

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

November 24, 2004

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.

Vernita Bar Update:

Chris Carlson, Grant County PUD, reported that a Vernita Bar redd count conducted on 11/21 found 99 redds between 50-55 kcfs; 67 between 55-60 kcfs; 32 between 60-65 kcfs; 9 between 65-70 kcfs; and 3 above 70 kcfs. The counts indicated that the protection level/critical elevation be set at 65 kcfs. The next redd count was scheduled for Sunday, 11/28. The PUD is using the Hanford Reach Fall Chinook Protection Agreement as guidance for operations. Chris will provide an update to the TMT at the December 8th meeting. Updates are also available on the TMT web page.

Effects of Transport History on Performance on Adult Salmonid Migrants:

Chris Peery, University of Idaho, provided a power point presentation intended for the TMT Year End Review. Radio tagged fish (Snake River spring/summer chinook and steelhead) were studied from 2000-2003 to see whether homing ability was effected by transportation. The following summarizes his presentation (which can also be found on the TMT web page):

- During low flow years and when spill is reduced, the proportion of transported fish will increase.
- Fish that were transported as juveniles had lower survival to natal areas, likely because of greater straying and fallback behavior.
- Evidence related specifically to the 2001 out-migrant year is not complete.
- 2004 data is forthcoming. Note there will be no comparison of transported vs. in-river fish, as the sample size for in-river is small.
- The study shows that there may be not as much benefit to transportation, perhaps even a cost, than previously assumed.

Reflections on Lessons Learned from 2004:

Donna Silverberg, facilitator, asked TMT members to consider lessons learned from 2004 operations and the impacts they might have on management practices for 2005. Ron Boyce, Oregon, noted that this reflection has been happening in other processes (e.g. AFEP and through comments to the BiOp Remand) and that the region should find a way to summarize these comments to enhance collective decision-making in the future. Other members agreed and suggested that the group identify subject areas (e.g. transportation, challenges of low flow years) and discuss with the TMT during future meetings or separate work group discussions. John Wellschlager, BPA, noted that 2004 was a low flow year, and an intense year for management. A positive lesson learned was that everyone maintained professionalism during the challenging

times. Dave Wills, USFWS, echoed this point and said that nobody got personal when disagreements arose. Russ Kiefer, Idaho, said that while there was some disappointment from 2004, for the most part everyone listened and tried to understand others' views. He raised concern that new information shows fewer benefits and potential detriments of transportation and encouraged TMT to look closely at this during discussions of 2005 management practices. Ron Boyce added that the TMT process worked well this year, partly because the members work well as a group. From Ron's perspective, there was a process outside TMT that drove operations of the river in 2004, and he believes that operation decisions in the future should be more responsive of technical information.

ACTION: TMT members will make a list of topics at the December 8th TMT meeting, and decide when/how to discuss them to aid 2005 operation management decisions.

Chum Update:

Ron Boyce reported on a chum survey conducted between 11/16 and 11/23 – 123 were counted on the final day of the survey. Fall chinook numbers continue to be high; up to 377 redds have been counted. Most of the redds have been found in Hamilton Creek and the area between Ives and Pierce Islands. Chum numbers thus far have not been high as 2002, although this may change as the season progresses. The operation for chum was successful this year. Timing was good thanks to BPA and COE real-time and on site operators.

Burbot SOR 2004 FWS-2:

Dave Wills, USFWS, reported that the Kootenai Valley Resource Initiative submitted a request on 11/5 to the COE and BPA to operate Libby to reach temperatures to meet burbot needs. Montana granted an exemption to the usual temperature agreement with USFWS to accommodate the request. Temperature reductions were successful at Libby (dropping 1-2°F), although not quite as low as burbot need. Temperatures are expected to reach 39°F in mid-December. Earlier coordination with Montana this year will prove to be an improvement on operations for burbot. The SOR will continue through the end of 2004. Follow-up results will be presented to TMT in January.

ACTION: BPA and the COE will look into flexibility of shifting water from Libby to Grand Coulee, per a suggestion from a TMT member. This issue will be re-visited at a future TMT meeting.

Water Management Plan Comments:

No comments to the 2005 WMP have been submitted as of today's meeting. The salmon managers' individual agencies plan to submit comments by next week (Nov. 29-Dec. 3). Jim Adams, COE, noted that the water quality section needs to be updated and the latest draft WMP will be sent out to folks in the next two weeks. Process suggestions from the public are welcome.

Status of Operations:

Reservoirs: Cathy Hlebechuk, COE, reported that Libby is currently at elevation 2437.2', with inflows of 6 kcfs and outflows at 10 kcfs. The COE is operating the project to reach elevation 2411' by the end of December. The COE will use the December early bird forecast to set flood control elevations. Albeni Falls is operating to stay within 2055-2055.5' elevation, with current

inflows at 16 kcfs and outflows at 12 kcfs. Dworshak is filling slightly, at elevation 1526.6'. Lower Granite is operating at 19 kcfs in and 19 kcfs out. The RSW at Lower Granite will be moved to Ice Harbor in February. TMT members have been invited to view the RSW before it is moved to the project. (NOTE: The field trip was scheduled for Tuesday, December 14th at 8 AM). Bonneville is releasing 129 kcfs. Grand Coulee is at elevation 1285'. Hungry Horse is at elevation 3540', and will remain so through the end of December.

Fish: Juvenile sites have closed down so there will be no more data collection through the end of the year.

Power: The power system is running to meet chum needs. A rod re-sequencing at CGS during the weekend of Nov. 27-28 required 8 hours of no power.

Water quality: There was nothing to report at this time.

TMT Meeting Schedule:

The next TMT meeting is scheduled for **Wednesday, December 8th**. Agenda items include:

- Issues from Year End Review/Game Plan
- Chum Update
- Vernita Bar

There may be a TMT call on chum on **December 15th at 9:00 am**. There will be no TMT meeting on December 22nd. The following face to face meeting will be held on **January 5th**.

TMT Process Meeting: The action agencies met on November 29th to plan for the upcoming TMT process meeting. The salmon managers will have their planning meeting on December 21st at FPAC. The TMT process meeting will be held sometime in early January. (Details to follow.)

Technical Management Team Meeting Notes

Custom House Building, Portland, OR
November 24, 2004

1. Greetings and Introductions.

The November 24 meeting of the Technical Management Team in Portland, Oregon was

chaired by Cathy Hlebechuk of the Corps and facilitated by Donna Silverberg. The following is a summary (not a verbatim transcript) of the items discussed and decisions made at that meeting. Anyone with questions about these notes should contact Helebchuk at 503/808-3942.

2. Vernita Bar Update.

Chris Carlson of Grant County PUD reported that field personnel counted redds in the 50 Kcfs to 70 Kcfs flow band during their last Hanford Reach fall chinook spawning ground survey. They observed 99 redds between 50 and 55 Kcfs, 67 redds between 55 and 60 Kcfs, 32 redds between 60 and 65 Kcfs, and nine redds between 65 and 70 Kcfs. We also noticed some females during the most recent survey that were working redds closer to shoreline area, Carlson said, noting that 70 Kcfs is the maximum critical elevation allowed under the Hanford Reach agreement. End of emergence will occur some time in the spring; until then, the critical elevation will be maintained to protect these redds.

Carlson said that, based on the additional spawning, the monitoring team decided to do an additional redd count on November 28. The results of this survey will be used to determine whether this year's critical elevation will be 65 Kcfs or 70 Kcfs. He noted that Grant is basing this operation on the new Hanford Reach agreement, although it has not yet been formally signed – we're just assuming that that's what we'll be operating under this year, he said. Carlson said he will provide another update at the next TMT meeting on December 8.

3. Effects of Transport History on Performance of Adult Salmonid Migrants.

Chris Peery of the University of Idaho provided a presentation titled "Effects of Transport History on Performance on Adult Salmonid Migrants." He noted that the goal of the study is to investigate whether or not fish that were transported as juveniles showed impaired homing ability as adults. He touched on the following major topics:

- Background – from 2000 to 2003, radio-tagged 457 Snake River spring/summer chinook and 727 Snake River steelhead. Just over 60% of the chinook had been barged, and 62% of the steelhead had been barged. Known-source fish were monitored to determine homing, straying, survival and fallback for barged and in-river migrants.
- Chinook showed about a 10 lower homing rate for transported fish (table)
- Steelhead generally showed less effect than did chinook, except in 2003, when 23.4% fewer barged steelhead homed (table)
- Fallback – barged chinook fell back more and more often than in-river migrants (table)
- Fallback – steelhead showed a similar pattern as chinook, but the effect was not as strong (table)

Peery then provided the following summary points

- During low-flow years and when spill is reduced, the proportion of fish transported will increase
- Fish that were barged as juveniles had lower survival to natal areas, likely because of greater straying and fallback behavior

- Evidence related specifically to the 2001 migration year is not complete. Most PIT-tagged fish were transported, so there was no in-river comparison group. The 2004 data are not yet complete; there was less coverage than in past years.

You show for both species that the percentage of returns tends to be trending down, yet adult returns have been trending upward over the last three to four years, said Wellschlager – am I missing something? Adult numbers peaked in 2001 and have trended downward in more recent years, Peery replied; obviously ocean conditions improved about that time, and it's possible that ocean conditions have begun to decline, or that a carrying capacity threshold has been reached. So you're saying that the percentage of change in adult returns is matching your numbers pretty well? Wellschlager asked. They correlate pretty well, Peery replied – obviously the condition of fish at freshwater entry has a significant impact on their ultimate chances of surviving to spawn.

With respect to his homing numbers, Peery said 19% of the barged chinook fell back, compared to 11% for in-river migrants. What this tells us is that the fish that were transported incur some sort of impairment in homing. The number in parentheses is the sample size? Wellschlager said. Correct, Peery replied. Some of those sample sizes are pretty low – are they statistically significant? Wellschlager asked. I wouldn't say they're statistically significant, replied Peery, but they provide further evidence of the homing problems we're seeing. In response to another question, Peery said Bonneville, The Dalles and John Day are the projects where the most fallback occurs. Particularly in the vicinity of The Dalles, there are a number of tributaries to confuse these fish. Ice Harbor is another place where we see quite a few of these Snake River-origin fish fall back.

It's odd that the majority of the fallback is occurring in the lower river, said Wellschlager – I would assume, intuitively, that you would see more fallback at the Snake projects, where the fish were barged through. Peery replied that it is possible that the larger volumes of spill at the lower river projects is a confusing factor. David Wills observed that even the 2001 sample, where only two of 81 sample fish fell back, may still be statistically significant; Russ Kiefer agreed. Remember too that this is selective data for Snake River fish, further subdivided into river and barge and year class – you're going to have small sample sizes. And I'm not questioning the value of this information, said Wellschlager – I'm just trying to understand its statistical significance.

Peery said the average difference in homing for steelhead, for all years combined, is 7.6% lower for barged fish than for in-river fish. Moving on to his summary, Peery reiterated that the condition of the fish as they enter fresh water appears to be declining somewhat over the past several years, perhaps due to El Nino effects. Did you look at tributary dip-ins in the lower river? Boyce asked. We did, and are analyzing that data now, Peery replied – we'll be summarizing that information as well.

Wills asked whether the researchers had looked at the relative contribution rates of these fish, in terms of overall survival, using CWT technology. No, that's outside our scope, Peery replied – this was specifically a homing study. We wanted to know whether barging had an impact on homing and fallback, and it appears that it does. He noted that, overall, fallback in the system has declined significantly in recent years, but added that fish that fall back show a 4-7%

reduction in survival compared to fish that outmigrated in-river. It's up to the managers to decide how significant they think that is.

This is very useful information, Boyce observed; there were some earlier studies that indicated similar observations. Obviously the point of transport is to increase juvenile survival, said Peery; if that survival improvement is enough to offset the detrimental effects those fish face when they return as adults, then it may provide a net survival gain for these stocks. Most transport studies are done in terms of adult returns to Lower Granite, said Wagner – wouldn't this information be reflected in the survival to Lower Granite numbers? I can't answer that directly, but if you see a net gain in numbers of adults returning to Lower Granite, then you may have your answer, Peery replied. In response to another question, Peery said his results do take harvest into account. He said that, off the top of his head, the average harvest on Snake River chinook is about 10%; for Snake River steelhead, it is about 25%.

Your homing rate is back to Lower Granite, said Margaret Filardo – if homing is impaired to Lower Granite, isn't there reason to think that those homing problems would continue once the fish pass Lower Granite? Yes, Peery replied – we have some numbers on that, but haven't quantified them yet. That's a good point, said Boyce; it would also be interesting to have information on the relative spawning success of the in-river and transported fish. Peery invited anyone with further questions to contact him directly.

4. Reflections on Lessons Learned from 2004.

At the TMT year-end review meeting, we asked that the participants reflect on lessons learned in 2004 – things that might impact how we operate the system and make management decisions in 2005, said Silverberg. have you had a chance to think about that, or do you need more time?

Boyce said this is certainly a valuable discussion to have; it will occur through the Regional Forum and AFEP. One thing that is lacking is trying to get a way to summarize it all, so that we can have a discussion and agree on future direction. We're getting there, he said, but we're not there yet.

As far as what I've learned, there are some key issues identified through the AFEP process; I also learned some things in reviewing the remand publications, but I have not yet put my thoughts down on paper. I think we should give people a little more time, then have that more deliberate discussion, Boyce said.

I think it's important to have that discussion well in advance of the management season, Silverberg observed; we need to identify a time when we could have that conversation.

With respect to transport operations in 2005, said Boyce, I think we've gotten a lot of relevant information recently; the salmon managers have been discussing a change in direction specific to transportation. However, you need to share that information with the non-salmon-manager members of TMT, Silverberg observed. We're talking about more of a spread-the-risk strategy, additional spill studies and other changes, said Boyce – perhaps we need to schedule a

special, subject-by-subject meeting at TMT to discuss transport and other issues. Kyle Martin suggested that it would be appropriate to discuss this at the next TMT meeting.

Wellschlager noted that 2004 was a pretty intense year, a low water year, which always adds pressure. One good thing, from my perspective, is that we didn't let things get personal. We all represent our agencies, and although those agencies often have very different views of how the system should be managed, I thought people were willing to hear each other out. Low flow years are challenging, said Paul Wagner; the question is, how do you manage when flows are low? Transport is one tool, but it carries some baggage, as Chris Peery's report indicates. That applies to all years.

Cathy Hlebechuk echoed Wellschlager's comments; she asked whether the salmon managers agreed that, while the discussion was often intense, the overall tone was non-personal and professional. Wills agreed, saying that the tone in 2004 was very different than the tone in 2001. Perhaps we carried that experience with us into 2004. Kiefer said that last year was both the best and worst year he has had at TMT, because it was his first year at TMT. Generally, however, I felt it was mostly professional, although there were a few times when I was disappointed, said Kiefer. We certainly represent different agencies, with different interests. I was disappointed that we're seeing that transportation doesn't provide the benefits we would like to see; we are going to have some cost savings through the Ice Harbor RSW in 2005, yet the Updated Proposed Action is essentially unchanged since the 2000 BiOp. I believe that if we're working to improve adult returns, we should be trying to get as many fish as possible over spillways in the most cost-effective manner, rather than relying so heavily on transport. The UPA doesn't move the region in that direction, and that was a disappointment, Kiefer said.

Boyce said that, in his view, TMT does a good job, but it was irrelevant in 2004 – most of the action was tied up in lawsuits, when it came to operations. As far as the TMT process, I thought it worked well, and that we work well as a group, recognizing that there are processes above TMT that are actually driving operational decisions on the river. From a technical standpoint, I think the TMT should be more responsive to emerging information, Boyce said. That's one area where I would like to see improvement, he said – that new information should drive our recommendations to the operating agencies.

It sounds as though the TMT is still processing all of the information we've received in the past few weeks, Silverberg observed; perhaps what we should do is brainstorm about issues of concern at the December 8 meeting, and schedule a separate meeting at which to discuss them in depth. It was so agreed.

5. Chum Update.

Boyce directed the TMT's attention to the Fish Passage Center homepage, which showed that the November 23 spawning ground survey found 210 chinook redds and 123 chum redds in the Ives Island area, as well as 137 live fall chinook and 105 live chum. Chum really picked up last week, and picked up further in yesterday's survey, he said. Fall chinook continue to be very strong; we have seen up to 377 redds in our recent surveys. Most of the action is in Section 2, just below the confluence with Hamilton Creek. Both chum and fall chinook spawning is in full

swing; it doesn't appear, however, that 2004 is going to be a huge chum spawning year, said Boyce. At Hardy Creek, in the most recent survey, no chum redds were found, but 29 were found at Hamilton Springs. Boyce noted that a very large number of chum redds have been counted in the West Fork Grays River this year.

Is it too soon to make any projections about how the 2004 chum return stacks up against previous years? Wellschlager asked. The returns for 2004 appear to be tracking fairly well with last year's returns, which were down somewhat, said Boyce; the 2004 count of live fish is not likely to approach the 6,694 live chum counted in 2002.

Overall, it appears that we were successful in getting the water on the fish at the proper time this year, said Boyce. Hlebechuk thanked the BPA real-time staff and Bonneville project operators for the good job they've done in maintaining the requested tailwater elevations. I'd like to second that, said Boyce.

6. *Burbot SOR.*

On November 5, the action agencies received SOR 2004-FWS 2. This SOR, submitted by USFWS on behalf of the Idaho Office of Species Conservation, the Kootenai Tribe of Idaho, IDFG, the City of Bonners Ferry and Boundary County, Idaho, requests the following specific operations:

- Use the selective withdrawal system at Libby Dam to release the coolest possible water during November and December, before temperature stratification limits the temperature control capability.

Wills provided an overview of the SOR, noting that it had been discussed at the TMT's last management meeting, but was not final at that time. The Kootenai Valley Resource Initiative Group would have preferred to specify lower flows, during this period as well, he said, but following a meeting with BPA and the Corps regarding expected runoff at Libby, it was clear that it would not be possible for the action agencies to reduce Libby outflow this year. The requested operation has been initiated, and is going well, Wills said.

Greg Hoffman said the selector gates are being withdrawn, and water is being withdrawn from elevation 2222 beginning today. Montana and the Corps have an agreement throughout the year for temperature guidelines below Libby; Montana has granted an exemption to that agreement for this operation. This is a test to see whether or not we can bring temperatures down at this time of year, said Hoffman. It appears that we are able to do so, although perhaps not to the extent that burbot need, he said. What temperatures do you expect to see over the next couple of months? Boyce asked. We're looking at 39 degree-water (7 degrees C) coming out at Libby, Hoffman replied; last year we saw 4 degrees C at Bonners Ferry, probably because of atmospheric cooling in the intervening stretch of river. He noted that earlier coordination on the burbot operation is desirable for next year; that may allow us to release colder water, he said, adding that he will provide a wrap-up of the operation at one of the TMT's January meetings.

Is there any possibility of shifting flood control from Libby to Grand Coulee this spring, given the need to draw Grand Coulee down for the drum gate work, and given the fact that most of the climatologists are predicting below-average precipitation during the late winter period? Kiefer asked. That's not the way it works, Tony Norris replied. Elevation 1255 is actually pretty high, said Norris – if it's an above-average water year, the flood control elevation would actually be below 1255. However, we have heard Idaho's request, and will see if there is something we can do, operationally, to accommodate it, said Scott Bettin. We can look at it, but I don't know if there's any chance of shifting flood control from Libby to Grand Coulee, primarily because of the VARQ requirements, added Hlebechuk. We'll check back on this issue at a future TMT meeting, Silverberg said.

7. Water Management Plan Comments.

Hlebechuk said no comments have been received, to date, on the 2005 WMP. Wills said the salmon managers anticipate providing comments some time next week. CRITFC will probably have its comments in on Monday, added Martin. Jim Adams noted that the water quality section of the WMP has not yet been updated; he will do that over the next couple of weeks.

8. Status of Operations.

Hlebechuk said Libby elevation has finally dropped below 2439, to 2437.2 feet; the current project inflow is 6 Kcfs, with outflows of 10 Kcfs. Libby's November water supply forecast was 98% of normal; although the Corps doesn't use the November forecast to change the Libby flood control operation, if the forecast holds true, it would result in a December 31 flood control elevation of 2411 feet. Albeni Falls is operating in its winter elevation range of 2055-2055.5 feet, with inflows of 16 Kcfs and outflows of 12 Kcfs. The Corps plans to increase outflow to pass inflow soon. Dworshak inflows have been running 2.5 Kcfs, with 1.5 Kcfs out; current project elevation is 1526 feet. Average flow at Lower Granite, currently, is 19 Kcfs; the Ice Harbor RSW is scheduled to be barged upriver in December. It was agreed that there may be an opportunity for a TMT field trip, to see the RSW before the manufacturer ships it upriver. Daily average flows at Bonneville have been 129 Kcfs (with a range of 120 Kcfs-134 Kcfs) over the past seven days. The USGS testing took place on Wednesday and Thursday of last week; further testing is scheduled for tonight and Friday.

Reclamation reported that Grand Coulee is hovering at just under elevation 1285; Hungry Horse is holding elevation 3540 through January 31 – flows pop up and down depending on inflows. Will the Corps use the SOI forecast to determine the flood control elevation at Libby? asked Dan Bedbury of EWEB. The November forecast is a guide, but we act upon the December forecast, Hlebechuk replied – if the December forecast is below 96% of normal, the flood control elevation would be somewhat higher – if it's 85% of normal, for example, 2426 would be the highest elevation we would draft to. The December water supply forecast should be available during the first week in December, Hlebechuk added.

Wagner said that, from a fish perspective, all of the action is in chum; the juvenile facilities have now been shut down for the winter. Power supply? Silverberg asked. We're

running the system for chum at the moment, said Wellschlager; there is a rod resequencing at the Columbia Generating System scheduled for this weekend; they will dump load for eight hours over the weekend.

The fieldwork is now complete on the Bonneville spill bay recalibration, said Hlebechuk; however, they don't have funding to write up their final report. TMT needs that information prior to the start of the spill season. The important thing is that we know that when we call for 50 Kcfs spill, we actually receive 50 Kcfs spill, Wills observed.

9. Next TMT Meeting Date.

The next TMT meeting was set for Wednesday, December 8. It was agreed to schedule a check-in call on chum operations, if necessary, for December 15. January 5 would then be the next scheduled face-to-face meeting of the TMT. Meeting summary prepared by Jeff Kuechle.

**TMT Participant List
November 24, 2004**

Name	Affiliation
Donna Silverberg	Facilitation Team
Robin Harkless	Facilitation Team
David Wills	USFWS
Cathy Hlebechuk	COE
John Wellschlager	BPA
Paul Wagner	NOAAF
Laura Hamilton	COE
Rudd Truner	COE
Kyle Martin	CRITFC
David Benner	FPC
Russ George	WMCI
Tim Heizenrater	PPM
Nic Lane	BPA
Jim Adams	COE
Tom Haymaker	PNGC
Russ Kiefer	IDFG

Ron Boyce	ODFW
Tont Norris	USBR
Dan Bedbury	EWEB
Mike Buchko	Powerex
Chris Peery	U of I
Ruth Burris	PGE
Margaret Filardo	FPC
Scott Bettin	BPA
Chris Carlson	GCPUD
Lance Elias	PPL