

Final Notes December 5, 1997

IMPLEMENTATION TEAM MEETING NOTES

November 5, 1997, 9:00 a.m.-4 p.m.
NATIONAL MARINE FISHERIES SERVICE OFFICES
PORTLAND, OREGON

I. Greetings and Introductions.

The November meeting of the Implementation Team, held at the National Marine Fisheries Service's offices in Portland, Oregon, was chaired by Brian Brown of NMFS. The agenda for the November 5 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.

II. Updates.

A. In-Season Management. No in-season management update was presented at today's meeting.

B. Plan for Analyzing and Testing Hypotheses (PATH). PATH held a workshop in late October, said Brown – is there anything new on your schedule as a result of that workshop that we need to know about? Generally, said Tom Cooney of WDFW, we're aiming to have the draft spring/summer chinook report available later this month – we were able to make a lot of progress on the draft at the workshop, despite the fact that we didn't have all of the modeling results we had hoped for at the workshop. A second meeting, to discuss the modeling results that weren't ready in time for the workshop, has been set for next week; that should keep us on schedule to finish the draft report by late November or early December.

C. Independent Scientific Advisory Board (ISAB). The ISAB held a workshop this week, how to manage the ISAB workload, said Mike Schiewe of NMFS. There is a lot on the ISAB's plate; I don't have anything earth-shattering to report, other than it is going to be difficult to finish all of that work in the time available. At the moment, the ISAB is finishing its review of the NMFS draft Recovery Plan; that review should be finished by next week. The other main item that has taken up quite a bit of discussion at the workshop was how to undertake the Congressionally-mandated review of artificial propagation in the basin, Schiewe said; it now appears that it will be necessary to bring in a couple of experts from outside the ISAB to help with this work, as well as a contractor to help with the compilation of the relevant data. There was also some discussion of the ISAB's role in the Council's Congressionally-mandated review of the Corps' capital program, Schiewe added.

D. Dissolved Gas Team (DGT). No DGT update was presented at today's meeting.

E. System Configuration Team (SCT). No SCT update was presented at today's meeting; SCT-

related activities are discussed later in the agenda, under Item IV.

F. Regional Forum Facilitation Update. NMFS's John Palensky distributed Enclosure C, an issue paper laying out several possible approaches to securing a facilitator or facilitators for the Regional Forum committees. Last week, he began, we heard from both BPA and the Power Planning Council that the potential budget we had presented – somewhere between \$250,000 and \$400,000 in annual costs for full facilitation of all of the Regional Forum committees – is unlikely to gain Council approval. BPA wants Council approval before it will authorize the use of ESA funds for facilitation. As a result of this feedback, Palensky said, we've been exploring a variety of options to reduce the cost of facilitation.

Enclosure C lays out five main facilitation options:

Option 1: Reduce the contract period from one year to six months.

Option 2: Provide facilitation for selected teams only.

Option 3: Employ a facilitator only at meetings, and substantially reduce or eliminate their between-meeting involvement.

Option 4: A combination of Options 1 and 2.

Option 5: Have meetings facilitated on an "as needed" basis.

(Please see Enclosure C for more detailed summaries of each option).

In response to a question, Brown said the facilitation issue is on the Executive Committee's November 21 agenda for decision – the approval of a proposal to go forward with hiring a facilitator. Do we want to discuss this list of options and see if we can reach IT consensus on a recommended approach today, or should we come back to this question at our conference call on November 12? he asked. After some minutes of discussion, it was agreed to defer a final decision on the facilitation issue until next week's conference call.

III. Progress Report from the Decision Process Coordinating Group (DPCG), Including Update on the Three Sovereigns Process.

DPCG coordinator Ed Sheets provided a status report on the decision process for fish and wildlife restoration. As part of that process, he began, the DPCG developed an issue paper on a process for Columbia River Basin fish and wildlife restoration decisions; it was intended to stimulate discussion in the region about what would be the best process, what are the right scope and goals, and what additional information is needed to support the 1999 decision.

In terms of where we are in this process, Sheets continued, there appears to be a consensus among the DPCG on a goal; there appears to be consensus on interim biological criteria; there appears to be consensus that we would use those biological criteria to screen alternatives – that is, to look at which alternatives meet certain basic biological objectives. For those alternatives that pass through that biological screen, we would then evaluate economic, cultural and social effects. We will also be making recommendations on alternatives, as well as a schedule for analysis, Sheets said.

The draft goal that there appears to be consensus on is one that was originally articulated in the Multi-Year Implementation Planning process, Sheets said. That goal is stated as follows: "To

restore sustainable, naturally-producing fish and wildlife populations to support tribal and non-tribal harvest, and traditional cultural activities and practices. This goal will be achieved by restoring the biological integrity and genetic diversity of the Columbia River ecosystem and through other measures that are compatible with naturally-producing fish and wildlife populations.”

That leads into the question of the scope of the 1999 decision, Sheets said. What we’ve been talking about as a group – and again, there appears to be consensus on this – is, which hydro actions consistent with this goal should be taken to protect ESA stocks? We have agreed that we want to evaluate those hydro actions for their effects on all fish and wildlife in the Columbia River Basin. Again, there appears to be a consensus that we need to evaluate the biological and power effects of John Day Drawdown; there is also interest in evaluating the other effects of John Day Drawdown, although, at the moment, Congress has imposed a ban on evaluation of the engineering and construction costs associated with this alternative. The Corps now has authority to scope a study of those engineering and construction costs, a subject we may want to revisit later, Sheets said.

Moving on, Sheets touched on the various alternatives currently under consideration by the DPCG. These include expanded transportation, with the goal of getting the maximum possible number of fish into barges; Drawdown of the four Lower Snake projects to natural river, including the possibility of a phased implementation that would draw down these projects one or two at a time over multiple years; Drawdown of the four Lower Snake dams to natural river, plus Drawdown of John Day Dam to spillway crest; Drawdown of the four Lower Snake dams and John Day Dam to natural river; Drawdown of John Day to either spillway crest or natural river separate from the four Lower Snake projects. We have also identified some further evaluation for additional flow augmentation, Sheets said.

In the course of these discussions, it has become apparent that there is still some confusion about alternatives, and how they’re identified, he continued. That being the case, what we are going to propose to the IT is that we ask the Corps of Engineers to compile an official list of alternatives for analysis. That list will then be reviewed by the DPCG to check everyone’s comfort level; the final list will then be brought to the IT for review.

Moving on, Sheets spent a few minutes going through specific potential decision criteria. In terms of the overall schedule that we’re on, he said, the biological effects work is being done by PATH; the engineering report is being developed by the Corps; the economic effects analysis is being overseen by the Drawdown Regional Economic Workgroup (DREW). The major economic work product to date has been agreement on a plan of study – essentially a scope of work for all of the contracting and other analyses – which has now been reviewed by the Council’s Independent Economic Advisory Board (IEAB).

Most of the basic information will be developed by late 1998, Sheets continued. At that point, we will develop a draft Environmental Impact Statement in early 1999, and a final EIS and decision document in late 1999.

In terms of the PATH analysis, he said, our current recommendation is for PATH to complete its analysis of spring/summer chinook for the following alternatives: base case, maximum transportation, Drawdown of the four Lower Snake projects to natural river, and Drawdown of

the four Lower Snake dams plus John Day dam to natural river. Once PATH finishes these four analyses for spring/summer chinook, we propose that PATH turn their attention to completing the analysis of the same four alternatives for fall chinook and steelhead. Our feeling is that this will give us the most comprehensive look at the potential effects of these “bookend” alternatives on all of the main anadromous stocks, Sheets said. Once this work is accomplished, we would go back through and refine alternatives to identify permutations of the four basic alternatives that should be analyzed. If higher survival is needed, we will also be looking at additional flow augmentation; we’re setting up a subgroup to scope the amount and shape of that flow augmentation, and to evaluate its biological effects. Assuming that we do see biological benefits from that additional flow augmentation, the subgroup will then take a look on its social and economic effects.

One word of caution, said Sheets: the current indication is that PATH’s analysis is not likely to eliminate or narrow what are being called the major hypotheses. The next appropriate step, with that in mind, is to do some risk analyses. What we’re looking for are actions or recommendations that are robust – that yield good results under any of the alternative hypotheses we’ve identified.

Moving on to information needs, Sheets said that the PATH analysis does not currently include a specific mechanism to assess resident fish and wildlife impacts. We have approached CBFWA, and their resident fish and wildlife caucuses are evaluating what kind of information they can produce for us, he said. The bottom line is, we think we can cover resident fish and wildlife. John Day Dam is another significant issue; what we will have on John Day Drawdown is pretty good information on the power system impacts, as well as the biological impacts. What we won’t have, based on the current schedule, is the same kind of detailed economic impacts assessment the Corps is doing for the four Lower Snake projects; we also will not have the engineering analysis. On increased flow augmentation, given our current schedule, we probably won’t have much on the economic effects, and we’ll have to wait and see how much we have on fish and wildlife effects. One other information need we’ve identified is water quality and gasabatement, Sheets said; that’s something the Environmental Protection Agency is very interested in seeing, and we’ll have to figure out how much of that information is going to be available before the 1999 decision.

We have discussed schedule at some length, he continued, and I think the consensus among the group is that accelerating the schedule is not going to be possible, if you want to have the biological information PATH will be producing. By 1999, we will have complete analysis of the effects of the various alternatives, under the various hypotheses, for spring/summer and fall chinook and steelhead. We will have projected results for each alternative for the base stocks, as well as for Mid-Columbia and Lower Columbia stocks. We will have looked at all of the competing hypotheses, and will have completed risk analyses showing which alternatives are best under various hypotheses. The economic analyses will also be complete, except for some of the John Day Drawdown work. If we try to move the decision up the March of 1998, all we will have is preliminary analysis on spring/summer chinook, almost no work on fall chinook and steelhead, none of the risk analysis, and, on the economic side, some very preliminary, unreviewed work from DREW. The bottom line is that I think the DPCG will be recommending that 1999 is probably the right schedule, and even at that, we’ll have to scramble to fill in some of the information gaps, Sheets said.

In terms of next steps, the group is developing final recommendations, to be submitted to the IT at its December meeting, Sheets said. We're trying to decide how to get approval for some decision process; given the complexity of this analysis, I think it would be useful for the DPCG to continue to meet on a relatively regular basis, in order to keep the various moving parts on the right track, and to give the IT a regular status report.

In response to a question, Sheets said one of the goals of this analytical work is to give decision-makers some probabilities of being able to achieve various levels of survival improvement under each of the alternatives – what's the probability of avoiding jeopardy, of achieving the ESA survival standard, of achieving some higher survival standard, together with an assessment of projected harvest rates.

Do you anticipate that information will be coming out incrementally, or will it be late 1999 before we see any results from this process? asked Jean Edwards. I'm thinking in particular about how the biological information comes out, and is melded with the economic information, she said. We'll have preliminary information on spring/summer chinook within a month or so, Sheets replied; we may have preliminary results from the fall chinook and steelhead analyses as early as this spring. DREW's schedule shows that a lot of the preliminary reports will be available by March or April 1998. To answer your question, we will see some incremental results, but we'll have to be disciplined about how we interpret those results before they've been completely integrated. As PATH focuses in on the alternatives that meet the biological criteria, then we'll be packaging those analyses with the economic information into an integrated final report in early 1999.

Are other IT members comfortable with taking the four "bookend" alternatives Ed outlined above as the initial analytical priorities for spring/summer and fall chinook and steelhead? Brown asked. Do any of the four alternatives include surface bypass, increased spill, modifications to spillways? asked Fred Olney of USFWS. There is a refinement of the maximum transport alternative that would look at surface collectors and other technology, Sheets replied. There will have to be an assumption about how many additional salmon could be collected and put into barges. There is another alternative that we have talked about, and need to define further, which is basically a maximum in-river scenario – what kind of technology is available to improve spill and passage survival? That had been designated as a lower priority because, based at least on initial analysis, it did not appear likely to produce the kinds of survival improvements necessary to meet the biological criteria, Sheets explained.

After some minutes of further discussion, no IT objections were raised to the priorities for PATH analysis as described by Sheets. Next question, said Brown: how do we want to proceed with the development of future add-ons to alternatives, specifically in the area of additional flow augmentation? After some minutes of discussion, it was agreed to allow the DPCG work group that has been assigned to look at additional flow augmentation complete its work.

The group spent a few minutes discussing what should be presented during the decision process portion of the November 21 Executive Committee agenda, ultimately recommending that Sheets or Dave Marmorek should provide a similar briefing to the one Sheets presented today, together with a brief description of the current thinking about how the PATH data will be presented to the decision-makers. I would also suggest that you reiterate the point that, ultimately, PATH is not going to say "go left" or "go right," said Brown – it's going to say, if we

choose to go left or to go right, here's what that means within a range of possible futures – in other words, PATH has not been set up to provide a direct answer about which alternative the region should pursue in 1999. Perhaps the way to say it is, one alternative may not pop out of PATH as being the clear winner, said Tom Cooney. However, PATH will assess, for each alternative, how they would perform under a range of assumptions about what is going on with the system.

Brown asked Sheets to provide a brief overview of the current status of the Three Sovereigns process. Sheets described the origins of this process, saying that, at a meeting in June, the governors of Oregon, Washington, Idaho and Montana, as well as tribal leaders, had expressed a desire to develop ways to improve the governance and implementation of fish and wildlife restoration efforts in the Northwest. Since that gathering, senior staff have been meeting in preparation for the next meeting of the Three Sovereigns principals. Workgroups have been formed to look at fish and wildlife, at governance, at fish and wildlife costs and at the issue of cost recovery.

The Columbia Basin tribes have developed a set of principals which they hope will provide a basis for cooperation in this process, Sheets continued. At the June meeting, the tribes asked the other participants to review those principals and to provide comments. These principals cover fish and wildlife funding alternatives, ways to keep BPA competitive while meeting its other obligations, as well as specific governance issues. They are currently under review by the various sovereigns in the process.

Sheets described some of the recent activities of the various Three Sovereigns work groups. The Columbia Basin Governance work group has developed a draft set of recommendations which, among other things, identify a need for a policy-level decision-making forum for federal, state and tribal governments to coordinate existing processes that affect the Columbia Basin ecosystem, as well as for a unified basin plan that will pull together all of the existing processes that affect the ecosystem.

The goal of this governance structure would be to assure coordination for planning and implementation of existing processes, to develop a unified plan, to develop commitments among sovereigns and a schedule to implement them, to provide dispute resolution, to improve the financial administration of fish and wildlife implementation, and to ensure independent scientific review of the activities in the basin. One key governance issue that still needs to be resolved is membership, Sheets said. There seems to be agreement that we need designated membership – one of the problems with the Executive Committee, frankly, is the fact that you can never be sure who's going to show up. This being the case, it has been difficult to build the sort of collegial working relationships that would encourage fruitful interactions between members outside of the actual meetings, Sheets said.

Another, related, question is representation, particularly whether the federal government is going to be willing to agree to having a single representative at the forum, he continued. These are all issues under discussion, and there's no point in getting too hung up on them at this time, other than to say that so far, it is my impression that there is a real willingness among all three sovereigns to discuss these issues in a meaningful way, and to try to work something out.

Scope is another key question, said Sheets. There appears to be a consensus among the parties

that the scope should include all of the processes that affect the Columbia River ecosystem, with recognition that some prioritization is going to be required from the standpoint of the sheer level of effort involved. Another important issue is the decision process, in particular whether it should be consensus-based or based on voting, with either a simple majority or a super-majority deciding an issue. On a related note, the dispute resolution mechanism the process would employ has also received considerable discussion, Sheets said.

It looks now as though the Three Sovereigns principals will re-convene in January, he continued. At that meeting, it's possible that they will adopt some overall principals to guide this effort; it's also possible that we'll be far enough along on the governance issue that the sovereigns could agree to establish the above-referenced policy-level decision-making forum and its various subgroups. Another issue that could be addressed at the January meeting, although this is less likely, is fish and wildlife costs. Sheets spent a few minutes going through some of the very preliminary out-year cost estimates for the BPA direct program, reimbursable, capital costs under the various PATH alternatives, and operational costs.

The bottom line is that, no matter which alternative is chosen in 1999, it looks like annual fish and wildlife costs in the future will be higher than they are now; there is also a pretty significant range in the estimated costs – a difference of up to \$150 million+ per year between the least-expensive and the most-expensive alternatives. The future market price of power is another major unknown, as, of course, is the runoff volume that will be available in any given year. The key question, from the standpoint of BPA and the region, is how Bonneville can successfully complete its next round of long-term power sales contracts given all of these uncertainties, Sheets said.

With this reality in mind, another work group has been formed to look at cost recovery alternatives, said Sheets. The work done so far indicates that there are several alternatives for funding BPA's costs: BPA revenues from power sales and transmission operations; continued reductions in other BPA costs; additional Treasury funding; additional Congressional appropriations; a cost recovery mechanism to help keep BPA competitive while meeting its other obligations. The cost recovery alternatives that have been discussed to date include the use of exit fees – if a public utility wants to leave the BPA system, it would be allowed to do so only after paying some amount related to the financial obligations BPA has incurred on its behalf – WPPS being the most obvious example. Another option is to increase the fees charged for use of BPA's transmission system; according to some recent BPA analysis, it may be possible to generate a couple of hundred million dollars per year through transmission fees, said Sheets. Distribution fees have also been discussed – something that everyone would pay, he continued.

The next steps in this process are to determine future fish and wildlife costs, to assess the potential for cost reductions, to determine potential cost recovery needs, to develop alternatives, and to analyze their economic implications, said Sheets. One key point, said Jim Ruff of the Council staff – we're not spending \$425 million per year at the moment. We're underspending, particularly in the operations and capital expenditures side of the equation.

IV. Report on Criteria and Guidelines for Corps Capital Projects and Views of the Sovereigns on the Applicability of the Corps' Capital Restrictions to the FY'99 Budget.

The System Configuration Team is in the process of revisiting the criteria and guidelines used to prioritize the FY'99 budget, said Ruff. We're in the preliminary stages of reviewing the decision process we used in developing the FY'98 priorities; I don't have a lot to report except to say that that is an ongoing subject of discussion, and that it will continue to appear on future SCT agendas. We made this a separate agenda item because it was our understanding that the SCT would be providing a status report to the Executive Committee on the 21st, said Brown – I was hoping to get a preview of what you'll be presenting at that meeting. Is it still something we want to have on the agenda on November 21? I don't think so, Ruff replied – I don't think it will really be ripe for discussion by then. What about the question of the Council review of the Corps' capital expenditures? asked Brown. The Conference Committee language for the appropriations bill gave us \$95 million for capital construction this fiscal year, replied Ruff; it also requested that the Council, with assistance from the ISAB as necessary, review the major fish mitigation capital construction activities in the Corps' CRFM program. What we have been doing at the Council is trying to develop a process to scope what people's opinions are on the FY'98 priorities; so far, we have agreed to conduct a series of scoping meetings, at which we will solicit comments from various entities in the region, particularly the tribes. The first scoping meeting is scheduled next Wednesday, following the Three Sovereigns work group meeting. A second meeting is scheduled for November 13 in Pasco; a third will be held November 14 in Portland. There will also be an opportunity for people to express their views on this issue at the Council's meeting in Spokane on November 18.

Following the conclusion of these scoping meetings, the Council staff plans to outline some questions to be submitted to the ISAB, and to develop an outline of what the review is going to look like for Council consideration, Ruff said. There may be some follow-up consultations as well, depending on what we hear at the scoping meetings.

Have you characterized an objective for this review? asked one meeting participant. One of the comments in the appropriations language made the point that this program appears to reflect the pursuit of multiple information strategies, said Ruff – that's one thing I think we need to address. We want to solicit people's ideas about what projects should be reviewed, and which should not be pursued. Is your sense that some of the FY'98 projects now underway are the subject of continuing controversy for some parties in the region? asked Brown. There is still the issue of whether or not we should be spending money for capital improvements at the Lower Snake projects, which are candidates for removal, Ruff replied – Lower Granite surface bypass is a good example. And are there significant additional expenditures associated with the Lower Snake projects that you expect will be contentious issues in the FY'99 budget? asked Brown. There is some additional work on Lower Granite surface bypass in FY'99, as well as Ice Harbor flow deflectors, was the reply. There are some controversial FY'99 Lower Columbia projects as well.

What, exactly, is the purpose of the work sessions next week? asked Cooney. It is to generate ideas as to how this review should be conducted, Ruff replied. Including input as to what kinds of questions should be posed to ISAB? Cooney asked. That's part of it, yes, Ruff replied.

At the last meeting, I made the point that some in the region believe that the FY'98 budget is not exempt from this Council review, said Nigro. What is the Council's view on that? According to Mark Walker, language to that effect was originally written into the appropriation, but was

subsequently dropped, Ruff replied. The thinking is that the FY'98 program will move forward while the FY'99 review is ongoing.

So it sounds as though there will be four public meetings and a Council work session prior to the Executive Committee meeting on November 21, said Brown. That's correct, said Ruff. We're hopeful that we'll get some direction from the Council, based on the input provided at the public scoping meetings, as to how we should frame this review. We may have something concrete to report on the 21st; on the other hand, we may be in a position where all we have to present is a report on what people told us at the public meetings – at this point, it's difficult to say. One major point to bear in mind is that the clock is ticking – we only have until June to complete this work, so we need to get on with it.

Moving on to other SCT-related issues, Ruff said that the group is beginning to work on ranking its FY'99 priorities in light of what was funded in FY'98. We are also continuing to discuss some of the 1998 work in light of the \$95 million appropriation – in other words, we're fine-tuning the FY'98 budget, and are also beginning discussions on FY'99. One of the major items that bears on the 1999 decision process, and one of the major projects in the SCT program, is the money we have budgeted in FY'99 for John Day Drawdown, said Ruff. The Corps will be submitting a scoping document to the SCT within the next week that will give us a sense of what the feasibility studies for deep John Day Drawdown might look like. This will allow the SCT and the region to provide input on those studies so that the Corps can submit a report back to Congress for approval, Ruff said – as you know, we need Congressional approval before we can spend the money to do the actual work. The SCT will be reviewing this document at its next meeting, on November 19, he added.

V. Discussion of FCRPS Consultations on Steelhead.

With the listing of steelhead effective last month, said Brown, there is a requirement for consultation on operation of the Federal Columbia River Power System. The three action agencies – the Corps, the Bureau of Reclamation and BPA – have been talking to NMFS about how to conduct that consultation. What we have settled on is that the action agencies are now in the process of developing a biological assessment; they plan to make that BA available by mid-December. At that point, the BA will be distributed to both federal and non-federal sovereigns, and will become a public document. We will then go through consideration of the proposed action; NMFS will basically be in consultation once that Biological Assessment is available, said Brown. We will attempt to conclude that consultation and have a draft Biological Opinion ready for regional distribution by mid-February. The final Biological Opinion is scheduled for completion by mid-March, prior to the 1998 migration season.

The main issues that will have to be dealt with in the course of this consultation process include juvenile fish transportation, with particular emphasis on transport at McNary, Brown continued. The second major issue is Mid-Columbia flow, both during the early spring steelhead migration period before the BiOp flow targets kick in, and after April 20, when Snake River flows are high enough to cause Mid-Columbia flows to be restricted.

VI. Review of 1998 Steelhead Transportation Question to the ISAB.

Brown distributed the most recent IT draft of this question, which read as follows:

A comprehensive review of the potential of transportation to meet survival objectives for listed Snake River salmon and steelhead is underway through PATH. In the interim, measures in the Biological Opinion on operation of the Federal Columbia River Power System frame and guide how the transportation program is implemented annually. These measures are based on 1) historical information, 2) existing uncertainties in estimates of survival of transported fish and fish left to migrate in river, and 3) the need to generate additional information to reduce critical uncertainties. The basic scientific question that the Implementation Team should refer to the Independent Scientific Advisory Board as a basis for implementing transportation in 1998 should be described as:

"Based on a comprehensive review and analyses of 1) all existing empirical data, 2) the uncertainties in that data, and 3) the validity of assumptions used in analyses of that data, are there real and significant differences, under the full range of flow conditions, in the survival to spawning between salmon and steelhead that are transported as juveniles vs. those left to migrate as juveniles in river?"

"This question is a key scientific question underlying the different points of view about risks and benefits of transporting juvenile salmon and steelhead. Although the certainty with which we can answer this question significantly informs how the transportation program is implemented annually, answers to other biological questions such as the effects of transporting fish on straying rates will also significantly inform the decision."

There are still a lot of management action implications that I would anticipate that we would ask the ISAB to assess in the context of a scientifically bounded question, said Nigro. What specific parts of the question would you identify as being management oriented? asked Schiewe. The conditions you're talking about in terms of existing configuration, planned implementation -- given all of that, what would you expect to see with respect to smolt to adult returns? said Nigro. That's a predictive type of question -- that's not what I expected you to ask the ISAB. What I expected you to ask them was, given what we know right now, does the evidence suggest that there is a real and significant difference between the survival of fish that have been left in river vs. those that have been transported? How will that then be used to scope a management scenario for 1998 and an anticipated response as a result of that scenario?

I guess what I was trying to avoid was a normative river answer from the ISAB, because that is irrelevant to 1998 operations, said Brown. Part of what we said from the onset is that we wanted to separate out long-term considerations -- answering what transport may or may not be able to do for salmon recovery in the long-term relative to other structural alternatives. We want to get that off the table -- given the fact that the system is what it is going to be in 1998, what we want to know is, is there a survival advantage for transported fish vs. in-river fish? said Brown. We need to lay out a central premise in the fact that the system is not going to change in 1998 -- we've got the concrete as it exists; we've got the operation as it's defined in the BiOp. The question then becomes, what should we do with collected fish? he asked.

That's not their question, said Nigro -- that's our question. The ISAB's question should be, given the fact that the information we have has been collected with the system configured in a certain way, over a series of years, is there evidence that there is a true and significant difference

between the survival of fish that have been transported verses the survival of fish that have been left to migrate in river? Then we would use that information to say how we should craft the 1998 operation given what we believe the scientific evidence tells us about the performance of juveniles to date -- that is the basic scientific question that we would be asking the ISAB to assess, Nigro said. I'm not nearly as interested in what the ISAB thinks might happen in 1998, and in their making a whole series of assumptions about planned modifications and how those might translate into performance.

All I'm trying to do is to convey the fact that we are not interested in the ISAB's opinion on the role of transportation in long-term recovery in this particular question, said Brown. I agree, said Nigro -- all I'm interested in is getting an independent assessment of whether or not the information we have available to us to date informs us in some way about the relative performance of fish left in river verses fish that are transported, such that we can build a 1998 program on the most up-to-date and comprehensive analysis available.

One thing we haven't talked about, said Cooney, is the fact that, although it is captured in the BiOp limits, the way this question is currently drafted, it leaves out entirely the fact that the whole transport verses in-river management program was designed to test results from these two different routes of migration to the sea. As a manager, if 1998 is a decent flow year, I would like to see in-river survival estimates, for as long a reach as we can get them. That's going to be a very critical scientific question, and that's going to be a very critical piece of information -- this question, as currently formulated, it doesn't provide for that kind of scientific feedback.

The ISAB, if this question goes to them, would like to get presentations from the people who are most familiar with this information at their next meeting, which is scheduled for December 17, said Schiewe. This will provide an opportunity for people to say whatever they would like to say.

I suggest that we've revise this question with the goal of capturing the differences of opinion regarding what the ISAB is expected to say on this matter, said Brown. I would further suggest that we discuss it further at the IT conference call on Nov. 12. It was so agreed.

VII. 1997 Hydro Operations – Preview of Information to be Presented at the November 21 Executive Committee Meeting.

As a preview of information to be presented at the November 21 EC meeting, the Corps' Cindy Henriksen, chairwoman of the Technical Management Team, presented an extensive overview of physical operational data from 1997; the gist of Henriksen's presentation is captured in Enclosure D. Some highlights include :

? 1997 was the largest water year in the 60-year record (1928 to 1988) at Lower Granite and The Dalles Dams; it was the second-largest year for Grand Coulee and the eighth-largest year at Libby Dam.

? Lower Granite flows peaked at 225 Kcfs on May 18.

? Seasonal average flow at Lower Granite was 152 Kcfs for the April 10-June 20 period, and 66 Kcfs during the June 21-August 31 period. This compares to seasonal average flow objectives of 100 Kcfs and 55 Kcfs, respectively, during the spring and summer periods at Lower Granite.

? At McNary, observed seasonal average flow was 441 Kcfs during the April 20-June 30 period; this compares to an observed average of 356 Kcfs during the same period in 1996. The BiOp flow target for this period was 260 Kcfs. The observed flow at McNary was 237 Kcfs during the July 1-August 31 period; the BiOp flow target was 200 Kcfs for this period.

? McNary flows peaked at 577 Kcfs on June 13.

? At Libby, the highest pool elevation reached in 1997 was 2455 feet, four feet from full, on August 12. August 31 elevation at that project was 2442 feet, 17 feet from full.

? At Ice Harbor Dam, total dissolved gas levels in the tailrace were significantly lower in 1997 than in 1996 – despite the fact that flows were higher in 1997, TDG levels peaked at 132% during the May and June periods, compared to a composite 1994-1996 maximum in the 142% range. This difference is likely attributable to the fact that, in 1997, for the first time, flow deflectors were installed on four of Ice Harbor's eight spill bays.

? Daily maximum dissolved gas levels below John Day Dam peaked at nearly 145% in late April, and exceeded 140% during most of May and June.

I'm a little surprised at the gas levels below John Day, said Brown – wasn't there also some flow deflector construction at that project? Yes, but only on two spill bays out of 20, Henriksen replied – we haven't installed enough of them yet to make a significant difference. Ice Harbor has flip lips on half of its spill bays.

Moving on, Michele DeHart provided a briefing on 1997 biological monitoring results, starting with the conclusions and issues she said popped out at the Fish Passage Center staff when they reviewed this data:

? Spill was greater in volume and duration at all projects in 1997 than in 1996. Consequently, the 80% Biological Opinion fish passage efficiency (FPE) target was met or exceeded at all projects, especially during the spring period.

? On the dissolved gas side, as it did in 1996, the occurrence of gas bubble trauma symptoms in 1997 mirrored increases and decreases in total dissolved gas. The NMFS monitoring plan biological monitoring criteria (5 of 100 fish in a given sample with severe signs in fins or 15 fish with lesser symptoms) were exceeded 25 times in 1997, compared to 23 times in 1996. To provide additional context, a total of 51,000 fish were examined for signs of gas bubble trauma in 1997; 4.9% (2,500) of those fish showed some level of GBT symptoms. About 1.4% of the 51,000 fish sampled in 1997 showed severe (Rank II or Rank III) signs of GBT.

? The bottom line: the occurrence of signs of gas bubble trauma was not significantly higher in 1997 than in 1996, despite the fact that total flow and spill levels were much

higher in 1997.

? Moving on to fish passage data, DeHart said that, for hatchery steelhead, wild steelhead, hatchery chinook and wild chinook, the middle 80% of the passage period began a week early, but ended at about the same date suggested by analysis of the historical data. At Rock Island Dam, something very different happened: the chinook migration started later and ended later, while the steelhead migration started earlier. These differences are probably attributable to changes in production in the Mid-Columbia between 1997 and previous years.

? At Lower Granite, the passage index for wild yearling chinook was very low – only 18% of the past four years' average. This was not unexpected, given low adult returns in 1996. The hatchery and wild index at McNary Dam was higher in 1997 than in past year; the subyearling migrant passage index was 10 million fish, much higher than the average.

? On the transportation front, DeHart said NMFS had asked the FPC to estimate the proportion of subyearlings originating above Lower Granite Dam that were transported in 1997. The Fish Passage Center is now estimating that 90% of those fish were transported this year.

Moving on, Steve Smith briefed the IT on survival estimates in the Snake River for PIT- tagged juvenile salmonids. Two things to bear in mind, he said – the PIT-tag database is very large, and there is almost no limit to the amount of data that could be presented -- for that reason, it's not going to be easy to identify the key points we want to present to the EC. On the other hand, there are some limits to what this database can tell us – for example, what this data gives us is survival estimates for PIT-tagged fish only while they're in the river, and only in the part of the river in which we can estimate survival. These numbers say nothing about anticipated adult returns, or about survival outside the reach where we can estimate survival. Among Smith's key points:

? High flows in 1997 made it difficult to generate accurate survival estimates.

? In 1997, estimated PIT-tagged chinook survival from Lower Granite to Little Goose was higher than average; overall, average Lower Granite-to-McNary Dam survival fell somewhere between the levels seen in 1995 and 1996.

? For PIT-tagged steelhead, estimated 1997 survival from Lower Granite to McNary Dam was somewhat higher than estimated survival in 1995 and 1996.

? Five groups of PIT-tagged steelhead were released in 1997 to test different passage routes through Little Goose Dam. One group passed through a spill bay with a flow deflector, one passed through a spill bay without a deflector, one passed through the bypass system, one passed through a turbine unit, and one group was released below the dam to provide a comparison to the groups released above the project. Survival was 100% for the fish that went through the spill bay without a deflector, 97% for the fish that went through the spill bay with deflector, 95% for the fish that went through the bypass system and 93.5% for the fish that went through the turbine. Results from the spill bay passage groups were replicated with a balloon-tag test, which produced nearly identical numbers.

? Moving on to 1994-1996 data from the analysis of the relationship between survival and travel time for at-large groups of chinook between Lower Granite Dam and the Lower Monumental Dam tailrace, Smith said the data shows a positive relationship between increased flow and survival. However, the same trend did not hold true in 1997 – there was a great deal of variability between 1997 data points, but overall, most of the 1997 survival data points were lower than we would have expected, based on the 1994-‘96 data, Smith said.

? Overall, we do see the relationship we expected to see between travel time and flow, Smith said – it is a relationship that is strong within years, consistent from year to year, and repeatable over all four years. However, we’re not seeing the same sort of relationship between travel time and survival.

? For steelhead, the relationship between travel time and flow again shows a strong positive correlation both within and between years. An analysis of the relationship between flow and survival for steelhead suggests a positive relationship between flow and survival, particularly at the low end of the flow range – it seems to flatten out at the higher end of the flow range, Smith said. 1997 results were consistent with that observation.

? The relationship between survival and travel time was also consistent for steelhead during the 1994-‘96 period – the shorter the travel time, the higher the survival. Results from 1997 appear to be less conclusive.

Next up was Dan Daley, who provided an overview of economic highlights for FY’97. His presentation is summarized in Enclosure E. Among the highlights:

? BPA did a number of the block sales early in the year to displace thermal resources when we knew we were going to be in a high-flow situation, to try to offset spill, said Daley. The bottom line was that we overdid it, to the extent that we wound up having to make purchases in April and May, because we had oversold the system. The bottom line we’ll be telling the Executive Committee is that what was a very good water year, and what many would consider to be a very good spill a year, may not have been very good year for survival statistics, or for purposes of revenue.

? It is very difficult to identify individual cost components at this point, Daley said. BPA has yet to complete that analysis, and will not do so prior to the 21st. Once those analyses are complete, he said, we’ll have some estimate of the overall cost of all of the measures combined. What is difficult is to pick out any of the individual measures, such as spill, and say what spill cost in 1997 -- that’s a function of the multiple models used in this analysis. The bottom line is that BPA’s spill costs some were minimal during the spring period, said the Phil Thor -- it wasn’t until August that’s spill began to cost us money, because it was only in August that we began to get control of flow.

When will BPA have specific dollar figures for 1997 operations? asked Brown. We’re working on them, Daley replied. The fact is, we have not yet produced those for 1995 or 1996. The reason for that is that the analysis employs hourly simulations, and is extremely time- intensive.

It seems to me that, the from the standpoint of the presentation to the Executive Committee, this may be of more interest than some of the ones that we have done up to this point, said Brown.

We hear a lot about a \$435 million dollar program, and \$435 million includes something on the order of \$180 million in estimated operational impacts. There is some controversy associated with that estimate; as we begin to consider future commitments for the period of 2002 through 2006, the cost of operation is still an open issue. The question of costs of the operations under the BiOp debate is still a relevant one, Brown said. I would expect the question to be posed about when we can expect to come up with best estimates, recognizing that they may still be pretty broad.

Bear in mind that the \$435 million dollar program is projected over a 50-year average, said Daley. As Jim Ruff pointed out, we are not spending \$180 million annually at this point, and the answer to the \$435 million dollar program question is that that is over a 50 year average, over all kinds of water years -- that is the average Bonneville would expect to be hit over the entire range of years. We haven't spent in that much in recent years, Daley said, but that is because we have enjoyed good water years.

After some minutes of further discussion, Daley said that BPA is currently working both internally and with Council staff to develop a regionally acceptable accounting method to determine exactly what those costs really are.

VIII. Report from ISRP on the Review of Corps Non-Facility Research.

The question posed at the last IT meeting was whether the research review committee could be reconstituted in some form to tackle this question, said Mike Schiewe – I think the answer is basically yes. Chip McConnaha and I both think this is reasonable, as do other committee members. Our plan is to build off some discussions that have already occurred regarding a framework for this research; the bottom line is, yes, the ISRT is willing to undertake this task.

After some minutes of discussion, Schiewe explained that the Integrated Scientific Review Panel's intent is to move forward simultaneously with the development of the framework and the actual project review, with the goal of providing an initial report at the February IT meeting. John Palensky summarized the work assignment as follows: the ISRP will be reconstituted to review the Corps' FY'99 non-facility research, with a parallel development of a research framework; both components to be developed by February or March 1998.

IX. Report from the ISAB on the Adequacy of Biological Information to Inform DGAS.

The issue I was to report back on was the ISAB's response to the question of the sufficiency of the existing data to allow for the development of some sort of dose response curve to be used in evaluating the incremental biological benefits associated with various system modifications, Schiewe said. The ISAB's general response was that this is an appropriate time to review that whole program – not so much in the context of a specific question from the IT, but in the context of the basic foundation and direction of the Corps DGAS program. The bottom line is that the ISAB feels that the Corps' Dissolved Gas Abatement Program is ripe for review; how this work will be prioritized in light of the ISAB's other work, however, is an open question.

So you're saying that this review would be broader than just the question about the adequacy of the biological component of DGAS? asked Cooney. That's correct, Schiewe replied. What specific questions would the ISAB focus on, if they review the entire program? Cooney asked.

The ISAB would look to the IT to formulate the specific questions, Schiewe said.

Do you anticipate that the ISAB would want to include the BPA-funded dissolved gas research program in this review as well? asked DeHart. I would presume that the answer would be yes, Schiewe replied. What they're interested in doing is looking at the science behind the dissolved gas abatement program as a package, he explained, rather than examining isolated pieces of the entire program.

The Dissolved Gas Team is still struggling with their assignment to develop a comprehensive dissolved gas research plan, said Brown – in your view, would that effort follow, or precede, the ISAB's review? I would think the ISAB would want access to the DGT's plan, if they're going to look at the whole package, Schiewe replied.

X. Discussion of Agenda for the November 21 Executive Committee Meeting.

The group turned its attention to Enclosure D, the draft agenda for the Executive Committee's November 21 meeting. It's fairly obvious that there are more items on this list than the EC is going to have time to discuss, said Brown. This being the case, we need to cast a critical eye over this list of agenda items, to see where cuts can be made.

Brown went through the proposed agenda item by item, laying out key discussion areas under each item, as well as whether or not the item will require an Executive Committee decision. Some minutes of further discussion yielded an IT recommendation that Items 2 (Discussion of the Steelhead Listing), 6 (1999 Decision Process Update) and 10 (ISAB Work Plan Update) could be dropped from the EC agenda if time becomes an issue. It was further suggested that Items 2 and 3 (Discussion of Approach to Transportation) could be combined into a single agenda topic and condensed, and that Items 4 (Capital Construction Issues in 1998) and 7 (Update on the Three Sovereigns Process) could be shortened from 45 to 30 minutes. Cooney said he would rather see Item 6 shortened than dropped. Another meeting participant suggested that the agenda needs a more coherent organizational structure, with many of the items on the current list presented as components of two or three major agenda items, such as the 1999 decision process. Brown agreed that this would be a good idea.

XI. Next IT Meeting Date and Agenda Items.

The next meeting of the Implementation Team was set for Thursday, December 4 from 9 a.m. to 4 p.m. in NMFS's Portland offices. A supplemental conference call to discuss the November 21 Executive Committee agenda items was set for Wednesday, November 12. With that, the meeting was adjourned. Meeting notes prepared by Jeff Kuechle, BPA contractor.