

Final Notes May 19, 1998

DECISION PROCESS COORDINATING GROUP
MEETING NOTES

April 21, 1998, 10:30 a.m.-4 p.m.
COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION OFFICES
PORTLAND, OREGON

I. Greeting and Introductions.

The April 21 meeting of the Decision Process Coordinating Group, held at the Columbia River Inter-Tribal Fish Commission offices in Portland, Oregon, was facilitated by consultant Ed Sheets. The agenda for the April 21 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.

I. Greetings and Introductions.

Sheets welcomed everyone to the meeting, led a round of introductions and a review of the agenda. These formalities concluded, Sheets moved on to the first substantive agenda item for today's meeting.

II. Status Report on the PATH Analysis.

PATH coordinator Dave Marmorek reminded the group that, at the February Implementation Team meeting, certain changes were made to the PATH schedule. Those changes include a near-exclusive PATH analytical focus on fall chinook between now and the end of June, he said, and we are making good progress on that task. That said, there is a lot less information available on fall chinook, compared to spring/summer chinook, Marmorek said – that means we will not be able to use some of the techniques used in the spring/summer chinook analysis in our fall chinook analysis. In other words, it will be a more rudimentary analysis, both because of data constraints and time constraints. He added that PATH is still on schedule to produce its preliminary fall chinook analysis by the end of June.

A second task, which is being undertaken by a subgroup of PATH, is the development of a process for weighing the evidence in support of alternative hypotheses for spring/summer chinook, Marmorek continued -- the next step in the decision analysis process outlined in the preliminary spring/summer chinook report. Again, we have made some good process in beginning to organize and schedule this task. One constraint in this effort is that we do not want to hamper progress in the fall chinook analysis, Marmorek said; to that end, we are attempting to do most of that work through ESSA, with limited interaction with the full PATH group until July.

The third item we have before us is, after June, to return to the spring/summer chinook analysis and complete the remaining key alternatives, Marmorek said. Those alternatives include A2', transportation with surface bypass collectors, and B1, John Day drawdown with Snake River drawdown. We need to have some more detailed discussion of what, if any, additional alternatives need to be analyzed, Marmorek said.

He added that some of the PATH participants have been contributing to the work on steelhead; Charley Petrosky said most of this work was focused on the development of the 1998 supplemental Biological Opinion. Basically, we updated SARs for Snake River and Mid-Columbia steelhead, as well as for Snake River spring/summer chinook, to provide an updated look at the relative pre- and post-hydrosystem status of these stocks, he said. Currently, there isn't a lot of additional analytical work being done on steelhead, Petrosky said. In response to a question, Petrosky added that additional steelhead tasks are up in the air at the moment – I have a number of things on my “to do” list, he said; however, I'm not sure of their relative priorities at the moment. We need to look at steelhead in light of the other tasks currently on the PATH table, and decide how important steelhead is in terms of relative priorities, Marmorek said.

The bottom line, Marmorek said, is that the current PATH schedule is still the one discussed with the IT, and that it still remains an ambitious schedule. In terms of our interaction with the Lower Snake Feasibility Study, he continued, I think the only strategy that will work is for us to deliver what we can when we said we would, then continue to refine those work products after they are delivered.

III. Proposals for a Process to Weigh Evidence on Spring/Summer Chinook.

Marmorek distributed a document titled “Proposed PATH Weight-of-Evidence Approach for Spring/Summer Chinook,” dated April 20, 1998 (this paper is attached as Enclosure C). He spent a few minutes going through this document; please see Enclosure C for details of Marmorek's presentation.

One thing I need to stress, Marmorek said, is that the fact that there are uncertainties does not mean it is impossible to make decisions. The media has tended to characterize the PATH process by saying that, since uncertainties remain, the region will not be able to make decisions. That is inaccurate; the whole purpose of the decision analysis process is to recognize that, if you ignore uncertainties, you are likely to underestimate the risk to stocks. What we're trying to do is look at which actions are most robust to a variety of uncertainties, Marmorek said – both how the system has been operated in the past, and how various influences, such as climate, might operate in the future. He added that the weighting of evidence approach development process is now underway; it is scheduled to be completed, with weights assigned, by August 31.

In compiling evidence, you stress the aggregate hypotheses, said Howard Schaller – you say your intention is to summarize the various aggregate hypotheses in a manner that is consistent for all sets of hypotheses, both aggregate and the underlying components. The idea is to give the panels a picture of what the aggregate hypotheses are, and how the components fit together, in a consistent manner. That's correct, Marmorek replied. Would that be a specific step? asked Ed Bowles of IDFG. That would be one of the steps, but it would probably start earlier than that, Schaller replied. It has to be part of the outline, Marmorek observed.

I think that (Enclosure C) is a good first cut at a weight of evidence approach, Bowles said. I'm still concerned, though, that we may be concentrating too much on individual pieces, without enough emphasis on how it will all fit together, and the biological rationale of the linkage of that aggregate hypothesis, he said. Identifying four key areas of critical uncertainties with respect to the outcome is important, but the key element here is, if you're building on the retrospective analysis, and the known facts about how many juveniles produce how many adults, how you allocate that mortality between the different life-stages, and the ecological rationale behind those allocations, still isn't clear to me.

Another key point is the fact that this whole exercise pivots on what is the explanation for a systematic decline in Snake River fish, occurring in the ocean, that is not related to the hydrosystem, Bowles continued. We need to identify and analyze that clearly if this effort is to succeed -- where does that fit into the process you've just outlined? A couple of places, Marmorek replied -- primarily under Step 4, "Prepare List of Sources of Evidence." We would use the conclusions document, as well as other retrospective analyses that have been done; any aggregate hypothesis needs to be able to explain the pattern of changes over time in recruits per spawner, and also the pattern of changes over space -- why upstream stocks have fared more poorly than downstream stocks. Overall, I think we are going to be looking not only at the parts, but also the linkage that's built into the process, Marmorek said -- I think once you have a chance to read through (Enclosure C), you'll see that that concern is addressed. Any of these aggregates do have to account for the spatial and temporal patterns that have been observed.

Another thing to point out is that the pieces from the conclusions document are directly considered in these retrospective analyses, which estimate extra mortality as well as the differential proportions of post-Bonneville survival for transported vs. in-river fish, Schaller observed. The question after that is, what is the supporting information for these different hypotheses associated with extra mortality? That's within the context of comparing the relative performance of upstream vs. downstream stocks, and also considering those to be independent, using two different modeling systems, Schaller said.

One other thing that concerns me a little, said Bowles -- Dave mentioned that his impression of the critical uncertainties that have been identified, for the most part, is that only additional information will resolve these uncertainties. That gets back to what I said before about having the ability to lean on some of the conclusions PATH reached in its conclusions document, Bowles said -- to me, the quandary PATH found itself in during the month following the release of the prospective analysis had a lot to do with the fact that it didn't build a strong foundation for the retrospective analysis within its prospective analysis report. Therefore, it came across as saying that there were two models PATH was weighting equally; this is the outcome of those two models, but no attempt was made to sort out the two opposing views of reality, said Bowles. I disagree with that approach, he said -- the retrospective analysis identified what we have to buy into if we're believing one approach or the other, and if we're able to fully discuss and scientifically evaluate that linkage, I disagree that we need new empirical information to resolve the uncertainties. Am I mischaracterizing that? he asked. Do you really believe that these uncertainties cannot be resolved without additional information?

I think you are mischaracterizing it, Marmorek replied. What I actually said was that we are going to review all of the existing evidence to attempt to weigh these alternatives; weighing these alternatives means considering the aggregate as well. Our intention is to mine the existing

evidence to the greatest extent possible to come up with some judgements as to which are more likely, he said.

On the question of resolving uncertainties, Marmorek continued, we're not going to come up with weights of one and zero for some of these uncertainties. At the other extreme, we hope to do a lot better than 0.51 and 0.49. The point I'm making, Marmorek said, is there are some things you could do which would be much more powerful evidence – for example, if you're concerned about what role hatcheries have played in the decline, you can shut hatcheries off for a couple of years, then turn them on for a couple of years -- that would give you much more compelling evidence than you have now, when you have a bunch of things that have happened at the same time.

“Resolving” is a relative term, he continued – I have not said that we can only make some distinction between equal weightings if we do future experiments. I think everyone would agree that, by using the existing information, we can do better than equal weightings. How many decisions are ever made with complete certainty, anyway? Marmorek asked. The fact is, the decisions will need to be made under uncertainty, and those decisions will need to consider what benefit will be had in terms of improving our knowledge, as well as what benefit will be had for the stocks.

Schaller encouraged everyone to read the “Purpose of the Weight of Evidence Approach” section on page 1 of Enclosure C – it is designed to set up decisionmakers' expectations about what is going to come out of this process, he said. Basically, if you're looking for 99.9% certainty about which actions are going to work, your expectations are too high.

At the request of David Arthaud of the Shoshone-Bannock Tribes, Sheets distributed Enclosure D, a letter to Marmorek and Calvin Peters, dated April 20, laying out the tribes' preliminary comments on PATH's Preliminary Decision Analysis Report on Spring/Summer Chinook. Basically, I wanted to give you the earliest warning possible about some of our concerns, Arthaud said – primarily, they have to do with the calibration of the models and the need to run a null hypothesis, and to minimize confusion about what the models are really telling us (please see Enclosure D for details of the Sho-Bans' comments).

First of all, said Marmorek, we don't really have null hypotheses – we have key hypotheses, which postulate some kind of interaction or effect: for example, is in-river survival of juvenile fish highly responsive to changes in flow and transit time, or is it less responsive? No one is postulating that there is no relationship, he said – it's a question of how strong that relationship is. Your point is a good one, he said – that's one of the things we want to try to do, and I hope that once I have a chance to review your comments in more detail, we'll be able to provide a more specific response.

With respect to our second comment, said Arthaud, I think that if the weighting of evidence is done correctly, it may get past the tiering approach by using the null hypothesis, in theory. It just puts a lot of onus on the weighting of evidence. Making that very clear to the decision-makers – what really is known, to what degree the models indicate what factors are causing the decline and what factors, if removed, could bring about recovery – is extremely important. We might be able to get there through multiple model runs and extremely accurate weighting of the evidence that drives those models, but on the other hand, we may not, Arthaud said.

I guess I'm looking for what kind of data it will take, in the simplest and most perfect form, to achieve a positive recovery result or likelihood, using, for example, the CRiSP model, he continued. If, at the simplest level, with the best data available, it isn't possible to achieve those kinds of results, then we should just stop it there. Adding more and more evidence and more and more interactions isn't going to improve realism, because that will mean that the way the model looks at even the most basic data is limited. I just wanted to raise that concern, Arthaud said.

We do plan to look at both the components and the aggregate against all of the evidence, Marmorek replied. We will be looking at the passage model's predictions of reach survival vs. actual reach survival data. That's not a perfect test, Marmorek said, because the passage models have been calibrated to that data. The problem with looking only at perfect data is that some of the key questions relate to parts of the system over which we don't have perfect data, he said – you can't leave out those parts just because you don't have perfect data; you still have to look at what you do have. It is going to be necessary to wade into some of the fuzzier areas, because they are key to the decision -- it isn't realistic to say that we can only look at the migratory corridor from Lower Granite to McNary because that's the only part of the life-cycle for which we have accurate data. The Scientific Review Panel made it clear that we have to look at the complete life-cycle, said Marmorek.

In response to a question from Arthaud, Marmorek said the available data includes spawner-recruit ratio information going back to the 1950s for most of these stocks, transportation-control studies dating back to the early 1970s and in-river survival studies dating back to the 1960s, including some very important studies that were done prior to the construction of the Snake River Dams.

Other questions or comments on this agenda item? Sheets asked. Jim Geiselman of BPA raised the concern that the schedule for the weight-of-evidence approach effort is too ambitious to be realistic, given the need to produce PATH's fall chinook analysis in a timely fashion; Tom Cooney of NMFS raised the opposite concern, that the effort may be focused too intensely on particular aspects of one or two of the major hypotheses at the expense of taking a look at the big picture. While I appreciate what Jim is saying, Cooney said, I think it's important to get this level of work done as quickly as possible, according to the schedule the Corps has laid out for producing their Lower Snake Feasibility Report.

We are fully cognizant of the IT's instruction that we not put off the fall chinook analysis yet again, Schaller replied. I think we've been walking through this fairly consistently, in terms of what level of participation the PATH folks will have in the weight of evidence process development. That's why it was given primarily to ESSA to develop, he said; PATH will then review what they come up with. Overall, the intent is to impact the other PATH participants as minimally as possible, he explained.

Following a lunch break, Sheets summarized the preceding discussion by saying that there are a couple of issues on the table: first, Geiselman's concern that the schedule for the weight-of-evidence approach development may be too ambitious, and second, Cooney's concern about the need to focus on the big picture and adhere to the schedule Marmorek outlined in Enclosure C in order to produce the information needed to keep the Corps feasibility study on track. One of the functions of the DPCG is to try to coordinate the various schedules, said Sheets, so I think it's important that we try to work through these opposing viewpoints and come

to some sort of agreement.

After some minutes of discussion, focused mainly on interactions between the PATH and Drawdown Regional Economic Workgroup (DREW) processes, Sheets offered to contact Dennis Wagner directly to find out whether or not the PATH schedule and work products, as laid out by Marmorek, meet DREW's needs.

Getting back to Jim's question about whether or not it will be possible for PATH to complete both the weighting exercise and the fall chinook analysis in a timely manner, said Sheets, my understanding, from today's discussion, is that the planning committee has a proposal under which the PATH participants will continue to do the fall chinook work, while ESSA develops the weight-of-evidence process. How can this group help, other than to say that we recognize that schedules are very tight, and we would like as much information from PATH as soon as we can get it? Sheets asked. I think the IT has been pretty adamant that the schedule needs to be adhered to, Schaller replied. In response, PATH has put together a schedule of what we could deliver by the deadline if everything went right. So the proposal we heard this morning is an attempt to get the information on fall chinook that the IT feels is very important, while at the same time to begin making progress on the weight of evidence, so that when PATH does turn its attention back to spring/summer chinook in July, that work is farther along? asked Sheets. That's correct, Marmorek replied.

With respect to fall chinook, Marmorek continued, it seems to me that the most helpful way to organize things would be for DREW to take our preliminary results in June, do some of their preliminary economic analysis using those numbers, then do their own sensitivity analysis to decide what biological inputs exert the most leverage on the economic results. That way, when we get to the point of directing the weight-of-evidence approach at fall chinook, we could include not only those things that have the most effect on biological performance measures, but also those things that have the most impact on the economic performance measures, Marmorek said.

Jim, is your proposal to delay the resumption of work on PATH's spring/summer analysis by three months? Sheets asked. Because if it is, that would slip the schedule beyond what IT wants, and it may be that the IT is a more appropriate forum to discuss that idea. What I'm saying is that, according to this schedule, PATH would be reviewing and compiling the evidence during June and July, right when we're trying to finalize the fall chinook analysis, Geiselman replied – I would propose that we delay that work until after the fall chinook preliminary analysis is done. Geiselman also raised an economic concern, saying that it may make more sense to wait until the new contract period starts on October 1 to do the bulk of the weight-of-evidence work.

My concern is that, if we wait until October 1 to begin this effort, that will make it very difficult for PATH to get its report done in November, Sheets said – that's a critical fit with the Corps' feasibility study. If the concern is that we won't have enough money to pay outside reviewers, it may make sense to ask BPA to explore the possibility of reprogramming some funds to make that possible. In response to a question, Marmorek estimated that about \$40,000 additional would be needed to complete the weighting panel's work.

Eventually, Sheets said this issue appears to come down to two possible outcomes: first, to

postpone delivery of the final PATH report by several months, thereby creating a problem for the Corps feasibility study, or second, to explore the possibility of reprogramming some BPA funds to allow the independent reviewers to participate in the process during FY'98, so that we can adhere to the schedule. Really, there are two issues, Geiselman said -- the first is the budgetary concern, and the second is whether there is enough time for PATH people to engage in reviewing the weight-of-evidence report.

After a few minutes of additional discussion, Greg Graham and Tom Cooney said neither the Corps nor NMFS is supportive of the idea of any delay in the current PATH schedule. Is it the DPCG's consensus that we should explore the possibility of reprogramming some funds so that the independent review can be accomplished in FY'98, in accordance with the schedule that has been proposed by the planning group? Sheets asked. No DPCG disagreement was expressed with this proposed course of action.

IV. Report on the Executive Committee Briefing.

We had a good session with the Executive Committee in March, Sheets said; there were good questions and some good discussion. At the end of my presentation, he said, there was a consensus to send out the DPCG's recommendations for broader public review; Mike Field was also interested in exploring whether the Power Planning Council should be a part of that public process, and we are still exploring that possibility, said Sheets.

In terms of next steps, in addition to talking about the need for consultation, the recommendations also talk about the interest of NMFS, the Council and others to explore a multi-species framework, Sheets continued. There are preliminary conversations going on between NMFS and the Council about the best way to broaden this discussion to others in the region; that process may include meetings with CRITFC and others, he said. There also continues to be some discussion of the third "next step" in the paper, some sort of collaborative process in which the federal, state and tribal governments will work together in a collaborative way on the 1999 decision. That is an issue under active staff discussion by the Three Sovereigns process, Sheets said; it was also endorsed last week by Katie McGinty as something the Administration would like to see pursued.

Getting back to the consultations question, Sheets said, we have a mailing list of people who are following this group's activities, and will be mailing our recommendations to them. I assume we will also be mailing it to the CBFWA membership, he said, as well as to the Columbia River Alliance membership if they have an interest. If anyone else has ideas about other audiences for this document, he said, please let me know.

I also think it would be useful if we were to offer to do some direct consultation on this issue, Sheets said -- groups that we would approach and offer to do a presentation on the decision process. We hope to conclude our discussions with the Council within the next week or so, and distribute the recommendations paper for comments as soon after that as possible. After that, we need to come to agreement on the length of the comment period, he said.

The idea is not that the Council would adopt these recommendations, but that we would use the Council review process to get feedback on these recommendations? Schaller asked. I don't want

to speak for the Council, but I think that's accurate, Sheets replied. And Mike is going to explore, with the other Council members, whether the Council is willing to adopt these recommendations? Schaller asked. No, what I understood Mike to say is that he was going to ask his fellow Council members whether they want to be part of the public review of the document, Sheets said. There may be more interest than that, but we haven't gotten any further feedback from the Council at this point.

Again, if you have ideas about who this document should be distributed to, or other groups that we should be approaching for consultations, please let me know, Sheets said. Also, if you have some ideas about the length of the comment period, that would also be helpful – is 45 to 60 days appropriate, or would a longer or shorter period be better? After some minutes of discussion, no specific comment period was designated.

V. Discussion of a Public Process to Circulate the DPCG Recommendations.

This topic was discussed during the previous agenda item.

VI. Discussion and Prioritization of Alternatives.

We have three cases done for spring/summer chinook, said Sheets; my understanding is that PATH is currently looking at alternatives A1, A2, A2', A3 and B1 for fall chinook. The question, for many of us, is, is that the right set of alternatives? he asked. We know that there is specific interest in looking at some of those with both more and less flow augmentation. That, potentially, will require some additional hydroregulation work, as well as some additional work by the fish managers to allow the Corps to model that.

Is everyone here comfortable with the idea that, if we're doing A1, A2, A2', A3 and B1, that we're bracketing the full range of alternatives? Sheets asked. One meeting participant said that alternative A6 (in-river) also needs to be included. Is that alternative being considered under the current PATH schedule? asked Sheets. We've talked about it, but there is still some question about exactly what A6 involves, Marmorek replied.

Further discussion yielded the observation that alternative A6 includes no transportation, flow augmentation as prescribed, surface bypass collection at all eight projects, and various physical passage improvements to the projects. Greg Graham asked whether it would also be prudent to consider a "spread the risk" variation of this alternative, which would include surface collectors, plus the ability to transport about half the fish.

Jim Yost of the Idaho Governor's office said that, from Idaho's perspective, he would like to see three alternative scenarios modeled. First, he said, we need a model run that shows us what zero flow augmentation provides, second, we need a model run that shows us what current flow augmentation provides and third, we need a model run that shows us what current flow augmentation plus 1 MAF provides. If you run those three scenarios through your model, Yost said, maybe we can get an idea of the differential biological benefit between them.

Let me explain Idaho's position, Yost continued. You've already said you're going to run the current BiOp scenario, and that you want to run a scenario that includes 1 MAF more than the

current BiOp flow augmentation volume. If you're going to do those two, we would like you to run a scenario that includes zero flow augmentation as well, said Yost, so that we can look at the biological difference between zero, current BiOp and current BiOp plus 1 MAF. Frankly, he said, we don't think you're going to see any difference between the three. You're going to have to be able to tell us how much difference, biologically, you're buying with that additional water, because we're catching hell in Idaho – people think we've put an additional 1 MAF of additional water on the table when we haven't. So we're going to give you a chance to do a model run that will say how much biological benefit you expect an additional 1 MAF of Idaho water will provide, Yost said.

Marmorek suggested that it probably makes the most sense to look at alternatives A1, A2, A2', A3, A6 and B1 first – let's look at what we have, he said, and how far we are from achieving various targets. At that point, he said, we can decide where it may be appropriate to look at flow augmentation. From a scheduling perspective, it probably also makes sense that, if additional hydroregulation runs are needed, that we ensure that those are ready, he added. So what you're saying is, let's do those six alternative scenarios first, and see where we are, said Sheets; in addition, what I hear you saying is, if you're going to do some of these sensitivities with more and less water, then getting the hydroregulations done ahead of time would be prudent. What that means is that someone needs to decide how to allocate the available water between the spring and summer periods, Sheets said.

Schaller raised the point that PATH is going to have an extremely difficult time completing the analysis of the alternatives that are already on the table, without adding any additional options. I'll make it easy for you, said Yost – if you leave it at 427 KAF of flow augmentation volume from Idaho, and you take the 1 MAF off the table, I won't bother you any more. But if you study that additional 1 MAF from Idaho, I'm giving you fair warning that Idaho is going to push to have you study zero flow augmentation from Idaho as well, he said. Everyone from the farmers to the governor is going to want to know the difference, biologically, between zero flow augmentation and the current level, plus 1 MAF.

So how important is alternative A6, in terms of the relative priority of scheduling the analysis of alternatives? Marmorek asked. After some minutes of discussion, Cooney suggested that it may make sense for PATH to take the existing hydroregulations and do a less-detailed analysis of A6, using the most optimistic possible assumptions -- throw everything we can think of at it -- to see if it's even in the hunt. If it's not in the hunt, he said, then there is no reason to commit any more resources to it. Frankly, my guess is that A6 is not going to do as well as A3 did under FLUSH or A2 did under CRiSP, Marmorek said. Given that assessment, is there a compelling reason to run A6? Sheets asked. Yes, Marmorek replied – I don't trust my off-the-cuff analysis. We'll be leaving ourselves open to criticism if we don't run this fairly obvious alternative, added Schaller.

So the way we've left this, to be clear, is that PATH is going to keep going on A1, A2, A2', A3, and B1, said Sheets. There will be a meeting on May 6 to discuss how we may want to structure A6 and some other hydroregulations; perhaps we can get a report on that meeting at the next DPCG meeting.

VII. Next DPCG Meeting Date and Agenda Items.

The next meeting of the Decision Process Coordinating Group was set for Tuesday, May 26, beginning at 10:30 a.m. Meeting notes prepared by Jeff Kuechle, BPA contractor.