

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM MEETING NOTES

June 4, 2003

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

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

DRAFT

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Donna Silverberg

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.

Vernita Bar/Priest Rapids Update:

Chris Carlson reported on Priest Rapids operations for the previous two weeks. The information is also posted on the TMT web site. Kyle Martin provided a handout of hourly flows and inquired about fluctuations over the weekend. Chris explained the difficulty in avoiding fluctuating flows. The end of the Hanford Reach fry protection program is expected to end tomorrow, when the temperature units (TUs) reach 400. Today's report showed TUs at 357.

Fish Spill Status and Tracking:

Jim Adams reported 98 TDG exceedances in the Snake River over the last two weeks, mainly due to high flows during the freshet. The handout provided is also located on the TMT web site. Flows are expected to drop, which will minimize exceedances, in the next day or two. Paul Wagner reported on the effects of TDG exceedances on juvenile migrants, based on gas bubble monitoring done by the Fish Passage Center. At Little Goose (representative of TDG at Lower Granite), 7% of the studied fish had gas bubble trauma. 10% of the fish were effected at Lower Monumental (representative of TDG at Little Goose), and 1-2% were effected at Rock Island. Paul summarized that, from a fish perspective, the TDG exceedances are not a serious problem.

Dworshak Operations:

Rudd Turner reported on Dworshak operations over the last two weeks. There was a slight change in operations as agreed to at the last TMT meeting, due to high flows. The operation was as follows:

- 10 kcfs on 5/21 through 5/24;

- ramp down to 7 kcfs on 5/25;
- ramp down to minimum on 5/26 through today.

The current objective is to refill Dworshak by the end of June, which, according to COE forecast modeling, will occur with some water to spare. Kyle Martin said, according to his models, to expect lower than average precipitation in June, not higher. TMT members will continue to monitor the situation at Dworshak.

Spring Treaty Fishery:

Kyle Martin reported on two SOR's submitted after the 5/21 TMT meeting, one from CRITFC and one from the Yakama Nation, for spring treaty fisheries. Kyle provided a handout of compliance statistics for 2001 and 2002 with three different criteria (CRITFC 1' range, COE 1' range, and COE 1.5' range), using the COE's official gauge at Bonneville. No problems have been reported with any of the Spring fisheries this year. Kyle will update TMT on the number of fish caught this year when the information is available. Overall, Kyle reported that it was a "successful fishery". Rudd noted a correction, that the 5/29-5/31 1.5' range was 74-75.5', not 75-76.5', and that this change had been coordinated with CRITFC.

Sturgeon Operations:

Dave Wills reported that the SOR for sturgeon operations at Libby was still in rough draft. The specifics of the SOR are dependent on whether there is natural spawning of the sturgeon. An SOR is expected to be completed later this week. The COE expressed an interest in making a decision about Libby operations as soon as possible.

ACTION: A subgroup of NOAA, COE, USFWS, BPA, and Montana representatives will work to develop the SOR for sturgeon operations at Libby. Dave Wills will coordinate an 8:30 AM call tomorrow morning (6/5). [The sub-group agreed after TMT to convene the call at noon Thursday.] Rudd Turner will send an email with an attached SOR to TMT as soon as it is available. A conference call to discuss the SOR will be set up for TMT if necessary. He noted that 1-2 days lead time will be needed to operate any request that is put forth.

Current Conditions:

Reservoir operations: Rudd Turner and Tony Norris reported on operations at COE and BOR projects. The reservoirs are filling. Flows are beginning to recede in most places. Grand Coulee is at elevation 1277.6'.

Fish migration status: Paul Wagner reported that there was a good Spring Chinook run this year, for both adults and jacks. Most of the yearling Chinook were out of the system before the freshet arrived. Paul also reported high sub-yearling numbers this year. Steelhead numbers peaked during the additional flows over the last two weeks; they are now on their way out.

Water supply forecast: The June early bird forecast was distributed and is available on the TMT web site. Rudd reported that the June early bird is similar to the May final. The

June final should be available early next week. Rudd also provided an STP (single trace procedure) forecast for flows at Lower Granite, Priest Rapids, Bonneville and McNary.

ACTION: TMT needs further discussion on Dworshak operations. Ben Cope, EPA, has prepared model scenarios on Dworshak and will be asked to share them at the June 18 TMT meeting to aid in those discussions.

Other:

End of Spill: TMT discussed the end of spill date, which normally occurs on June 20. The group agreed to revisit this issue at the June 18 TMT meeting. If a decision needs to be made before that time, Paul Wagner will coordinate with TMT members.

Lower Granite RSW: Scott Boyd and Rudd Turner reported that due to debris problems, the RSW was opened at Lower Granite in order for it to pass. The COE then authorized a “debris removal operation” at Little Goose. Another special operation may have to be implemented further downstream to allow the debris to pass.

ACTION: Paul Wagner will initiate NOAA internal discussions on the Lower Granite RSW operations, considering fish passage/transport and gas level issues. He will report those discussions to Rudd Turner, who may then contact FPOM to coordinate on RSW operations. There will be an update on this at the next TMT meeting.

Lower Monumental Operation Changes: Rudd Turner shared photographs of Lower Monumental during high spill, showing water in areas that it is not supposed to be. As a result, operators have not been able to access certain parts of the dam and there have been a number of stranded fish observed. The COE restricted openings at end bays after coordinating the operation with NOAA. There will be an update on this at the next TMT meeting.

Public Website Change: Rudd Turner reported that the COE website will no longer display real time daily and hourly reports of generation data. Access to generation information will be available the following month. This action was requested by BPA due to increased power market competition. The COE is not required by statute or regulation to post real time generation data. This action will be effective on Monday, June 9.

Next Meeting, June 18, 9am-noon:

Action Items:

- Dworshak long-range operations; EPA runs
- End of Spill
- Sturgeon Operations
- Lower Monumental Update
- Current Conditions
- SORs
- Other

Meeting Minutes

1. Greeting and Introductions

The June 4 Technical Management Team meeting 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.

2. Vernita Bar/Priest Rapids Update.

Chris Carlson said that, for the week ending June 25, the average flow at Priest Rapids Dam was 147.5 Kcfs; for the week, the flow band ranged between 40 Kcfs and 60 Kcfs. The bands were significantly exceeded on May 22 and May 25, and slightly exceeded on May 23 and 24. Index seining took place at a total of 24 sites during the week; field personnel found a total of 22 subyearling chinook mortalities for the week. By week's end, the fish had accumulated 273 Celsius temperature units (CTUs).

For the week ending June 1, average flow at Priest Rapids was 139.3 Kcfs; the flow band ranged between 30 Kcfs and 150 Kcfs. The bands were significantly exceeded on May 29 and exceeded to a lesser extent on May 27, 28 and 31. Index seining occurred at a total of 13 sites during the week; field personnel found a total of two subyearling chinook mortalities. By the end of the week, the fish had accumulated 357 CTUs. We expect to reach 400 temperature units tomorrow, said Carlson, at which point the Hanford reach fish protection operation will end.

Kyle Martin noted that, late last Friday afternoon, Priest Rapids outflow went from 170 Kcfs+ to about 125 Kcfs. Was that just a normal drop going into the weekend? Martin asked. It occurred because of reduced power demand, Carlson replied. So this is the last Hanford reach report of the spring? Silverberg asked. Correct, Carlson replied.

3. Fish Spill Status and Tracking.

Jim Adams reported that, for the period of May 20-June 3, there were numerous (98) exceedences of the state TDG standards throughout the system due to the start of the spring freshet. Virtually all of these exceedences were Type 1, due to high runoff flows and flood control efforts. Adams noted that peak flows in the Snake are much higher this year than they were last year, up to 208 Kcfs. He added that there have been a number of exceedences of 125% TDG or higher, the highest being 133.7% at the Lower Granite tailwater on May 31. Flows in the Snake are now receding, he added, and uncontrolled spill should end by tomorrow.

Margaret Filardo said that, with respect to gas bubble trauma monitoring and the effects of this uncontrolled spill on juvenile outmigrants, 10% of the fish sampled yesterday at Lower Monumental showed signs of GBT. On May 28, 7% of the fish sampled at Little Goose Dam showed signs of GBT. Overall, said Paul Wagner, GBT has

not been observed in any of the fish sampled at Bonneville or Lower Granite to date; none of the fish sampled at Little Goose, Lower Monumental and Rock Island Dams have showed GBT signs higher than Level 1, the lowest level of trauma. Overall, said Wagner, I see little cause for concern, from a biological perspective. It appears that all of our millions of dollars of investment in flow deflectors and other gas abatement measures is now paying dividends, Scott Bettin observed.

Again, with Lower Snake flows dropping and involuntary spill levels becoming lower, we expect to return to TDG levels that are within the variance limits within a day or so, said Turner; this should be even less of a concern in the future.

4. Dworshak Operations Update.

Turner said that, at the last TMT meeting, there was extensive discussion of the 2003 rampdown operation at Dworshak. As per that discussion, we reduced Dworshak outflow to 10 Kcfs on May 21, he said, held that through May 24, and went to 7 Kcfs on May 25. With the beginning of the Snake River freshet, flows then increased to 140 Kcfs+ at Lower Granite, so the Corps decided to reduce to minimum outflow at Dworshak one day early, Turner said. The project has been at minimum outflow since May 26, he said. Dworshak's elevation, as of midnight last night, was 1584.7 feet, filling two feet per day, with current inflows of 16.7 Kcfs, down from a peak of 22 Kcfs last week, he added. Dworshak has filled 14 feet over the past two weeks. We plan to reach elevation 1600 at Dworshak by June 30, Turner said.

Turner drew the group's attention to the Corps' most recent volume histograms, based on Dworshak's June final water supply forecast. He noted that there may be up to 111 kaf available for further flow augmentation from Dworshak during the month of June; the June final forecast for that project increased slightly (1%) over the May final WSF. Martin said his forecast indicates below-average precipitation during the month of June, so this additional volume may be on paper only.

Bonneville has referred numerous times to the fact that the Dworshak flow augmentation operation was costing ratepayers \$1 million per month, said Wagner – is that still accurate? Yes, Bettin replied – given our preference, we would have stored some of that water and brought it out later, once the recession begins.

5. Summary of Spring Treaty Fishery.

Martin noted that two additional spring treaty fisheries have occurred since the last TMT meeting, one of which was requested by the Yakama Nation. He said that, under the criteria requested by CRITFC, Bonneville pool was in compliance only 13% of the time on an hourly basis; if the Corps' 1.5-foot operating range is applied, Bonneville pool was in compliance 53% of the time. The Dalles pool was in compliance with CRITFC's requested criteria 59% of the time; John Day pool, 35% of the time. In talking informally to a few of our fishers, said Martin, no major problems have been reported this year. He said that he will talk to personnel from the Tribal Enforcement Office to see if they have heard of any additional problems and will report back at the next TMT meeting. Martin also provided re-calculated summaries of compliance during the 2002

and 2001 treaty fisheries, revised based on the forebay gage information Turner provided at the last TMT meeting; he noted that these re-calculated tables (available via hotlink from today's agenda) should now be considered a part of the official TMT record.

6. Current System Conditions.

Turner reported that Bonneville outflow was 316 Kcfs yesterday, and 285 Kcfs this morning. Peak flows of 353 Kcfs occurred on June 1, Turner said. At McNary, day-average flow was 294.5 Kcfs yesterday; the project saw two days of 353 Kcfs on May 30-31. McNary spilled 120 Kcfs on a day-average yesterday, he said. Lower Granite flows are now receding; they averaged 149.1 Kcfs yesterday, down from a peak of 208 Kcfs on May 31. TDG levels are going down at all of the projects on the Lower Snake. The current Dworshak elevation is 1584.7 feet, 16 feet from full; the project is filling two feet per day, with inflows of 16.7 Kcfs.

Turner said Libby inflows continue to run 50 Kcfs+ with day-average outflow of 15 Kcfs; Libby has filled 22 feet over the past two weeks. Albeni Falls is at elevation 2059.7 feet and filling; the project has filled four feet in the past two weeks. We expect to hit 2062 feet by the end of June, possibly earlier, he said. Tony Norris said Grand Coulee elevation is currently 1277.6 feet; Hungry Horse; 3545.5 feet and filling 1.5-2 feet per day. We plan to reduce outflow from that project by one unit next week, although we may need to come back up in order to avoid fill and spill, he said. There are currently three units available at that project, he said, with one unit down for annual maintenance.

Moving on to the current status of the adult spring chinook migration, Wagner said that, at Bonneville, the count to date is just over 201,000 fish, second only to the 2001 and 2002 counts. 2003 jack counts, an indication of future run strength, show 15,000+, about the same as the 2001 count and second only to the 2000 count of 22,000 jacks.

With respect to the status of the juvenile fish migration, Wagner said combined yearling chinook indices at Lower Granite peaked before the freshet began; the peak index of 61,900 occurred on May 27. The indices at Little Goose, however, are continuing to increase; indices also continue to be strong at the Lower Columbia projects. With respect to subyearling chinook, Wagner said the indices continue to increase at Lower Granite and McNary. Steelhead indices increased dramatically at Lower Granite in response to the onset of the freshet, and are now decreasing.

Is there a chance that we could reach the 95% passage point before June 20? Bettin asked. The Fish Passage Center is predicting we will reach the 95% point of the run by June 17, Wagner replied, but there are a lot of questions about the value of transporting such small fish. We will discuss the end of spill at the three Snake River collector projects at the June 18 TMT meeting, Wagner said; we may choose to end spill at that time, or wait until the planning date of 6 a.m. on June 20. We'll put that on the agenda for next TMT meeting, Silverberg said.

The June early-bird water supply forecast is now available, Turner said; it is pretty close to the May final forecast – 89.3 MAF at The Dalles, 83% of normal, down

from 90.2 MAF in the May final. The June early-bird forecast shows 17.7 MAF at Lower Granite, again down slightly from the May final. The Dworshak forecast increased by about 1% over the May final. We expect to have the June final forecast by early next week, Turner said; overall, we don't expect any significant changes compared to the May final forecast. Turner also drew the group's attention to the most recent STP run; he noted that it is getting closer to the Water Supply Forecast. He said the action agencies believe flows have now peaked in the Snake River; Lower Columbia flows may also have peaked last weekend, but there is still a significant residual volume in that basin, so flows are not expected to recede as quickly at the Columbia River projects as they will at the Lower Snake projects. Turner suggested that a discussion of the long-range Dworshak operation be placed on the agenda for the June 18 TMT meeting; it was so agreed.

7. Request for Sturgeon Operations at Libby.

David Wills said he has a preliminary draft of the Fish and Wildlife Service's sturgeon SOR; this draft is not yet ready for formal discussion, however. The basic premise of the SOR is still the same – the first choice would be to use the 800 kaf to enhance natural spawning, but there is no indication, as yet, whether or not natural spawning has occurred.

When will you know? Turner asked. What they're looking for as a trigger to indicate successful natural spawning is an abrupt movement of these fish downstream – five to 20 miles, Wills replied. If there is consensus that natural spawning has occurred, we will contact the Corps to request that the flows begin; we're trying to work that language into the SOR. If natural spawning does not occur, he said, we will request that the 800 kaf be released later in the season, for the benefit of the outplanted fry.

Wills suggested that a TMT subgroup, including himself, Wagner, Chris Ross, Bettin, a Montana representative and a Corps representative, meet later this week to flesh out the sturgeon SOR. Turner noted that Libby outflow has now been increased to 15 Kcfs, and will likely need to go higher for flood control and to avoid filling and spilling. It would help if we could have an idea of what the sturgeon needs are going to be as soon as possible, he said, to allow us to operate Libby as smoothly as possible. If the project reaches full while we still have 50 Kcfs inflow, as we do currently, that would be a major problem, Turner said.

So will the TMT members receive an email? Silverberg asked. We will send out the SOR as soon as it's available, Wills replied. And at that point, there could be a conference call, if conditions warrant? Silverberg asked. Correct, was the reply.

Currently, we're planning to hold 15 Kcfs for another day, then ramp up to 22 Kcfs Libby outflow by June 9, Turner said. We would then hold that flow through June 26, then ramp down to 16 Kcfs. We are watching inflows to the reservoir, Cathy Hlebechuk added; if inflows increase more rapidly than expected, we may need to ramp up sooner. Libby elevation was 2442.5 feet as of midnight last night, 16 feet from full, Turner added.

8. New System Operational Requests.

No new SORs were submitted prior to today's meeting.

9. Recommended Operations.

Recommended operations were summarized during a previous agenda item.

10. Other.

A. Changes to Public Website. Turner said there a number of FTP websites on which hourly generation data at the FCRPS projects is made available; at BPA's request, we're going to be blanking that information out, he said. The columns that will be blanked out include gross generation, station service megawatts, unit status and surplus generation data. On the 7th of next month, we will put the information up for the previous month, he said. Therefore, it will become available, just not in real time. The reason for the change is the increasingly competitive nature of the energy business, Turner said. VE, VC and VU also will be deleted from the data query function, Turner said; this change will be in effect beginning Monday, June 9.

B. Lower Granite RSW Operations. Turner noted that currently a large volume of debris is moving down the Snake River; this could have an impact on the operation of the Lower Granite RSW. Scott Boyd said the RSW was operated for a couple of hours last week to pass debris; another debris-passage operation involving the RSW and full-flow operation of Spill Bay 4 at Lower Granite is taking place today. Turner said field personnel are concerned about the number of debris-related injuries that are being seen in juvenile outmigrants; the Corps subsequently authorized spill through Little Goose Spill Bay 2 to help pass the debris downstream last night. Most of that debris is now on its way down to Lower Monumental, Turner said. The problem is that some of the Snake River tributaries have seen higher flows this year than they have for the past several years, Turner said; that's the likely source of that debris.

The group also discussed the continuing operation of the Lower Granite RSW to reduce TDG levels below that project; our preference would be to operate the RSW plus training spill, Bettin said. In my opinion, said Turner, TMT's expertise is more on the system, rather than the individual project, level; we should probably ask FPOM to develop a recommendation as to the optimum Lower Granite operation. Our interest is to keep gas levels as low as possible, said Wagner; there is some question about whether we want to move more fish in-river, or transport them. So is there more coordination that needs to occur? Silverberg asked. Yes, Bettin replied, if we want to make changes to the Fish Passage Plan. There is general agreement that FPOM is the group through which to coordinate that decision, Wagner said. We will frame up a question for FPOM laying out our objectives for the last two weeks of spill, Bettin said. We'll talk about that at NMFS and get back to you later today, Wagner said.

C. Changes at Lower Monumental. Turner put up a series of photos taken at Lower Monumental last Friday, showing the spill pattern with the new end-bay flow deflectors in place. He noted that water has been splashing up onto the project's tailrace

access ramps; at least two adult fish have been found on the ramps since spill began. As a result, Turner said, we have instructed the project to restrict spill somewhat to avoid that splashing effect. What we're finding is that at spills of 70 Kcfs or above, we're seeing that splashing effect; we've now gone to a two-stop restriction at the end bays, with the remaining spill divided equally among the other bays, he said. What we're likely going to need to do is construct walls along the spillway to keep the water in the river, Bettin said. We may also need to go to a crown spill pattern, with limited spill on the end bays and the majority of spill in the center bays, Turner said, which could result in additional TDG issues downstream. Turner added that the current end-bay spill restriction is a short-term fix only. It was agreed to revisit this issue at the next TMT meeting.

11. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, June 18. Meeting summary prepared by Jeff Kuechle, BPA contractor.

TMT PARTICIPANT LIST

JUNE 4, 2003

Name	Affiliation
Rudd Turner	COE
Donna Silverberg	Facilitation Team
Paul Wagner	NOAA Fisheries
Scott Bettin	BPA
Tony Norris	USBR
Nick Lane	BPA
Jim Adams	COE
Steven Wallace	PacifiCorp
Scott Boyd	COE
Mary Karen Scullion	COE
Margaret Filardo	FPC
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