


# State, Federal and Tribal Fishery Agencies Joint Technical Staff Memo

*Columbia River Inter-Tribal Fish Commission  
Idaho Department of Fish and Game  
Oregon Department of Fish and Wildlife  
Washington Department of Fish and Wildlife  
NOAA National Marine Fisheries Service  
US Fish and Wildlife Service  
Nez Perce Tribe*

TO: Jim Ruff, NPCC  
Lynn Palensky, NPCC



FROM: Paul Wagner, Chairperson  
Fish Passage Advisory Committee

SUBJECT: Council's Prospectus for two mainstem issues in a Science Policy Exchange meeting

DATE: July 2, 2007

We extend our appreciation to both of you for coming to the Fish Passage Advisory Committee (FPAC) with your prospectus for the Council's Science-Policy exchange meeting scheduled for this September, and for being open to input from the FPAC. We are providing the following recommendations regarding the science-policy conference being developed by the NPCC in response to your request for FPAC to summarize their perspectives on the discussion that took place at the June 19, 2007 FPAC meeting. We appreciate your willingness to consider our suggestions and look forward to continuing this dialogue with Council staff on how to advance scientific understanding for improved management actions and for informing Council Members, especially in consideration of the Council's upcoming Fish and Wildlife Program Amendment process.

The draft outline for the upcoming mainstem session in September is focused on only two narrowly-defined issues: Snake River fall Chinook migration behaviors and current juvenile and adult survival rates through the hydrosystem. While only these two topics are currently being

considered in the Council's proposed meeting, it is important to recognize that there are many other important mainstem passage issues that could be given similar consideration (including spill, temperature, dissolved gas, travel time and arrival timing at Bonneville Dam, route of passage and SARs, and RSW effectiveness). We suggest that the Council recognize and consider these additional subjects for future treatment.

At the June 19, 2007 FPAC meeting, members discussed their concerns with you regarding the proposed format for your conference and suggested an alternative format (i.e. weight of evidence approach), the results of which could be used to inform your science-policy meeting and make it a more productive endeavor. A summary of the FPAC concerns discussed are as follows:

- With respect to the two issues the Council has identified for the meeting in September, FPAC members are familiar with the most current research results, the limitations associated with the research, and the breadth of management concerns associated with these two topics. We are also aware that the number of scientists that have conducted work on these issues and that have valuable information to contribute is much larger than the list provided by the agenda. Consequently, FPAC regards the conference as rather limited regarding its scope of scientists included and the information presented.
- Regardless of the scope of this science-policy review conference, that is whether it is designed to address one mainstem science-policy question such as fall Chinook mainstem passage mitigation or whether it is designed to address many other mainstem passage questions, the science-policy conference would benefit from the results produced by a "weight of evidence" workshop. An example of such was a regional review of comparative salmon survival described in Mamorek et al., 2004. This format would include a wide scope of scientists that have data and analysis to contribute. Various hypotheses, and data and evidence supporting these hypotheses, would be presented in formal written proceedings. Neutral scientific facilitation would also be an important part of the proceedings.
- The FPAC has a specific format in mind when they describe a weight of evidence approach. A weight of evidence approach would help inform your proposed science-policy conference format which in its present form consists of individual presentations on ongoing or past research by the researchers themselves. In a weight of evidence approach, a suite of hypotheses are organized in a series of hierarchical impact hypothesis diagrams, with increasingly detailed set of hypotheses and the evidence for and against each of those hypotheses. Scientists presenting data and analysis relative to a particular topic present are all members of the same work group (work groups are typically limited to about 12 people) for that topic, and they each present their evidence for a particular hypothesis.

First, to structure this approach the objectives for the work shop need to be specifically identified and agreed upon. We suggest the following be included in those objectives:

1. Synthesize the results of mainstem passage monitoring and research studies and analysis for Chinook salmon and steelhead...

2. Document and assess the evidence relating to various factors that can affect survival rates over different life history stages relating to hydrosystem passage, time of ocean entry and travel time.
3. Produce a report synthesizing and assessing the evidence for and against hypothesized mechanisms for mainstem juvenile passage and survival related to mainstem hydrosystem operations including water travel time and spill.
4. Provide the foundation for future implementation of future mitigation measures and future research and monitoring needs.

Second, a workshop oversight group should be established to:

- Develop the overall framework of the conference in terms of a hierarchy of increasingly detailed hypotheses about potential mechanisms linking the hydrosystem to smolt to adult survival rates.
- Define a general hypothesis regarding the operation and development of the hydrosystem.
- Define the hypotheses and assign hypotheses and evidence for each topic area to the appropriate work group. Work group members should be selected for a specific work group on the basis of their expertise in analysis and data.

Third, analysis, reports, and data (i.e., evidence) should be provided to each member of the work group for evaluation against their own hypotheses some time before the actual workshop. A neutral facilitator is assigned to each group and keeps a record of the discussions. The facilitators are charged with summarizing the evidence for and against each hypothesis and these summaries are incorporated into a proceedings document. Each work group develops a set of overall conclusions and recommendations for the hypothesis assigned to them.

At the FPAC meeting you stated that you were receptive to a proposed weight of evidence approach and were going to discuss amongst yourselves specific ways in which the approach could be applied. We are looking forward to working with you to assist in implementing a weight of evidence structure for synthesizing past research and the evidence for and against various management-focused hypotheses. We believe that such an approach would be very useful for advancing scientific understanding for improved management actions, especially for consideration in the Council's upcoming Fish and Wildlife Amendment Process and would help broaden regional support.

Reference:

Marmorek, D.R., M. Porter, I.J. Parnell and C. Peters, eds. 2004. Comparative survival study workshop, February 11-13, 2004. Bonneville Hot Springs Resort. Report compiled and edited by ESSA Technologies, Ltd., Vancouver B.C. for the Fish Passage Center, Portland, OR and the U.S. Fish and Wildlife Service, Vancouver WA. 137 pp.