

# **COLUMBIA RIVER REGIONAL FORUM**

## **TECHNICAL MANAGEMENT TEAM**

November 7<sup>th</sup>, 2001

### **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.

#### **Year-end Review, 2001 Water Supply Forecast:**

Harold Opitz of the National Weather Service showed graphs of the very low water year west of the continental divide for 2001. The Weather Service is working to improve forecast tools to reduce the standard of error, although their forecasts this year proved to be quite good. Harold said there is still much uncertainty in the precipitation forecasts for 2002. Right now it looks like there is an equal chance of 2002 being a dry, normal or above normal year! TMT expressed their interest in revisiting this in a few months when there is more data to provide a better degree of certainty. Harold agreed to return when this data exists.

#### **Chum Studies/Operations:**

Cathy Hlebechuk presented the COE's model runs for proposed chum operations. She will distribute them to TMT members via email. The Action Agencies feel, as they did last week, that the constraints of the Vernita Bar agreement remain the main hurdle to meeting the requested 125 kcfs below BON before November 19<sup>th</sup>. The Action Agencies were asked under what conditions could last week's chum SOR be implemented? They responded that a sudden increase in Snake River flows and/or meeting Vernita Bar criteria could enable implementation of the SOR for chum below BON. They expressed doubt that either of these conditions would present themselves prior to Nov. 19<sup>th</sup>.

Grant PUD updated TMT on the status of conditions at Vernita Bar. Significant spawning has occurred in the mainstem and 5 redds have been found below 40kcfs. In their opinion, keeping a 55 kcfs flow during the day would allow shaping of 85-90 kcfs daily average flow and be the best operation for VB fish.

Kyle Martin expressed CRITFC's desire to avoid pitting chum against other species. WFWD's Shane Scott reported that his agency had seen very few chum in the Ives Island area. Those that were seen appeared to be quite "green" and not yet ready for spawning. He asked if anyone knew what time the chum go up the nearby creeks. This led to a suggestion that maybe a pulse could be provided to help fish while awaiting an increase in flows for a steady 125 –130 kcfs.

The Action Agencies asked Oregon's Ron Boyce if any progress had been made related to establishing criteria that could assist in a decision to de-water chum redds if conditions get bad again this year. Ron expressed interest in having discussions with other members of the Regional Forum to jointly determine criteria regarding this issue.

**Action:** TMT agreed to raise the chum redds de-watering issue at the December IT meeting, asking IT to direct the development of criteria for de-watering redds. Specifically, TMT members want to know if and how big a role they should play in developing criteria that would be used if conditions were to deteriorate and a determination of de-watering existing redds were necessary. IT should be involved because such a determination is both technical and policy related.

**Action:** Chum discussions will continue at the next TMT meeting/call, Friday November 16<sup>th</sup> at 1 p.m., to decide which operation to implement on November 19<sup>th</sup>. The group will review current status of the fish and water levels.

### **Lessons Learned from WY 2001:**

TMT members were asked to reflect on the year-end review presentations and discuss "lessons learned" from the past water year. The following list summarizes their thoughts as expressed in a brainstorming session:

- Operating Bonneville to a tailwater level proved more important than operating to a specific kcfs for chum last fall;
- There is a need to establish drought criteria and triggers. For example, if "wet" months are dry, then there needs to be a change in operations at that time, not when it is too late to have any effect on the overall system;
- Criteria for de-watering redds need to be established to help make tough decisions in the future;
- There are more factors to consider regarding chum near Hamilton Creek such as tides, location of fish in the surrounding springs, etc. More information about this habitat area could help in-season decision making;
- There is a need to establish a better working relationship with Idaho Power Company to coordinate in-season needs;
- Low flows were harder on in-river steelhead than anticipated;
- A lack of clarity regarding the power emergency (criteria used to establish it, calling it, process for decision-making, etc.) had negative effects on operations, especially spill. It also had a stressful effect on relationships;
- Understanding effects of temperature on survival has become either more precise or lucky—Billy Connor's work was very useful to TMT;
- Tools for predicting adult returns need sharpening;
- A precise understanding of redd elevations below Bonneville and at Hanford Reach would be useful (**ACTION:** Scott Bettin will check with Batell to obtain data regarding redd locations and share with TMT members at their upcoming field trip);
- Better use of weather and climate information can enhance the TMT process (**ACTION:** Kyle Martin will begin giving a regular report on weather and climate conditions);

- A higher level of involvement by the executives this year lead to confusion – this could have been managed differently, and should be clarified if such an event were to occur in the future;
- Energy conservation can have a profound effect on load reduction.

**ACTION:** Donna Silverberg asked the group to consider the ‘TMT process’ as they continue to reflect on the lessons learned in the 2001 season. She will add a discussion on this to the agenda of a future meeting.

**Review Current System Conditions:**

**Operations:** Cathy Hlebechuk and Ted David (filling in for Tony Norris) reported on the current system and operations (see website for details). The balloon tag test is underway at Lower Granite and zero flow is scheduled at John Day and The Dalles on December 9<sup>th</sup> for three hours to look for leakage problems. TMT members will be updated on the testing at the December TMT meeting.

**Action:** As requested, TMT members will receive (via email) specific operations at John Day and The Dalles that require zero flow.

**Power System Status:** BPA is running to meet loads. Scott Bettin said everything looks normal at this time.

**Emergency Protocols:**

It was clarified that the latest E.P. draft is dated October 24<sup>th</sup>. Ron Boyce reported that Oregon’s attorney Steve Sanders would like to talk to Gail Lear (COE) and Bill Kinsey (BPA) before finalizing the protocols.

**Next Meeting, November 16<sup>th</sup>, 1 pm (\*note new date and time):**

Agenda items:

- Chum operations for November 19<sup>th</sup>
- Emergency Protocol check-in
- Vernita Bar update

\*\*There will be no TMT meeting November 21<sup>st</sup>. TMT will gather for a field trip to look at the chum spawning areas around Ive’s Island on November 28<sup>th</sup>. Information (time, place, maps, etc.) will be provided via email and/or at the November 16<sup>th</sup> meeting.

**TECHNICAL MANAGEMENT TEAM  
MEETING NOTES  
November 7, 2001  
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE  
PORTLAND, OREGON**

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

# **DRAFT**

## ***1. Greeting and Introductions***

The November 7 Technical Management Team meeting, held at the Customs House in Portland, Oregon, was chaired by Cathy Hlebechuk 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 Cindy Henriksen at 503/808-3945.

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

## ***2. Year-End Review.***

Harold Opitz of the River Forecast Center led this presentation; he began by observing that, unless anyone failed to notice, 2001 was a pretty dismal water year, with precipitation totals of anywhere between 50% and 70% of normal throughout the Columbia Basin. Moving on to streamflows, Opitz noted that 28 of the stations the RFC uses in its forecasts recorded low record streamflows in 2001.

Opitz touched on the actual runoff volumes at various points in the system, then moved on to forecast performance vs. actual runoff; he noted that, overall, the forecast performed acceptably; the actual runoff volumes fell within the confidence intervals of the forecasts. Opitz said that, overall, the 58.2 MAF runoff volume at The Dalles in 2001 was the second-lowest in the last 72 years. He noted that precipitation totals for October 2001 were normal or near-normal throughout the basin, which provides at least some basis for hope; however, Opitz added, there is a lot of storage project and groundwater recharge that needs to occur before streamflows approach normal levels.

With respect to the forecast for the next several months – the November through January period – Opitz said there are equal chances that temperature and precipitation could be above or below normal. Kyle Martin noted that, according to the forecasts of George Taylor at Oregon State University, it appears likely that January precipitation will be above-normal.

The discussion then moved on to the chum operation requested in SOR 2001-10, supported by the Fish and Wildlife Service and ODFW:

- Beginning November 5 and continuing until further notice, provide a minimum instantaneous tailrace elevation of 12 feet at Bonneville Dam under conditions where FCRPS operation is consistent with conditions of the Vernita Bar Agreement and NMFS' 2000 FCRPS Biological Opinion RPA.

Hlebechuk noted that the action agencies submitted a memo to NMFS on October 30, laying out the criteria under which they will be able to initiate this year's chum operation. This memo included some model analysis, Hlebechuk said, including BPA model analysis using the 50 year historic water record for inflows for the period through April 15 and the Corps/River Forecast Center's October 22 SSARR model analysis using this year's forecasted flows for the period ending December 31. She also said the Corps is just about done with their January – April 10 analysis. She said she would send the results out later this week. In this analysis, Hlebechuk said, the Corps used inflows of 80% of normal and 100% of normal and modeled these inflows using historic shapes for a 58 year period. Hlebechuk also said that the most recent (November 5) SSARR shows that, if the action agencies begin chum flows at 125 Kcfs on November 19 (the day after the last scheduled Vernita Bar survey), Grand Coulee will reach elevation 1276.7 by December 31. That is above the 85% confidence of refill elevation for that date, she explained.

With respect to the Corps January-April analysis, Hlebechuk said, when we assume a normal water supply for modeling purposes, we could meet 125 Kcfs almost all of the time for the January-March period, as well as the first half of April. However, said Hlebechuk, when we look at actual unregulated flows in the river, they're only 70% of normal at The Dalles, currently. That means that, in order to provide 125 Kcfs at Bonneville, we would need to augment flows by as much as 55 Kcfs using storage water. Therefore, the action agencies position is that we need to wait until after the Vernita Bar operation ends so that we can start getting water out of Grand Coulee to meet the Bonneville chum flow target, Hlebechuk said.

Yesterday's average flow at Bonneville was 115 Kcfs, noted Ron Boyce – my understanding was that the flow situation in the lower river was improving, and that the action agencies would be doing some additional analysis to see what effect an earlier start date would have on the probability of the storage projects reaching their rule curve elevations. The problem continues to be that, in order to meet the 125 Kcfs flow request at Bonneville, we would have to increase Grand Coulee outflow, Hlebechuk replied – that will cause a problem with the Vernita Bar operation, because it would mean redds would be deposited at an elevation that cannot be sustained. The analysis did look at refill probability, she said, but the primary focus was on the impacts to the Vernita Bar operation.

The group devoted an extensive discussion to the question of when this year's chum operation should begin, with Boyce arguing that it should begin sooner than November 19, and the action agencies arguing that, given the current low groundwater and reservoir storage levels, as well as the uncertainty about the water supply forecast for the coming year, the chum operation should not begin before November 19. Ultimately, Boyce said ODFW understands that the Vernita Bar agreement is the main hurdle in the way of beginning the chum operation prior to November 19; he said Oregon does not advocate violating that agreement. If we get a slug of water in the Snake due to a sudden precipitation event, Hlebechuk said, it may be possible to begin the chum operation sooner, using Snake River water. Shane Scott observed that the chum have just begun to arrive at the spawning grounds, and do not yet appear ripe for spawning. Boyce said that, at this point, he would advocate monitoring flow and spawning conditions, and keeping this discussion open on future TMT agendas. It was so agreed.

Hlebechuk then revisited the question of the criteria the salmon managers would consider for dewatering the chum redds. Boyce replied that, from his perspective, this is a regional discussion, rather than an ODFW/USFWS discussion. Those fish are listed under the ESA, he said; we need to develop a more formal management plan laying out how to operate the system to protect them. We also need to identify some contingencies for changing operations if conditions change, Boyce said, including a section that describes how a broodstock collection salvage operation would fit into the overall management plans to protect those fish. In other words, he said, it would not be appropriate for ODFW and the Fish and Wildlife Service to make that decision in isolation.

Does the BiOp specify that meeting upper rule curve elevations should take precedence over providing flows for chum? Hlebechuk asked. That's the BiOp's priority, yes, Wagner replied. It is not explicitly stated in the BiOp that listed Upper Columbia stocks take priority over chum, however, Boyce observed – that's a policy call by NMFS outside the BiOp, so I'm not sure we have any clear direction on this issue. As I recall, the language in the BiOp states that, in general, achieving upper rule curve elevations will have priority over maintaining chum flows, Wagner replied; however, the year-to-year decision depends on a variety of other factors relevant to the situation, such as: are there chum spawning in the springs and in the creeks, is there a contingency broodstock collection program? In general, how large a component of the overall chum population is the portion spawning below Bonneville? Those are just some of the factors that need to be taken into account, along with the question of how far we are below rule curve elevations, Wagner said. However, that doesn't mean we shouldn't do everything we can to provide the conditions the chum need to spawn and rear successfully, Boyce said.

David Wills agreed that there is a complex web of factors and conditions that could lead to a decision to dewater or not dewater the chum redds. Certainly the need to achieve upper rule curve elevations is compelling, he said; we could also find ourselves in another power system emergency, in which case all bets are off. In between the extremes of an abundant water year and another year like 2001 lies the grey area, Wills said, including such questions as, do you have "backup" fish that can provide eggs for a captive brood program; if so, should we consider dewatering the redds? Those are the kinds of details that would benefit from additional discussion, Wills said.

Is that something that needs to occur at the TMT level, in order to avoid last-minute decision-making/ Silverberg asked. It seems more like a policy decision to me, Wills replied, which suggests that perhaps the Implementation Team would be a more appropriate forum. I would like to see the issue raised to the IT, so that they could provide some direction to subsequent TMT discussion, said Boyce.

What specific question, then, would be elevated to the IT? Silverberg asked. What I heard was, is it appropriate for TMT or IT to develop the criteria that would be used to make a dewatering decision, Wagner said; also, does the IT feel it would be appropriate for either group to develop those criteria at this point? The other issue that might benefit from IT discussion is the question of how the BiOp can accommodate the needs of all of the fish in the basin, said Boyce – as we've just discussed, the Vernita Bar agreement is precluding us from providing chum flows at this point in the season. Is Oregon asking to re-open discussions on the Vernita Bar agreement? Bettin asked. I don't know whether this is a Vernita Bar agreement discussion or an ESA discussion, Boyce replied – there is overlap between FERC and ESA on this issue. It sounds as though we may want to start with IT, Silverberg observed.

After a few minutes of further discussion, it was agreed to convene a TMT conference call on Friday, November 16 to explore the chum issue – specifically, what tailwater elevation is needed at Bonneville -- in more detail. It was further agreed to schedule a TMT field trip (to be followed by a TMT meeting) to the Ives/Pierce Island chum spawning areas on Wednesday, November 28. In the interim, said Silverberg, at least until we have an opportunity to discuss this issue further at the November 16 meeting, it sounds as though until weather and natural flow conditions change, there will be no operational change.

Moving on, Silverberg reminded the group that, at the end of last week's year-end review, the discussion had turned briefly to the lessons learned in 2001. There was some desire to revisit that question at today's meeting, she said, in order to give you a chance to think about those lessons after you had heard a recap of the data from the 2001 in-season management and monitoring period.

A few minutes of discussion yielded the following additional lessons learned in 2001:

- Low flow is bad
- Operating Bonneville Dam to a tailwater elevation, rather than a specific average flow, makes more sense during the chum operation
- There is a need to establish drought trigger criteria in November, to be in place if the wetter months turn dry and there is a need to change the operational trajectory to protect available storage water

- Dewatering decisions are extremely difficult, and would benefit from some established criteria to guide future decision-making
- There is a complex array of factors that need to be considered in decisions about the Ives/Pierce Island chum spawning – tidal effects, the location of springs etc. More detailed information about this habitat could make for more effective decisions.
- There is a need to establish better working relationships with Idaho Power to coordinate seasonal flow needs; this may include a need for pre-season power/water exchange agreements
- The low flows in 2001 were harder on steelhead than anticipated
- Lack of clarity re: power emergency criteria (how and when it can be declared, the process for such a declaration) had a negative effect on 2001 BiOp operations (spill)
- Understanding the effects of temperature on survival has become either more precise or more lucky
- The tools for predicting adult returns could stand some additional refinement
- More information about the precise elevation of redds below Bonneville Dam would be useful to the in-season decision-making process, as would more precise information about redd elevations in the Hanford Reach
- Better use of weather and climate information could enhance the in-season management process
- The higher level of involvement by the federal and regional executives in 2001 led to confusion, and could have been handled better
- Energy conservation can have a profound effect on system operations.

Silverberg thanked everyone for their contributions, and asked that they come to the next TMT meeting prepared to discuss any changes they feel are needed to the TMT process itself.

### ***3. Current System Conditions.***

Hlebechuk said the current Libby elevation is 2425 feet; the project drafted 1.2 feet over the past week. Albeni Falls was at elevation 2053 feet as of midnight last night; the project drafted 1.4 feet over the past week, heading toward elevation 2051 on November 20. The current elevation at Dworshak is 1518.7 feet, up 2.2 feet over the past week. The daily average flow at Ice Harbor over the past week was 23 Kcfs, an increase over last week's outflow from that project.

At Lower Granite, said Hlebechuk, project personnel are currently conducting the balloon tag test of the removable spillway weir; there is no preliminary information about how that test is going. The other issue we need to discuss is zero flow at John Day and The Dalles, scheduled for a three-hour period on the morning of December 9, she said – we're trying to figure out where a leakage is occurring. Flow will be reduced to zero from 4 a.m. to 7 a.m.; the idea is to keep The Dalles pool as low and stable as possible. Project personnel believe it will be possible to maintain the minimum tailwater elevation at Bonneville Dam by keeping that project's forebay elevation somewhat higher, added Larry Beck; the fishways will remain operational.

It was further reported that Hungry Horse continues to operate to maintain the Columbia Falls minimum flow; last week's rain event allowed Reclamation to drop Hungry Horse outflow from 2.4 Kcfs to 1.7 Kcfs. Hungry Horse outflow has now crept back up to about 2 Kcfs. Current elevation at the project is 3527.6 feet and drafting slightly. The current Grand Coulee elevation is 1287 feet, and holding steady.

Moving on to power system reliability, Bettin said there continues to be adequate flow and storage to meet load in the FCRPS. Do you anticipate, based on current forecasts, that this situation will continue? Boyce asked. We don't see anything to indicate otherwise at this time, Bettin replied.

### ***4. Finalization of TMT Emergency Protocols.***

Boyce said the Oregon attorney, Steve Sanders, would still like to talk to the Corps and BPA attorneys regarding the "mitigation" vs. "offset" language in the protocols. It was agreed to revisit this topic once the attorneys have met.

**5. Next TMT Meeting Date.**

A TMT conference call to discuss the chum operation was set for 1 p.m. Friday, December 16. The next regularly-scheduled TMT meeting was set for Wednesday, November 28 at Bonneville Dam; the meeting will be followed by a field trip to the Ives/Pierce Island chum spawning sites (rubber boots are recommended). Meeting notes prepared by Jeff Kuechle, BPA contractor.

**TMT PARTICIPANT LIST**

**NOVEMBER 7, 2001**

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