

**TECHNICAL MANAGEMENT TEAM
MEETING NOTES
February 4, 2004
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE
PORTLAND, OREGON**

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.

Summer Spill: Alternatives and Options:

Overview: Suzanne Cooper, BPA, gave an overview and context for the analysis of alternative spill options and potential offsets that were presented to the TMT today (see TMT agenda for supporting analysis information and documentation). She explained that the Federal agencies are looking at the analysis as a decision support tool to help look at varying impacts—in other words, there are no absolutes or certainties that should be taken from the numbers. Today’s presentation was given to inform TMT and others about how the analysis was done, and to give the TMT the opportunity to provide technical comments on the analysis. Similar opportunities will be provided at IT and the WQT. Written comments are encouraged and should be sent to BPA (via mail or www.bpa.gov/comments) by February 13th.

Suzanne explained that the alternatives presented range from small changes to the BiOp’s recommended spill to larger departures from the BiOp. She noted that technical aspects of the proposed test alternatives (# 5 and 6 under the Spill Alternative Options) are also being discussed at FFDRWG. Suzanne clarified that, at this point, the options and analysis being considered are only for 2004. The Regional Executives will need to decide whether to consider future years. She also noted that there will be a Regional Executives’ meeting in March to discuss and make decisions about operations for 2004 and possibly beyond. Oregon commented that a written explanation of the methods, assumptions and results would be very helpful to have for the review and comment on the entire analysis.

Analysis: Kim Fodrea, BPA, presented information about the analysis, which was created out of a set of assumptions agreed to through collaboration of federal agencies, with input from state and tribal representatives. Kim highlighted stock calculations for July/August migrating fish. This was a one year analysis, based on expected conditions for 2004 (average flow year). Input passage parameters were put into the Simpas model, and the output numbers were used for calculations. To access more detailed information about the formulas or assumptions used in the analysis, which is posted on the TMT web page, go to the excel spreadsheet and hit **Format: Sheet: Unhide**.

Comments & questions:

- A question was raised about revenue impacts based on the expected water year (as was done for fish passage) as opposed to the “average” (which gives a wide range). This should be made clearer.

- Idaho expressed a strong concern that the SIMPAS model is being used in a way that it was not designed to do: so it underestimates the affects on fish. CRITFC noted there are other models available that might be better for the analysis.
- There is a danger that the way information is presented will be read by some as certainties instead of probabilities. While everyone here may know there are no certainties, the presentation should be sharpened to better reflect that.
- A question was raised whether there was a better way to calculate the run at large, such as using pit tag information instead of fish indexes.

Offsets: John Palensky, NOAA, gave background on the group that looked at feasible offsets based on agreed upon principles. He walked through those options that seemed worthy of consideration at this point. He noted that NOAA will await comments from the co-managers regarding the analysis of losses, the potential of offsets mitigating those losses, and any other considerations before Bob Lohn will weigh in with NOAA’s position. To be in the best position for the BiOp Remand, NOAA would like to see no harm and a *benefit* from any offset actions that might be taken.

Comments on the offsets presentation were shared:

- Impacts to fish will be immediate if spill is stopped while most of the offsets are longer term and will need time to be put into place. There is concern about the lack of the link up between the two.
- A question was raised whether the McNary test proposal is a possible offset that could occur in spring and then the gain be realized during the summer spill season (as spill).
- The Northwest Sport Fishing Industry commented that there is a need to match potential offsets with other stocks – what are the affects and tradeoffs?
- Specifics on the numbers used for the Hanford Reach analysis are needed before comments can be made—they seem off somehow.
- What is the anticipated overall benefit of offsets to all stocks? Is this anticipated?

The Way Forward: Cindy Henriksen, COE, commented that the discussion today was very helpful from a technical standpoint. She encouraged folks to share any additional technical questions as soon as possible and focus the information only relative to 2004, for now. Input from today’s discussion WILL be considered! Also, written comments can be sent to www.salmonrecovery.gov, or to the BPA PO Box included on the TMT web page under “Summer Spill: Status of Discussions -- Comments” document. A Regional Executives meeting is anticipated for mid-March, after which a decision is anticipated. Montana commented that they would like to see the Hungry Horse/Libby proposal discussed at that meeting as well.

Next Meeting, February 18th, 9 am:

- QADJ For Flood Control (please review and have comments ready)
- Spring Creek Spill? – Update
- BON Adult Fish Attraction Flow—Criteria from Salmon Managers
- Snake River End of Zero Flow—Criteria from Salmon Managers
- Spring/Summer Update—Begin to develop

1. Greeting and Introductions

The February 4, 2004 Technical Management Team meeting was chaired by Cindy Henriksen of the Corps and facilitated by Donna Silverberg. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Henriksen at 503/808-3945.

2. Summer Spill – Status of Discussions.

BPA's Suzanne Cooper began by providing some background on the summer spill effort. She noted that, last spring, the Council passed its updated mainstem amendments, which told the action agencies to evaluate the effectiveness of the summer spill program, and to evaluate offsets that might provide the same biological benefits at a lower cost. We have been working since October to see whether the objectives of our executives could be met, she said, through CBFWA's spill subcommittee, and through the Regional Forum, where we have participated in a number of discussions on this issue. Working with the Corps and NOAA Fisheries, BPA has also analyzed the biological and revenue impacts of various spill program options, she said, as well as the benefits of various mitigative actions and offsets. Results were presented to the Council on January 21, said Cooper, adding that the comment period on the summer spill evaluation ends February 13. Our goal today is to present the analysis to you, to help you formulate your written comments, she said.

Cooper then provided an overview of the analysis, beginning with the alternatives evaluated:

1. Full BiOp spill in July and August
2. BiOp spill in July and August/no spill at Ice Harbor
3. BiOp spill in July-August 15/no spill at Ice Harbor
4. BiOp spill in July/no spill in August
5. BiOp spill in July except test 50 Kcfs v BiOp at Bonneville/no spill in August/no spill at Ice Harbor
6. BiOp spill in July except test 0 Kcfs v. BiOp at Bonneville/no spill in August/no spill at Ice Harbor/no spill July-August
7. No spill in July or August

Cooper devoted a few minutes of explanation to the thinking underlying these various alternatives; she noted that the ultimate decision on which spill strategy to pursue in 2004 will be made by the Regional Executives, hopefully in March.

Is this one-year proposal, or a proposal for future years? Paul Wagner asked. In terms of a change to the operation, that is something that will have to be worked out at the executive level, as far as its longevity past 2004, Cooper replied.

Cooper then moved on to the expected revenue impacts of each of these alternatives, based on a \$36/MwH average price:

Revenue Impacts of Summer Spill Alternatives

Spill Option	Annual savings Compared to BiOp in millions (50-yr average)	Annual savings range compared to BiOp in millions (low-high)
1	\$0	
2	\$8	\$5-11
3	\$26	\$15-32
4	\$42	\$25-50
5	\$51	\$30-61
6	\$54	\$32-64
7	\$77	\$55-92

Have you factored in the years when there is so much water the spill program essentially costs you nothing? Liz Hamilton asked. Yes, Cooper replied, but under the 50-year historic record, the least the summer spill program cost in lost power revenues was \$55 million. Bear in mind that this is summer spill – July and August, months when there is never any involuntary spill, Scott Bettin added.

Did the pricing analysis take into account shaping between on and off-peak? Tom Haymaker asked. We used a month-average model, Cooper replied. So in all likelihood, in reality, the cost would be higher, if you were able to shape flows into the heavy-load hours, Haymaker said. I’m not sure that’s true, Cooper replied – the Aurora model is a marginal cost model.

It would be helpful if we had a narrative explaining the assumptions used to project those savings, said Ron Boyce. That’s why we’re going to walk through this today, Cooper said. This is a very big decision you’re asking the region to make, Boyce said – it would be helpful if we had a written document explaining how these costs were estimated. We don’t have that available, Cooper replied. That is unfortunate, said Boyce, because it would help us develop our comments. Bill Maslen noted that all of the assumptions underlying these analyses have been posted to the BPA website. Wagner observed that one thing that could drive down the cost assumptions in this analysis would be if conservation suddenly became fashionable, if people were willing to “sweat for salmon” and energy conservation was tied to the cause of salmon recovery. In other words, I’m not sure conservation is fully valued, Wagner said. That’s one of the roles of the Council, Jim Litchfield observed.

Cooper then yielded the floor to Kim Fodrea, who led the group through the biological analysis portion of the summer spill evaluation. She distributed a pair of documents, “General Overview of Methods Used to Estimate Impacts of Summer Spill Reductions,” and a spreadsheet showing the expected survival impacts of various operational alternatives on a wide array of listed juvenile and adult, wild and hatchery fall and summer chinook stocks. She went briefly through the spreadsheet, explaining how to read the model outputs. In general, explained Fodrea, to calculate the expected impacts of these operations, we multiplied the number of fish in each affected stock times the percentage migrating in July and August times the delta in survival rates for each operational alternative to get the estimated survival impacts of each alternative.

Fodrea noted that the juvenile hatchery fish number estimates came from PATH, while the wild fish number estimates came from NOAA Fisheries' 2003 estimates. She discussed how she developed the calculation of the percentage of each stock migrating in July and August. Fodrea then went through the large spreadsheet, which compared the expected survival of each stock under each of the seven alternatives analyzed.

In the course of this discussion, Fodrea answered a series of clarifying questions and comments, many having to do with the passage timing assumptions for various stocks at various projects. Bill Maslen admitted that this is an area the analysts have struggled with; what we're after is the best way to measure when various stocks are passing a given project, and in what abundance, he said. Maslen and Fodrea encouraged anyone with comments or suggestions on this portion of the analysis to provide them as soon as possible, because it is critical to the accuracy of the analysis. Fodrea noted that more detail about the assumptions underlying her "Estimated Percent of Fish Passing During Each Period" analysis can be found by clicking "format/sheet/unhide" on the Excel page.

Fodrea noted that the survival rate analysis was based on SIMPAS outputs showing relative survival percentages under the various scenarios (columns J-O on the spreadsheet). Wagner noted that SIMPAS is not designed to produce absolute numbers; there is significant uncertainty around those outputs, he said, and it would be a mistake for people to lock on to the absolute numbers on the spreadsheet. Fodrea noted that the assumptions underlying the SIMPAS analysis can be found on the "Comments on SIMPAS Input" tab at the bottom of the page.

Fodrea noted that all of the materials presented today, including the functional Excel file, are available via hotlink from today's agenda on the TMT homepage.

The group also offered a series of detailed questions and comments about the flow (the sensitivity of the SIMPAS model to flow ranges) and transport assumptions underlying the analysis. Fodrea noted that this analysis anticipates that 2004 will be a near-average water year, so average flow assumptions are germane; it also anticipates that the full BiOp transportation program will continue to be in effect. Fodrea noted that one assumption that the group was unable reach agreement on was the Bonneville spill cap; for the purposes of this analysis, it was assumed to be 125 Kcfs, but according to Gary Fredricks of NOAA Fisheries, it may be increased to 145 Kcfs in 2004.

Fodrea then moved on to the results, in terms of survival for each stock, under each of the alternative operations, and the assumptions and calculations underlying those results. What this is calculating, basically, is July and August fish survival for each of these stocks, Fodrea explained. The bottom line, in terms of estimated adult impacts to listed stocks, based on a 2 percent SAR, is that none of the operational alternatives considered in the summer spill evaluation, including zero spill in July or August, is estimated to result in a decrease in adult survival of greater than 1%.

Maslen noted that, in response to comments received, the analysis also attempted to capture the difference in pool survival under the zero spill option, basically using best professional judgement in the absence of significant empirical data. We certainly aren't trying to minimize those impacts, he said; if anyone has empirical data that would be germane to that

calculation, we would welcome it. In response to a comment from Boyce, Fodrea emphasized that this is a one-year analysis, focused on the average water year expected in 2004. In other words, as a decision support tool, it made sense to focus on expected conditions for 2004, rather than a range of low-high water and flow-year conditions, she said.

With respect to the financial component of the analysis, Filardo asked that the analytical team add a column showing "Expected savings in 2004" – in other words, the savings in the specific water years in the 50-year record that are closest to average-flow years.

Russ Kiefer said one concern he has about the biological analysis is that there is empirical information that shows a large percentage of the PIT-tagged adult returns to the Snake River were never interrogated as juveniles. According to Appendix D of the NOAA Fisheries BiOp, juvenile survival rates are based on juvenile passage studies only and cannot be used to infer the likelihood of adult returns. In other words, said Kiefer, the SIMPAS results are consistently biased against juvenile spillway passage, and basing this analysis on those results will underestimate the biological impacts of reducing spill. Still, said Fodrea, while it may not be perfect, according to NOAA Fisheries, it is the best method we have to estimate adult returns. Kiefer provided a document, "Caveats to SIMPAS Modeling Results," in support of his comment. Kyle Martin noted that the FLuSH and EDT models both offer viable alternatives to SIMPAS, particularly FLuSH. Wagner added that Fredricks does not use SIMPAS in this way, specifically, using it to extrapolate the impacts of given operation on adult returns.

John Palensky then discussed the outputs of the offsets subcommittee, which he has been chairing. The offsets subcommittee is an offshoot of the spill committee set up under CBFWA auspices; its charge was to define and evaluate various mitigation measures to offset the anticipated impacts of any reduction in the summer spill program. The group developed a series of seven principals to guide their efforts, including implementation feasibility, temporal consistency and the fact that any offsets needed to be over and above existing BiOp measures. They then developed the following list of potential offset measures:

- Increased Northern pikeminnow management
- Increased smallmouth bass management
- Unneeded pile dike removal to reduce predation
- Reductions in commercial harvest
- Hanford Reach rearing protection
- Avian predation research
- Habitat improvements

The group considered other potential offsets, which, for various reasons related to the principals established by the group, were considered not feasible, at least for implementation in 2004:

- Marine mammal management
- Walleye management
- Increased law enforcement
- Habitat improvements, including estuary
- Hatchery supplementation
- Raised spillway weirs
- Dam removal
- Reservoir drawdowns
- Reintroduction of fall chinook above Hells Canyon Dam
- Additional O&M funding
- Manage turbine operations to maximize passage survival

Palensky said that, ultimately, the group will make a recommendation to Bob Lohn as to what measures should be implemented; he reiterated that the executives are expected to make a decision on this issue some time in March.

The group offered a few clarifying questions and comments. Palensky then encouraged the TMT participants to look closely at the offset measures under consideration and to provide any comments they may have prior to February 13. NOAA staff will then look at those comments and incorporate them into our recommendations to Bob Lohn. In response to a question from Litchfield, Palensky said that some of the items on the “Other Offsets Considered” list, including law enforcement and additional O&M funding, may conceivably still be on the table.

One general comment, said Boyce – the impacts to fish from any spill reductions will be immediate, while it will take some time to get these offset measures up and running. Will spill reductions be contingent on having a viable offset program up and running? Boyce asked. You would have to ask my boss, Palensky replied, but all of that is still under discussion. My concern is that it may take several years of mitigation to offset the impacts of a spill reduction in 2004, Boyce said. Boyce also discussed the proposed VBS and operation outside 1% tests at McNary this year – could we take that into consideration as an offset, which would limit the reduction in summer spill? he asked. The idea of offsets is to offset for biological impacts, Cooper replied – it’s not about the financial impacts. The short answer is that that is not the way offsets were contemplated to work, she said.

Liz Hamilton said her understanding was that the Council had listed the pikeminnow program as a low priority. The Council didn't lower their ranking, but recommended a 50% reduction in the program funding, said Maslen; BPA disagreed but did reduce the funding level, with the understanding that we would look at the biological results of that decreased program with the option of increasing funding in future years if we don't see similar results to previous years. Also, said Hamilton, when you talk about harvest reductions, were you thinking of in-river harvest, or ocean harvest? We're still discussing that, Palensky replied, but the primary intent would be to protect Snake River fall chinook. Hamilton added the comment that any offsets need to benefit, as directly as possible, the stocks that are impacted most directly by the reduction in the spill program.

Steve Haeseker observed that, before the Fish and Wildlife Service can comment on the Hanford Reach assumptions in the analysis, they need to be able to review the calculations that went into the 1998 estimates.

Silverberg reiterated that comments on the summer spill analysis are due by February 13. There will be another presentation, and another opportunity to comment, at tomorrow's IT meeting. Henriksen thanked the group for a very productive discussion at today's meeting; from a TMT perspective, if there are technical questions about the analysis, we want to get those answered as quickly as possible. And again, she said, bear in mind that this analysis is offered in the context of 2004 operations only. Written comments can be posted to the www.bpa.gov/comment website, she added.

Obviously this is a huge regional discussion, but it is moving forward, she said – the regional executives will be meeting in mid-March, and by that time, your executives need to know how they are going to approach this question, because the decision on 2004 operations will be made soon thereafter. Written comments should be submitted to BPA Communications, DM-7, PO Box 14428, Portland 97209.

Litchfield noted that Montana will want to discuss the Libby/Hungry Horse reservoir operations provisions of the Council's mainstem amendments at the March regional executives meeting; we would like to be sure that is addressed, he said.

3. Bonneville Adult Ladder Attraction Spill, December-March.

Boyce said he had looked at the daily November-March winter steelhead counts for the past seven years; the bottom line is that, in some years, we have seen a substantial number of summer and wild winter steelhead – up to 100 per day – passing Bonneville. The question is whether attraction spill is warranted at the Cascade Island ladder, he said. My suggestion is that we re-evaluate that operation based on current passage numbers to revisit the decision to terminate spill, as passage numbers change, Boyce said. It was agreed that FPAC will develop criteria as to what passage numbers should trigger a re-start of spill at the Cascade Island ladder.

4. Salmon Managers Update of Adult Fish Counts in the Lower Snake.

Any progress on getting real-time counts on the Snake? Boyce asked. Starting February 1, WDFW staff will begin reviewing the video counts on Monday, Wednesday

and Friday, Cindy LeFleur replied. It sounds, then, as though the video counts are being reviewed on a timely basis under the current contract, said David Wills – the question then becomes, how do we get that information on a timely basis. Henriksen said she will coordinate the availability of that data. We’ll track it from this end and see what we find, she said.

5. Spring Creek Spill Update.

It was agreed to discuss this topic at the next TMT meeting.

6. Operations Update.

Henriksen said the Corps had provided the first Q-Adjust run of the season at today’s meeting; she asked the other TMT participants to evaluate whether it provides the kind of information they would like to see for future meetings. She asked the other TMT participants to email her with any suggestions they may have.

7. Next TMT Meeting Date.

The next Technical Management Team meeting was set for Wednesday, February 18. Meeting summary prepared by Jeff Kuechle.

**TMT Meeting Participants
February 4, 2004**

Name	Affiliation
Jim Litchfield	Montana
Ron Boyce	ODFW
David Wills	USFWS
Russ Kiefer	IDFG
Cindy Henriksen	COE
Cindy LeFleur	WDFW
Bruce Suzumoto	NWPPC
Donna Silverberg	Facilitation Team
Robin Harkless	Facilitation Team
Shane Scott	PNUCC
David Benner	FPC
Kyle Martin	CRITFC
Tom Haymaker	PNGC

Scott Boyd	COE
Rudd Turner	COE
Mary Karen Scullion	COE
Tim Heizenrater	PPM
Mike O'Bryant	CBB
John Palensky	NOAAF
John Wellschlager	BPA
Scott Bettin	BPA
Nic Lane	BPA
Paul Wagner	NOAAF
Suzanne Cooper	BPA
Kim Fodrea	BPA
Bill Maslen	BPA
Birgit Kohler	BPA
Kevin Bannister	PNUCC
Kevin Nordt	PGE
Don Schwartz	NWSFI
Liz Hamilton	NWSFI
Dave Ryan	PPM
Steve Haeseker	USFWS
Sauna McReynolds	PNUCC
Margaret Filardo	FPC
Dan Bedbury	EWEB
Bill Rudolph	NW Fish Letter
Martin Hatscher	SCL
Tom Le	PSE
Lance Elias	PPL
Richele Beck	D. Rohr & Associates
Rod Sando	CBFWA