

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM MEETING NOTES

April 4, 2001

CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE
PORTLAND, OREGON

TMT Internet Homepage: <http://www.nwd-wc.usace.army.mil/TMT/index.html>

FACILITATOR'S NOTES ON FUTURE ACTIONS

Facilitator: Donna Silverberg

The following is a list of items the Technical Management Team (TMT) discussed at its last meeting that will require future action or discussion:

Vernita Bar: Joe Lukas has begun posting information on stranding on the web. Please check for the latest information. Questions remain about the Vernita Bar Settlement Agreement. TMT members acknowledged that all parties to the VBSA might need to meet and confer about the allowable elevations for this low water year. Also, questions were asked about the gages below Priest Rapids.

Action: Pat McGrane will check with USGS regarding re-rating the gages at and below Priest Rapids.

Current Systems Operations: COE and BOR reviewed current reservoir operations and water supply. When asked, NMFS, CRITFC, Washington, Oregon and USFWS expressed a preference to delay refill of Albeni Falls to maintain Vernita Bar flows. Idaho needs to check before stating a preference due to their lawsuit. Montana supports a delay to get water to Coulee, but not to maintain Vernita Bar flows.

Water Rights in Washington: Jim Nielsen will provide an update at the next meeting regarding recent public hearings that may affect WA water rights resulting from the declared drought emergency.

Water Temperature Modeling: COE is working with Battelle to do runs of the MASS1 gas abatement model that will include temperature. These runs will include lower flow years with high temperatures and with more moderate temperatures ('94 and '77 meteorological conditions). They will have outputs for the next TMT meeting. **Question** for TMT – in simulation 3, should there be no spill or low spill?

Action: Rudd will distribute results for simulations 1 and 2 on Tuesday, April 10. TMT will discuss simulations 1 and 2, and input for simulation 3, on Wednesday, April 11.

RE: TMT Feedback on COE's Work Products and Tools: Overall, the group found the COE tools very helpful. They suggested the following modifications:

- Date the files and note the agency author
- Change “refill” to “fill”
- Include both kaf and ksf-days on the histogram

RE: Navigation Locks: Given the poor water conditions this year, COE’s Walla Walla District has agreed to reduce the number of lockages for recreational users from 5 to 3 per day. Portland District is still reviewing its operations for this year. There will be an update on this item at the April 18 meeting.

Action: Rudd will email the megawatt per hour loss for each lockage to TMT members. (Note: this was done last week).

Operations: Due to BPA’s power emergency, there will be no spill in the near future. Headwaters will remain on minimums and Grand Coulee will draft no more than needed for Vernita Bar or the power system. If the Regional or Federal Execs adjusts this, COE will notify TMT members.

Next Meeting: The group determined it was necessary to have a face-to-face meeting on Wednesday, April 11. The agenda will include:

- Temperature models
- Lower Granite operations
- MOP
- Federal Agencies' River Operation Plan

Thank you for your preparation and participation in TMT!

Meeting Minutes

1. Greeting and Introductions

The April 4 Technical Management Team meeting, held at the Customs House in Portland, Oregon, was chaired by Rudd Turner of the Corps and facilitated by Donna Silverberg. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Turner at 503/808-3935.

Silverberg welcomed everyone to the meeting, then led a round of introductions and a review of the agenda.

2. Current System Conditions.

Rudd Turner said Dworshak continues to release minimum discharge of about 1.5 Kcfs; Dworshak elevation, as of last night at midnight, was 1512.3 feet. Project inflows have dropped

slightly due to cool weather, but Dworshak is still filling at a rate of 7/10 of a foot per day. Day-average flow at Lower Granite has run between 32 Kcfs and 44 Kcfs over the past week, Turner said; it was 41.8 Kcfs yesterday. At Libby, outflow is now 4 Kcfs; current project elevation is 2387.9 feet, with inflows of about 3 Kcfs – the project is drafting by about 1/10 of a foot per day. At Bonneville, over the past week, day-average flows have run between 111 and 144 Kcfs, with tailwater elevations as high as 14 feet.

The Corps is regulating the forebay elevation at Bonneville, said Turner; following the last TMT meeting, the Corps, BPA, and the tribes coordinated to operate the Bonneville pool within a 1.5-foot operating range, between 75.0 and 76.5 feet, from 6 a.m. Monday through 6 a.m. Saturday, for the treaty fishery. This is a hard constraint from Tuesday through Saturday, Turner added. Kyle Martin said he has not heard of any problems experienced by tribal fishermen since this operation was implemented.

Albeni Falls is releasing 10 Kcfs, Turner said; the planned operation at that project is to fill somewhat in April, to elevation 2056 by April 30. Once this operation begins, filling Albeni Falls to elevation 2056 will require a decrease in project outflow of 6 Kcfs-7 Kcfs, normally not a big deal, but it could be this year, said Turner.

This is a dicey time to do that, from the standpoint of maintaining the Vernita Bar minimum flow, said Paul Wagner, adding that NMFS' preference would be to delay Albeni Falls refill until after the Vernita Bar minimum flow requirement ends in early May. The Tribes concur, said Kyle Martin. David Wills said the Fish and Wildlife Service agrees with NMFS' position; Christine Mallette said ODFW does as well. Steve Pettit said he will have to check with his office to verify Idaho's position. Jim Nielsen said Washington supports deferring refill at Albeni Falls. Jim Litchfield said Montana has no strong position on this issue, but would probably support delaying Albeni Falls refill into May. So noted, said Turner; I'm not prepared to respond to that request today, but we will take it into account.

Pat McGrane said Grand Coulee elevation is holding steady at 1223 feet; Hungry Horse elevation is also holding fairly steady at about 3491 feet. April 1 is the traditional start of the irrigation season in Southern Idaho, said McGrane; withdrawals have been slight so far, due to cold weather. McGrane added that Reclamation's Biological Assessment on the Snake River projects is due out this Friday.

The discussion turned to Grand Coulee and Banks Lake operations; in general, it was observed that these operations are very difficult to predict at this point, before the 2001 runoff season has begun in earnest. Given the complexity of the decisions we will need to discuss, it seems to me that some sort of analysis is in order, said Litchfield. In response to a question about what the absolute bottom elevation is now at Grand Coulee, Robyn MacKay said that, rather than setting a minimum elevation at that project, it probably makes more sense to develop some operational priorities – what gives first, in other words, she said.

McGrane said there is already some analysis taking place; right now, it looks as though everything will be OK. The best thing we can do operationally is to keep Grand Coulee outflow

as low as possible, and avoid exceeding the Vernita Bar minimum, McGrane said. The only viable option we have right now is to cut Vernita Bar minimum flows, he said, adding that it is his understanding that the executives will be discussing that issue this Friday. MacKay said that, currently, the Vernita Bar minimum flow and power needs are approximately in balance; as temperatures rise later in April, however, maintaining the Vernita Bar minimum flow will likely put BPA into a surplus power position, at which point it would be preferable to start storing additional water in Grand Coulee.

Basically, there are a large number of variables and options before us at the moment, said McGrane – the weather, runoff, irrigation demand, power demand, what the Vernita Bar minimum flow will be etc. The discussion then turned to the question of which is the proper venue in which these decisions should be made; there was no clear TMT consensus on this issue.

Silverberg asked what the TMT's recommendation would be, in terms of the best near-term operation for fish. Martin replied that maintaining Vernita Bar minimum flows is one of CRITFC's highest priorities. Wouldn't it make more sense to put the majority of the available water on the most at-risk listed species, such as the Upper Columbia stocks, in this extremely low-flow year, rather than favoring the healthiest run in the basin? Turner asked.

The group then spent a few minutes debating the effects of the current Vernita Bar operation on operations for other listed species later in the season. Wagner observed that the current operation is driven equally by power and the need to maintain the Vernita Bar minimum; there isn't much opportunity to save additional water in Grand Coulee at this time. If there is to be a reduction in Vernita Bar protection flows, NMFS would need to be convinced that there is a real biological benefit for listed species down the road, he said. Nielsen said Washington is also not quite ready to give up on the Vernita Bar protection operation at this time; he objected to the fact that, when push comes to shove, it is always the fish that take the hit while power and irrigation are unimpacted. MacKay took exception to Wagner's statement, noting that BPA has captured significant load reductions, including the purchase of 1,500 MW in DSI load. I stand corrected, on the power part, at least, Nielsen said.

Turner said the April early-bird forecast is now available; at The Dalles, January-July runoff is predicted to be 55.7 MAF, 53% of normal, down about 3 MAF from the March final forecast. Libby dropped 4% to 49% of normal. Lower Granite dropped 8%, to 49% of normal, for the April-July runoff period. Dworshak dropped 5%, to 52% of normal during the April-July period. Hungry Horse dropped 2% to 58% of normal for the April-September period, Turner said. We're expecting the April final forecast this Friday, he added, at which point RCC will update the SSARR runs, the family of curves and the histograms, which will then be posted to the TMT web site or provided to TMT members.

MacKay added that, yesterday, BPA declared a power system emergency, citing the Northwest Power Planning Council's estimates of power system reliability problems during the spring and summer of 2001, as well as the impact of spill for fish passage on West Coast energy prices and power system reliability (please refer to the full text of the emergency declaration, available from the Bonneville Power Administration website, for further details). MacKay said

this emergency situation will continue until further notice.

On the subject of fish passage, Wagner said the outmigration has now begun; yearling chinook numbers are building at Lower Granite, with a protracted run expected this year. Normally, the peak of the juvenile outmigration at Lower Granite occurs between the third week of April and the second week in May, he said; this year, it's hard to predict exactly what will happen, given the low flows these fish are likely to see.

Steelhead have also begun arriving at Lower Granite and elsewhere in the system, Wagner said; again, the steelhead migration is expected to be protracted in 2001. He asked whether the daily historic cumulative passage index graphs NMFS and the Fish Passage Center produced last year were useful enough to continue with in 2001; there was general agreement that they are.

Moving on to adult passage, Wagner said more than 25,000 adult spring chinook have passed Bonneville Dam so far this week, double last year's count for this date. Yesterday alone, 6,721 adult chinook passed the project. Adult chinook and steelhead are also passing John Day, McNary, Ice Harbor, Lower Monumental, Little Goose and Lower Granite Dams. Christine Mallette said the current forecast is for 364,000+ adult spring chinook entering the Columbia system, more than twice as many as last year's very good run. A total of 206,000 spring chinook are forecast to enter the Snake River, four times last year's total.

With respect to chum, the count to date from Hamilton Springs is just over 3,300 fry, from Hardy Creek, just over 800 fry, said David Wills, adding that outmigration timing from those systems appears to be a couple of weeks behind normal this year. Nielsen added that field crews are observing some stranding in the Ives Island area; fry are still being captured in substantial numbers at the index seining sites. With the fluctuations in Lower Columbia flows, the bottom line is that we are continuing to see emergence, Nielsen said.

3. Vernita Bar Operation.

Joe Lukas said he had posted the first Hanford Reach Stranding report of 2001 on the TMT website yesterday. He reported that flows are now about 70 Kcfs at Chief Joseph Dam; we reached the 50-fish criteria on March 21, the earliest date on record, he said. This being the case, said Lukas, program operating constraints began on March 26. On March 28, crews captured 157 chinook at the index seining sites. In other words, Lukas said, it looks like the estimated temperature units are falling a little behind reality this year, and emergence is somewhat earlier than predicted. We are maintaining 68 Kcfs, just above the Vernita Bar minimum flow, Lukas added.

So we're now in the 40 Kcfs (+/- 20 Kcfs) fluctuation band at Priest Rapids? Wagner asked. Correct, Lukas replied -- basically, all we're doing at this point is maintaining the Vernita Bar minimum flow. In response to a question from Litchfield, Lukas said that when Grand Coulee January-July runoff is below the critical level of 42.6 MAF, the Vernita Bar minimum flow can be lowered; we are well below that critical runoff level this year, he said, and while

reducing the Vernita Bar minimum flow has been discussed, to date, that decision has been deferred.

In response to another question, Nielsen said that, if water and air temperatures continue to be similar to last year's, the estimated end of emergence will be about May 5; at that point, the Vernita Bar minimum flow requirement will end. In response to another question from Litchfield, Lukas said the Vernita Bar Agreement allows for the Vernita Bar minimum flow to be dropped from 65 Kcfs to as low as 55 Kcfs under the extremely low runoff conditions we're experiencing this year; however, there is some confusion about exactly how that decision must be made. Nielsen added that, so far, BPA has needed to release at least 70 Kcfs from Grand Coulee in order to meet load.

There is a federal executive meeting to discuss this topic on Friday of this week, Turner noted; at that point, we should have some additional information to share with you. He added that the next meeting of the federal, state and tribal executives is scheduled for April 13.

The discussion turned briefly to the discrepancies noted recently between the flow readings at the Priest Rapids tailwater gauge and the USGS gauge four miles downstream. Pat McGrane said he will contact USGS to find out when – or if – their gauge has been re-rated, and will report back at the next TMT meeting. In the meantime, said Lukas, the next meeting of the Hanford Stranding Policy Group is this Friday, April 6.

4. New System Operational Requests.

No new System Operational Requests were submitted prior to today's meeting.

5. Recommended Operations.

Turner drew the group's attention to a document titled "Operation of Lower Granite Project During Spring 2001," explaining that this proposal was developed by NMFS. Chris Ross briefly reviewed the contents of this handout; in essence, NMFS is proposing an evaluation of short-term substantial increases (pulses) in Lower Granite powerhouse discharge during early evening hours this spring, up to 90 Kcfs-100 Kcfs if possible, drafting the volume in the top four feet of Lower Granite's operating range to produce the pulses, then refilling the project during daylight hours. We are proposing this as an operational alternative in order to avoid the negative biological impact of low flows seen in 1992 and 1994, when no special operations were done, Ross explained.

The evaluation would consist of a block test design of control days and test days, Ross said. He noted that there is anecdotal information that a similar strategy used briefly in May 1992 produced a strong positive correlation with increased fish passage; following these pulses, yearling chinook numbers increased 350% over the previous day's total. The monitoring personnel and equipment originally earmarked for the raised spillway weir evaluation will be used instead to monitor fish response to this evaluation, Ross explained.

Ross spent a few minutes going through the details of the NMFS proposal, including the details of the various operational conditions that could be tested. What do you need from TMT today? Silverberg asked. Concurrence with the operation, Ross replied; we probably don't need that today, but the researchers will be ready to go by the third week in April – the week of April 23. Ross said it would be extremely helpful if TMT could provide its input by next Wednesday, April 11.

In response to a question, Ross said the researchers believe they will have at least preliminary observational data within 48 hours after each day's testing. If they can process that information as quickly as humanly possible, if the information is positive, we may want to go to this type of an operation as our operational strategy, rather than just as an evaluation, Litchfield observed. That possibility has occurred to NMFS as well, Ross said.

Mallette said FPAC had discussed this operation yesterday; Scenario C enjoyed the strongest support among the salmon managers, and is a viable option, from the salmon managers' perspective. Can we expect an answer, as far as the salmon managers' support for this proposed evaluation, by next Wednesday? Silverberg asked. Montana supports it, said Litchfield. Steve Pettit said there are a number of questions that still need to be answered before such a decision can be made, such as the availability of flow augmentation from other reservoirs to increase velocities in the upper end of Lower Granite pool.

Martin said this proposal is inconsistent with CRITFC's advocacy of a normal, natural hydrograph; however, he said he will run it by CRITFC's policy people. McGrane said it will be difficult to resolve the augmentation question over the next week. For that reason, said Silverberg, perhaps we should concentrate on Scenario C. MacKay said BPA is willing to consider this operation. From the Corps' standpoint, this operation would be workable, Turner said. We'll discuss this further at next Wednesday's TMT meeting, Silverberg said.

With respect to the actual operation, the next two-week increment would cover the period of April 9-22, said Turner. So far, he said, we have two unanswered questions about that period: the MOP operation, and whether or not to begin implementing the NMFS-advocated "pulsing" operation at Lower Granite. Spill did not begin at Ice Harbor due to the power system emergency, Turner added; the Corps would propose that, from an operational standpoint, we plan for zero spill through April 22. Nielsen observed that BPA has said they will reconsider the emergency declaration on April 16; MacKay replied that she anticipates an ongoing emergency declaration throughout the fish passage season this year, so it is fair to assume that no spill will occur during the next two weeks.

The Corps would propose that headwater projects remain on minimum outflow, with Grand Coulee releasing the minimum flow necessary to meet power system and Vernita Bar minimum flow needs, Turner said. If power system or flow conditions change significantly, or if the Executives make significant changes to the operation prior to April 22, we will inform TMT members via email and telephone, Turner said.

Moving on to MOP at the Lower Snake projects, said Tuner, what does the TMT

recommend, given the fact that April 3 is the BiOp planning date to move to a MOP operation. We can talk about it today, he said, or we can wait another week and discuss it at the April 11 conference call. I would suggest that we wait, said Litchfield – it is going to be a lengthy discussion, and there probably isn't enough time remaining in today's meeting to resolve it. There was general agreement that this issue will be discussed at the TMT's April 11 meeting.

After a few minutes of additional discussion, there was agreement that the MOP decision can wait a week; in the meantime, the operation described by Turner will go forward.

6. Review of 2001 Water Management Plan.

Discussion of this agenda item was deferred.

7. Water Temperature Modeling.

Turner said the Corps has been working with Battelle to do some runs of the MASS 1 model developed for the DGAS study, to try to get a handle on what Snake River temperatures might look like this summer. Nancy Yun distributed a written description of the model, and the reasons it improves on the older COLTEMP model. She said the Corps and Battelle are doing three simulations: Simulation 1, using 1977 hydrologic and meteorological data, Simulation 2 using 1977 hydrologic information and 1994 meteorological data, and Simulation 3, a base case dependent on the output from Simulation 2.

Battelle should have some outputs we can share at the next TMT meeting, Yun said, at least from the first two simulations. Turner noted that there is still time for the TMT to provide input into the parameters of Simulation 3; there was general agreement that this would be useful, once the results from the first two simulations are available. Yun said the results from the first two runs are expected to be available by next Wednesday; Turner said he will distribute this data to the TMT as soon as it is available. In response to a question, Yun said the Corps plans to run a simulation using CRITFC's proposed operation once the MASS 1 base-case is established.

Yun noted that it would be helpful if the TMT could provide their input on Simulation 3 prior to April 18; she said she will check with Battelle to see whether the model runs can be made available by next Tuesday, April 10, so that they can be discussed at the April 11 TMT meeting. If it will not be possible for Battelle to do this, an email will be send out informing the TMT.

8. TMT Feedback on COE Work Products and Tools.

Turner said he has received no additional comments to date on the work products and informational tools discussed at the last TMT meeting; the Corps' plans, at this time, are to continue to update the family of refill curves for the three federal headwater storage projects. The current probability of filling Libby to elevation 2439 by June 30, based on the March final water supply forecast, is edging up slightly, and is now just over 50%. The probability of Dworshak filling to elevation 1580 by June 30 is now estimated to be about 85%, while the probability of Hungry Horse filling to elevation 3540 feet by June 30 is about 50%.

The next work product is the histogram or “bar chart,” Turner said, showing the volumes projected to be available for flow augmentation from Hungry Horse, Dworshak and Libby this summer, as well as inflow volume to date and the volume needed to fill to each project’s target elevation. The group spent a few minutes discussing this information; in response to a question, Cathy Hlebechuk said there is 358 KAF of storage in the top 20 feet of Dworshak. This being the case, said Litchfield, it appears to me that there is a better-than-50% chance that we could fill Dworshak completely in 2001; perhaps that should be our goal, rather than elevation 1580.

The group spent a few minutes discussing the Corps’ bar chart, offering a few minor suggestions as to how it could be improved.

9. Water Conservation at Navigation Locks.

Turner distributed a Walla Walla District Public Notice explaining the Corps’ water conservation plans connected with recreational lockages this year; at least at the Snake River projects and McNary, we will be reducing the number of lockages for recreational traffic from five per day to three, he said. This does not apply to commercial traffic, he added, and is for this year only. At Bonneville, The Dalles and John Day, Portland District is considering similar reductions, but has not yet made a decision, Turner added.

10. Update on NWPPC Request for TMT Decision Rationale.

Discussion of this agenda item was deferred.

11. Next TMT Meeting Date.

The next face-to-face meeting of the Technical Management Team was set for Wednesday, April 11, from 1 p.m. to 4 p.m. Another face-to-face meeting was set for April 18. Meeting notes prepared by Jeff Kuechle, BPA contractor.

TMT PARTICIPANT LIST

April 4, 2001

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