

TECHNICAL MANAGEMENT TEAM

CONFERENCE CALL NOTES

March 23, 2005
Corps Reservoir Control Center
Portland, Oregon

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Harkless

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.

Ice Harbor Balloon Tag Test

Cindy Henriksen, COE, summarized the Walla Walla COE's proposed Ice Harbor balloon tag test, which was also described in two documents attached to today's agenda. The test was proposed to run from March 31-April 9, during which time three treatments would occur:

- "Plunging": Low flow treatment over a 24-hour period with flows ranging from 9.5 kcfs at night to 15 kcfs during the day, with a day average outflow of 12 kcfs.
- "Skimming": Medium flow treatment with flows ranging from 9.5 kcfs at night to 55 kcfs daytime, with a day average outflow of 30 kcfs.
- "Undular": High flow treatment with flows ranging from 9.5 kcfs night to 95 kcfs daytime flows, with a day average outflow of 48-52 kcfs.

All four Lower Snake projects would be affected by the test, as they would be used to draft during daytime periods requiring higher flows. The graph shows that storage at the Lower Snake projects would start (March 31) at full pool, and end (April 9) at lower MOP storage levels. No UPA nighttime spill would occur during the test, but spill would occur during daytime test periods. The spill periods would be up to 10 hours.

The Walla Walla COE has been coordinating the test through FFDRWG and expressed an interest in continuing to coordinate through TMT, welcoming feedback on the proposed test. Concerns from the salmon managers were raised:

- With this year's low flows, the test may not provide the information we are looking for. Walla Walla COE recognized the strain on the river with low flows. Still, they felt the potential real-time risks to fish were pressing enough to move forward at this time with the test.
- Injuries to fish/decreases in survival may be impacted by other factors (e.g. gate locations) more so than tailwater – is this test necessary? Available information suggests that tailwater elevations have an effect on fish injuries.
- Is the test critical this year, or could it be postponed? There are potential risks to fish right now, and the test results could effect future RSW and bulk spill operations at the project.

The salmon managers needed time to consider and discuss the proposed test. The COE needed to make a decision in the next day, so TMT agreed to reconvene for a conference call at 3:00 pm today.

UPDATE: After further discussing the test proposal, the salmon managers expressed concern about the effects of the study (fluctuating flows) on delay and mortality in forebays, particularly at Lower Granite. They recommended postponing the test until next year before spring migration season, to allow time to look at the nature of the study, the technology around the study, and the study design. The COE Reservoir Control Center believes this is important research and has safety concerns with implementing the test during this low flow period, so recommended that it be conducted at a later time.

ACTION: The salmon managers will draft a letter summarizing their concerns and share it with the Walla Walla COE. The COE will take comments from TMT into consideration as they make a final decision about the test. They will send an email with their decision through Cindy Henriksen to TMT tomorrow (3/24). There will be an update on this issue at the 3/30 TMT meeting.

Priest Rapids Flow in April

The action agencies requested feedback from the salmon managers about chum operations criteria, given the low water year and concerns with high TDG levels in the river. The latest chum emergence information was posted and linked to the 3/16 TMT meeting agenda – the COE requested clarification on some of the links.

ACTION: The salmon managers are working on flow scenarios for operations after April 10 (the expected end of chum emergence), which they will share with the COE in the next few days to inform the COE's Q Adjust runs. One suggestion was to consider lowering the Bonneville tailwater before April 10 if chum emergence appears to be ending early. There will be a follow-up discussion on this at the March 30 TMT meeting.

The salmon managers requested that the action agencies continue to be mindful of the water 'budget' when making operating decisions as we continue through the season. It was noted that the tailwater at Bonneville went slightly above 11.5' yesterday due to other system operation issues.

Next Face to Face TMT Meeting, March 30, 9am-noon

Agenda Items:

- Chum update/Operations during low flow years
- Spring Creek spill update
- Upper Snake operations
- WMP Spring/Summer Update
- The Dalles operations
- Bonneville spill
- Water supply at Priest Rapids
- Feedback on graphs/graphics

- CRITFC 2005 River Operations Plan

1. Greetings and Introductions.

Today's Technical Management Team conference calls were chaired by Cindy Henriksen and facilitated by Robin Harkless. The following is a summary (not a verbatim transcript) of the items discussed and decisions made at this meeting. Anyone with questions or comments about these notes should contact Henriksen at 503/808-3945.

2. Ice Harbor Balloon Tag Test and Start of Spring Operation.

Henriksen said that the proposed Lower Snake operation during the testing period has been hot-linked to today's agenda on the TMT homepage. The test is scheduled to start March 31 and will run through April 9. There are three treatments of spill: skimming, undular and plunging. This entails specific tailwater elevations for each treatment. The plunging spill treatment involves a low tailwater elevation, 338 feet at Ice Harbor. That translates into flows of 9.5 Kcfs at night and up to 15 Kcfs during the day for 8 hours. The skimming spill test would result in Lower Snake flows of 55 Kcfs during the day down to 9.5 Kcfs at night. The undular treatment will require up to 95 Kcfs for 7-8 hours during the day, down to 9.5 Kcfs at night while the reservoirs refill.

I say reservoirs in the plural, said Henriksen, because all four Lower Snake projects will be used to contribute to these different flows, particularly the undular flows. These projects will draft during the day, then refill at night. Across the 10-day test period, these projects will start out full, and will be below MOP at the end of the test.

Other impacts of this test include the fact that, during the test period, there will be no other UPA spill at Ice Harbor, Henriksen said. Also, the other Lower Snake projects will not be able to operate in their MOP or MOP+1 ranges during the test period.

How long does the test run each day? Kyle Martin asked. For 7-8 hours, and up to 10 hours, during the daytime test period, Henriksen replied. I've been trying to figure out, for a single three-day block, what the average daily flow is, and how that will affect flows in the lower river, said Wills. The test plan is based on an average flow of 22 Kcfs through the Lower Snake; the flows will be re-shaped downstream, Henriksen replied. Day-average flows will be up to 30 Kcfs under the medium tailwater treatment, added Julie Ammann, 12 Kcfs during the low tailwater, and on undular, 48-52 Kcfs.

There will be no spill when flows are 12 Kcfs? Paul Wagner asked. No, that would be all spill, Ammann replied. And at night, it would be all powerhouse flow? Wagner asked. Correct, Ammann replied – there would be no powerhouse flow at Ice Harbor during the day. The objective is to use existing river flows to provide all water for this test, rather than taking any water out of storage, John Wellschlager added.

Has this test gone through the regional approval process? Wagner asked. The coordination has been done through FFDRWG, Mark Smith replied; I guess the

coordination is ongoing. I'm hoping this group will help with that. The study has been coordinated, although we haven't gotten a lot of comments back. We're planning to go forward unless the TMT is strongly opposed, Smith said, but we're still considering coordination, and are still open to comments.

Russ Kiefer said he has heard some concerns: with these low flows, the test we can provide may not be truly representative of what we really want to test, for example. Also, there is some concern from CRITFC and USFWS that the differences in spillway survival we've seen in the past may be more due to low gate openings and where the fish were released than what tailrace conditions were like. I think we should make sure that we can convince folks that there really is an issue we need to address, he said. If so, the cost of manipulating MOP and the lack of nighttime spill to the fish needs to be worth the information we're going to gain, Kiefer said – we need to be sure this is a question that really needs to be answered.

Lynn Reese replied that, in terms of the target tailwater elevations, based on the Corps' analysis, we feel we can hit the conditions we want. The low flows may cause a slight adjustment in the releases we would like to see from the projects, but the idea is to hit the tailwater conditions we're targeting, as well as the time duration. We're working with Reservoir Control and others to make sure we're getting the proper conditions. With respect to the second part of your question, the influence of gate openings, our view of the evidence is that the problem is the tailwater conditions. This test is designed to nail that question, and it has major operational and biological implications. The sense is that bulk spill gives us the best tailwater conditions, but there is still a question about where the greatest survival benefit occurs. We have a theory that's based on some pretty strong information, and this test will nail it, from our perspective, particularly the question of bulk spill vs. flat spill, Reese said. We see this as one of the most important tests that we've done.

When you say "we" did an analysis, is that the agencies, tribes, Corps and the region? Michelle DeHart said. Have other people reviewed the test design? We've been looking at the 2003-2004 research information at FFDRWG, Reese replied; from my perspective, it's "we, the region." So do I understand that "we, the region" agree with the proposed study design at Ice Harbor? DeHart asked. The Corps did most of the analysis and presented it at FFDRWG for comment, Smith replied. Other agencies have reviewed that analysis, and based on the comments received, the Corps designed this study. Did the agencies and tribes agree with the analysis you presented, and with the test design? DeHart asked. Leading up to this design, we held meetings to which the states, tribes and other salmon managers were invited, said Reese. I think this has been coordinated through all of the interested agencies, said Smith. But did they agree? DeHart asked. This study requires a significant river operation, so have the agencies and tribes agreed with you on the basis of this study and the conduct of this study? I would say yes, except on the river operations, Smith replied – originally, we planned to do the study earlier, before the spill season was to begin. I'm a little less confident on the operation because the test has been shifted into the spill season, due to delays with RSW installation. My point is that coordination and agreement aren't the same thing, said DeHart.

The point is that there has been ample opportunity to comment, said Henriksen; we would prefer to talk about the test as it is before us. We have to consider, also, what will happen after the test, because by that time it will be April 10. According to the UPA, we would not be spilling at the collector projects, but we would be doing some testing of the RSW for approximately 10 days. That would not be full UPA spill because of the testing of the RSW, Henriksen said. You should be prepared that you may get some comments on the design and on the analysis, said DeHart.

What I'm hearing is that if people object to the operations required to perform this study, this is the time to weigh in, said Wagner. Our next TMT meeting is on the 30th, Henriksen replied; if we don't get any feedback from you today, by next TMT meeting, we'll be poised and ready to begin, because we need to set up the river and get people in the field.

I'm not seeing the test as critical this year, given the low flows, said Wills. What's preventing us from postponing the test until next year? It's a question of risk, Reese replied – every year we operate Ice Harbor without knowing what's causing the injury problems, it puts real-time fish at risk. There is a potential that this test could impact what bay adjacent the RSW we operate for training spill. If we have injury issues with the RSW, this may give us some indication as to why, and help us refine the operation for next year. The training spill question will be determined through an analysis of hydraulic conditions, added Reese – it's a real-time thing we were hoping to factor in this year.

With respect to bulk spill, I'm scratching my head, said John Wellschlagler – if you're in an operation and it's not giving you the results you want, what's to prevent you from switching the training spill to another bay? It's a question of how quickly we can turn around the information, Reese replied – this balloon tag information is the only way we can get a quick turnaround on injury data.

Is there another time we could do this test? Henriksen asked. There's always another time, Reese replied; we have discussed moving the test to the fall, possibly in November. However, the average flow would be, perhaps, 20-40 Kcfs. It's a little bit of a longshot that we would be able to do the test this fall, which could mean pushing the test out to next March. That means another year of impacts to fish. But this test will not impact operations this year? Wagner asked. Correct, Reese replied, but to me, this may be one of our best years to do the test, in terms of minimizing the impact to migrating fish.

Do you understand the operation as it's being proposed, and the impacts to other Lower Snake operations, such as delaying the MOP+1 operation and delaying UPA spill until the 20th of April or so? Henriksen asked. Why the 20th of April? Wagner asked. Because we will be testing the RSW for 10 days after the Ice Harbor test is completed, Henriksen replied.

After a few minutes of additional discussion, it was agreed that the salmon managers will discuss the proposed test, and the TMT will re-convene via conference call at 3 pm today.

When the call resumed, Wills said the salmon managers had discussed the balloon tag test, and have concerns about the effects of the operation on delay and mortality in the forebays, particularly at Lower Granite, due to the fluctuating flows. Given the risks associated with this low-flow year, in terms of getting a meaningful study, which may need to be repeated, in the salmon managers' view, the risks of continuing outweigh the risks of delaying the study, he said. We also have some concerns about the study design, which we would like to address at a later time. Tom Lorz said the salmon managers will be sending a letter outlining these concerns to the Corps. And when you say you have concerns about the study design, where would those be addressed? Henriksen asked. Through FFDRWG, Wills replied.

Smith said that, in his view, this study needs to occur. There are risks associated with the study; the question is, how real are those risks? We have set up the test, and in my view, the conditions we have set up, there is some softness in the tailwater target for the undular and skimming flow, said Reese. We need to have some further discussions with Reservoir Control, and with the biologists, about the feasibility of the test this year, he said.

Russ Kiefer said he had talked to Tom Lorz, Steve Haeseker and others, and we have some concerns about balloon-tag and hose-release studies that have not yet been addressed. We are also concerned about doing this test during the spring migration season, rather than prior to the start of the season, as originally proposed. We are drafting a joint letter recommending that we spend some time in the coming year reviewing those concerns, and making sure we're using the right technology to address these questions. We're going to be sending a letter expressing our concerns, and the fact that we are unanimously not in support of doing the study this year, Kiefer said. Wagner said that, if other salmon managers have a problem with this study, then NOAA Fisheries is not comfortable with it either.

Henriksen said that, from an RCC perspective, this is a very difficult operation to try to pull off, given the low-flow conditions this year. I would feel more comfortable waiting until we have more flow in the river, she said; that will give the Lower Snake pools more ability to recover, from an operational standpoint.

I would like to take this information to our upper management, said Reese. We definitely hear folks loud and clear, said Smith; however, we need to have some additional in-house discussions before the Corps makes its final decision. Paul Ocker said that, from a Division perspective, this is important research; however, if it was to be pushed to a different time, we wouldn't have a problem with that. The decision is up to Walla Walla, however, he added.

It sounds, then, as though there will be some internal discussions later today at Walla Walla District, and that the Corps will send out an email laying out their final decision by tomorrow morning, said Harkless.

3. Shape of Priest Rapids Flow in April.

This question has an impact on flows at Bonneville, and our ability to maintain an 11.5-foot tailwater elevation at Bonneville after April 10, said Henriksen. Spill is scheduled to begin on April 10, so one question is, where are we with chum emergence? The latest information we have was appended to the agenda for the past TMT meeting, said Wills. I think we'd like to look at the data again and link it properly, said Henriksen – there was a bit of a disconnect between the text and the graphic information. Our concern is that, with the spill, and the 11.5-foot tailwater, I'm assuming that we're going to see very high TDG levels, which could be a problem for any chum that are left, said Wellschlager. We have been discussing that point with the salmon managers, and we would like to wait for another couple of weeks to see where we're at, said Wills. There was a commitment to get all of the temperature data together, so that we have a clearer picture of what's going on by the next TMT meeting, said Wagner. Henriksen reminded the group that, with Grand Coulee drafting toward elevation 1255 by March 31, there is limited ability to shape flow in the lower river in April. We need to discuss how best to shape the Grand Coulee draft to support the chum operation between now and the end of April, she said.

We're looking at different scenarios, piecing together different ideas and different flow scenarios, said Wills. Hopefully we'll be able to present those at the next TMT, he said. Can you give us some idea of what you're thinking of? Henriksen asked. As a default, since we've invested this much time in the chum, we would suggest maintaining this operation through April 10, when we would start spill, said Wagner. The TDG from spill would be a risk to the chum, but not providing spill would be a risk to the upriver stocks. It would be nice if we could budget whatever water is available from drafts in the Lower Snake and the Columbia into the April 1-10 period, to maintain the tailwater elevation at Bonneville through April 10 while minimizing the stress on Grand Coulee, Wagner said. For example, if you could not bring John Day to 262.5 before April 1, that would be helpful.

So you're saying maintain the 11.5-foot tailwater through April 10? Henriksen asked. Correct, Wagner replied. And what happens after April 10? Henriksen asked. That's what we need to discuss, said Wagner. Could we begin gradually reducing the tailwater elevation prior to April 10? Wellschlager asked. Do the fish from the shallower redds emerge earlier than the deeper redds, because the temperatures are warmer in the shallower areas? That's what the data from Ives Island indicates, but we have less information on the redds in the Multnomah area, Wagner replied. The latest Q-ADJ run shows an average flow of 152 Kcfs at Bonneville during the last two weeks in April, one participant observed. That is correct, said Henriksen, but the data from the Q-ADJ study also shows that in about 12 out of the fifty years studies, the flow at Bonneville is less than 125 kcfs, too. Those are the years that may be problematic.

After a few minutes of additional discussion, it was agreed to revisit this issue at the March 30 TMT meeting. Wills said the salmon managers will provide the Corps with several post-April 10 operational scenarios to model prior to the March 30 meeting.

Dave Hurson noted that the Corps is planning to begin maximum transportation from the Lower Snake collector projects within the week.

4. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for March 30. Meeting summary prepared by Jeff Kuechle

**TMT Meeting Participants
March 23, 2005**

Name	Affiliation
Cindy Henriksen	COE
David Wills	USFWS
Paul Wagner	NOAAF
John Wellschlager	BPA
Nic Lane	BPA
Dan Spear	BPA
Robin Harkless	Facilitation Team
Kyle Martin	CRITFC
Russ George	WMCI
Bruce MacKay	Consultant
Lee Corum	PNUCC
Tom Le	PSE
David Benner	FPC
Lynn Reese	COE
Mark Smith	COE
Tim Wick	COE
Tine Lundell	COE
Laura Hamilton	COE

Larry Beck	COE
Julie Ammann	COE
Cindy LeFleur	WDFW
Tony Norris	USBR
Dave Hurson	COE
Paul Ocker	COE
Tom Lorz	CRITFC
Russ Kiefer	IDFG