

**TECHNICAL MANAGEMENT TEAM  
MEETING NOTES  
June 20, 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: 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.

Current System Conditions:

Cathy Hlebechuk chaired today's meeting and reported on COE projects. Dworshak is expected to be at 1589 by the end of the month. Tony Norris reported on BOR projects. Chris Ross reported on fish migration. The group focused on low steelhead numbers at McNary. In reviewing the index the group identified the need to adjust Bonneville index for spill. Spring spill ended Friday, June 15 at midnight with total 599 mw months expended. The system continues to run under a power emergency; no SOR's were brought to the meeting. At their 29 June meeting, the Federal Executives are scheduled to discuss whether or not summer spill shall take place this year.

ACTION: Update Bonneville fish index numbers for spill and report next Wednesday.

Recommended Operations:

Libby is set to go to 6kcf, on July 1, 2001, unless there is contrary indication. This is an agenda item for next week's conference call. Decisions regarding summer spill will be made at the June 29<sup>th</sup> Regional Executives meeting. Grand Coulee is at 1282 elevation and expects to hold there. Lower Granite will have repairs done June 25 and a request has been put in to shape flows in the evening; this will be monitored and more discussion will occur as the date approaches.

ACTION: Decision on Libby operations at next weeks TMT conference call.

GUIDELINES FOR TMT AND TMT 2001 WATER MANAGEMENT PLAN Discussion:

Comments regarding TMT guidelines, and the Water Management Plan should be sent to Cathy by Friday and they will be finalized next week. Changes from last week's comments have been made and posted on the web page. Richard Forester submitted Donna Silverberg's proposed changes to the Facilitator's portion of said guidelines (Section V. Operating Procedures, f) Meeting Facilitation, page 5). These proposed changes reflect some of the evaluation comments and will also be posted.

ACTION: Post of the proposed changes on the web and adopt the amended TMT process guidelines and Water Management Plan at the next TMT meeting.

Chum Salmon Genetics:

Jim Nielson handed out this report identifying different genetic strains of Chum and said to contact Joe Lukas with any questions.

McNary Warm Temperature Operations - FPOM Discussions:

COE and BPA are in the process of coordination on this operation. Since summer spill is not now authorized, BPA identified other hydraulic operations that impact temperatures. There can be as much a 4-degree difference from south side of the dam to the north. Wind can also affect temperatures. Switching unit operation priorities to 14-1 (from 1-14) allows a cooler water mix to be created. Those 14 to 1 priority operations will start now in order to take advantage of the temperature differential and weekly updates will be provided (This will become a weekly agenda item). Christine Mallette requested information on the location of the thermometer used to run this operation.

ACTION: Change priority operations at McNary from unit 1 to unit 14, as required to provide cooler water outflow and provide weekly updates.

Water Temperature Modeling:

Chris Ross shared EPA's model runs with the group. All the model runs start with a temperature spike above 20 C in early July and there was a discussion as to how to avoid that. Water temperatures at Lower Granite have to be monitored carefully so that a timely decision regarding Dworshak can be made, because given the current water levels temperatures can rise rapidly. It was agreed that a two-day running average above 64 F at the forebay should trigger an emergency TMT conference call. The group reaffirmed that for the Nez Perce model run it had agreed to reduce than number to 10kcfs as a more likely scenario since any flow over 10 kcfs at Dworshak would be considered spill and would require decisions by the Execs to allow spill and an SOR approval. There remains one more MASS-1 run to be made, whose parameters will be decided after the report from the Lewiston meting (convened by CRIFTIC). It was also agreed that in terms of timeliness, EPA and MASS-1 runs were producing similar enough results that reliance could be placed on the more timely model run. The Bechtel contract for MASS-1 allows a two week turn around.

ACTION: Tom Lorz will inquire about Lewiston discussions and report back to TMT members. COE will call an emergency TMT conference if Lower Granite forebay running average temperatures exceed 64F for two days.

Conference Call June 27, 9 am:

Agenda items are:

- Lewiston update/ Dworshak modeling
- Fish run graphs adjusted for spill at BON B Chris Ross
- Libby operations
- McNary Update
- Lower Granite Temperature update
- Finalize TMT guidelines and 2001 Water Management Plan
- July 3 Agenda

July 3, 1-4 Meeting (possible Conference Call) Agenda items are:

Continuation of Dworshak/water temperature discussions

Summer Spill Discussion/ Report on Execs decisions  
Operational Updates

***1. Greeting and Introductions***

The June 20 Technical Management Team conference call, held at the Customs House in Portland, Oregon, was chaired by Cathy Hlebechuk 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.

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

***2. Current System Conditions.***

Hlebechuk reported that Libby elevation was 2424.5 feet as of midnight last night, 14.5 feet below the June 30 target. Libby is still on minimum outflow, 4 Kcfs; outflow will be increased to a minimum of 6 Kcfs in July and August for bull trout spawning and incubation. The current Albeni Falls elevation is 2061.74; outflow from that project was 22 Kcfs yesterday. Upstream of Albeni Falls, Kerr outflow is increasing from 9.8 Kcfs to 12.7 Kcfs at a rate of 500 cfs per day. Average Priest Rapids discharge last week was 90 Kcfs, Hlebechuk said. Dworshak is still on minimum outflow of 1.4 Kcfs, project elevation was 1584.8 feet as of midnight last night, 4.8 feet above the June 30 target and filling about three-tenths of a foot per day. We're now anticipating that Dworshak will reach elevation 1589 by June 30, Hlebechuk said. At Lower Granite, the average flow was 39 Kcfs last week, with day-averages ranging from 37 Kcfs to 42 Kcfs. Average flow last week at McNary was 132 Kcfs, with day-averages of between 111 Kcfs and 166 Kcfs. At Bonneville, last week's average flow was 140 Kcfs, with day-averages ranging between 117 Kcfs and 166 Kcfs.

Tony Norris reported that Grand Coulee is now at elevation 1282.2 feet, two feet above the project's end-of-June target. Flows are expected to be higher next week, said Scott Bettin; we plan to maintain this elevation through the end of the month. Norris added that the current Hungry Horse elevation is 3537 feet.

Bettin said there is no change to the power system status; we're still meeting load, and everything looks OK so far, he said.

With respect to the status of the fish migration, Chris Ross said combined yearling chinook indices at Lower Granite have dropped to 400-500 per day; the indices have also dropped off at McNary, from about 11,000 per day last week to about 5,000 per day currently. The yearling chinook index at John Day is now around 4,000 fish per day. With respect to subyearlings, at Lower Granite, we're now seeing quite a few Lions Ferry fish, Ross said – about 10,000 per day. Many of those fish have also begun to arrive at Little Goose. Wild fish numbers are still very low; he said; only eight wild fish have arrived to date at Lower Granite. At McNary, we saw a peak of about 100,000 yearling chinook per day a week ago; the indices at

that project are now down to about 25,000 per day. Coho bumped up to 22,000 a week ago at Lower Granite, Ross said; we're now seeing a few thousand per day.

Moving on to cumulative passage index information, Ross said steelhead collections at McNary continue to be well below expectations. Mid-Columbia conditions undoubtedly provide part of the explanation, Jim Nielsen observed. Yearling chinook started to arrive late, but have since begun to catch up, said Ross. He noted that these are expected numbers, not actual numbers, based on the number of fish expected given what the salmon managers knew would be coming down through the system, this year. Yearling chinook at Bonneville Dam have exceeded expectations, probably because of the large number of hatchery fish released into Bonneville pool, Ross said.

With respect to subyearling passage at McNary, said Ross, we're in the first inning. Moving on to adults, he said the spring chinook run totaled more than 391,000 adult fish past Bonneville, and 172,000 past Lower Granite, the highest totals in many, many years. David Wills noted that the Hardy Creek and Hamilton Springs juvenile traps were pulled May 21; field personnel sampled just under 15,000 juvenile chum from Hamilton Springs and just under 3,000 from Hardy Creek.

Hlebechuk noted that spring spill for fish passage in the Lower Columbia ended as planned at midnight on Friday; the Corps calculated that 599 MW-month of spill was achieved.

### ***3. New System Operational Requests.***

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

### ***4. Recommended Operations.***

We are planning to increase Libby discharge to 6 Kcfs on July 1 unless otherwise instructed, said Hlebechuk; is that still the Fish and Wildlife Service's intent? I'm in the process of checking on that, said Wills. In the absence of other instructions, said Hlebechuk, we will begin ramping up Libby outflow up to 6 kcfs on July 1, using the Biological Opinion ramping rates.

What about summer spill? Jim Nielsen asked. My understanding is that the Executives intend to make a recommendation about summer spill at their meeting on June 29, Hlebechuk replied. Ross noted that there is a NMFS analysis of the biological benefits associated with various volumes of summer spill on the salmonrecovery.com website; he said NMFS is seeking comments on this analysis.

Does BPA plan to invoke the spill exchange with Grant County PUD? Nielsen asked. They shifted over from their spring spill program to their summer spill program on Friday night, Bettin replied, reducing spill to the MOA level at that time.

Hlebechuk said that, next week, Albeni Falls will continue to operate to refill by June 30. Dworshak remains on minimum outflow until the temperature control operation begins, she said.

Bettin noted that it may become necessary to increase Dworshak outflow soon if that project is to achieve elevation 1520 on August 31 without spill. It is possible that some spill will be allowed from Dworshak, he said; however, that will be an Executives call. Would that be considered part of the summer BiOp spill program? Christine Mallette asked. Sure, Bettin replied – we would be working toward a MW-month target, and it doesn't matter where that spill occurs. It was noted that a meeting is taking place today in Lewiston to discuss long-term planning and 2001 summer water temperature model operations at Dworshak and elsewhere; this meeting has been called and includes representation from CRITFC, the Corps, Reclamation and EPA.

Norris said Hungry Horse will continue to fill next week, except when lightning is in the area and it becomes necessary to increase generation at that project to energize the second transmission line. At Grand Coulee, he said, we have now achieved our target elevation, and plan to maintain the project at elevation 1282 so that project operators have a small amount of operational flexibility. The plan, then, is to basically pass inflow at Grand Coulee for most of the summer? Nielsen asked. Correct, Bettin replied.

On June 25, there is a special operation at Lower Granite, Hlebechuk said; we need to fill the project to elevation 736.5-737.5 for a three-hour period to move a bulkhead and repair the seals. We will work out the details about how best to get the water out once the operation is complete, she said. Ross suggested that the water be shaped into the evening, keeping flows higher until 11 or 12 o'clock at night. We can talk about it further as we get closer to the operation, Bettin said.

##### ***5. TMT Process Discussion.***

Hlebechuk noted that the facilitator evaluation survey is available; there is also some need to discuss the TMT Guidelines and Water Management Plan. We plan to finalize those documents next Wednesday, she said, so please get me any additional comments by this Friday, June 22.

Forester went briefly through some of the comments received on the facilitation surveys, noting that a few minor tweaks, but no major changes, have been suggested. Forester asked that any additional comments on the facilitation process be submitted to Hlebechuk by this Friday as well.

##### ***6. Chum Salmon Genetics.***

Nielsen said a report is now available detailing the results of genetic analyses on a series of chum samples taken over the past nine years; he went through the various sources of those samples: Greys River Hatchery, Sea Resources Hatchery, Hardy Creek, Hamilton Creek, Ives Island and I-205 beach. Without going into excruciating detail, said Nielsen, the take-home message is that the upper river stocks – I-205 beach, Ives Island, Hardy and Hamilton Creeks – are all closely related; the Greys River samples are less-closely related. The Sea Resources 1996 sample is distinctly different from all of the above. No big surprises, in other words, Nielsen said; with the exception of the Sea Resources sample, all of these fish are a part of the Lower Columbia chum ESU. The Ives Island and I-205 beach samples showed the greatest genetic

difference from the Greys River and Sea Resources samples, Nielsen said. In my view, he said, this analysis points out the danger, in terms of the potential for lost genetic diversity, if we attempt to manage the Lower Columbia chum as a single stock.

### ***7. McNary Warm Water Temperature Operations.***

Hlebechuk said the Corps has been discussing McNary operations with FPOM as water temperatures begin to warm; the Corps and BPA are in the process of coordinating on a couple of concerns. We're approaching the period of concern, said Bettin; once the temperature difference across the powerhouse exceeds 4 degrees, we plan to shut off McNary Units 1-3 if possible. Operation of the remaining 11 units will give us a hydraulic capacity of 130 Kcfs at the project. Starting today, TMT members agreed to change the unit priority at McNary from Unit 1 to Unit 14 to Unit 14 to Unit 1 to try to cool down water temperatures.

In response to a request from Mallette, Hlebechuk said she will find out the location of the monitoring stations that measure the temperature difference across the powerhouse, and will e-mail that information to her.

### ***8. Water Temperature Modeling Results.***

Chris Ross reported that the EPA model runs have now been done for four scenarios. The first scenario run was Dworshak 1, which starts Dworshak at 14 Kcfs outflow in July, then reduces it to 10 Kcfs in August. Ross said that, in this model run, Dworshak starts releasing 14 degrees C. when Lower Granite forebay temperature is 21 degrees C; the cool water from Dworshak then takes the forebay temperature down to about 16 degrees C. You get a strong effect with the 14 Kcfs, in other words, and that holds through much of the season, he said, adding that this model run assumes 1998 meteorology and 1977 flow conditions – the worst-case assumptions, in other words. Once the operation ends in September, there is a little rebound in temperatures until natural cooling can kick in, said Ross.

Under Simulation 2, we would run 10 Kcfs straight through the end of August, Ross said. One piece of good news is that Lower Granite temperatures are only about 15 degrees C right now, which is significantly cooler than the temperatures used in the model run. Ross said Simulation 2 shows an initial elevation in water temperatures, followed by a consistent lowering effect on temperatures, again until the operation ends on August 31, after which temperatures rebound somewhat.

Scenario 3 is the first CRITFC proposal, Ross said; according to the EPA model, this would result in warmer temperatures in late July, and cooler temperatures later in August, in comparison to Scenarios 1 and 2. Scenario 4 is the modified CRITFC proposal, which shifts a bit more water later into August; this results in a few more days above 20 degrees C. in late July and early August, but from a practical standpoint, the difference in results between Scenarios 2 and 3 isn't that significant.

The group devoted a few minutes of discussion to the EPA model results; in general, it was noted that July water temperatures would be lower, but September water temperatures would be higher, under Scenarios 1 and 2; August water temperatures would be fairly similar

under all four scenarios. There was general agreement that, whatever Dworshak operational scenario is ultimately chosen, it is important to start it before Lower Granite temperatures reach 20 degrees C. Mallette observed that the TMT also needs to be mindful of the importance of the Dworshak releases to total flow at Lower Granite.

Nancy Yun then spent a few minutes going through the Corps' MASS 1 water temperature modeling results for these four scenarios. In general, she said, the MASS 1 results tended to be a little lower for all four scenarios – about 2 degrees C. The TMT spent a few minutes discussing the details of these model results; ultimately, Yun noted that it would still be possible to have Battelle run one more modeling scenario if the TMT so desires. Litchfield suggested that the TMT wait for the outcome of today's meeting in Lewiston to see whether or not the participants recommend an operational scenario that could be modeled. The TMT also discussed the utility of having the EPA modelers run the last MASS 1 scenario.

Forester suggested that the TMT review results from the various EPA and MASS 1 model runs and come to next Wednesday's meeting prepared to make a recommendation as to which Dworshak operational scenario is preferred for 2001, given the fact that Lower Granite forebay temperatures are now on the rise – they were as high as 64 degrees yesterday, noted Ruth Abney.

In the meantime, it was agreed to convene an emergency TMT conference call to discuss temperature control operations if day-average water temperatures in the Lower Granite forebay exceed 64 degrees F for two consecutive days. The bottom line is that we have now reached the point in the season when we need to monitor water temperatures very carefully, said Hlebechuk; we will discuss this situation again next Wednesday, if not sooner.

***9. Next TMT Meeting Date.***

The next meeting of the Technical Management Team was set for Wednesday, June 27 from 9 a.m. to noon. Meeting notes prepared by Jeff Kuechle, BPA contractor.

**TMT Attendance List**

**June 20, 2001**

<b>Name</b>	<b>Affiliation</b>
Ruth Abney	COE
Scott Bettin	BPA
Richard Forester	Facilitation Team
Russ George	Water Management Consultants Inc.
Robin Harkless	Facilitation Team

Cathy Hlebechuk	COE
Sharon Kiefer	IDFG
Jim Litchfield	Montana Consultant
Tom Lorz	CRITFC
Christine Mallette	ODFW
Doug Marx	Attorney, Lake Pend Oreille Idaho Club
Jim Nielsen	WDFW
Tony Norris	Reclamation
Mike O'Bryant	Columbia Basin Bulletin
Chris Ross	NMFS
Bill Rudolph	NW Fish Letter
Maria Van Houten	ENRON
David Wills	USFWS