

Final Notes May 3, 1999

IMPLEMENTATION TEAM MEETING NOTES

April 8, 1999, 9:00 a.m.-1 p.m.

NATIONAL MARINE FISHERIES SERVICE OFFICES
PORTLAND, OREGON

I. Greetings, Introductions and Review of the Agenda.

The April 8, 1999 meeting of the Implementation Team, held at the National Marine Fisheries Service's offices in Portland, Oregon, was chaired by Brian Brown of NMFS and co-chaired/facilitated by John Palensky. The agenda for the April 8 meeting and a list of attendees are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced in the body of the text may be too lengthy to attach; all enclosures referenced are available upon request from NMFS's Kathy Ceballos at 503/230-5420 or via email at kathy.ceballos@noaa.gov.

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

II. Updates.

a. In-Season Management. TMT Chair Cindy Henriksen said there is little to report in terms of progress on the TMT's development of the 1999 Water Management Plan. She said the April final water supply forecast is not yet available, but the April early-bird forecast has been delivered, and generally shows a downward trend. The forecast is still above-average at most projects in the basin, Henriksen said; the January-July forecast at Grand Coulee is now 74.8 MAF, 118% of average. At Lower Granite, the April-July water supply forecast is now 25.8 MAF, 119% of average, down from the 131% of average forecast in the March final. At The Dalles, the January-July forecast is now 128 MAF, 121% of average, down slightly from the March final forecast at that project.

In terms of the implications of the April early-bird forecast on our seasonal flow objectives, said Henriksen, we're still at the high end of the sliding scale – 100 Kcfs in the spring at Lower Granite and 55 Kcfs during the summer period, and 260 Kcfs at McNary in the spring and 200 Kcfs in the summer. At Priest Rapids, the spring flow objective remains unchanged at 135 Kcfs.

Henriksen distributed the most recent TMT spreadsheet, explaining that the group has just entered the 1999 in-season management period. Based on current information, she said, it looks as though the spring seasonal flow objectives will be met at Lower Granite, McNary and Priest

Rapids. Henriksen added that the storage projects in the system are currently drafting toward their April 10 or April 20 flood control elevations; that means there isn't a lot of flexibility in terms of current project operations, and that system flow is primarily a function of natural runoff. Because the weather has been cold and fairly dry in recent days, project inflows across the basin have dropped significantly in recent days.

Michele DeHart of the Fish Passage Center provided a biological monitoring update, saying that all of the monitoring sites have begun collecting data. So far, we've seen a period of peak passage at Lower Granite in late March, DeHart said; there have been a lot of spring chinook from Lookingglass Hatchery at Lower Granite. These fish are also showing up at McNary Dam, as are wild summer steelhead and yearling Snake River-origin fall chinook. Numbers at McNary have been in the 21,000-55,000 range over the past few days; those numbers are expected to continue to rise. The daily index at Lower Granite is currently 3,000-4,000 fish and falling slightly, as inflow to the project has declined. The bottom line is that the 1999 migration appears to be a little earlier than normal, and the Lookingglass releases are moving downstream very quickly, DeHart said.

Henriksen added that, in response to an SOR from the salmon managers, the Snake River spill program started at 6 p.m. on April 2 at Lower Granite, Little Goose and Lower Monumental Dams; spill started at Ice Harbor at 6 p.m. April 3. There is also 75 Kcfs in inadvertent spill around the clock at McNary, she said. A TMT conference call, to discuss SOR 99-7 (spill at McNary and John Day Dams) is set for later this afternoon.

In response to a question, BPA's Dan Daley explained that turning on Lower Columbia spill is a very expensive proposition; with the low temperatures, falling river flows and high power loads we're currently seeing, conditions are not very conducive to starting the spill program this week. Frankly, this SOR caught a lot of people at BPA flat-footed, Daley said; basically, when the power managers asked the BPA biologists whether or not starting spill right now is necessary, we told them that we need to talk to NMFS about current passage numbers before we can answer that question. That's the primary purpose of today's conference call, he added. There is also some concern, based on current river and temperature conditions, about how this SOR might be implemented, from a system stability standpoint, Daley added. SOR 99-7 requests that spill at McNary and John Day begin Friday, April 9; Daley said the soonest it would be possible to begin the spill programs at those projects is April 12.

The bottom line is that BPA's biologists are willing to agree that we're probably seeing an early run in 1999, Daley said; given the economic impacts of the spill program, we simply want to be 100% confident that the run is indeed starting early, and this isn't just a blip on the screen. My feeling is that, once we go over the numbers at the conference call later today, that concern will likely disappear, he added.

b. Plan for Analyzing and Testing Hypotheses (PATH): No PATH update was presented at today's meeting.

c. Integrated Scientific Advisory Board (ISAB): No ISAB update was presented at today's meeting.

d. Water Quality Team (WQT): NMFS' Mark Schneider said the first meeting of the combined Water Quality Team is April 20; the meeting will be facilitated by Jacqueline Abel. It is

expected that this initial meeting will largely be consumed by organizational matters – how the WQT will operate, what its initial scope of work will be, what its charter will look like etc.

Palensky said that, at the last IT meeting, the merger of the DGT and the Temperature Work Group to form the Water Quality Team was provisionally approved; however, the IT members were asked to check with their executives to see whether there were any objections to the merger, before the IT formalized the existence of the new group. He asked whether anyone knew of any objections to the formation of the Water Quality Team. None being raised, Palensky said the record should show that the IT has officially approved the merger of the Dissolved Gas Team and the Temperature Work Group to form the Water Quality Team. Doug Arndt said he had one provision: that the Water Quality Team develop a collaborative plan for addressing temperature issues across the basin.

e. System Configuration Team (SCT): See Agenda Item IV.

III. Status Reports.

a. 1999 Water Management Plan. Henriksen distributed the current version of the 1999 Water Management Plan (Enclosure C). She characterized this draft as 95% complete, and said she has been working with the various entities represented at the Technical Management Team to finalize the comments received to date. There are no substantive issues to raise at this time; there are a few areas of the plan that are not yet complete, notably the Upper Snake River operations and the summer operations, particularly with respect to Libby and Hungry Horse operations in light of the recent Montana IRC decision.

Henriksen said that, in general, the development of the 1999 WMP is going well. The plan references a number of issues from past years; we have included the various points of view on those issues in the 1999 plan, and have agreed that we will work through these issues as we reach the appropriate management period, Henriksen said. At this time, she said, I don't see any substantive issues that will require IT resolution, although Washington and Montana have yet to submit their comments. The TMT's hope is that a near-final version of the 1999 Water Management Plan can be presented at the May IT meeting.

Palensky noted that it is his understanding that Montana intends to participate in the Technical Management Team this year.

b. USBR BiOp. Brown explained that NMFS has been involved in a Section 7 consultation with the Bureau of Reclamation for the past several months; the purpose of this consultation is to review the operation of the Upper Snake projects which, collectively, provide the 427 KAF in flow augmentation water described in the 1995 Biological Opinion, and to evaluate the ability of the proposed operations for those projects to meet the objective of providing the 427 KAF. The consultation has resulted in a draft Biological Opinion (attached as Enclosure D), developed by NMFS and USBR, in response to the Biological Assessment released last May.

We are now in the final stages of consultation, and are providing an opportunity for the review of this Biological Opinion by the co-managers, said Brown. The comment period closes April 30. Brown then introduced Ritchie Graves of NMFS, who briefed the IT on the contents of the Biological Opinion.

As Brian mentioned, the focus of the Biological Opinion is the 427 KAF, which is the Upper Snake contribution to the salmon flow augmentation program, Graves said. He explained that the Lewiston Orchards projects are not included in this Biological Opinion; it covers only the Bureau of Reclamation projects above Lower Granite Dam. NMFS' Habitat Conservation Division is working on a supplemental BiOp covering the Lewiston Orchards projects.

Graves explained that one of the purposes of this BiOp was to evaluate Reclamation's ability to comply with the 1995 and 1998 FCRPS BiOp measures; NMFS also wanted to identify any additional measures that were necessary to avoid jeopardizing listed species or to increase their chances of recovery, and to identify issues that should be further developed prior to re-initiating consultation. This consultation is scheduled to be in effect through the end of the interim period, as defined in the 1995 Biological Opinion – basically, until a long-term decision is made on the configuration of the hydrosystem, Graves said.

Graves said that, based on the analysis of the 50-year water record in Reclamation's Cumulative Effects report, water development in the Upper Snake River Basin has resulted in an average annual reduction in streamflow at Lower Granite Dam of about 17%. Most of that reduction occurs in May and June. In response to a question from BPA's Dan Daley, Reclamation's Michael Newsom said that 17% reduction cited in the Cumulative Effects report includes the effects of all projects above Lower Granite Dam, including Brownlee Reservoir.

In response to a question from Michele DeHart, Rich Domingue of NMFS said Reclamation's estimate of irrigation withdrawals in the Cumulative Effects report was based on Harry Taylor's analysis; Newsom explained that Taylor's estimate was based on irrigated acreage, and an estimate of diversion per acre. So there is no database of actual water withdrawals? DeHart asked. Actually, there is a pretty complete database of Snake River Basin diversions, Newsom replied – they keep excellent records. Most of the diversions are measured, particularly those above Milner.

Graves continued on through the contents of the Biological Opinion, touching on the capacity of the various storage pools in the Upper Snake Basin, the sources of the 427 KAF, and the average increase in flow at Lower Granite as a result of the 427 KAF in augmentation water – about 13 Kcfs. Graves noted that 13 Kcfs is an average flow across 72 days; the TMT has the ability to shape that water more intensively into certain periods in the summer – for example, they could increase Lower Granite flows by 26 Kcfs over 36 days.

So what did we learn through this exercise? Graves said. First, that Reclamation is actively acquiring water storage rights to satisfy its obligations; for example, it recently contracted with the Shoshone-Bannock Tribes for an additional 38 KAF in storage at American Falls Reservoir. Second, that, even with this acquisition program, Reclamation can reasonably assure delivery of only a little over half of the 427 KAF; they must rely on the Idaho water rental pool to acquire the remainder of the Upper Snake flow augmentation water. There is considerable variability in the availability of rental water; naturally, it is most readily available when natural streamflows are high.

One of the objectives of the Biological Opinion is to increase the surety that the 427 KAF will be delivered in a timely manner, said Graves. Another objective is to prevent the base flows to which the 427 KAF is added from being further diminished. Factors limiting the surety of that

delivery include the natural variability of streamflows in the basin, Idaho water law/water policy issues which, in some cases, confound Reclamation's ability to acquire water, and Reclamation's reservoir management.

With respect to Idaho water law and its effect on the surety of the 427 KAF delivery, Graves said that, as the IT is aware, the law recognizing salmon flow augmentation as a beneficial use is a temporary one, set to expire at the end of this year. Idaho has requested documentation of the benefits of this water for salmon. There are also legal and policy impediments to water right transfers, said Graves.

With respect to the effects of Reclamation's reservoir management on the surety of the 427 KAF delivery, Graves continued, NMFS is asking USBR to continue to evaluate flood control storage needs in light of advances in hydrologic forecasting. They have done some of that work, but there is more to be done. He touched on a few other detailed areas where Reclamation is being asked to do some additional evaluation: conversion from flood irrigation to sprinkler irrigation, and uncontracted space management, particularly in the Payette Basin.

What has this BiOp done for the flow augmentation program? Graves said. First, it requires a NMFS review of all new commitments of uncontracted space. Second, it encourages the Bureau to continue to improve the surety of the supply of the 427 KAF, through additional water rights acquisitions and changes in reservoir operations. Third, it encourages Reclamation to continue to seek out intergovernmental and interagency opportunities to enhance conditions for ESA-listed fish. Fourth, it encourages the Bureau to continue to work to ensure that diversions of Reclamation-supplied water are efficiently managed.

Graves added that the BiOp includes information on the number of naturally-produced fall chinook adults returning to Lower Granite Dam since 1975; returns hit their lowest level of 78 adults in 1990, and have since increased to levels approximating the returns seen in the early 1980s. The Technical Advisory Committee to U.S. v. Oregon estimated that approximately 1,000 naturally-produced fall chinook adults would return to Lower granite in 1998; they're still trying to figure out exactly what happened, but the actual count was only 306 adults. The speculation at this point is that the discrepancy between predicted and actual had to do with winter flow and survival, because the hatchery fish and the supplemented natural spawners returned at the expected rates in 1998.

Graves asked that anyone reviewing the Upper Snake Biological Opinion focus on identifying any errors that may be present in NMFS' analysis or conclusions; on the identification of any additional information needs, and on the identification of any omissions related to USBR operations or Idaho law – anything NMFS was not aware of, in going through this consultation. Again, comments are due to NMFS by April 30.

In response to a question from Bruce Lovelin, Graves said this Biological Opinion is supplemental to the 1995 and 1998 BiOps; basically, it was felt that NMFS had not focused on the Snake River Basin to the same extent that it had focused on some of the other basins, and this is an attempt to go back and re-do that work. In response to another question, Graves said the Upper Snake supplemental Biological Opinion will be superceded by whatever decision is made in 1999 -- it will be rolled into the Biological Opinion that is produced in support of that decision.

In response to another question, Graves said the benefits information requested by Idaho has been identified, at least in basic manner, through NMFS' flow/survival studies for summer-migrating fish. Newsom added that a committee is being organized to develop a response to Idaho's information request. Brown noted that this effort is still in process, and is not intended for inclusion in this Biological Opinion.

How will the upcoming NMFS BiOp/Section 7 consultation on Hells Canyon operations be dovetailed into this Biological Opinion? asked Bob Heinith of CRITFC. Basically, what we've heard from Reclamation and other interested parties in Idaho is that there is a fear that any water released to improve flows for salmon will be intercepted by Brownlee, Graves replied. At this point, I think what we'd be looking for in the Hells Canyon consultation is ways to ensure that any contributions from the Upper Snake are not impeded on their way through the Hells Canyon complex. When do you expect that a draft of the Hells Canyon BiOp will be available? Heinith asked. Early August, Graves replied.

Jim Yost of the Idaho Governor's office observed that Idaho Power operates the Hells Canyon complex according to Idaho water law and the Biological Opinion. They deliver the 427 KAF in Upper Snake augmentation water as required, and do not arbitrarily impede that water. That is a requirement under Idaho law, he said. I agree, said Graves, and I did not mean to imply that Idaho Power was in fact impeding that water – it is simply a concern that some interested parties in Idaho have raised.

In response to a question from Daley, Yost said the Bureau of Reclamation does not operate the river system in Idaho; the river is operated by Idaho irrigation companies. The Bureau makes a request for water releases in the same manner that a farmer or irrigation district does. Yost said there may be some shaping of the Bureau releases as it passes through some of the small generation projects between the Bureau projects and the Hells Canyon complex. The bottom line is that the Hells Canyon complex delivers the 427 KAF according to what the TMT recommends we deliver, Yost said.

For the record, said Daley, while I would be the last person to suggest that Idaho Power is interfering with the delivery of the 427 KAF, that doesn't change the fact that Reclamation isn't really operating the river system in Idaho – that system is operated by the Idaho irrigation companies. It also doesn't change the fact that Idaho Power is operating several projects for load between Reclamation's storage projects in the Upper Snake and the Hells Canyon complex. One of the reasons we're doing this review is the fact that the 1995 BiOp more or less treated Hells Canyon as a faucet – we turn on the water, and it flows downstream. If we assume that the Idaho Power projects and the irrigation districts have no effect on the delivery of the 427 KAF downstream, why do this study in the first place? Daley asked. Heinith added that the tribes do not agree with Yost's statement that there is no problem with getting the 427 KAF out of the Idaho Power projects.

Heinith asked whether, pursuant to the Secretarial Order, NMFS plans to do a separate consultation with the tribes on this Biological Opinion. NMFS is approaching this the same way it did the 1998 supplemental BiOp, Brown replied – we have requested that the tribes contact us if they would like a separate consultation, and to date, they have not done so.

c. Bonneville Outfall Flume. Brown noted that this project has been under development for

some time; it is now in place and operational, and regular reports will be provided as the evaluation process proceeds. Gary Fredricks said he had visited Bonneville Dam to inspect the outfall pipe on March 10, and had crawled through the entire two-mile length, inspecting each joint. He said various problems were discovered during that inspection, including a 50-pound boulder (which was removed by the inspectors) and a number of weld and joint problems; since then, those problems have been fixed.

Fredricks said the outfall pipe was watered up just prior to the March 18 Spring Creek Hatchery release; there were reports of problems on March 18, when a number of dead fish showed up on the primary dewatering screen at the end of the collection channel. We followed that up to the gatewells, said Fredricks, and found a relatively large number of moribund fish in that location, as well as a number of additional mortalities. All of these fish exhibited missing eyes, hemorrhaging in the eyes and descaling. These are very unusual signs, which I never observed in all of the years I worked at Bonneville, Fredricks said. He noted that the gatewells are upstream of the new collection channel; his conclusion was that the problem was unrelated to the new bypass system, but had something to do either with the vertical barrier screen or trash rack debris. There was only one unit (Unit 18) running in the powerhouse at that time; this unit was shut down. Unit 16 was started up, and no mortalities were seen. This led to the conclusion that there was a problem with Unit 18; a subsequent inspection of the unit by the Corps found no problems.

The bottom line, said Fredricks, is that we don't know what happened. It may have been fish condition, but we don't know yet whether there may have been health problems with some of the Spring Creek fish. The problems were only seen in the first fish that arrived at Bonneville; subsequent arrivals looked good all the way through. The system has been operating ever since, and the fish continue to be in good condition. Fredricks added that NMFS will be conducting a post-construction biological evaluation starting April 12, using steelhead and yearling chinook.

NMFS' John Ferguson noted that, based on his observations so far, despite the initial problems, the new system appears to be a phenomenal improvement over the old system. It's a night and day difference, he said; obviously, we still need to do the sampling, but we don't expect to see anything but positive results, based on visual observations so far. Arndt thanked NMFS for their teamwork in working closely with the Corps on the outfall project, noting that it seems to be a good news story all the way around.

In response to a question, Fredricks said it appears that the 50-pound boulder was dropped into the pipe through a manhole cover. In response to another question, he said the outside diameter of the two-mile pipe through which he and other NMFS personnel crawled was 48 inches.

d. Koch Report on Upper Snake Water Delivery. Rich Domingue of NMFS provided a brief overview of this report, commissioned by NMFS from Dr. Roy Koch of Portland State University. The study was done to develop a mechanism to verify that the water released by the Bureau of Reclamation from the Upper Snake for salmon flow actually makes its way down the Snake River to benefit outmigrating salmon. In other words, said Domingue, we were after a mechanism that would allow NMFS to demonstrate that the water called for in the BiOp is actually delivered.

The basic approach was to compare two existing flow measurement and accounting mechanisms, Domingue explained; Dr. Koch then attempted to assess which of these

mechanisms was the best one to use to track the Reclamation releases. The first tool was a model developed for NMFS by Hydrosphere in 1992: the Snake River Operations Model. This model looks at various reservoir operating scenarios and determines the outcome that would occur from those scenarios.

The second tool we looked at was the Idaho Department of Water Resources water accounting model, Domingue continued. That model is the one IDWR uses to track water use throughout the system; it is used by various irrigation districts and others in Idaho to assess water use fees.

Domingue went through the comparison process that was used for the two models; ultimately, he said, it was determined that the IDWR water accounting model was better for our purposes, primarily because, unlike the Snake River Operations Model, it operates on a daily, rather than a monthly, time-step basis, and because, unlike the Snake River Operations Model, it is non-proprietary.

Following the selection of the best model, Domingue said, Dr. Koch did a case study, using the Payette River. What we found out in the course of this case study is that, first, the IDWR model requires a lot of information to make it work – daily stream gauge data, estimated and actual diversion rates, etc. The case study turned out to be a pretty good test of the IDWR model, Domingue said; we found out a lot about what happens when there are errors in the data, and about the overall sensitivity of the model. What we can say about the model is that it appears to be pretty robust, he said; it works quite well, although unmeasured diversions can cause problems in the analysis – basically, it becomes very difficult to verify that the water released by the Bureau of Reclamation actually made its way down the Snake River.

The study reached the following conclusions, Domingue continued: first, that the IDWR accounting model is a pretty good system to account for how much of the Bureau's water actually makes it downstream. However, to the extent that there are ungauged diversions, or to which we erroneously estimate the amount of diversion, the ability to track that stored water as it moves through the system is diminished. That leads us to the simple recommendation that improving the system for measuring the actual diversions will improve the ability of this model to track those flows, Domingue said; my understanding, he added, is that IDWR is actively pursuing that improvement.

Is there a schedule for improving the accuracy of those diversion measurements? Heinith asked. We have asked Reclamation to follow this issue so that they can demonstrate to us that the water is in fact making its way downstream, Domingue replied – in other words, NMFS will be relying on the Bureau to work with the Idaho Department of Water Resources to try to improve that measurement ability. In terms of the schedule question, Domingue said, I'll be honest and say we simply don't know at this point – it's a very complex system with hundreds and hundreds of diversions. To be honest, it probably isn't going to be possible to reach a point where every diversion is gauged. Over time, however, we will reduce the number of ungauged diversions, Domingue said.

In response to a question from Brown, Domingue said it appeared, from the Payette study, that about 10% of the stored water passing one of the key gauges on the system in 1996 failed to make it to Payette. He said that 10% difference is most likely an artifact of the errors in the model, with respect to the amount of diversion that is taking place in that reach, because there

are flow gains in that reach that would fully satisfy all of the diversions that occur in that reach. Because all of those diversions are not measured, the model doesn't see them, and when it calculates the results, it concludes that there is less stored water flowing into this portion of the stream, he explained.

Yost spent a few minutes describing how the diversion enforcement system works in Idaho; he observed, however, that it really doesn't matter whether a few farmers may be taking more water than they're paying for – the 427 KAF from the Bureau of Reclamation storage is delivered, and accounted for, at the Hells Canyon Complex. It doesn't matter what's happening upstream, as long as we're delivering the full 427 KAF out of Hells Canyon, below all of the diversions, he said – that's more of an internal Idaho problem. He added that it is physically impossible to measure the elevation difference at Lower Granite if the 427 KAF is delivered over 72 days – the difference is in centimeters, and we simply don't have a gauging system that is sophisticated enough to measure running water that accurately.

Brown observed that none of the flow augmentation contributions from the various projects in the system is particularly large; however, the flow augmentation program in the Biological Opinion is a package – all of these contributions play a role in our ability to meet the stated flow objectives during the summer period. I don't disagree, replied Yost – my point is simply that we can't measure or verify this particular water delivery, beyond saying that the full 427 KAF is being released from Brownlee Reservoir.

IV. Decision on the Plan for The Dalles Spillway Survival Study.

a. 1999 Study Plan. At the March IT meeting, we discussed the 1999 spillway study proposal for The Dalles Dam, said Brown. We agreed at that meeting that it would be prudent to ask a subgroup to look at the proposed study design alternatives, which included a within-season, alternating block design to look at two different spill volumes (30% and 64%) at the project, and a between-season design that would hold the spill rate at a constant 64% in 1999, and to compare the statistical precision of the two alternative study designs, said Brown. A third alternative design was also proposed, which eliminated the downstream control and compared spillway, turbine and sluiceway survival more directly.

The principal limitation of the comparison between the within-year and between-year study designs was the lack of any means to estimate the variance for the between-year comparison, Brown continued. NMFS continues to believe that that variance would be high, and that it would be difficult to get any meaningful results from that type of study in a reasonable amount of time, Brown said. NMFS also felt that the third proposed study design, in which the controls would be eliminated, is unlikely to yield a usable estimate, because of the inability to directly evaluate survival through the different passage routes.

With that, said Brown, NMFS continues to believe that the within-year study design, with alternating three-day spill blocks of 30% and 64%, is the best one for 1999. He added that, at the last meeting of the technical work group, there was no representation from the state or tribal agencies, and the federal representatives met alone. While we have not been able to reach consensus or agreement on The Dalles study design issue in 1999, Brown said, and while NMFS understands the state and tribal concerns about the within-season test, NMFS still feels that the limitations of the within-season study design are less than the limitations of either the between-

year design or the design that would eliminate the downstream control. NMFS is prepared to provide a written explanation of its selection of the within-year study design for 1999, as well as a response to the comments received over the past several months.

Heinith said the Treaty tribes continue to be concerned about the downstream release, because of the mixing problem; that is one of the criticisms the SRG had with respect to this overall approach to studying survival. We are also concerned that we're not getting any information about survival through the sluiceway in this year's test, Heinith said, given the fact that this test will put a lot of fish through the sluiceway. The tribes are also concerned about the use of coho in the study – we're trying to rebuild these coho populations, and we don't think they should be a source of test animals for this study. If you're studying listed species, he said, then you should use them in the study.

Jim Nielsen agreed with Heinith's comments about the lack of a sluiceway survival evaluation, given the fact that, when spill is cut from the 64% called for in the BiOp to 30%, proportionally more fish pass through the sluiceway. Also, as you're aware, the 64% spill level was set in the BiOp to achieve 80% FPE at The Dalles, Nielsen said. WDFW is also concerned about the apparent acceptance by NMFS of the potential for reducing the 64% spill level called for in the BiOp, he said – we would prefer that NMFS look at ways to address whatever physical problems may be causing lower mortality at 64% spill, rather than looking at reducing the spill volume called for in the BiOp. In addition, given the high runoff volume forecast at Grand Coulee in 1999, it may not be possible to limit spill to 30% at some points in the season, Nielsen said. In short, Washington supports its original study proposal, he said.

Nielsen added that, in the minutes from the March 4 meeting, he was quoted as saying that WDFW is not convinced of the need to study spill effectiveness at John Day. What I intended to say, and thought I said, was that WDFW does not see the linkage between the amount of spill provided at John Day and the amount of spill that should be provided at The Dalles, said Nielsen.

Tony Nigro of ODFW asked that the record show that Oregon stands by the concerns it has raised about NMFS' proposed study design; I would also like the record to reflect that we have a fundamental disagreement about what the question is at hand, he said. Oregon believes that the study it has proposed addresses a different question than the study design NMFS has proposed, said Nigro. We view the BiOp as the status quo, and that means the 64% spill level should be maintained at The Dalles in 1999. We believe that, this being the case, the burden of proof lies with those who want to change that spill level; that proof must consist of reliable evidence that expected project survival, ideally measured through smolt-to-adult-return data, is lower than anticipated when the BiOp was signed. ODFW does not believe that the study results to date make a convincing case that project survival at 64% spill is less than was anticipated when the BiOp was signed, nor does Oregon believe that NMFS' proposed study design will produce reliable results with respect to project survival at these spill levels. Therefore, said Nigro, we conclude that, if any study proceeds in 1999, it should be similar to the one that we have proposed, a study that estimates, to a high degree of confidence, what project survival is at the 64% BiOp spill level.

Heinith observed that the 1999 spillway study at The Dalles is a major policy issue; he asked in which forum it would be most appropriate to seek policy-level input or review. That's a good question, said Brown; we have established, through our operating rules, that this type of issue

can be elevated to the Executive Committee. However, the EC has not been active in the past year. NMFS is open to considering this question and to having it elevated, said Brown, but the question is, to whom? The Columbia River Basin Forum is one possibility; we have been discussing the potential linkages between the NMFS Regional Forum and that group, he said. However, those discussions have not yet come to a definitive conclusion.

The other question is, to what end? Brown continued. It's obvious that there is not a consensus on this issue; those of you who know me know that I don't like to push things without a consensus, he said. However, I feel personally that, while the discussions we've had on this issue over the last several months have not yielded consensus, they have allowed us to explore all sides of this issue pretty thoroughly, Brown said. I am prepared to document the reasons NMFS has decided to move forward with the 1999 study at The Dalles, in writing, and then move on, he said. If people want to hear that from Will Stelle rather than from me, I'm willing to set that up, said Brown.

Heinith said the CRITFC Commissioners would likely wish to meet with Stelle to discuss this issue; he suggested that the states may want to be a part of that discussion as well. In response to a question from Brown, Heinith said the next monthly Commission meeting is scheduled for April 15. Brown said he has alerted Stelle as to the direction this issue is going, and will inform him of the CRITFC Commissioners' desire to discuss this issue further. We'll work with the tribes to see what we can put together, he said.

When does the research need to begin, and are you saying that work will not proceed until after these further discussions take place? asked Doug Arndt. I'm not agreeing that the research will be delayed until after those discussions, Brown replied – once again, NMFS feels strongly that this research needs to proceed. John Ferguson added that the study is set to begin on April 19.

Heinith asked how many coho will be used in the study in 1999; Ferguson replied that the total number of spring migrants that will be used in the study is 140,000. I don't have specific numbers available, he said, but roughly half of those fish will be coho, the other half, yearling chinook.

Brown asked whether any of the other IT participants would like their executives to be included in the meeting with CRITFC; none of the other participants present replied in the affirmative. I'll assume, then, that NMFS will work with the tribes to do what we can, recognizing that we have a study that is planned to begin on April 19, said Brown; I will also provide written documentation of this decision. Heinith said there is also a meeting scheduled between Will Stelle and the new director of CRITFC on April 14; Brown suggested that this may be a more appropriate forum to discuss the study design decision.

In summary, said Palensky, Oregon and Washington have registered their concerns about going ahead with the study design selected by NMFS in 1999; CRITFC has objected to the 1999 study as designed by NMFS; Brian Brown and Bob Heinith will work together to coordinate an appearance by Will Stelle before the CRITFC Tribal Council on April 15, or a discussion of this issue at the meeting between Stelle and the CRITFC director on April 14; meanwhile, the 1999 study is scheduled to begin on April 19.

Heinith asked what effect the planned study at The Dalles will have on the spill program at John

Day. For the record, Brown replied, as we discussed last month, there is a connection between the studies at The Dalles and John Day; that connection lies in what is possible, in terms of the spill volumes at the two projects, rather than what is required under the 1998 supplemental Biological Opinion. The 1998 supplemental BiOp acknowledged that there was an ongoing study of alternative spillway survival levels at The Dalles, said Brown; there was some consideration when that BiOp was developed of the possibility of adjusting the spill level at The Dalles downward. We did not do that in the 1998 BiOp, said Brown, and NMFS is not proposing to do that now.

The 1998 supplemental BiOp also required a study of 24-hour spill at John Day, Brown continued. At the time we did that consultation, it was acknowledged that there were significant impacts to the power system, in terms of both the additional spill and the potential transmission stability impacts of 24-hour spill test at John Day. It was agreed that the test at John Day could proceed despite those concerns, provided that there was adequate consideration of how to minimize those effects, he said. We do not need to reduce spill at The Dalles in order to do the spill study at John Day, Brown said. However, as BPA has explained, there are limitations to the study that it will be possible at John Day, without crossing the threshold of what BPA considers possible, he explained.

If The Dalles study goes forward as designed by NMFS, Brown continued, that will provide an opportunity to do more of a study at John Day in 1999. The plan at John Day is to keep the nighttime spill level at a constant 60% and alternate between 30% spill and the lowest spill level that can be provided at that project during the day. The intent is to do a comparison between 30% and zero daytime spill and 60% nighttime spill, he explained. The evaluation of this test will look at two factors: how does the addition of daytime spill at John Day affect fish passage efficiency and, second, can we reduce forebay residence time and delay through spill at John Day.

Heinith suggested that it would be more appropriate to spill 34%, rather than 30%, during the day at John Day, to make up the shortfall between the 64% called for in the BiOp and the 30% that will be provided during the alternating test periods at The Dalles. That way, there would be no net loss in terms of the amount of water spilled in the Lower Columbia, Heinith said. I don't think it can be netted out entirely, based on our previous discussion of this issue, Brown replied – my understanding is that 30% of instantaneous flow is the highest volume BPA is able to spill at John Day when The Dalles is spilling 30%.

After some minutes of further discussion, Heinith said the John Day test will also be a topic of conversation when Will Stelle meets with the CRITFC executives next week.

b. ISAB Question. As Jim Ruff reported at the last IT meeting, said Brown, the ISAB is available to consider the study design question at The Dalles; however, they were not able to do such an evaluation prior to the start of the 1999 research period. Instead, the ISAB indicated an interest in reviewing the 1999 study design, methodology and results after the fact, and providing their input on how the information from this type of single passage route survival study might be used.

I agreed that I would develop a draft question for IT review to today's meeting, Brown continued; I have not done so, largely because of time constraints, the need to coordinate with

the NMFS Science Center, and the fact that the study design question had not yet been resolved. Brown suggested that it would be appropriate to provide the 1997 and 1998 study results, as well as the 1999 study design, to the ISAB for review. That way, when we get to the more significant question of project survival, we will have the benefit of this ISAB review, Brown said, adding that late summer, when preliminary results from the 1999 test are available, would be the appropriate time to develop the question the ISAB will be asked to focus on in its detailed review. No IT objections were raised to this proposed course of action.

V. Mid-Columbia Quantitative Analysis Report.

Brown explained that NMFS has been having discussions with PATH and the Mid-Columbia Coordinating Committee on the approach to the analysis for Upper Columbia listed stocks – what has been tentatively called the Mid-Columbia Quantitative Analytical Report (QAR). This analysis was initially described in the 1998 supplemental Biological Opinion, Brown explained; it has also been referenced in NMFS' correspondence with FERC on the interim protection plan and the habitat conservation plan for the Mid-Columbia projects. There have been a couple of meetings to date to address this subject; about a month ago, the work group met to discuss a potential approach to this analysis, and Peter Kareiva has been asked to provide a summary of the recommended approach at today's meeting.

Kareiva spent a few minutes going through the work group's recommended approach to the Mid-Columbia analysis; this information is contained in Enclosure E. Please refer to this document for details of Kareiva's presentation.

Chris Toole of NMFS observed that the work group has agreed that the alternative described in Enclosure E is the preferred approach for this analysis; we had thought that we would be presenting a list of options for IT consideration, he said, but there is pretty much general agreement that this is the best way to go. Has this been presented to the MCCC? Palensky asked. Not yet, but we plan to present it at the next meeting of that group, was the reply.

Arndt said he has not yet had an opportunity to review the proposed analytical approach in detail; he requested an opportunity to conduct such a review and provide comments. It was agreed that any comments on the proposed Mid-Columbia analysis should be provided as soon as possible to NMFS' Bill Hevlin. Heinith added that this study is of particular interest to the Yakima, Colville and Umatilla Tribes; he said it is crucial that someone representing those tribes have the opportunity to attend the work group meetings, and that some funding from NMFS or the PUDs may be needed to allow that to happen. Palensky suggested that Heinith contact Hevlin directly about the tribal funding needs.

Is there a need to bring this back to the IT for further discussion? Palensky asked. What I would expect to happen, absent objection, is that the work group will proceed as outlined in the handout, said Brown – that is, to develop a more detailed schedule and staffing proposal. In the course of that discussion, perhaps the work group could consider the tribes' funding needs. I would then expect to receive periodic updates at future IT meetings, said Brown; however, the actual analysis will be managed through the work group.

VI. Status of the Anadromous Fish Appendix.

Brown said April 13 is the current release date for the Anadromous Fish Appendix. On that

date, NMFS intends to release this document for broad review, because of the level of interest it has generated regionally. He emphasized that, at that point, the A-Fish appendix will still be a draft document, because it's going into a draft EIS.

We are not, however, seeking comments on the draft Appendix at this point, Brown continued – we are not intending to make any major changes to it between now and the release of the draft EIS. We also want to be sure that PATH has an opportunity to review the A-Fish

Appendix in detail, to ensure that we have not mischaracterized their work in any way, said Brown.

Arndt said the A-Fish Appendix will be made available through the Lower Snake EIS Internet homepage to ensure the broadest possible distribution; he reiterated that, while the document is sure to generate a large number of comments and questions, the Corps will not be responding to those comments and questions prior to the release of the complete draft EIS in October.

VII. Regional Forum Facilitation.

At the last IT meeting, said Palensky, we agreed that there is a desire to continue to use facilitators at the meetings of the various Regional Forum committees. The new facilitation contract takes effect in May; we discussed the ability to use that contract on some of the other groups associated with the Regional Forum. There was a desire to see a list of the committees that might be eligible for facilitation, Palensky said; that list includes the following groups:

Regional Forum Groups

- Executive Committee
- Implementation Team
- Technical Management Team
- System Configuration Team
- Water Quality Team
- Integrated Scientific Review Team
- Ad hoc teams formed under the aegis of any of the above

Associated Groups

- PATH/IT group
- QAR group (Mid-Columbia)
- Independent Scientific Advisory Board
- Drawdown Regional Economic Work Group?
- Fish Passage Advisory Committee?
- Public meetings specifically associated with any of the above.

Palensky said he will talk with BPA's Alan Ruger to be sure that the above list is included in the facilitation contract, to eliminate the need to discuss the appropriateness of facilitation services for groups and meetings not specifically included under the Regional Forum umbrella, but which might benefit from the use of a facilitator. Arndt observed that, at the last IT meeting, it was suggested that NMFS could offer its facilitation contractors to the Columbia Basin Forum on an as-needed basis. We can add the Columbia Basin Forum to the list, if the IT thinks it is appropriate, Palensky replied.

After some minutes of discussion, Brown emphasized that this list is for BPA accounting purposes only, to eliminate the need for discussion of which groups are candidates for BPA-funded facilitation services; any requests for facilitation from the committees on the “Associated Groups” list will still need to be approved by the IT. Brown asked that this concept be specifically referenced in the introduction to Palensky’s list. It was agreed to remove DREW and FPAC from the “Associated Groups” list, because these groups have not requested facilitation; it was agreed to add the Columbia Basin Forum to this list. Palensky said he will forward the list to Ruger, with the changes made at today’s meeting.

VIII. Approval of Minutes from February 4 and March 4 IT Minutes.

Palensky requested that any comments on the February 4 and March 4 IT minutes be provided to him as soon as possible; he added that NMFS will soon be making the IT minutes available via its Internet homepage.

IX. Next IT Meeting Date and Agenda Items.

The next meeting of the Implementation Team was set for Thursday, May 6. Meeting notes prepared by Jeff Kuechle, BPA contractor.