

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
June 13, 2001
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM
HOUSE
PORTLAND, OREGON**

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

COLUMBIA RIVER REGIONAL FORUM

FACILITATOR'S NOTES ON FUTURE ACTIONS

Facilitator: Richard Forester

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.

Hanford Reach/Vernita Bar Update:

Joe Lukas reported that operational restrictions ended June 10. Joe said he would like to start looking at a longer-term operational plan. This will be his last TMT Vernita Bar update report for the year. There will be over-all data review and analysis later in the year. Joe said he would post any worthy information on the TMT web page.

System Operations:

Regarding SOR # 2000-6, Priest Rapids flow was up after last week's meeting, although the 117,000 cfs weekly flow objective would not be met. Grand Coulee is also up from last week, at 1279.4. The operational plan for flow at PRD will be to operate close to 90 kcfs on weekdays for the rest of this week and next, and lower on weekends (below 70 kcfs). Robyn MacKay expressed that BPA wants to end the month with Grand Coulee at or above 1280. The salmon managers continued to express a strong preference for higher flows at Priest Rapids this week (as close to 117 kcfs as possible) and compensated by lower flows later this month. They recognized that last week's flow increase helped with out-migration. In response, MacKay's main point was that to be at 1280 or higher at Grand Coulee by the end of June they did not want to be in a position to catch up on the refill during the upcoming period of declining inflows and wanted to be assured of adequate operating room for the summer. Dworshak gained three feet in elevation last week, to 1581.9. See the web pages or minutes for other results.

The Regional Executives decided to continue spill at John Day and McNary until 600 mw/mos. is reached. COE expects this to occur around midnight Friday, June 15. The Execs will discuss summer spill on June 15th.

End of Spring Spill for Fish Passage:

Spill at the Lower-Columbia is approximately 23 mw/mos. per day until the 600 agreed upon by the Regional Execs. is met. Rudd asked TMT members how to end the program. CONSENSUS: Members decided to spill from seven to midnight on Friday June 15th, 2001 at John Day, with spill to also end at midnight at Bonneville and The Dalles. Spill at McNary ends Thursday.

Full Transport at McNary:

The COE proposed that full transport begin Saturday, June 16 due to the following events:

- An increase in sub-yearling fish moving through the project
- A drop in flows beginning this weekend
- An increase in water temperatures
- The spill program ending

TMT members were asked for their thoughts, and no opposition was stated

ACTION: Full transport at McNary will begin June 16.

Water Temperature Modeling at Dworshak:

Christine Mallette (Oregon) asked to review the modeling scenarios at Dworshak. Dick Cassidy responded:

1. 1977 flow conditions
2. 1977 hydrological conditions, 1994 meteorological conditions
3. Dworshak at 10,000 cfs from July through September
4. Variable flows for the summer (three scenario's were discussed)

Kyle Martin (CRITFC) introduced a suggested revision of August flows in scenario #3 (11,11,8.5, 8, 7) There was a discussion as to whether scenario two is most likely (realistic). The Corps stated that DWR powerhouse capacity was closer to 10 kcfs rather than the 11 kcfs in the model. The August scenario was changed to 10,10,10,8,7 to be more consistent with DWR operation without spill. There was no dissent expressed by TMT members or CRITFC to this change. It was agreed that MASS-1 and EPA runs should cover the same scenarios for comparison purposes, even though there were some different weather inputs in each run. It was requested that both models be run using scenario # 3 next and that those results be available for the 20 June TMT meeting.

ACTION: COE will contact EPA with the alterations and ask that they use the same run for next week.

Lower Granite Removable Spillway Weir (RSW):

The RSW will come from Vancouver to Swan Island and float to Lower Granite beginning tomorrow and ending the 18th or 19th of June. It will take three weeks to install, during which time Unit 6 won't be working. It will require 6 kcfs spill over several weeks to see if it works. One request is that it is delayed until mid-August. This issue will be discussed at the face-to-face meeting.

Next Meeting June 20, 9-12:

Agenda items are:

- Water temperature results
- System operations update, requests, and development

- Chum report – Jim Nielson
- Guidelines from Walla Walla district on water temps.
- WMP review and revision
- TMT guidelines review and revision
- Facilitation evaluations

***Comments on the last three agenda items are to be sent to Cindy or Rudd by Friday!

***Cathy Hlebechuk will chair next week's meeting.

***Members present agreed on meeting Tuesday, July 3 from 1-4 pm due to the holiday. Put it on your calendars!

1. Greeting and Introductions

The June 13 Technical Management Team conference call, held at the Customs House in Portland, Oregon, was chaired by Rudd Turner of the Corps and facilitated by Richard Forester. 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.

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

2. Hanford Reach Update.

Joe Lukas reported that, for the week of June 4-11, average flow at Priest Rapids Dam was 97 Kcfs, the highest weekly average flow of the year. An 80 Kcfs flow fluctuation band was in effect last week. Hourly flows peaked at about 140 Kcfs, with low flows in the 60 Kcfs range. Monitoring last week showed the lowest number of fish since the 2001 Hanford stranding protection operation began; field crews sampled 40 random sites and found one fall chinook. Index seining showed the same trend, said Lukas; crews sampled only 588 fish, average size 48.8 mm.

We are now at the end of the emergence period and the Hanford stranding protection period, Lukas said; on June 10, we reached 400 CTUs post-emergence, so June 10 was the last day of operational restrictions. It was agreed that, once the final written 2001 Hanford Stranding report is available, the TMT will review the Hanford protection operation for the year. Jim Nielsen observed that, in all likelihood, 2001 will be a year of heavy mortality. One positive is that we should be able to gain a large amount of information about how to operate more effectively in low-water years, Pat McGrane observed. Lukas agreed, saying that, after five years of monitoring, it should be possible to craft a longer-term Hanford reach operating plan for next year. Lukas added that this will be his last Hanford stranding report of the year, unless special questions arise.

3. Review of System Operation, Including Mid-Columbia Flows and Fish Migration.

Turner reminded the TMT that last week, in response to SOR 2001-6, the action agencies agreed to provide minimum weekend flows of 70 Kcfs and minimum weekday flows of 90 Kcfs at Priest Rapids, with the understanding that they would attempt to keep flows higher. The action agencies also made it clear that they would be balancing the higher flows at Priest Rapids against the need to achieve an elevation of at least 1280 feet at Grand Coulee on June 30, Turner said; the salmon managers also expressed a desire to have Grand Coulee somewhat higher than elevation 1280 on June 30, if feasible, to provide some operational flexibility this summer. McGrane said that, in the six days since the last TMT meeting, day-average flow at Priest Rapids was 102 Kcfs and that, for four of the six days, the action agencies were able to provide flows that came pretty close to the requested 117 Kcfs at that project. Current Grand Coulee elevation is 1279.4, 1.4 feet higher than last week. McGrane explained that it was necessary to draft Grand Coulee when Priest Rapids flows exceeded 100 Kcfs; we were then able to refill Grand Coulee somewhat over the weekend, he said.

At Hungry Horse, said McGrane, current elevation 3533.5, up four feet from last week. We're still looking at a 50-50 chance to fill the last 6 feet to the June 30 target elevation of 3540 feet, said McGrane; whether or not that target is achieved will depend on whether or not we have to increase project outflow in response to any lightning storms. McGrane reported that the decision has been made not to alter the Hungry Horse rampdown rate following a lightning incident; the Montana Department of Fish Wildlife and Parks and the Fish and Wildlife Service both thought it was more important to protect the river than it was to retain storage water in Hungry Horse, McGrane said.

Elsewhere, all of the Reclamation projects are drafting for irrigation, McGrane said; on June 9, the Snake ran dry below Milner. Idaho Power is required to provide a minimum flow of 200 cfs below Milner if that water is available, said McGrane; however, at this point, Idaho Power has used up its water right, because they're been on 200 cfs for most of the year. I'm postulating, said McGrane, but it appears that IPC has been unable to acquire any water from the rental pool, so under the terms of their FERC license, they are allowed to let the Snake run dry. McGrane added that Idaho water law gives preference to agricultural users, so it will be extremely difficult for Idaho Power to acquire water for this use. McGrane added that flow augmentation from the Payette is now finished for the year; there will be no more Reclamation water coming out of the Snake River this summer, unless some additional sources of water are found.

Turner noted that Dworshak is currently at elevation 1581.9 feet, with outflows of 1.7 Kcfs and inflows of 6 Kcfs-7 Kcfs over the past week. The project filled three feet over the past week, he said, but the rate of fill is slowing. Current Libby elevation is 2420.4 feet, with 17 Kcfs inflow and minimum discharge out. Libby filled 4.3 feet last week. Albeni Falls, at the Hope Gauge, was at elevation 2060.7 feet as of midnight last night, Turner said, with outflow 20 Kcfs and inflow, yesterday, of 30.3 Kcfs. Albeni Falls filled eight-tenths of a foot last week. Turner added that yesterday's day-average flow at Lower Granite was 39.4 Kcfs; day-average outflows at McNary have varied between 111 Kcfs and 166 Kcfs over the past week. The 166.3 Kcfs recorded yesterday was the highest day-average of the year at that project. Day-average Bonneville flows have also

varied between 117 Kcfs and 166 Kcfs over the past week, said Turner; the peak 2001 flow at that project was 180 Kcfs in mid-May.

We continue to spill 50 Kcfs around the clock at Bonneville, 30 Kcfs every other night at McNary, 30% of total river flow around the clock at The Dalles, and 30 % of total river flow at John Day during nighttime hours, Turner said. To date, the 2001 spill program has used the equivalent of 538.6 MW-months; at the current rate of about 23.8 MW-months per day, we will hit the ceiling of 600 MW-months on the night of Friday, June 15, he said. Turner noted that the June final water supply forecast is now out; it declined slightly, to 55.5 MAF at The Dalles, 52% of normal, for the January-July period.

In terms of the planned operation, said Robyn MacKay, it looks as though we will see weekday flows at Priest Rapids on the order of 90 Kcfs, with flows lower than that on the weekend. That should continue into next week as well, said MacKay; Grand Coulee is almost to elevation 1280. The action agencies would like to keep Grand Coulee at that elevation, essentially passing inflow and filling a little on the weekends so that the project does not draft. The goal is to be at elevation 1281 or 1282 by June 30, MacKay said.

In response to a question, MacKay said the action agencies do not intend to draft Grand Coulee heavily, then have to refill that project during the latter part of June. My guess is that weekend flows at Priest Rapids will have to dip down below the 70 Kcfs range to get much fill, MacKay added, as the hydrograph continues to decline, flows overall at Priest Rapids will be coming down. In response to a question from Nielsen, MacKay said BPA does not intend to meet the requested day-average flow of 117 Kcfs at Priest Rapids for the remainder of this week, because doing so would result in a daily draft of three-quarters of a foot at Grand Coulee. If we do that, said MacKay, we don't think Grand Coulee will be at elevation 1280 on June 30, and again, we don't want to dig a hole now, and have to fill that project while flows are on the decline.

The salmon managers would prefer higher flows this week, and lower flows toward the end of the month, said Chris Ross. And they have been higher, in the 90 Kcfs range, MacKay replied. We asked for 117 Kcfs this week, said Nielsen. We didn't agree to that, MacKay replied; at this point, we're doing the best we can. What's the problem with delaying refill at Grand Coulee until the first week in July? Kyle Martin asked. The principals set out by the federal agencies said fill Grand Coulee to elevation 1280 by June 30, MacKay replied; summer flows were pretty high on the list as well.

The salmon managers consider 1280 to be a critical elevation on June 30, said Christine Mallette; where we differ is how we get there. Our preference would be to keep flows higher this week, recognizing that flows will drop sharply on June 18, she said. And were have been able to maintain flows higher than the 90 Kcfs minimum during the week, said MacKay, particularly last week. And that was an excellent operation, by the way, said Ross – we did see a positive biological response, in terms of increased collections at McNary. Basically, we would like to keep flows as high as possible this week, recognizing that flows will be lower as Grand Coulee fills the rest of the way during the latter part of June, said Nielsen.

What we're hoping the salmon managers will appreciate is that the flows over the past week have been a little different shape than those requested, higher than the week-average requested in the SOR for last week, slightly lower than the week-average requested for this week, Turner said. Our hope is that the intent of the SOR has been met, with flows in excess of 100 Kcfs for several days at Priest Rapids, and a corresponding biological benefit in terms of fish movement, Turner said. While flows are declining somewhat this week, he added, our hope is that the intent of the SOR has been met.

Is there any chance of Grand Coulee ending June above elevation 1280? Turner asked. Right now, we're shooting to get to 1280 and hold it, MacKay replied; however, we will need some operating space going into summer. If we can get a few feet over 1280, that would be fine, although from Reclamation's standpoint, that extra space isn't critical, said McGrane – achieving 1280 feet on June 30 would meet our needs. For reliability purposes in such a low water year, we're going to need to have some room at Grand Coulee, at least three feet, said MacKay. Does that mean elevation 1281, or 1283? Nielsen asked. Reclamation would like to keep Grand Coulee near elevation 1280 for most of the summer, and hit 1278 on August 31, said McGrane – ideally, we would like to stay above 1280 through the summer, if possible, for recreational and power needs.

My sense was that the majority of the salmon managers would like to see at least some summer flow augmentation from Grand Coulee, said McGrane; at last week's meeting, we talked about achieving elevation 1283.5 feet at Grand Coulee on June 30. Only if we had the water to do so and meet the requested flow targets at Priest Rapids, Nielsen replied – it now appears that we don't have quite as much water to work with as we thought, and the salmon managers' primary goal is to keep flows as high as possible through the end of this week.

So the planned operation is? Nielsen asked. To pass inflow at Grand Coulee during the week, and opportunistically store water over the weekend if possible, given BPA's load situation, McGrane replied. There is not a great deal of confidence at Reclamation or at BPA that we will be able to be much above elevation 1280 at Grand Coulee on June 30, he added – it will be weather-driven, and if it gets hot the last two weeks in June, chances are we won't be able to store much, if at all.

And what will the Albeni Falls operation be, once it refills on June 30 – what do you expect Albeni Falls discharge to be at that point? Ross asked. Currently, Albeni Falls is releasing 20 Kcfs, said Cathy Hlebechuk; I would expect that, once the project starts passing inflow, we will see about 10 Kcfs outflow.

We would like to craft an operation that will run through June 24 at today's meeting, said Turner. One further question, said Nielsen – if we're looking at 90 Kcfs during the week, 80% of that operation would be about 70 Kcfs, but that's not what Robyn said was going to happen. If we want to fill Grand Coulee over the weekend, MacKay replied, flows over the weekend will likely be closer to 50-60 Kcfs at Priest Rapids. Essentially, she said, we can't sustain this operation indefinitely.

We would like to see weekend flows of closer to 70 Kcfs, said Howard Schaller – I want to make it real clear that that is the salmon managers’ recommendation. Two weeks ago, you said 60 Kcfs would be acceptable, said Turner – what has changed? Actually, what we said was that 65 Kcfs would be an acceptable minimum, while we would prefer closer to 70 Kcfs, Schaller replied. MacKay observed that, in this inflow-driven year, operational flexibility is far more limited than usual.

4. End of Spring Spill for Fish Passage.

Turner reiterated that spill continues at all four Lower Columbia projects; however, the 600 MW-month spill allocation is almost used up. We will be at 606 MW-months if spill continues until midnight this Friday, June 15, Turner said. McNary spill would end after the Thursday night spill period; John Day would receive six hours of spill on Friday night. The Corps would be interested to hear any alternative operations the TMT would care to suggest, he said; however, at this point, we’re planning to continue the current spill operation until the spill volume is exhausted on Friday night.

MacKay suggested that, since Friday is the longest day of the year, it might make sense to start spill two hours later, at 8 p.m., and end it at midnight to achieve a volume of exactly 600 MW-months. Peak passage at John Day tends to occur at about 10 p.m., said Ross; I think that, last year, as the days got longer, we did start spill at 7 p.m. Starting at 7 p.m. would be acceptable to NMFS, Ross said, as long as spill can continue until midnight.

This suggested operation would be for Friday night only? Mallette asked. Yes, Turner replied. That would be acceptable to Oregon, said Mallette. And spill would also continue until midnight at The Dalles and Bonneville Dams? Ross asked. Correct, Turner replied. That will likely put us over 600 MW-months, said MacKay, but I’m not going to get too excited about that – it’s not an exact science, given the variation in flow and spill volume at The Dalles.

Has there been any discussion of the possibility of providing at least some summer spill? Mallette asked. There has, Turner replied; it will be discussed further at this Friday’s Executives meeting. However, for the record, spring spill for fish passage will end this Friday night at midnight, Turner said.

5. Other.

A. Full Transport at McNary. Turner said that, given current flow, fish passage and water temperature information, the increase in subyearling chinook passage at McNary and the upcoming drop-off in flows at that project, the Corps’ opinion is that spring-like conditions are now at an end, and it is appropriate to begin full transport from McNary starting this Saturday, June 16. Barging would continue every other day from McNary, Turner said.

Ross agreed that events seem to be converging; we are on the upswing in subyearling passage, while flows are headed downward. After this weekend, it does appear that springlike conditions will be at an end, he said; the BiOp gives the TMT the flexibility to decide when to switch from spring to summer operations. Ross said June 16 sounds like a reasonable date on which to make this changeover, from NMFS' perspective. Nielsen said that, given circumstances this year, WDFW would not oppose that operation. Any objections to starting full transport from McNary this Saturday, June 16? Turner asked, No objections were raised at this time.

B. Dworshak Water Temperature Scenarios. Mallette said she wanted to be clear about who will be modeling the three Dworshak operational scenarios put forward by Paul Wagner at last week's TMT meeting, as well as what, exactly, is going to be modeled. Dick Cassidy replied that the first scenario the Corps asked Battelle to run was the actual 1977 flow conditions, to verify the accuracy of the model. Scenario 2 was 1977 flow data and 1994 meteorology. Scenario 3 had Dworshak releasing 10 Kcfs beginning July 1 and ending September 30. Under this scenario, said Cassidy, Dworshak would start the flow augmentation period at elevation 1575 and would draft to elevation 1475 feet by September 30. Turner clarified that this is not a recommended operation; it is simply a modeling scenario. Scenario 4, the CRITFC alternative, had Dworshak releasing variable flows – from July 1-15, 7 Kcfs outflow, from July 16-30, 8 Kcfs, from August 1-15, 10 Kcfs outflow, from August 16-31, 8 Kcfs, from September 1-15, 4.5 Kcfs, and from September 16-30, 1.5 Kcfs. Those numbers have since been updated, said Kyle Martin; we're now requesting slightly lower flows during July and a slightly-higher peak – 11 Kcfs – during August.

In response to a question, Cassidy said Battelle has run the three scenarios requested by Paul Wagner at the last TMT meeting, including Scenario 4, above. The Dworshak 1 scenario, under which Dworshak would release 14 Kcfs from July 8-22, is also being considered for modeling. In response to a question from Martin, Cassidy said the Corps has not yet run the latter scenario.

Mallette suggested that the Corps look at Scenario 2 as a more realistic Dworshak operation for 2001; she asked that the Corps model this scenario, in addition to Scenario 1. In response to a question from Ross, Cassidy said the Corps is running these scenarios through the MASS 1 model; Turner said his understanding is that NMFS was also going to ask EPA to run these scenarios using their temperature model.

We have two MASS 1 model runs left in the budget this year, said Cassidy. It would be interesting if we could compare the results for the CRITFC scenario from MASS 1 and the EPA model, said Martin.

The TMT devoted a few minutes of discussion to the question of which scenarios should be modeled by Battelle; Ross observed that, given the low water supply this summer, spill at Dworshak is unlikely to be an option; for that reason, Dworshak outflows of 14 Kcfs are not likely to be an option. For that reason, he said, Scenarios 2 and 3 are probably the most appropriate bookends for this year. After a few minutes of

further discussion, it was agreed that the Corps and EPA will model a slightly modified version of Scenario Dworshak 3 next with no spill at Dworshak, and will model Dworshak 2 after that.

C. Removable Spillway Weir at Lower Granite. Turner reported that the removable spillway weir began being towed upstream this morning. It will take four to five days to make the trip to Lower Granite, so it is expected to arrive at the project on June 18 or 19. It will take about three weeks to install the RSW in Spill Bay 1; during that period, Unit 6 will not operate, which, given current river flows, should not be a problem, Turner said. Project personnel would then like to operate the RSW for a period of several hours, likely during the latter part of August; that operation will require about 6 Kcfs spill, Turner said. He went through a few additional operations the operators would like to do in order to test the RSW's functionality this summer. The only special operation needed to accommodate this equipment this summer, however, is several hours at 6 Kcfs spill at some point in August, Turner said.

6. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, June 20; it was agreed that this will be a face-to-face meeting. Meeting notes prepared by Jeff Kuechle, BPA contractor.

TMT ATTENDANCE LIST

JUNE 13, 2001

Name	Affiliation
Ruth Abney	COE
Scott Boyd	COE
Mike Butchko	PowerX
Dick Cassidy	COE
Richard Forester	Facilitation Team
Russ George	Water Management Consultants Inc.
Richelle Harding	D. Rohr & Associates
Robin Harkless	Facilitation Team
Cindy Henriksen	COE
Cathy Hlebechuk	COE

Joe Lukas	Grant PUD
Robyn MacKay	BPA
Christine Mallette	ODFW
Kyle Martin	CRITFC
Doug Marx	Attorney, Lake Pend Oreille Idaho Club
Pat McGrane	Reclamation
Jim Nielsen	WDFW
Tony Norris	Reclamation
Mike O'Bryant	Columbia Basin Bulletin
Chris Ross	NMFS
Bill Rudolph	NW Fish Letter
Howard Schaller	USFWS
Rudd Turner	COE
Maria Van Houten	ENRON
Steve Wallace	PacifiCorp
Victoria Watkins	PYRA Energy Group