

# **COLUMBIA RIVER REGIONAL FORUM**

## **TECHNICAL MANAGEMENT TEAM**

### **MEETING NOTES**

**September 15, 2004**

**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 SUMMARY 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.

#### **Bonneville Spillway Calibration Update:**

Rudd Turner, COE, updated TMT members that the COE is still in the planning stage of doing a calibration study, based on a draft that was presented at the August 25<sup>th</sup> TMT meeting. The COE is looking at the last 2 weeks of October to implement the work, due to funding, timing of fish runs, and weather. The COE may be operating under a continuing resolution from Congress for funding. Bonneville is spilling during the day for adult fish attraction. The spill gates were opened and measured at 6” so current calibration data should be accurate. The COE will update TMT as plans progress.

#### **Libby Operations/Subgroup Report:**

A sub-group of TMT met on September 8<sup>th</sup> to discuss Libby operations through September. Notes from that discussion, courtesy of Jeff Kuechle, were provided as an attachment to today’s TMT agenda. Rudd Turner re-capped that discussion, saying that the group agreed to a weekly load shaping schedule through the end of September (starting this week): 14 kcfs during the week, Friday ramp down to 12.5 kcfs, then ramp down again to 10 kcfs over the weekend, and back up to 14 kcfs on Monday.

Since that discussion, inflows have been above average and are forecasted to remain above average through the month. If the current operating plan continues, the COE projects that Libby will end up at an elevation above 2439’ by the end of September. The COE asked TMT members to share their preference, for 12.5 kcfs weekly average, or 2439’ end of September elevation?

Some TMT members expressed interest in maintaining a weekly average of not greater than 12.5 kcfs over meeting 2439’ at the end of this month. There was also an expressed interest in saving the extra water for lower Columbia chum spawning later in the fall. The COE would like to avoid filling at the project in October, and BPA, noting that this operation is not a BiOp

requirement, would like to maintain some flexibility for power needs. There was also an interest in doing a gradual ramp-down and avoiding hard constraint minimums in October.

Idaho expressed the desire that any change to the Libby operation should not impact the studies that were planned to come out of operating Libby outside the BiOp this year. While there has been some basic modeling and baseline information from this year's unique operation, funding was not put in place in enough time to hire contractors to do the more extensive study design put forth by Brian Marotz of the Montana Fish, Wildlife and Parks Dept. TMT members expressed disappointment that these studies did not occur. Idaho was interested in understanding how the funding failure occurred even in the face of the change to BiOp operations. It was noted that more lead time is needed to put funding for studies in place.

After a full discussion, TMT agreed to recommend (and the COE agreed to implement) the following operation for Libby: 9 kcfs minimum outflow and do not release more than 12.5 kcfs as a weekly average.

#### **Albeni Falls:**

Based on an SOR from USFWS (in coordination with NOAA and Idaho) last year, the COE plans to draft Lake Pend Oreille to elevation 2055' by late November. The COE plans to operate to reach elevation 2060-2061' by the end of September to meet the November target. The current elevation is 2062.3'. The USFWS requested that the COE consider shifting the draft until later and use this water also to support chum. Idaho needs to check to see if a shift would work with kokanee spawning. Idaho and USFWS will coordinate on this and update TMT at the September 29<sup>th</sup> TMT meeting.

#### **Lower Granite Powerhouse Outage/MOP Operations:**

Rudd Turner reported that, rather than a 24-hour outage, the Lower Granite powerhouse will require a daytime outage, from 7am to 5pm from September 20-25<sup>th</sup>, for dole testing and transformer repair at the project. Half of the work has been deferred to next year, resulting in shorter outage hours than originally planned. So, the COE plans to fill during the day and release water (30 kcfs) out at night. During the outage the project will operate 1 unit at speed-no-load and spill to meet the 11.5 kcfs minimum discharge. BPA requested that the MOP operating range be increased by 0.5' to ensure a smoother operation and moderate TDG levels. The goal is to keep TDG levels at or close to 110%. Oregon requested that the COE consider spilling at night also, to support remaining migrating juveniles.

The COE will operate Lower Granite, from September 20-25<sup>th</sup>, as such: fill as needed, up to 0.5' above the MOP+1 range, while operating 1 unit at speed-no-load plus spill from 7am-5pm. At 5 pm, draft water out to MOP +1.

#### **Autumn Treaty Fishery Update:**

Kyle Martin, CRITFC, reported that the Autumn Treaty fishery is likely to continue through next week. The highest priority on forebay operation is for the John Day pool (50-68% of the total nets are there) with lowest priority for Bonneville for this fishery. Additional fisheries requests are yet to be determined.

### **TMT Year End Review 2004:**

The 2004 TMT year end review was scheduled for Wednesday, November 10<sup>th</sup>, from 10am-3pm at the Water Resources Education Center in Vancouver. Cindy LeFleur, WDFW, will work with the facilitation team to reserve the space. A draft agenda for the 2004 Year End Review was handed out, based on topics that were discussed during last year's review. TMT members offered suggestions for changes and additional items for this year. The facilitation team will work with individual members to coordinate on presentations (who and what). An updated agenda will be sent to TMT members prior to the November 10<sup>th</sup> review meeting. The facilitation services evaluation form will be distributed at the review, and there will be time for discussion (as desired) on this and overall process at the meeting. This year, folks have the option of filling the form out and sending it to Jacque Abel, or doing a phone interview with Jacque. The facilitation team has an interest in hearing from as many Regional Forum participants as possible.

### **2005 Water Management Plan DRAFT:**

The COE provided the full draft 2005 WMP as an attachment to today's TMT agenda, and provided a handout with a section of the draft. The Action Agencies are not yet requesting formal comments on the draft, as there are ongoing consultations with NOAA on the remand of its BiOp, as well as the USFWS on the Libby operations portion of its BiOp.

TMT members discussed the process for incorporating comments and requesting changes to the WMP. It was suggested that longer term issues be raised and planned for via IT. A suggestion was also made that the WMP go back to being a TMT document, not an action agencies document, to re-initiate more give and take amongst TMT members in integrating comments to the WMP.

**ACTION:** There will be more discussion of the WMP at the September 29<sup>th</sup> TMT meeting. At that meeting TMT members can look at past comments and raise issues that need more discussion, and flag those major changes that will occur (e.g. LGR double testing).

### **Status of Operations:**

*Reservoirs:* Bonneville is at 104 kcfs day average flows. McNary is at 96.6 kcfs. Lower Granite is operating at 38 kcfs out. Dworshak is at elevation 1521.6', with 3.4 kcfs in and 4.8 kcfs out. Dworshak will ramp down to minimum outflows in the next few days. Libby is at 2444.7'. Albeni Falls is at 2062.3', with 11.7 kcfs out and 13.6 kcfs in. Hungry Horse is at 3540' and holding. Grand Coulee is at 1282' and filling.

*Fish status:* Cindy LeFleur, WDFW, provided graphs depicting adult fall chinook brights over Bonneville and tules over Bonneville for 2004. Both show late migration patterns and above average numbers – 264,000 brights have passed Bonneville to date, and 142,000 tules have passed. There has been very good sport fishing below Bonneville over the last two weeks. In August, the commercial fishery caught 212,000 fish. The fishery will start again next week and go through October.

Juveniles are at the end of migration; numbers on the Snake are down to the 100's. Total migration numbers met their high number projections this year. A question was raised about winter pit-tagging and whether screens should be pulled to avoid ice damage.

**ACTION:** Russ Kiefer, IDFG, will take this issue to FPOM.

*Water quality:* Temperatures have been below 68° as of last week. When Dworshak ramped down to 4.8 kcfs out, overshoot mode resulted in temperatures of 53°, as projected.

**USGS Chum Study:**

Ken Tiffin, USGS, provided a proposal to the COE and BPA for a chum study involving 10 trials at 10 kcfs/hour over a 9-hour period in early November through early December. The COE would like input from TMT on this. The COE has some concerns about spawning/dewatering.

**ACTION:** Ken will present information to TMT on the proposed chum study at the September 29<sup>th</sup> meeting. Rudd Turner will get the proposal up on the web in advance.

**Next Meeting, Wednesday, September 29<sup>th</sup>, 9am-noon:**

Agenda Items:

- Libby Operations
- Albeni Falls Operations
- WMP Comments
- USGS Chum Study
- System Status

## **Meeting Minutes**

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

The September 15, 2004 Technical Management Team meeting was chaired by Rudd Turner 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 Turner at 503/808-3935.

### ***2. Bonneville Spillway Calibration Update.***

Turner said the Corps is in planning mode on the calibration issue; we put a draft study plan on the table last meeting, and that remains the current plan. We're looking at the last two weeks in October to do the actual calibration, in part because of funding – that will be the new fiscal year – and it is also better for fish – after fall chinook, and before chum. The weather is a factor as well; we would prefer to conduct this operation before November. Funding could potentially be an issue; Congress has not yet passed the appropriation, and we expect to be working under a continuing resolution. The study won't cost a lot – \$5,000 to \$7,000 – but O&M funding is very tight within the Corps at this time. Hourly and daily data are still reflecting any errors that might be there; until we do the calibration work, we don't know what the errors are, so that data has not been scrubbed. Bonneville is spilling through Bays 1 and 18 during the day for adult fish attraction, said Turner; those bays have been physically measured, so that data should be accurate.

### *3. Libby Operations Update.*

Turner said the Libby operations subgroup, set up at the last TMT meeting, met via conference call last Wednesday. At that call, Libby operations through the end of September were discussed. The notes from that meeting are available via hot-link from today's agenda on the TMT homepage. The group decided to develop a weekly load-following schedule while continuing to release a weekly average outflow of 12.5 Kcfs, in order to achieve elevation 2439 at Libby by September 30. We went to 14 Kcfs outflow on Monday, and will hold that through tomorrow. On Friday, Libby outflow will be reduced to 12 Kcfs, and to 10 Kcfs over the weekend – this operation will result in a weekly average of 12.5 Kcfs through September 30.

Turner said Libby inflows continue to be above average for this time of year, with inflows 120-170% of normal actual and expected through September 30. The project has been sitting at 2444.7' since last week, he said, essentially passing inflow. The Corps now believes that, if we continue to release 12.5 Kcfs, the project could end up 2-3 feet, or more, above elevation 2439' on September 30. The bottom line is that it doesn't look as though we can achieve elevation 2439' by September 30 unless Libby outflow is increased.

Jim Litchfield said holding 12.5 Kcfs outflow, and letting Libby elevation fall where it may on September 30, makes sense to him. Russ Kiefer said IDFG would also support such an operation, because it may provide some additional water for use in the upcoming chum operation. Paul Wagner said such an operation is consistent with the guidance in the Bob Lohn letter on Libby operations, which specified either elevation 2439 by September 30 or continuing to release 12.5 Kcfs through the operating season. We have talked internally at NOAA Fisheries about saving some water for chum, Wagner said, and believe this would be a worthwhile action to take.

Litchfield said Brain Marotz (Montana Fish, Wildlife, and Parks Dept.) would prefer to see a gradual rampdown in Libby outflow during September – a softer landing – to avoid reducing Libby outflow to absolute minimum before increasing outflow again for chum and power production. Ron Boyce observed that the inflow forecast has changed since Lohn wrote his letter; he asked what Montana's preferred operation would be, given the new circumstances. Litchfield replied that a rampdown to 9 Kcfs as soon as possible, then to 8 Kcfs through the end of the month, then no lower than 6 Kcfs until winter load comes up, would be Montana's preferred operation. Turner replied that the Corps would prefer to go through October without filling into Libby –we would prefer to hold steady or draft slightly during October, he said, because of the desire for a smooth operation given the need to draft by the end of December. According to the modeling the Corps did yesterday, we would need to release 7-8 Kcfs through October in order to hold the end-of-September operation at Libby.

Scott Bettin reminded the group that this isn't a time of year in which Biological Opinion measures guide operations. We're willing to take biological needs into account, of course, but BPA would also like to keep its options open, in terms of operations for power, he said. If we give you a recommended operation, not a hard constraint, would that be a problem? Litchfield asked. No, it would not, Bettin replied. In that case, said Litchfield, Montana would prefer to see

the gradual rampdown to 9 Kcfs, then 8 Kcfs, then to whatever flow is needed to hold Libby's September 30 elevation through October. As long as such an operation won't interfere with the planned productivity studies below Libby, Kiefer observed. Litchfield replied that, according to Marotz, while those studies have been approved, they have not been funded, so Montana has been unable to hire the crews needed to conduct that monitoring work. We are monitoring, he said, but most of the productivity analysis in 2004 will be model-based. Kiefer said that is extremely disappointing, because Idaho agreed to this operation on the understanding that a good study would be conducted. Litchfield said baseline productivity information will be collected in 2004; he suggested that interested TMT members contact Marotz directly to find out exactly what Montana will be doing this year. It was agreed that Montana will provide a report on this work at the TMT's upcoming year-end review meeting.

I would like to find out how it occurred that we reduced BiOp protection measures to conduct this study, then failed to get the paperwork in place in order to allow the study to go forward, said Kiefer, in order to avoid similar disappointment in the future. The way to avoid it in the future is to plan the study a year in advance, rather than a few weeks in advance, Bettin replied.

So what do we want to do, operationally, at Libby? Silverberg asked. Turner suggested that Libby outflow be held at a weekly average of 12.5 Kcfs through October 3; at the TMT's September 29 meeting, we can then discuss how to ramp flows down. We hear your input in terms of a preferred October operation at Libby, that you would like to see an average flow of 8 Kcfs-9 Kcfs through the month, and will discuss that with Bonneville, Turner said – it should be possible to craft an operation that gets us pretty close to that outflow volume. Is there any opportunity to ramp down Libby outflow sooner, in order to save some water for chum flows later? Boyce asked. We would be interested in hearing a specific proposal from the salmon managers, said Bettin; however, it is not a BiOp requirement to reduce Libby outflow at this time. Greg Hoffman, COE at Libby, asked that the flow not vary more than one unit, or about 5 kcfs, from low to high discharge levels within a week.

Would it be possible to reduce outflow somewhat now while still retaining the operational flexibility Bonneville needs? Steve Haeseker asked. That's possible, said Bettin; given current power prices, power needs and chum needs may well coincide. It could be a win-win for chum and power, Kiefer observed. That may well be true, Bettin replied. Can we get some agreement on reducing the weekly average somewhat at today's meeting? Haeseker asked. Could you give us the flexibility to maintain 9 Kcfs as a minimum Libby outflow, but let us go as high as needed to meet load? Bettin asked. If we have that flexibility, I think I can save some water for you, he added. If we can do that with the understanding that the weekly average outflow won't exceed 12.5 Kcfs, Litchfield replied. That would be fine with BPA, said Bettin.

After a few minutes of additional discussion, it was agreed to hold 9 Kcfs as a minimum Libby outflow, with flows allowed to fluctuate upward as needed to meet load, with the caveat that the weekly average outflow from the project will not exceed 12.5 Kcfs, starting today, and the weekly flow range not to exceed 5 kcfs. It was further agreed to revisit this topic at the September 29 meeting.

In response to one other issue raised during the Libby subgroup conference call, Turner said he had checked with Seattle District, and had learned that, in cases where an unplanned outage causes a sudden reduction in Libby outflow, spilling to meet the minimum outflow of 4 Kcfs would be expected to cause an exceedance of the 110% TDG state standard.

#### ***4. Albeni Falls Fall/Winter Operation.***

This is the time of year in which we typically begin drafting Albeni Falls to its winter operating level, said Turner. In 2003, the U.S. Fish and Wildlife Service in coordination with NOAA Fisheries submitted an SOR that included a request to operate Albeni Falls to hold Lake Pend Oreille at elevation 2055' during the fall and winter of 2004/2005. We want to inform the TMT that the Corps is going to begin drafting Albeni Falls in the next several days to achieve elevation 2060' – 2061' by September 30, and to 2055' by approximately November 20. The current elevation at Albeni Falls is 2062.3'. Paul Wagner, NOAA Fisheries, concurred with this operation. No TMT objections were raised to this proposed operation.

Could you delay the start of the draft until October, for chum? Haeseker asked. There are already agreements on lake elevations, so I'd have to check, and get back to you, Turner replied. Kiefer said he, too, will check with others at IDFG to see whether such a delay would detrimentally impact kokanee spawning in Albeni Falls reservoir. If there is an opportunity to delay the draft somewhat, Oregon would support that, said Boyce. What is the planned Grand Coulee operation for September? he asked. Typically the Bureau of Reclamation operates to hit elevation 1282' – 1283' by September 30, Turner replied; the current project elevation is 1282.7', so essentially they would be passing inflow between now and the end of the month. Actually, we're filling Grand Coulee right now, while power demand is relatively low, said Tony Norris; we can't commit to a specific elevation target at this time. Turner said that, for now, the Corps' planned operation will proceed.

#### ***5. Lower Granite Powerhouse Outage and MOP Operation.***

Turner said that the plan, at this point, is to go to a daily outage during the hours of 7 a.m. to 5 p.m., returning two units to service at night. In other words, he said, we won't need to go to a 24-hour outage in order to conduct this work – we'll be able to pond, then get the water out at night. Inflows to Lower Granite popped up to 39 Kcfs yesterday, with a lot of local rain and increased Brownlee outflow. We don't expect that to be the norm next week, however, he added. The daily powerhouse outage at Lower Granite will occur from September 20-25; on September 26, the Lower Granite powerhouse will return to normal operation. BPA would like to see an operating range of 1.5 feet, rather than 1 foot. No TMT objections were raised to this increase in operational flexibility.

In response to a question from Haeseker, Turner said that, during the outage, Lower Granite will operate 1 unit at speed-no-load (5 Kcfs) while spilling approximately 6 Kcfs through the RSW; that should result in about a foot of fill into Lower Granite pool, which will then be drafted out at night at about 30 Kcfs. We will fill as needed to conduct the operation, and to try to avoid exceeding the 110% TDG standard, Turner said. Boyce said Oregon would prefer that the Corps provide some spill at night, rather than passing all flow through the powerhouse, in

order to benefit juvenile migrants. Bettin said the action agencies do not intend to spill at night. I understand that this request is outside the BiOp, said Boyce; however, it would benefit juvenile fish, and I would ask that the action agencies consider it.

Kiefer said that, in future years, he would prefer to conduct this operation, if possible, to benefit the maximum number of juvenile fall chinook migrants and collect information on RSW operations, while still meeting the Corps' maintenance needs. Understood, said Turner – we'll put outages that have been scheduled for next year into the draft Fish Passage Plan for regional review. He added that the current forecast shows an average flow of 20-21 Kcfs in the Lower Snake next week.

#### ***6. Autumn Treaty Fishery.***

Kyle Martin said there is no major news, in terms of safety-related incidents during the treaty fishery; pool elevations have also been relatively stable, which is good news. The tribes plan to continue its autumn treaty fishery through next Friday. Most of the fishing effort –56-58% of the nets – are in John Day pool, with only about 15% of the nets in Bonneville pool. Are they catching their allotment? Litchfield asked. I haven't heard, Martin replied. Cindy LeFleur said her understanding is that the tribal fishers are catching more fish as the season progresses, from very few fish in week 1 to 20,000 fish in week 2 to 26,000 fish in week 3. The total allotment is 150,000 fish, but the run size has increased, so the allotment will likely increase as well. Turner noted that the Corps has sent a soft constraint to the John Day operators requesting operation in the top foot of the project's current 1.5 foot operating range.

#### ***7. TMT Year-End review Agenda and Schedule.***

Silverberg distributed copies of the tentative agenda for the TMT's annual year-end review meeting; it was agreed to set this meeting for November 10 at either CRITFC in Portland or at the Water Resource Education Center in Vancouver. She went briefly through the proposed agenda for the meeting; the group offered a variety of clarifying questions, comments and suggested agenda items.

#### ***8. Draft 2005 Water Management Plan.***

Turner said the action agencies have produced a "first-cut" 2005 Water Management Plan; this document is available via hot-link from today's agenda on the TMT homepage. He invited the TMT to review this document and to share any informal comments and suggestions they may have with him (not Scott Boyd) prior to the September 29 TMT meeting. Formal comments are not being requested at this time, because the action agencies are consulting with both NOAA Fisheries and U.S. Fish and Wildlife on revised Biological Opinions.

Litchfield noted that he is somewhat hesitant to engage in this process, noting that, every year, Montana submits the same comments, which are then ignored. Tony Norris replied that the action agencies are required to submit an annual implementation plan demonstrating how they intend to meet the Biological Opinion requirements; the annual Water Management plan is an outgrowth of the annual Implementation Plan. Until the BiOp is changed, the action agencies

don't have a great deal of latitude, operationally. Norris suggested that Litchfield submit his comments to the Implementation Team, which is the primary place to make comments on the annual Implementation Plan. Litchfield replied that he understands how the process has worked in years past; what I'm trying to say is that I don't like how the process works, currently, he said – it seems counterproductive to submit the same comments year after year, only to have them ignored. Martin and Boyce said CRITFC and Oregon echo those concerns. Boyce observed that, in past years, the annual WMP had been produced in more of a collaborative fashion, rather than as the sole purview of the action agencies. Again, our operational discretion is limited, under the 2000 BiOp, Norris replied.

### ***9. Status of Operation.***

Turner said day-average flow at Bonneville was 104 Kcfs yesterday; it has been 93-130 Kcfs over the past week. McNary's day-average flow was 96.6 Kcfs yesterday, and has averaged 95-127 Kcfs over the past week. Lower Granite's day-average flow was 38 Kcfs yesterday, up from an average of 23-29 Kcfs over the past week, due to increased precipitation and Brownlee outflow. MOP +1 operation continues at that project; the other three Lower Snake projects have now been filled above MOP and are back in their normal operating range. Dworshak is currently at elevation 1521.6 feet; the project is releasing 4.8 Kcfs; over the next few days, we will ramp down to 2.8 Kcfs (one unit), then down to minimum outflow a day or so later, once the pool gets close to elevation 1520'. Hydro surveys below the project will require minimum flow or possibly one small unit operation once they go to work, which may occur for a few hours tomorrow. The bottom line is that we need to get another 1.5 feet out of that project before we go to minimum outflow at Dworshak, Turner said. Albeni Falls is releasing 11.5 Kcfs; it will increase later this week.

Hungry Horse is at elevation 3540', with 1.9 Kcfs outflow, said Norris. We could actually go below that discharge, to 900 cfs, he said, but they are doing some work on the ring gates. The 1.9 Kcfs discharge will continue as long as precipitation keeps inflows to the project up. Grand Coulee is at elevation 1282 and filling.

Moving on to the status of the adult fish migration, LeFleur said the preseason forecast for 2004 upriver bright fall chinook was 322,000; a total of 264,000 brights have passed Bonneville to date, yesterday alone, 34,000 passed the project, and it now appears that the preseason forecast may have underpredicted the actual run. We're seeing the same pattern in the 2004 tule fall chinook run; the preseason forecast was 132,000, and we're already at 142,000, with a prediction of 162,000. LeFleur said her feeling is that both the upriver bright and tule runs are skewing late in 2004; she added that the sport fishery below Bonneville has been sizzling for the past two weeks. There was a commercial fishery in August that caught 12,000 fish; another commercial fishery will begin next week.

In response to a question from Litchfield, LeFleur said Lower Granite recorded a one-day record chinook count the other day, so the fish are moving everywhere in the system. Wagner added that the juvenile run is now nearly complete, with daily indices in the low three-digit range at the Lower Snake projects. 2004 escapement at Lower Granite was in the range of the very high preseason projection of 1.5 million. Do you know when the 95% passage date occurred in

2004? Bettin asked. Not off the top of my head, Wagner replied – as always, it depends on what component of the run you’re looking at. The group briefly discussed the possibility of continuing to monitor passage at the Snake River projects during the winter; it was agreed to ask FPOM to consider that possibility.

Bettin said there are no power system problems to report at this time.

On the water quality front, Adams provided a graph showing Dworshak outflows and Lower Granite tailwater temperatures, as well as the changes in water temperature in Dworshak Reservoir over time in 2004; he noted that, in general, the TMT’s water temperature management efforts were successful in keeping temperatures in the Lower Granite tailwater below 68 degrees F in 2004. Turner said it is his understanding that, once Dworshak goes to minimum outflow, the single generating unit will be operated in overshot mode. He added that, for next year, the TMT may want to consider warmer water temperature releases from Dworshak – perhaps back to 48 degrees as was done a couple of years ago – because while the Lower Snake temperature stayed well below 68 degrees, there is some evidence that the low water temperature in the Clearwater may have delayed the growth of subyearling fall chinook rearing below Dworshak and been detrimental to those fish.

**10. Other.**

**A. USGS Chum Study.** Turner said the Corps received an email from Ken Tiffan of USGS regarding a proposed chum study this fall, which would involve 10 replicates of increasing flows at Bonneville Dam, from 125 Kcfs to 175 Kcfs at 10 Kcfs per hour over a nine-hour period, in early November and early December, observing the movement of radio-tagged female chum during the changing flow regime. There are 5 daytime and 5 nighttime tests proposed. Turner asked the TMT to provide any comments they may have on this proposed research operation to him as soon as possible. I’m just putting this on the table for now, he said, adding that he will invite Tiffan to attend a future TMT meeting to provide further detail on the proposed study. In the meantime, Turner will have the USGS research proposal linked to the agenda for the September 29 TMT meeting.

**11. Next TMT Meeting Date.**

The next meeting of the Technical Management Team was set for Wednesday, September 29. Meeting summary prepared by Jeff Kuechle.

**TMT Participant List  
September 15, 2004**

| <b>Name</b>      | <b>Affiliation</b> |
|------------------|--------------------|
| Rudd Turner      | COE                |
| Donna Silverberg | Facilitation Team  |
| Robin Harkless   | Facilitation Team  |

|                  |                      |
|------------------|----------------------|
| Russ Kiefer      | IDFG                 |
| Mike O'Bryant    | CBB                  |
| Scott Boyd       | COE                  |
| Ruth Burris      | PGE                  |
| Tim Heizenrater  | PPM                  |
| Steve Haeseker   | USFWS                |
| Tony Norris      | USBR                 |
| Nic Lane         | BPA                  |
| Jim Litchfield   | Montana              |
| Paul Wagner      | NOAAF                |
| Russ George      | WMCI                 |
| Kyle Martin      | CRITFC               |
| David Benner     | FPC                  |
| Scott Bettin     | BPA                  |
| Greg Hoffman     | COE                  |
| Margaret Filardo | FPC                  |
| Ron Boyce        | ODFW                 |
| Bruce MacKay     | Consultant           |
| Richelle Beck    | D. Rohr & Associates |
| Mike Buchko      | Powerex              |
| Cindy LeFleur    | WDFW                 |