

COLUMBIA RIVER REGIONAL FORUM
TECHNICAL MANAGEMENT TEAM
May 23, 2007 Conference Call

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Harkless

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.

Priest Rapids Update

Russell Langshaw, Grant County PUD, provided an update on Priest Rapids operations. The project was operated for four days at 60 kcfs flow bands, with 40 kcfs flow bands over the weekend and a minimum 150 kcfs on Thursday, May 17. One exceedance occurred over this time period, .2 kcfs on Saturday May 19.

Action/Next Steps: The fourth and final weekend of protection flows will occur over the weekend of May 26. Beginning Sunday, May 27, the 70 kcfs flow minimum restriction will be removed and the project will operate with standard flow bands to 400 temperature units, for rearing protection. Russell will provide an update at the May 30 face to face TMT meeting.

Grand Coulee Flood Control

John Roache, USBR, reported that, given current and forecasted conditions, Grand Coulee would operate this week to a May 31 maximum flood control elevation of 1273.9'. The project was expected to fill some between now and then. The next step will be to discuss and determine how to shape flows in June to fill the project. Cindy Henriksen, COE, shared that the April-August residual runoff for Grand Coulee is estimated at 71%. The COE is working with the other action agencies to strategize about the best controlled refill operation for the month of June, and will come to TMT with more discussion at the next TMT meeting.

Dworshak Operations

The latest graphs developed by the COE with information on Dworshak were posted and discussed. The April-July residual runoff for Dworshak was estimated at 38%. The project was currently above 1587' and continuing to fill with inflows above 10 kcfs. A graph of Dworshak augmentation volumes showed potential outflows through June being at 4 kcfs with the current water supply forecast, and 5.1 kcfs with ESP volumes. Current outflows were 5.4 kcfs. The COE recommended continuing this operation through Memorial Day weekend, looking at updated flow forecasts on Tuesday and revisiting the operation with TMT on Wednesday, May 30. The salmon managers discussed this operation at FPAC and had no overriding objections. ID and the Nez Perce tribe said they did not object to the operation. The salmon managers would like to stay apprised of changing conditions, particularly as they relate to achieving the target pool elevation of 1595 by May 31.

Action/Next Steps: The COE will operate Dworshak at 5.4 kcfs, and stay “on call” over the weekend to run models and make adjustments as needed if conditions change, otherwise will run models on Tuesday and revisit the operation at the 5/30 TMT meeting.

Sturgeon Pulse/Libby Operation

Jason Flory, USFWS, and Cindy Henriksen, COE, updated TMT on the start of the sturgeon pulse operation, which began Friday, May 18. Jason noted that over the weekend a bout of cold water passed through the system, dropping temperatures significantly. Thanks to the efforts of the Libby operators, outflows remained constant out of the project and minimized the effects of the unexpected cold water. Libby was approaching elevation 2410’ and will continue to operate at full powerhouse (around 24 kcfs) for 12 more days. The Sturgeon Recovery Team will continue to monitor and discuss the operation at their weekly Tuesday meetings.

The COE also ran scenarios to show how operations might be shaped after the sturgeon pulse – Cindy emphasized that these were not recommendations but rather developed to show bookends of different approaches. One was a ‘double peak’ operation which would operate Libby at 9 kcfs (the bull trout minimum), then increase to 22.6 kcfs in August to get close to end of August refill. The other bookend showed flat flows through August, also approaching August refill.

The COE will provide additional Libby operations scenarios at the next TMT meeting.

Updated Flow Forecasts

Several updated flow forecasts were posted to the TMT web page, including a new whiskers plot graph for Lower Granite, per request. This graph showed a recession across this week followed by varying flows after June 1. Actual flows at Lower Granite were 85 kcfs, and dropping. The April-July residual runoff for Lower Granite was estimated at 52%.

Next face-to-face TMT meeting: Wednesday, May 30th

Agenda items will include:

- Review Facilitator’s Notes/Meeting Minutes from 6/14, 5/16, 5/23 conference calls
- Priest Rapids Update
- Grand Coulee Flood Control Operations
- Updated Flow Forecasts
- Libby Operations Scenarios
- Dworshak Operations
- Snake River Transportation Follow-Up
- Operations Review

**Columbia River Regional Forum
Technical Management Team Conference Call
May 23, 2007**

1. Welcome and Introductions

Today's TMT conference call was chaired by Cindy Henriksen and facilitated by Robin Harkless, with representatives from COE, BPA, BOR, NOAA, CRITFC, USFWS, FPC and Idaho participating. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made on the call. Anyone with questions or comments about these notes should provide them to the TMT chair or bring them to the next meeting.

2. Review Meeting Minutes

The TMT will check in on various facilitator notes and official minutes for May at its next meeting May 30.

3. Priest Rapids Update

This week brought 4 days of 60 kcfs flow bands and a weekend of 40 kcfs flow bands, followed by a 150 kcfs minimum last Thursday, May 17, Russell Langshaw (Grant Co. PUD) said. The third weekend of protective measures brought a 146.2 kcfs minimum flow. All criteria were met except on Saturday, May 12, when there was an exceedance of 0.2 kcfs. Daily deltas for the week ranged from 20.2 to 43.8 kcfs, with discharges of 152.9 to 176.1 kcfs.

This weekend is the last of four weekends with emergent period protection measures triggered by 800 temperature units from the end of spawning, Langshaw said. Once initiated, the operation continues for four consecutive weekends. The emergence period formally ended on Sunday, May 20, when the criterion of 1,000 temperature units was met. Ramping rate restrictions will continue from the end of emergence another 400 temperature units when the Chinook rearing period protection program ends for the year. This amounts to about another month of flow band protections, Langshaw said. The PUD no longer is operating under the 70 kcfs elevation minimum, which hasn't been a problem because of flows recently. Langshaw will give another update at the next TMT meeting.

4. Grand Coulee Flood Control

As of May 22, the maximum elevation at Grand Coulee is 1,273.9 feet on May 31, John Roache (BOR) said. That's about 10 feet higher than the current elevation, so some fill can be expected. The remaining inflow for April-August as of May 21 is still almost 71% of residual runoff, so every week the COE examines how much residual runoff is yet to come, Henriksen said. The Action Agencies

have been working together on a controlled, gradual refill of the reservoirs, particularly at Grand Coulee. Next week, the Action Agencies will work on strategies for the month of June, she said. There will be an update on this issue at the next TMT meeting.

5. Dworshak Operations

Unlike Grand Coulee, the residual runoff for Dworshak as of May 21 was only 38% of remaining runoff for the April-July period, Henriksen said. The May 31 flood control elevation for Dworshak is 1,595 feet, or 5 feet from full. The reservoir is currently at elevation 1,587 feet and continuing to fill. Inflows continue to exceed the powerhouse capacity of 10 kcfs.

Like Grand Coulee, Dworshak is being managed to refill gradually, with controlled outflows. Henriksen presented a graph of Dworshak augmentation volumes (agenda item 7Bii) showing potential outflows from May 21-June 30. The graph includes runoff volume to date, minimum flows for the project, the volume to fill, and remaining volume available for augmentation. The total outflow volume remaining for May 21-June 30 is about 4 kcfs, which includes augmentation volume plus 1.5 kcfs minimum flows, Henriksen said. By contrast, the remaining augmentation volume is about 5.1 kcfs according to ESP volume traces.

With current outflows at 5.4 to 5.5 kcfs, inflows of more than 10 kcfs, and the reservoir filling close to its end of May flood control target, the COE recommends maintaining the current outflow using one large unit over the Memorial Day weekend, Henriksen said. Paul Wagner (NOAA) said FPAC had recently discussed options at Dworshak and would find that level of operation acceptable. Russ Kiefer (Idaho) agreed.

COE staff will be available over the Memorial Day weekend to monitor the situation and reduce outflows early Tuesday morning if needed. Then TMT will assess Dworshak operations at its Wednesday, May 30, meeting.

6. Sturgeon Pulse/Libby Operations

The sturgeon recovery team, via an email to Cindy from USFWS Jason Flory on Wednesday 16 May, recommended the operation begin Friday, May 18, Henriksen said. Libby is currently at full powerhouse and will be for the next 13 days. Last week the reservoir warmed rapidly, Jason Flory (USFWS Spokane) reported. The river was warm enough, there were spawning females upriver, and the initial release of water caused no significant drop in water temperatures.

Since then, colder water moving through the reservoir caused forebay temperatures to drop from 56 degrees Fahrenheit to 45-49 degrees F. Thanks to careful management by Greg Hoffman (COE) of the temperature control

structure at Libby Dam the impacts of the chill on sturgeon spawning have been minimized, Flory said.

Libby is currently releasing full powerhouse flows of around 25 kcfs which will continue for another 12 days. The reservoir continues to fill slowly toward elevation 2,410 feet. The 25 kcfs releases will be followed by 3 days of 20 kcfs flows, then 15 kcfs flat flows until the 1.17 maf of flow augmentation volume is depleted.

Henriksen presented the bookend scenarios requested at last week's TMT meeting. The first scenario (linked to agenda item 6i) shows a double peak operation at Libby for the remainder of the sturgeon pulse after the 15 kcfs outflow is exhausted in late June. The COE modeled an outflow reduced to 9 kcfs and the project didn't refill. When outflows were increased to 22.6 kcfs in August, the model shows the project came close to refilling by the end of August.

The second scenario (agenda item 6ii) shows an operation of 15 kcfs steady outflows for the remainder of the sturgeon pulse, the last week of June through August. Under that scenario, the reservoir elevation would be 2,442 feet on June 30, or about 17 feet from full, and 2,439 feet on August 31, or 20 feet from full.

7. Updated Flow Forecasts

Henriksen presented links to updated flow forecasts for Libby, Dworshak, Hungry Horse and Lower Granite. There were no questions. She focused on agenda item 7Ei, a whiskers plot for Lower Granite. The graph according to the May 21 forecast shows good recession of flows over the next week. After the single deterministic 10-day forecast, the graph shows the average flow at Lower Granite continues to recede from its current level of 85 kcfs. The residual runoff above Lower Granite is about 52% of remaining runoff for the April-July period.

6. Next TMT Meeting

The next meeting will be in person on May 30, 2007. Agenda items will include a Priest Rapids update, Grand Coulee flood control, Dworshak operations, Snake River transportation follow-up, comments on meeting minutes, possible Libby operation scenarios, and the usual operations review. This meeting summary prepared by consultant and writer Pat Vivian.

Name	Affiliation
Cindy Henriksen	COE
John Roache	BOR
Paul Wagner	NOAA
Kyle Dittmer	CRITFC
Jason Flory	USFWS-Spokane

David Wills	USFWS
Tim Heizenrader	Cascade Energy
Margaret Filardo	FPC
Dan Spear	BPA
Russ Kiefer	Idaho
Jim Adams	COE
Bernard Klatte	COE
Rudd Turner	COE
Russ George	WMC
Russell Langshaw	Grant Co. PUD
Holli Krebs	Bear Stearns