

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
August 29, 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 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.

McNary Transport Update:

Larry Beck of the COE updated TMT members of the status of the operation with a report that will be posted on the website.

Libby Fall Operations:

Montana requested that Libby flows remain at 6 kcfs until mid-September instead of the alternative option of ramping down to 4 kcfs. This, Montana feels, would allow bull trout and other resident fish to move up into the tributaries. The COE will carry out the request as no objections were voiced.

MOP at the Lower Snake Projects:

FPAC met yesterday and concluded that they do not have enough information to decide whether or not to lift the MOP constraint. Christine Mallette made a suggestion to maintain MOP this week and to further the discussion during next week's conference call with new information (e.g. migration status, flow, temperature). Robyn McKay would like to see a decision made next week so as not to delay future operations.

Biological Benefits of Summer Spill:

Paul Wagner had no new analysis to share, but will in the future as appropriate. As of yesterday, 389.2 mw/mos have been spilled through the summer spill program, with an expected 411 mw/mos by this Friday. Spill will end at midnight, August 31st.

Regarding spill at Bonneville, work is scheduled to begin on flip lips some time in September. Spill will be interrupted at adult attraction areas as a result. The COE will send out information as soon as it is available and salmon managers will give advice regarding time of day and which areas to interrupt first, given record numbers of adult passage.

Hungry Horse Fall Operations:

Tony Norris reported that the BOR will continue to track minimum outflows at Columbia Falls. Pat McGrane said that these minimum flows are a result of integrated rule curves set by a lawsuit against the COE and BOR brought on by Montana. It requires Hungry Horse to operate around ten feet from full. Hungry Horse is currently twenty feet from full so the BOR is attempting to increase the level.

SOR 2001 C-8: Autumn Treaty Fishing:

CRITFC requested that pools at Bonneville, The Dalles and John Day be operated within a one foot-from-full range from Aug. 28 – Sept. 1 and Sept. 4-8 to allow for the fall tribal fishery. The justification follows an unprecedented amount of returning adults. Kyle Martin specifically requested a hard rather than soft constraint as well as documentation by Friday of any decision that doesn't meet the SOR. The COE has sent out instructions to operate Bonneville at a 1.5-ft range, The Dalles to meet power system needs, and John Day at around a 1.5 range. The COE will make every effort to keep fluctuations at a minimum.

Review Current System Conditions:

The COE and BOR reported on operations, notably that there was a reduction in flow at Dworshak which will put it at an expected 1520' on Friday. Dick Cassidy handed out average daily temperatures for Lower Granite and McNary. Regarding system reliability status, Robyn McKay reported that the NWPPC plans to do another reliability analysis for this year. The COE reported that a blue green algae bloom in the Lower Granite pool has caused high saturation levels of dissolved oxygen. The COE will provide more information to TMT at next week's meeting.

Finalize TMT Emergency Protocols:

The group discussed details of suggested changes to the protocols made by Gayle Lear. Three items need further discussion:

- Offset vs. mitigation: TMT members will explore the word choice issue with lawyers and bring their perspectives back to the September 19th meeting.
- Spill priority list: Action agencies will review this list in light of emergency protocols and bring a revision back to TMT upon availability (prior to January).
- Senior management: Members need to clarify whether an emergency response should occur before senior management makes an "emergency" declaration. Cindy Henriksen said that the COE will take action in the absence of this if the situation warrants.

TMT End-of-Year Review Agenda:

The following items were listed as review topics (and who will take the lead coordinating the topics) to be discussed October 31st at TMT and possibly at the November IT meeting. This session will be an all day review of the year and "Lessons Learned" discussion:

- System Survival Data (NMFS Science Center)
- Important SOR's and their disposition (COE, BOR – Tony Norris)
- Weather Patterns (Kyle Martin)
- Power Emergency (Robyn McKay)
- Vernita Bar Operations and Survival Data (Shane Scott)
- System Operations and Effects on Fish (Tony Norris)

- What Were TMT's Goals for the Year? Was there Consistency? (Shane Scott, Robin Harkless)

OTHER DATA:

- Mixers at McNary – Mark Smith (Larry Beck)
- McNary Survival Rates – Brad Eby (Paul Wagner)
- Anomaly Analysis and Outcome (All)
- Lower Granite Study – Billy Connor (Dave Wills)
- Comparison analysis 2001/other years – FPC (Paul Wagner)

Next Conference Call September 5th:

Agenda items:

- Flip lip update
- Blue green algae update

Next Face-to-Face Meeting September 19th:

There will be no meeting September 12th due to a number of conflicting meetings that TMT members need to attend.

Agenda items:

- Emergency Protocols
- Chum
- Other items raised at the 9/5 meeting

1. Greeting and Introductions

The August 29 Technical Management Team meeting was chaired by Cindy Henriksen 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 Rudd Turner at 503/808-3935.

Silverberg welcomed everyone to the meeting, then led a round of introductions and a review of the agenda, noting that this will be the final TMT meeting of the in-season management period.

2. McNary Transport Update.

COE's Larry Beck reported that, on August 15, the McNary fish transport system went into primary bypass mode during evening hours (6 p.m. to 6 a.m.) Through August 24, the Corps had trucked a total of 150,000 fish from McNary, from a high of 45,000 juveniles on August 16 to a low of 4,800 on August 22. We're now trucking every other day because numbers and water temperatures have fallen, Beck said, adding that fish were trucked daily from McNary while fish numbers were higher. Beck added that the current water temperature in the McNary collection facility is just over 68 degrees F.

3. Libby Fall Operations.

Henriksen said that, as August 31 nears, it is time to begin thinking about the changeover from summer to fall operations. The Fish and Wildlife Served Biological Opinion does not specify a recommended flow for bull trout in September, she said; however, Montana Fish, Wildlife and Parks has requested that we maintain the current outflow of 6 Kcfs through September 15, then start a gradual rampdown. The Corps is considering maintaining 6 Kcfs for bull trout and power needs, at this time, Henriksen.

Does anyone have a problem with that proposal? Silverberg asked. No objections being heard, it was agreed that the 6 Kcfs outflow from Libby will be maintained through September 15.

4. When to Fill Above MOP at Lower Snake Projects.

Henriksen said this is also traditionally the time when the TMT discusses filling the Lower Snake projects above MOP, and issuing new instructions for Ice Harbor, Lower Monumental and Little Goose to allow some additional operational flexibility at those projects.

Christine Mallette said the salmon managers discussed this topic at yesterday's FPAC meeting, but did not arrive at a recommendation as to when fill above MOP should occur. We discussed migration status, flow and water temperatures, she said; basically, the consensus was that we would like to discuss refill of the Lower Snake pools again next week. Robyn MacKay noted that until a rain event occurs, it will not be possible to fill the Lower Snake pools anyway, because river flows are so low. However, she said, it would be helpful if we had that flexibility so that we can begin refill of the Lower Snake pools as soon as flows allow. In response to a question from Silverberg, no TMT objections were raised to maintaining the status quo for another week and revisiting this topic at a TMT conference call next week.

MacKay said she is somewhat concerned about the precedent that is being set here; this is typically the meeting at which we lay out a schedule for the refill of the Lower Snake pools, she said, and I would be hesitant to say it's OK to simply put off that decision and revisit it week by week into September. Although we can't fill the projects right away, MacKay said, it would be helpful to have that additional operational flexibility. Silverberg observed that refill of the Lower Snake pools is always a topic of debate and negotiation. This is an extraordinary water year, she said, and it is unlikely that any decisions or recommendations made this year will be precedent-setting.

I won't object to a week's delay, said MacKay, but again, the action agencies aren't interested in a process that postpones this decision from week to week while the salmon managers look at the data. Mallette said the salmon managers will revisit the most recent migration status, flow and water temperature information at next week's FPAC meeting; while I can't promise that we'll have a recommendation for you at next week's conference call, we will at least make progress toward that decision, she said.

5. Biological Benefits of Summer Spill.

Paul Wagner said there is nothing new to report on this topic at today's meeting. He reminded the TMT that he has already shared NMFS' analysis of the benefits of the summer spill program; when and if we do any additional analysis, I will share that information as well, Wagner said. In response to a question, MacKay said the 2001 summer spill program had used the equivalent of 389.2 MW-months through August 28; the spill program will end, as previously noted, at midnight on August 31.

Beck noted that the Corps is planning to do some work on the Bonneville flip-lips in September; while that work is going on, end-bay spill for attraction flow will need to be curtailed at one end of the spillway. It was agreed that the salmon managers will discuss this topic at next week's FPAC meeting in an effort to develop a recommendation as to when and how this work should optimally proceed, from a biological standpoint. In response to a request from Mallette, Beck said he will provide a written summary of the planned maintenance operation to inform the salmon managers' discussion.

6. Hungry Horse Fall Operation.

Tony Norris said Hungry Horse dipped slightly below elevation 3540 yesterday; Reclamation is continuing to maintain the Columbia Falls minimum flow. He reminded the group that Reclamation, as the result of a court settlement, is required to consider Montana's IRC elevations in its operational decision-making; in general, he said, those IRCs ask us to be within 10 feet of full at Hungry Horse going into the fall, and we're 20 feet from full right now. In other words, he said, this is the point in the year when IRCs begin to potentially impact Hungry Horse operations. If we operate according to the IRCs, he said, we would need to maintain minimum outflow at Hungry Horse through the fall period. We are required to maintain the Columbia Falls minimum, Norris said; currently, that minimum is 3.26 Kcfs. Norris added that the Columbia Falls minimum will be revisited on January 1, as soon as the first water supply forecast of the new year becomes available.

7. Status of SOR 2001 C-8 – Autumn Treaty Fishery.

On August 17, the action agencies received SOR 2001 C-8 from CRITFC. This SOR, covering pool elevations during the fall treaty fishery, requests the following specific operations:

- Implement the following operation during the ceremonial and subsistence fishery: August 28th, 2001, 6 AM, through 6 PM September 1st, 2001. September 4th, 2001 6 AM, through 6 PM September 8th, 2001
- Bonneville Pool. Operate the pool within 1.0 foot from full pool (msl elevation 77 _ 76)
- The Dalles Pool. Operate the pool within 1.0 foot (from msl elevation 159.5 _ 158.5)
- John Day Reservoir. Operate the pool within 1.0 foot (from msl elevation 264.5 _ 263.5)
- At this time we anticipate a Treaty fishery each week through most of September. CRITFC will notify the Corps with specific times for the tribal fishing season after each Columbia River Compact hearing, in the form of additional SORs.

Kyle Martin went briefly through the contents of this SOR, the full text of which is available via the TMT and Fish Passage Center homepages. Please refer to this document for full details and justification. He noted that the fall fishery started on August 28; given the record numbers of returning adults this year and the extraordinary importance and magnitude of the 2001 fall treaty fishing opportunity, the tribes are also requesting that these pool elevations be made hard constraints, rather than soft constraints.

The group spent a few minutes discussing SOR 2001 C-8, asking a number of clarifying questions and debating the degree to which similar requests have been implemented in the past. Ultimately, Henriksen said the Corps has agreed to maintain Bonneville pool within a range of 75 feet to 76.5 feet during the fall treaty fishery; the project has been instructed to maintain that 1.5-foot operating range. The Dalles does not receive special instruction; it fluctuates as needed to meet other system needs. There is also no special instruction issued at John Day pool, but that pool is routinely operated in a 1.5-foot range. This is what the Corps has agreed to and implemented every year since 1996, she said, and that is what we are implementing this year. Martin said that Bonneville pool is particularly critical because two-thirds of the tribal fishing effort is concentrated on that pool; anything the Corps and BPA can do to hold that pool as steady as possible would be helpful, he said. Understood, said Henriksen.

8. Current System Conditions.

Henriksen reported that Libby continues to release 6 Kcfs; it is drafting, given the fact that August inflows to that project were a record low. Current elevation is just over 2435 feet; elevation 2411 is the December 31 target at that project. Norris said Grand Coulee is still heading toward elevation 1278 plus operating range on August 31; this morning, the project was at elevation 1278.5 feet. Average Grand Coulee outflow last

week was about 75 Kcfs, he said, adding that Reclamation plans to start refilling Banks Lake on September 1, Norris added.

Dworshak was at elevation 1521 feet as of midnight last night, Henriksen said; the rampdown has already begun. Dworshak will reach elevation 1520 feet, and will go to minimum outflow, this Friday, August 31. The average flow at Lower Granite last week was about 23 Kcfs; McNary flows averaged just under 100 Kcfs. Where do you see flows going over the next few weeks? Wagner asked. The Bonneville minimum is just over 70 Kcfs, Henriksen replied, so lower river flows won't drop below that amount. And we might see flows on the order of 15 Kcfs-17 Kcfs at Lower Granite, with Dworshak going to minimum flow? Mallette asked. That is probably correct, Henriksen replied. How does that compare to a normal year? Silverberg asked. We were at about 27 Kcfs at this point last year, Wagner replied; however, 20 Kcfs is not unusual at this point in the season.

Albeni Falls continues to operate in the top half-foot of its operating range, about 2062 feet, Henriksen said; it will be at elevation 2061 on September 30, at 2051 by mid-November.

Dick Cassidy said water temperatures at the Lower Columbia projects are currently running in the low 70s, forebay, and the high 60s, tailwater. At Dworshak, water temperatures dropped from 47 degrees to 43 degrees when we switched to undershot mode; we started to notice the difference in water temperatures at Lower Granite yesterday, he said. Cassidy added that a Walla Walla District limnologist has noted a blue-green algae bloom in the Lower Granite pool this week; the likely cause is elevated dissolved oxygen levels. Cassidy said this bloom has been noted in previous low water years, such as 1994. He said he will gather some additional information and will provide an update at next week's TMT conference call. In response to a question from Wagner, Cassidy said Lower Snake water temperatures peaked on either August 14 or August 16 this year, depending on whether the criteria is highest daily average or highest hourly water temperature.

MacKay said that, with respect to system reliability, the system will continue to draft as we move through the fall; BPA is monitoring the reliability storage situation closely, and will provide further updates if anything dramatic changes. In response to a question from Wagner, MacKay said the Power Planning Council staff is working on an updated system reliability analysis, but she does not know exactly when that analysis will be completed.

Wagner then provided a report on the status of the fish migration, starting with subyearling chinook. The passage index at Lower Granite was declining, but has increased again in recent days, to about 1,000 fish per day, currently. At McNary, the same pattern was seen last week, Wagner said. Index numbers have been slowly decreasing at John Day in recent days; numbers at Bonneville continue to be pretty high for this time of year, the protracted migration typical of a low-water year.

Wagner added that the current estimate is that 95% of the Snake River wild subyearling chinook run has now passed Lower Granite; 85% of the run has now passed McNary. In terms of cumulative subyearling chinook passage, said Wagner, the estimate is that the run was slightly later than average this year. In terms of relative survival for 2001 vs. previous years, for the 1,300+ wild Snake River subyearlings tagged in 2001, it's 13.8 percent, much lower than the 40+ percent survival to Lower Granite observed in 1999 and 2000. Wagner added that 13.8% is still significantly better than the 8% survival seen most years in the mid-'90s. In response to another question, Wagner said 99% of the cumulative juvenile chinook run is now estimated to have passed McNary; at John Day, 95% of the run has now passed.

On the good news front, said Wagner, the seasonal total for adult chinook passage at Bonneville is in excess of 550,000. Fall chinook are arriving at a rate of 13,000 fish per day; plus another 5,000-6,000 coho. Over 450,000 adult steelhead have also passed Bonneville to date, said Wagner, giving us a total adult salmon and steelhead passage of more than 1.3 million this year, by far the highest total since Bonneville Dam was completed. He added that, at Ice Harbor, 47,000 steelhead have passed to date; temperature is always an issue at that project, with the fish hanging up in the pools until Snake River water temperatures cool. In general, adult chinook and steelhead continue to work their way up through the Snake River projects; temperature is playing a role in their progress, and we'll just have to see what happens when all is said and done, Wagner said.

In response to a question, Wagner said the 2001 spring chinook jack count at Bonneville was about 14,000, compared to 21,000 in 2000. The 10-year average is closer to 4,000, Wagner said, so it is likely that 2002 will also be an above-average year for adult chinook returns – it probably just won't be quite as good as this year.

9. New System Operational Requests.

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

10. Recommended Operations.

Recommended operations were summarized during previous agenda items.

11. Finalize TMT Emergency Protocols.

Silverberg noted that, at a previous TMT meeting, Mallette had requested a review of the TMT emergency protocols; that review has led to several revisions to the emergency protocols appendix to the 2001 Water Management Plan, some made as recently as yesterday. The group spent a few minutes reviewing these changes in detail, offering a variety of comments and suggestions. Ultimately, Mallette and others requested another opportunity to review the protocols, particularly the language regarding "offset" vs. "mitigation," with their agencies' legal staffs. There was also considerable discussion of the language regarding emergency actions and the need for

notification prior to taking action in response to various levels of emergency. It was agreed that the action agencies will review the spill priority list to ensure its consistency with the TMT emergency protocols. It was further agreed to revisit the emergency protocols appendix at the next face-to-face TMT meeting.

12. TMT Year-End Review Agenda.

This discussion focused primarily on information needs for the year-end review; Silverberg noted that, in January, Bob Lohn said the Council would be requiring each of the Regional Forum teams to provide a year-end report to the Council. She added that, at its most recent meeting, the Implementation Team also asked that the TMT provide a year-in-review presentation at one of their upcoming meetings.

After some minutes of discussion, the TMT identified a variety of topics and information needs for the year-end review, including:

- Physical data (flow, temperature, TDG)
- Fish migration and biological information
- Weather patterns
- Vernita Bar and chum operations
- Success of the McNary mixers experiment
- McNary survival rates
- Lower Granite survival
- Power system emergency operations
- System operations and their effects on fish
- 2001 SORs and their disposition
- Lessons learned in 2001
- 2001 water year anomalies

It was agreed that the TMT participants tasked with these various components will attempt to have their end-of-year presentation ready in time for an all-day TMT meeting on October 31; this meeting will be held somewhere other than the Custom House, if possible. A condensed version of the TMT's year-end presentation will then be provided at the IT's November meeting.

13. Other.

A. Duncan Creek Chum. Given the lateness of the hour, it was agreed to discuss chum operations at an upcoming TMT meeting.

13. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, September 5. Meeting notes prepared by Jeff Kuechle, BPA writer-editor pool.

TMT ATTENDANCE LIST

AUGUST 29, 2001

NAME	AFFILIATION
Scott Boyd	COE
Dick Cassidy	COE
Margaret Filardo	FPC
Russ George	Water Management Consultants Inc.
Richelle Harding	D. Rohr & Associates
Robin Harkless	Facilitation Team
Tim Heizenrater	Enron
Cindy Henriksen	COE
Jim Litchfield	Consultant (Montana)
Ningjen Liu	IdaCorp Power Co.
Robyn MacKay	BPA
Christine Mallette	ODFW
Kyle Martin	CRITFC
Doug Marks	Attorney, Lake Pend Oreille Idaho Club
Pat McGrane	Reclamation
Tony Norris	Reclamation
Chris Ross	NMFS
Shane Scott	WDFW
Donna Silverberg	Facilitation Team
Glen Traeger	Avista Energy
Maria Van Houten	Enron
Paul Wagner	NMFS
Steve Wallace	PacifiCorp