

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
January 9, 2002
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

**TECHNICAL MANAGEMENT TEAM
January 9, 2002**

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.

Weather Service/ NRCS:

Phil Pasteris (Natural Resources Conservation Services) and Harold Opitz (Northwest River Forecast Center) updated TMT on snowpack conditions, precipitation and water supply. Regarding water supply, a “recharge” period continues. The forecast continues to show “climatology”, which means that at this point, there is equal likelihood for precipitation to be above or below normal. However, conditions look consistent. All the information is posted on the NRCS and NWRFC websites, which can be linked through the TMT web page.

Flood Control Operation:

Chan Modini (COE) gave a presentation with handouts describing COE flood control operations. The floods of 1948 and 1956 were key in designing the control operation. Questions were raised over the transition from flood control to refill operations. When and how does this occur?

Action: TMT will be continually informed of refill probability in relation to flood control operations.

SOR 2001-13:

Ron Boyce requested to continue implementation of SOR 2001-12 through the end of 2001. The operation will continue through emergence unless extraneous circumstances occur.

SOR 2002-1:

Bob Hallock (USFWS) described the burbot population that lives in Kootenai Lake as depressed. As a result, USFWS and Idaho Fish and Game have requested that releases from Libby be maintained at a range of 6 – 10 kcfs through February 8, and that temperatures are as cool as possible.

After calculating the flood control plan from the early bird water supply forecast, the COE determined that they need to release 14.5 kcfs to meet their target of 2390' by the end of February. They have been working with USFWS to implement this operation, which USFWS finds more beneficial than fluctuating outflows at the end of January.

Action: The COE will release 14.5 kcfs out of Libby. They will monitor and decrease outflows if possible, but will keep release levels relatively stable.

TMT Water Management Plan WY '02:

Scott Boyd (COE) handed out two corrections made to the WMP. Comments are due by the next meeting, January 23rd. Each comment will receive a written response. Scott will send the document in Word to interested TMT members.

Other:

- **Finalize Emergency Protocols:** A meeting will be held next week between COE and Oregon legal staff, facilitated by Donna Silverberg.
- **Chum Dewatering Criteria:** Paul Wagner handed out an extended draft of NMFS' recommendations regarding dewatering chum. The memo points out a conservative approach to the issue (in order to avoid a dewatering situation) but lists factors to consider. NMFS feels that ultimately, this is a TMT decision.

Action: TMT will look over the listed factors and begin a prioritization process for discussion at the next TMT meeting.

- **2002 Web Page:** The web page has been updated for 2002. All 2001 information has been set aside, though fully accessible. TMT requested that the TMT home page have links to the COE's Water Control Data, historical data, and previous agendas and minutes.

Next Meeting, January 23:

Agenda items:

- Flood control
- Water Management Plan
- Chum dewatering comments
- Burbot update
- Web page
- Mid-month forecast

1. Greeting and Introductions

The January 9 Technical Management Team meeting, held at the Customs House in Portland, Oregon, 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

Henriksen at 503/808-3945.

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

2. Water Supply, Snowpack and Long Range Weather Forecast.

Phil Pasteris from the Natural Resources Conservation Service Climate Center, which produces the water supply forecasts in partnership with the RFC, began this presentation with a review of the just-released January final water supply forecast. What a difference a year makes, he said – almost across the board, we’re now seeing snowpacks that are average or well above average, particularly in the Upper Columbia Basin. The recent warm weather has condensed the snowpack in the Cascades, but it is still well above average. Overall, he said, it’s a significant change from last year. The only real area of concern is Western Montana, he said; currently, the snow-water equivalent estimate for the Flathead Basin is around 85% of average. The snowpacks in the Snake Basin and most of the Oregon and Washington basins of concern, however, are all normal or above-normal.

Moving on, Pasteris said precipitation is also generally above-normal in Oregon, Washington and Idaho, and about average in western Montana. However, he noted, there are some deep groundwater and reservoir elevation deficits to be made up in Montana. The Columbia above Castlegar is slightly above average, in terms of composite snowpack, as is the Columbia above Grand Coulee, Pasteris said, noting that the RFC puts together a 10-day temperature and precipitation page on its website, summarizing the best available information on current and short-term weather conditions; the email address is www.nwrfc.noaa.gov.

Basically, said Pasteris, there aren’t many surprises; we’re pretty close to normal, or above normal, in most of the basins of significance. What has the recent warm weather done to our snowpacks? Steve Pettit asked. There has been some flooding on the west side of the Cascades, Pasteris replied; however, the estimate for the Columbia at The Dalles remains slightly above average -- 102% of average, compared to 59% of average last year. As I said, he added, the warm weather has essentially compacted the Cascades snowpack, which was relatively lightly-packed before. Overall, he said, I think it’s fair to say that we’re doing better than expected, in terms of the regional water supply forecast.

Harold Opitz of the RFC agreed, saying that, overall, the region isn’t doing too badly so far this winter. The Lower Granite January-July water supply forecast is currently was 92% of normal, according to the January final forecast; the forecast for Grand Coulee is also 92% of normal; for The Dalles, 95% of normal. In other words, said Opitz, the aquifer is still recharging, as you can see when you compare the runoff forecasts by basin with current snowpack information.

Ron Boyce said he has heard that 2002 runoff may be below-normal because there is still a long way to go, in terms of recharging the aquifer. Opitz replied that, while there is no quantitative measurement of the amount of recharge that has yet to occur, he expects runoff volumes to be close to normal this year. Opitz reiterated that the main area of concern, in terms

of the soil moisture deficit, is Western Montana. Bear in mind, however, that that area is notorious for late winter and early spring storms and precipitation events, so the snowpack and runoff volume forecast situations may yet improve in Western Montana.

At Henriksen's request, Opitz provided a brief description of how the RFC generates its early-bird, mid-month and monthly final water supply forecasts, noting that the early-bird and mid-month forecasts are to be used as trends and are not stand alone products. He added that the Southern Oscillation Index remains neutral; there has been some speculation that we may enter a new El Niño cycle beginning this September, he said, but at this point, all we can do is wait and see.

3. Flood Control Operations.

Chad Modini of the Corps reported on current flood control operations. He began by listing the storage projects that are a part of the flood control system in Canada and the U.S., then described the process through which the annual flood control elevations are calculated. Overall, said Modini, the goal is to regulate the 1894 flood to 800 Kcfs at The Dalles.

Modini went through some of the data from major flood events in the century; he noted that 1997 was actually a higher runoff volume year than the Vanport flood year of 1948. However, the shape of the runoff was different in 1997 than it was in 1948. The peak unregulated flow at The Dalles was only about 890 Kcfs in 1997, compared to more than 1 million cfs in 1948. Modini also reviewed a sampling of the data from the historic water supply record, to illustrate the role both runoff shape and volume in shaping the Corps' flood control operations.

Does the Corps always assume the worst, in terms of the range of variability in runoff shapes? Boyce asked. Not necessarily, Modini replied; we take the entire historic record into account, in combination with snowpack, water supply and weather forecast information within a given year.

Modini continued on through his presentation, touching on a number of key areas, including:

- The Corps' flood control objectives
- How flood control damage is measured
- The major elements of the system flood control operation

Boyce expressed concern about last year's flood control operation, in which the Corps evacuated more water than necessary from the storage reservoirs based on a near-normal water supply forecast that never actually materialized. How do we get ahead of that curve, he said, to ensure that the same thing doesn't happen again this year, leaving us with unnecessarily reduced storage volumes for later use in flow augmentation? Modini replied that all of the information the Corps uses to develop its flood control operation is available from the Corps website. Henriksen said that 2001 was a below average water year beginning in January. There were no flood control operations in 2001, she said.

It would be interesting to gain a better understanding of how we make the transition from the flood control operation to the refill operation, said Jim Litchfield – in other words, what criteria do the Corps use to decide when we have adequate protection from flooding, and can begin to refill, rather than draft, the storage reservoirs? Obviously, said Litchfield, the salmon managers would like refill to begin as early as possible, so that as much water as possible is left in storage for use in flow augmentation later in the season.

Modini replied that the decision about when to switch from flood control to storage is made on a month-to-month, project-by-project basis, and varies from year to year. I understand that, said Litchfield, but it would still be informative to get a better handle on how good a chance we have, from week to week, to refill each project, and the extent to which current operations are jeopardizing that probability of refill. It was agreed to revisit this topic in more detail at a future TMT meeting.

4. Project Operations, Chum Status.

A. SOR 2001-13. On December 21, the Corps received SOR 2001-13. This SOR, supported by USFWS, NMFS, ODFW, IDFG, CRITFC and WDFW, requested the following specific operations:

- Continue implementation of SOR 2001-12 for chum spawning through December 31, 2001, as specified in the Biological Opinion.

Boyce explained that, as requested at the last face-to-face TMT meeting, the salmon managers discussed when the transition from the chum spawning to the chum maintenance operation should occur; that discussion led to this SOR, specifying a minimum tailwater elevation of 11.5 feet at Bonneville through the end of the year. He added that his understanding is that the SOR was implemented; Scott Bettin confirmed that this was the case. We have now transitioned to the chum maintenance operation, Bettin added.

Henriksen added that the Corps has been working with the Fish and Wildlife Service and the Idaho Governor's office, as well as with the Kootenai Tribe of Idaho, on SOR 2001-01. Bob Hallock explained that this request has to do with operations for burbot (a form of freshwater cod) in the Kootenai system, a once-abundant and now extremely depressed population. He said the Service is in the process of determining whether ESA listing is warranted for this species, noting that the population is continuing to decline, despite the fact that female burbot are extremely fecund. The suspected reason, he said, is habitat degradation, and the fact that burbot are very slow swimmers, and cannot migrate to spawning grounds through high-velocity water.

Historically, he said, burbot have spawned at flow volumes of around 5 Kcfs; in recent years, flows during the burbot spawning season have been 2-4 times that below Libby Dam. Lesser flow volumes would provide a greater opportunity for burbot spawning, he said; we've also requested that the reservoir be operated to release the lowest-temperature water. The other part of the request, he said, is an attempt to determine the upper flow threshold at which these fish can migrate. In response to a question, Hallock said burbot typically fish spawn in mid-to-

late January; they migrate to the spawning grounds beginning in mid-to-late-December. In response to another question, Hallock said the operation requested in the SOR would run through February 8.

Kyle Martin noted that CRITFC did not sign off on this SOR, due mainly to the fact that they have not yet been able to model its potential impacts because they have not yet received the final January water supply forecast. We're inclined to support it, however, because it would keep Libby outflow in the lower range during the period of the SOR, Martin said.

Henriksen said the Corps has been calculating the flood control evacuation requirement at Libby based on the most recent runoff volume forecast information; initially, she said, based on the early-bird forecast, we thought the forecast was 94% of average at Libby. That meant we would need to achieve a January 31 Libby elevation of 2392 feet to meet our flood control requirements, which would require steady outflows of about 10 Kcfs from Libby through the end of January, at the upper end of the range requested in this SOR, Henriksen said. By December 28, RCC staff were working with US Fish and Wildlife Service to describe this operation and discuss potential operational scenarios based on the water supply forecast. Based on these late December discussions, the Corps initially agreed to Libby outflow of 10 Kcfs, and to wait and see what the January final water supply forecast had to say.

Late yesterday, she said, we were able to finalize the Libby water supply forecast at 6 MAF, or 95% of normal. That translated to an upper rule curve flood control elevation of 2390 at Libby on January 31; to achieve that elevation, we need to release a level flow of 14.5 Kcfs from Libby through the end of January. We have been coordinating with the Fish and Wildlife Service, Henriksen said; another potential option would be to release 10 Kcfs for as long as possible in January, followed by much higher flows from Libby toward the end of the month.

Hallock said the Fish and Wildlife Service would prefer that the Corps release a level outflow of 14.5 Kcfs through the end of January, and reduce flows, if possible, toward the end of the month. Could the water be released in February, after spawning has occurred? Martin asked. Not according to our treaty requirements because we must meet the end of January flood control elevation, Henriksen replied; in addition, if the Libby water supply forecast goes up in February, we could be forced to spill at Libby in order to draft to our required flood control elevation at that project. The Service recognizes the need to meet flood control, Hallock said, this is noted in the specifications of the SOR where we recognize there may be a need to release more than 10 Kcfs in January. Hallock noted that the intent of this SOR is, again, to determine the upper flow limit at which the burbot can migrate to the spawning grounds; if they are unable to migrate at the flows the Corps will be releasing, he said, we will learn that that upper limit is something less than 14.5 Kcfs.

Steve Petit agreed to 14 Kcfs outflow for the remainder of January to meet flood control, but noted that Idaho would have preferred to see a flow no greater than 10 Kcfs. The Corps would have preferred to see a flow no greater than 10 Kcfs, said Henriksen, but we must meet our flood control elevation at the end of January.

Ultimately, no objections were raised to the proposed Libby operation; Hallock said the

operation falls within the range of operations requested by the Fish and Wildlife Service. In that case, said Henriksen, we will increase Libby outflow to about 14.5 Kcfs, beginning tomorrow, with the intent of maintaining that flow through February 8 unless something changes significantly, in terms of the meteorological or water supply situations. If we can reduce Libby outflow below 14.5 Kcfs during the first week of February, she said, we will.

5. TMT 2002 Water Management Plan.

Scott Boyd said that, last meeting, he had told the TMT he was available to answer any questions about the draft Water Management Plan; that is still the case, he said. Also, said Boyd, I did find one or two minor mistakes in the draft WMP; they have now been corrected. The goal of this agenda item is to answer any questions the TMT may have about the draft WMP. Henriksen reiterated that any written comments on the draft 2002 Water Management Plan are due to the action agencies by January 23.

In response to a question, Boyd said the Corps plans to begin work on the spring/summer update to the 2002 Water Management Plan around the end of this month; he noted that the TMT will have another opportunity to comment on the WMP once that update is released. He reminded the group that, in future years, the BiOp calls for the Water Management Plan to be produced in September, before anything concrete is known about water supply conditions in the year to come; hence the need for periodic updates as water supply forecast information comes in.

After a few minutes of discussion, Boyd said the Corps will attempt to incorporate or, where appropriate, respond to any comments received over the next week or so into a new draft of the WMP for distribution prior to the next TMT meeting.

6. Other.

A. Finalize Emergency Protocols. We have made some progress, in terms of getting the Oregon legal staff to enter the discussion, said Boyce; there will be a meeting between Oregon legal staff and Corps legal staff next week, and hopefully we will be able to resolve this item at the next TMT meeting.

B. Report from TMT to IT on Chum Dewatering Criteria. Paul Wagner described the changes he has made to his chum dewatering criteria memo in response to comments received at the last TMT meeting, laying out the many factors that would need to be weighed before a decision is made to halt the chum operation. In response to a question from Boyce, it was agreed that the TMT will review Wagner's document prior to its presentation to the IT and provide any comments they may have to him, including any thoughts they may have about which criteria should rank high, medium or low-priority, prior to the next TMT meeting.

Henriksen observed that, in her opinion, it would be much more useful to have at least a loosely-prioritized list of dewatering criteria than it would be to simply have a collection of potential dewatering criteria. Boyce noted that similar attempts to reach TMT consensus on criteria priorities have been relatively fruitless, and warned that it probably wouldn't behoove the TMT to spend too much time on such an effort. Understood, said Henriksen; while I certainly

don't expect that we would be able to develop an iron-clad TMT consensus on a prioritized list, some general priorities would be helpful if the dewatering criteria are needed in the future.

C. 2002 TMT Web Page. Henriksen said the recent access problems for the TMT website should now be fixed. The group spent a few minutes going through the newly-designed web page, observing that, in general, it is much easier to use than last year's page, although Boyce observed that better links to fish passage data would be helpful. Other participants observed that access to the historic TMT notes (available via the old TMT website) is also important. Henriksen asked that any further comments on the newly-configured page's organization be submitted to her.

In response to a question, Henriksen said the Corps may not be producing a weekly SSARR spreadsheet for the TMT meetings in 2002, due to changes in the River Forecast Center's modeling approach. She added that the TMT will have an opportunity for further discussion of this question at a future TMT meeting.

7. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, January 23. Meeting notes prepared by Jeff Kuechle, BPA contractor.

**TMT Attendance List
January 9, 2002**

Name	Affiliation
Ron Boyce	ODFW
Scott Boyd	COE
Larry Beck	COE
Scott Bettin	BPA
Ruth Burris	PGE
Richard Forester	Facilitation Team
Robin Harkless	Facilitation Team
Cindy Henriksen	COE
Karl Kanbergs	COE
Jim Litchfield	Consultant (Montana)
Kyle Martin	CRITFC
Tony Norris	Reclamation
Mike O'Bryant	Columbia Basin Bulletin
Harold Opitz	RFC

Phil Pasteris	NRCS
Steve Pettit	IDFG
Shane Scott	WDFW
Craig Sprankle	Reclamation
Glen Traeger	Avista Energy
Maria Van Houten	Enron
Paul Wagner	NMFS