TECHNICAL
MANAGEMENT TEAM MEETING NOTES

February 6, 2002, 9:00 a.m.-noon.

CORPS OF ENGINEERS NORTHWESTERN DIVISION HEADQUARTERS
PORTLAND, OREGON

DRAFT

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.

FLOOD CONTROL LESSON 2:
Chan Modini provided a presentation on initial controlled flow (ICF), the point at which reservoir refill begins for flood control (and June refill). Reservoirs are emptied so that, when needed, they can begin to hold water that would likely cause a flood. The reservoir "hole" is determined by forecast information at the River Forecast Center. The ICF calculates the day that reservoirs should begin refilling to reduce the risk of flooding. Chan handed out the chart for ICF at The Dalles.

Action: TMT will discuss process and plans for the Systemwide Flood Control Study as part of Lesson 3. This could have an impact on the current Flood Control Operating Plan, which was written in 1972 and updated in 1999. Many questions exist around the possibility of flexibility to meet multiple needs and purposes. The group will also discuss flood control "shifts" at the next TMT meeting, February 20th.

[Note: Next TMT will have a report on the Status of the System Flood Control Study. Lesson 3 is "Shifted Flood Control and its Application in 2002".

WATER MANAGEMENT PLAN UPDATE:
Comments from Montana, NMFS, Oregon, and USFWS are on the web. Idaho and CRITFC will be responding by the next TMT meeting. A revised plan with attached written responses to comments will be available soon, and a spring update will begin in

March. A suggestion was made for Action Agencies to structure the updating process to separate policy issues from those that need to be updated for flexibility.

CHUM DEWATERING CRITERIA:

TMT did an exercise to prioritize the list of factors relevant to making the difficult decision of dewatering chum redds (should the situation ever occur). These factors were spelled out in the NMFS memo from January 9th, 2002. TMT members rated these factors as high, medium or low in priority. The following chart captures the number of TMT members who selected the priority rating. The following criteria listed were placed in categories of high, medium, or low priority:

	HIGH	MED	LOW
The number and percentage of the total redds which would be affected by the decision	3	4	
The percentage of the total chum population that spawned in the creeks	2	5	
The percentage of the total chum population that spawned in other locations	3	4	
The component of the overall population that these redds represent	4	3	
Status of the FCRPS reservoir elevations	7		
Expected benefit to reservoir levels and river operations which would be provided by the dewatering decision	6	1	
Precipitation and runoff forecasts	7		
Expected river operations due to power market environment	6	1	1
Status of the upriver listed stocks	1	5	1
Existence and status of a brood contingency plan		6	

The exercise pointed out areas where the group has a common sense of importance with this issue. While the information is subjective, it is useful to show the commonality of views. Ron Boyce also pointed out that, rather than focusing on chum in a vacuum, a broader risk analysis approach could be beneficial. The analysis could be a combination of scientific data and a subjective allocation of risks that looks broadly at risks to fish viability, lambda, numbers affected, other listed stocks, etc.

Question: What risks does NMFS see for various stocks of fish as we enter this year?
Action: Paul Wagner will ask Chris Toole to discuss the Science Center/NMFS' risk assessment of stocks to help inform this year's decision making at the next TMT meeting. This discussion could continue at a later date with regards to other species (e.g. bull trout, sturgeon).

BURBOT UPDATE:

Scott Bettin handed out photographs of burbot. He updated TMT on his conversations with Montana biologists who report that the fish have migrated and would not be affected by an increase in flows for flood control operations at Libby. The Corps began flood control operations on 2/5 and went to full powerhouse capacity on 2/6.

EARLY BIRD FORECAST:
Cindy Henriksen reported that the forecast was released last week from the NWRFC. The early bird forecast shows water supply up from the January final. The information can be found on a link from TMT's web page. Ron Boyce mentioned that the Fish Passage Center used to attend the regular public weather briefings given by the COE. These briefings are not occurring this year, so Ron requested future weather briefings from the COE at TMT. He will check with the FPC to determine what particular information was useful so that the COE can present relevant information.

NEXT MEETING, FEBRUARY 27TH (Note date change!):
Agenda Items:

- Weather Briefing
- Lesson 3: Flood Control
    1. Presentation on Flood Control Study plans
    2. "Shift" – discussion
- Spring Creek Operation Discussion
    - Pros/cons: power/financial and fish biology
- Status of Fish: Risk Assessment Views – NMFS
- "Q Adjust" Run: What is it? How does it affect TMT?
- 2002 WMP: Discussion of Comments Given/Received
- Update/Report on NMFS Transport Study

I. Greetings, Introductions and Review of the Agenda.

The February 6, 2002 meeting of the Technical Management Team, held at the Corps of Engineers' Northwest Division headquarters in Portland, Oregon, was chaired by Cindy Henriksen of the Corps and facilitated by Donna Silverberg. Please note that this is a summary, not a verbatim transcript, of items discussed and decisions made at today's meeting.

2. Flood Control (Lesson 2).

The Corps' Chan Modini led a briefing on the initial controlled flow facet of the annual flood control planning equation. Modini noted that there are two periods of flood control: evacuation and refill. The TMT received a briefing on the evacuation period at its last meeting, Modini said; as you'll recall, the Corps computes the region's flood control storage requirements based on the monthly water supply forecasts, adjusting the amount of storage space required through the season as those forecasts evolve. The evacuation period generally ends by April 30; refill then takes place in May, June and July.

Modini distributed a handout showing an example of the charts the Corps uses to compute initial controlled flow: "Forecast of Residual Runoff, Columbia River at The Dalles from Date Through August, Corrected for Upstream Storage in MAF." Modini noted that the initial controlled flow is defined as the unregulated flow at a given project

(in this case, The Dalles) that the Corps uses as a trigger to initiate refill; he then spent a few minutes explaining how the ICF is calculated. According to this graph, said Modini, for the current water supply in 2002, once unregulated flow at the Dalles approaches 330 Kcfs after April 30, the evacuation period will end and the refill period will begin. He reiterated that the initial controlled flow changes over the season as better forecasts as received.

The group devoted a few minutes of discussion to the nuances of this concept, asking a variety of clarifying questions. Essentially, said Modini, the idea behind the initial controlled flow is to prevent floods -- to ensure that there is enough available storage to contain the annual runoff peak, after which controlled refill can begin. What you're saying, then, is that the forecasts determine how big to make the hole in the reservoirs, and the initial controlled flow determines when you start to fill the hole, one participant observed. That's correct, Modini replied.

Paul Wagner observed that it is getting near time to discuss the potential for a Dworshak/Grand Coulee flood control shift in 2002. We'll put that on the agenda for the next TMT meeting, said Henriksen.

In response to a question from Ron Boyce, Modini agreed that the Corps does take a fairly conservative view of their flood control responsibilities, generally opting for caution over risk. Part of the reason for that, Modini explained, was the 1948 flood -- while 1948 is only the 13th-highest water year on record, because it was a cold spring and a late runoff, it produced the second-highest unregulated peak flow on record at The Dalles. In other words, said Modini, the runoff volume forecast is only part of the flood control equation -- there is also considerable risk and uncertainty associated with how the snow pack comes off.

The problem with that approach, of course, is that, even as we speak, the storage reservoirs are being drafted to create flood control space, an operation that confers little or no biological benefit because of its timing, said Wagner. We will arrive at April 10 with our storage reservoirs drafted to some fairly low level, he said, and will then be waiting for the freshet to begin for some indeterminate period. Meanwhile, we have flow targets set in the BiOp which need to be met, said Wagner; the only way to meet them is by drafting the reservoirs further, creating an even bigger hole to fill by June 30. Perhaps the real discussion that needs to occur is, what would be the relative risk of shifting the timing of at least a portion of that flood control draft to April, before the runoff begins, but at a time when those flood control releases would provide some biological benefit? Wagner said.

Scott Bettin replied that, if sunspot predictions are correct, the timing of the freshet is moving earlier and earlier in the season, which would increase the risks associated with a shift such as the one Wagner suggested. Isn't that the type of question the flood control study is designed to answer? Silverberg asked. Yes, and that study is underway, Bettin replied.

The group discussed the logical next steps in the TMT's flood control briefings; there was general agreement that a presentation on the flood control study – its status and timeline, and the opportunities for TMT input into its development – should be the topic of the next briefing in this series. It was also agreed that the Corps and Reclamation will provide some information about the potential risks and benefits of a Grand Coulee/Dworshak flood control swap in 2002 at the February 20 TMT meeting.

At the conclusion of this discussion, Modini noted that a more detailed explanation of initial controlled flow and other flood control concepts are available on the Corps' NWD homepage.

3. 2002 Water Management Plan.

Henriksen reminded the group that the draft 2002 Water Management Plan is now available for review and comment; to date, Montana, NMFS, Oregon and the U.S. Fish and Wildlife Service have provided comments. Those comments are all available via the TMT website, Henriksen said; we hope to respond to those comments by the end of the month. Steve Pettit said Idaho will also be providing comments; Kyle Martin said comments from CRITFC will also be forthcoming. Henriksen asked that any further comments on the draft WMP be provided prior to the next TMT meeting on February 20. It was agreed to place a discussion of the comments submitted on the 2002 WMP on the agenda for the next TMT meeting, to give each agency a chance to present the highlights of their comments and allow for group discussion.

4. Chum Dewatering Exercise.

As you will recall, said Silverberg, at the last TMT meeting, we agreed to devote 20 minutes or so of today's meeting to an exercise in which we would attempt to assign basic priorities to some of the factors the TMT would need to weigh if they were to find themselves in the unenviable position of having to consider dewatering the Ives/Pierce Island chum redds. You will also recall, she said, that these suggested criteria were set forth in Paul Wagner's January 9 memo on this subject. Silverberg went to the board and wrote down this list of potential criteria; she asked each TMT member to (anonymously) rank these criteria as either high, medium or low-priority. The results of this exercise were as follows:

Percent of redds affected: 3 high, 4 medium
Percent spawned in creeks: 2 high, 5 medium
Percent spawned at other sites: 3 high, 4 medium
Percent of overall population represented by these redds: 4 high, 3 medium
Reservoir elevation status: 7 high
Benefits to system if dewatering occurs: 6 high, 1 medium
Precipitation/runoff forecasts: 7 high
Expected river operations/power forecasts: 6 high, 1 medium, 1 low
Status of upriver listed stocks: 1 high, 5 medium, 1 low
Existence and status of broodstock contingency plan: 6 medium, 1 low

Boyce observed that, while this was a useful exercise, in his opinion, what the TMT really needs is a more thorough and comprehensive risk assessment, which would factor in the risks associated with various operational strategies not only on chum, but on flood control and refill objectives, power system reliability and other species. Jim Litchfield agreed, noting that there is a clear need for a better understanding of how various operations – say, an additional 10 Kcfs of flow in the Lower Snake in the spring vs. the summer – affect the viability of various species.

Essentially what we need is a better way to quantify the biological benefits and detriments associated with a range of actions, Litchfield said – unless we have that analysis, then we're basically making a random or subjective choice. A good example is last year's decisions about how to allocate the limited volume of spill that was made available, Boyce agreed.

Silverberg asked where the TMT wanted to go with this issue from here; it was agreed to ask Chris Toole of NMFS to provide a presentation at a future TMT meeting on the current lamda status of each population, and how those lamdas were developed for the BiOp. It would also be helpful to get similar presentations for the other listed species – sturgeon and bull trout – to see both where they're at, currently, and what impact our operations are having on them, said Boyce.

In terms of actions, then, said Silverberg, Paul Wagner will ask Chris Toole about a possible NMFS presentation at the next TMT meeting on lamda and NMFS' risk assessments on currently-listed stocks, to be followed at another meeting by similar presentations on sturgeon and bull trout from the Fish and Wildlife Service and, possible, Montana. It was so agreed.

5. Burbot Update.

Bettin distributed some recent pictures of burbot; he reported that, due to the need to release more water for flood control, Libby outflow has been increased to full powerhouse capacity. The word from the Fish and Wildlife Service is that all of the burbot that are going to migrate to the spawning grounds in 2002 have done so, said Bettin, so the increased flow from Libby should not have any detrimental biological impacts.

In summary, then, the burbot operation is over for this year? Silverberg asked. That's correct, Bettin replied.

6. February Early Bird Forecast.

Henriksen said the River Forecast Center released its February early-bird forecast last week; it generally showed an increase from the January final forecast, thanks to some significant recent rain and snow events. At Grand Coulee, the early-bird January-July forecast is 60.2 MAF, 95% of average, up from 94% of average in the January final forecast. At Lower Granite, the early-bird April-July forecast is 21.3 MAF, 98% of

average, up from 92% of average in the January final forecast. At The Dalles, the early-bird January-July forecast is 101 MAF, 95% of average, up from 93% of average in the January final forecast. At Libby, the February early-bird April-September forecast shows 6.75 MAF, 100% of average, Henriksen added.

7. Emergency Protocols.

Silverberg said the January 14 meeting between the Corps and State of Oregon legal staffs resolved the state's concerns over the language in the emergency protocols appendix; she distributed copies of the revised emergency protocols, with the agreed-upon language highlighted in legislative format. Unless anyone has problems with the revised language, said Silverberg, the protocols can now be considered final.

8. Next TMT Meeting Date.

The next meeting of the Technical Management Team was moved to Wednesday, February 27, due to a scheduling conflict. Meeting notes prepared by Jeff Kuechle, BPA contractor.

TMT ATTENDANCE LIST

FEBRUARY 6, 2002

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