 12.5-13 kcfs from Dworshak. Baus will inform TMT via email as soon as the Walla Walla district office clarifies details of the planned operation, which will focus on releasing as much water as possible within water quality standards. Wagner asked to be notified if discharge plans for Dworshak change significantly (e.g., a reduction in discharge from 12.5 to 10 kcfs). If the COE is considering a change in Dworshak operations, Kiefer asked to be notified with sufficient lead time to model the change (he does modeling daily) and respond before instructions are issued to the project.

The Walla Walla district has been sending out informative email alerts, whose original intent was to notify downstream fisheries operators and researchers of planned flow changes at Dworshak, Kiefer pointed out. Wagner said he would consider these emails sufficient notification of flow changes. Kruger suggested adding all interested TMT and FPAC members to the email list (Kiefer will follow up on this).

There was concern because the August 1 conference call was canceled with so many regular TMT participants planning vacations. Kruger advocated that TMT be open to meeting whenever needed, without the constraint of a weekly meeting schedule. Doug Baus, Steve Hall and Russ Kiefer agreed to meet after today's call to clarify the Dworshak operation. Kiefer will follow up on getting the COE's email list updated to include all TMT and FPAC members who want the Dworshak flow updates. The COE will monitor Dworshak closely and keep FPAC and TMT members informed of any anticipated operational changes.

## ***5. Next TMT Meeting***

TMT members debated when to hold their next meeting, given that many people will be out of town August 1 but the Dworshak temperature augmentation operation warrants close attention. There was agreement the next regular face-to-face TMT meeting will be August 15, with a conference call on August 8 (and on August 1 only if necessary).

<b><i>Name</i></b>	<b><i>Affiliation</i></b>
Doug Baus	COE
Steve Hall	COE
Karl Kanbergs	COE
Scott Bettin	BPA
Russ Kiefer	Idaho
Rick Kruger	Oregon
David Wills	USFWS
Paul Wagner	NOAA
Kevin Schaffer	COE Seattle
Steve Juul	COE
Lisa Wright	COE
Dave Benner	FPC
Russ George	WMC
Bruce McKay	hydro consultant
Richelle Beck	Grant PUD
Barry Espenson	CBB
Cindy Lefleur	Washington
Jim Litchfield	Montana