

# State, Federal and Tribal Fishery Agencies Joint Technical Staff

*Columbia River Inter-Tribal Fish Commission  
Idaho Department of Fish and Game  
Oregon Department of Fish and Wildlife  
US Fish and Wildlife Service*

January 25, 2006

Dr. Richard Zabel  
NOAA Fisheries  
2725 Montlake Blvd E.  
Seattle, WA 98112

Dear Dr. Zabel:

This is in response to your request on January 23, 2006 to review and provide comments to you on the NOAA COMPASS model, prior to 2:00 PM on Wednesday January 25, 2006. Along with the request you provided the COMPASS model manual, and several appendices. We appreciate the opportunity to review the NOAA documents; however the 48-hour review period is too short to allow us to provide a comprehensive set of comments, recommendations and concerns. We are requesting the opportunity to provide additional comments with additional time for review. The following represent our general concerns as a result of the short time frame provided for review. These comments do not represent the full scope and detail of our concerns.

## **ISAB review**

We understand that NOAA has requested an ISAB review of the COMPASS documents. The questions proposed to the ISAB received limited review by the agencies and tribes and additional questions might be posed. The limited review of the questions and the fact that the COMPASS model is not complete and has not been calibrated, suggests that the ISAB review may be premature.

## **Development of the COMPASS model**

Unlike the implication in the background discussion in the COMPASS manual, the model is primarily a product of NOAA. Due to pre-existing and ongoing workload constraints, technical staff of the USFWS, ODFW, CRITFC and IDFG have had limited participation in the development of the model. On November 4, 2005, the Columbia River Intertribal Fish Commission, the Nez Perce Tribe, the Shoshone Bannock Tribe, the Oregon Department of Fish and Wildlife, the US Fish and Wildlife Service, the Idaho Department of Fish and Game provided some general concerns about the model being developed by NOAA, and that letter is attached for reference. To date we have not received a response to that letter and are unaware of

how those concerns are addressed in the version of the COMPASS model provided for our review on January 23. We are again reiterating our concerns described in our November 4, correspondence to NOAA.

Although technical staff of the fish agencies have had limited participation in the model workgroups and have participated in discussions, it is not accurate to represent the agencies and tribes as co-developers of the model. In fact the 48-hour review period provided by this request is the first opportunity the agencies and tribes have had to review the model components, structure, foundation and purpose in a written version. The agencies and tribes intend to provide extensive review comments as the model is developed by NOAA, but at present it is premature to infer that the agencies and tribes are either in agreement or have adopted the NOAA approach and intended use of the model.

### **Reservoir mortality**

We have serious concerns regarding the treatment of reservoir mortality in the COMPASS model. In the Comparative Survival Study workshop, in which NOAA participated with other fishery managers, tribes and researchers, several hypotheses regarding juvenile spring Chinook were considered. These included consideration of flow, spill, travel time, transportation and physiological condition and were based upon research results. These hypotheses do not appear to have been addressed in the reservoir mortality component of the COMPASS model. The data sets utilized to consider reservoir mortality are limited and preclude potential hypothesis testing. The data set utilized is limited to recent years, and do not reflect the time series utilized by the TRT and other analysis that feed into the overall framework analysis.

### **Latent Mortality**

The manual states that latent or delayed mortality will be addressed in a separate module of COMPASS. It is our understanding that a scope of hypotheses has been developed by the delayed mortality work group and was submitted to NOAA. However, it is unclear how these hypotheses will be addressed and incorporated into the model. Therefore the adequacy of the treatment of delayed mortality in the COMPASS model is unknown at this time. The treatment of latent and delayed mortality in this model is of paramount importance, and how alternative hypotheses will carry through to the decision-making process is critical. We are unclear how competing hypotheses will be resolved, but it seems that these uncertainties would need to be resolved using well-designed monitoring programs.

In conclusion, serious concerns and reservations remain regarding the appropriate use of the COMPASS model, the data sets used in the model, the calibration of the model, the treatment of delayed mortality, and the treatment of reservoir mortality. Given these concerns and the fact that the model is not complete and that it has not been calibrated or tested against empirical data, we believe that an ISAB review is premature. We will provide detailed comments when we complete our review. Thank you for this opportunity to provide comments.

Sincerely,

Raymond R. Boyce

Ron Boyce, ODFW

Bob Heinith

Bob Heinith, CRITFC

Russell B. Kiefer

Russ Kiefer, IDFG

Steve Haeseker

Steve Haeseker, PhD, USFWS

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*Idaho Department of Fish and Game*  
*Nez Perce Tribe*  
*Oregon Department of Fish and Wildlife*  
*Shoshone-Bannock Tribes*  
*US Fish and Wildlife Service*

November 4, 2005

Dr. Chris Toole  
NOAA Fisheries Service  
1201 NE Lloyd Blvd  
Suite 1100  
Portland, OR 97232

Dear Dr. Toole,

At the October 18, 2005 meeting of the Fish Passage Advisory Committee (FPAC), NOAA Fisheries Service provided an update on the effort to construct a revised passage model. We thank NOAA Fisheries for meeting with us and, after reflecting on the discussion that took place, we wanted to express some of our thoughts and concerns on the efforts that have occurred to-date on this topic.

As you recall, a meeting was held by NOAA Fisheries Service on August 10, 2005 to organize other fishery management agencies input into the NOAA Fisheries effort to develop a new passage model. There were several representatives from NOAA Fisheries, as well as agency technical representatives from USFWS, IDFG, ODFW, WDFW, and CRITFC present. At that meeting, NOAA Fisheries staff described their desire to develop a new model to replace the SIMPAS model. NOAA Fisheries staff explained that they were developing this new model in response to the regional criticism of the SIMPAS model. NOAA Fisheries staff requested technical input to their model development from the other fishery agencies' technical staffs.

The context in which this model would be used, and the fundamental question of whether such a model is the appropriate method for making decisions about future management actions, are of serious concern to us. The new model concept outlined to us on August 10 incorporates many of the elements of SIMPAS and CRISP, although both of those models have been extensively criticized and have serious shortcomings in their use in hydrosystem management decisions. Because the revised version of SIMPAS is arguably more complex than CRISP, and CRISP has been denounced because of its over-complexity (Carpenter et al. 1998), this effort may be misguided. It does not appear to us that the development of revised versions of SIMPAS

will overcome the significant issues of model complexity, system complexity, data gaps, and environmental variability, present in both the SIMPAS and CRISP models.

At the meeting on August 10, NOAA Fisheries staff also expressed the various applications they intended to use this model for. The fishery and tribal agencies technical staff voiced strong disagreement as to NOAA's intended uses for the model, as well as the context of their participation in the model development. Some of the technical concerns voiced include:

- How this model could integrate with the needs for overall life-cycle analyses;
- The model output is only focused on juvenile fish direct survival, with little analysis of effects of passage routes on adult return rates;
- The model cannot accurately measure incremental changes in system survival related to small operational changes at individual dams;
- Most of the data to be used in the model was collected from studies that were not designed from a life history perspective (i.e., short-term project-specific survival estimates designed to evaluate alternative management actions or passage routes for example often size distribution of fish was limited by tag size, making the marked fish not representative of run-at-large);
- Uncertainty as to how this modeling effort would be integrated with the technical needs and goals identified by the Technical Recovery Teams;
- Uncertainty on how technical disagreements and disputes surrounding the model are to be resolved.

It appears that NOAA Fisheries has already decided major aspects of the model development without the other fishery and tribal agencies' input. The invitation to work on the model did not include agency participation in developing the goals of the analysis, developing the uses for the model, determining whether such a model was the necessary or appropriate approach to take, or defining the management questions that the model could support for NOAA Fisheries. At the FPAC meeting you recognized that the failure to have these sorts of discussions was a shortcoming of the effort to-date. The present approach used to improve the NOAA Fisheries passage model is not our vision of collaboration on the research and management issues that need to be addressed for FCRPS operations relative to salmon recovery. We believe a collaborative approach for addressing the management and research needs for the FCRPS would be a more productive endeavor for the Region to recover salmon populations.

From our perspective, there are several examples of how collaboration can result in effective research and monitoring programs in the Region. The ongoing Comparative Survival Study (CSS) is an excellent example of effective collaboration among USFWS, CRITFC, IDFG, ODFW, and WDFW to study the effectiveness of transportation on spring Chinook and steelhead. The CSS group also organized a formally facilitated workshop to examine the issue of delayed mortality, which we believe resulted in improved understanding of this important factor. A proposal developed in 2005 for conducting a fall Chinook transportation evaluation was a collaborative effort among the USFWS, WDFW, ODFW, IDFG, and CRITFC. However, the Corps rejected this proposal for funding in FY 2005. Subsequent collaboration between these agencies, the Corps, NOAA Fisheries and BPA is occurring to attempt to develop an experimental design for Snake River Fall Chinook with respect to FCRPS operations that will

address many of the parties' management issues. Each of these efforts began with discussions to identify the important management and research questions, followed by discussions on what approach would be most appropriate for addressing these questions.

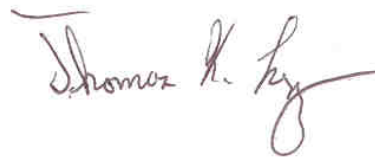
Our concern is that the present process of system passage model development employed by NOAA Fisheries, combined with the intended application of the model, will only lead to continued disagreement and discord when the model is completed. We strongly recommend that NOAA Fisheries engage the other fishery agencies in a true collaborative effort for the system passage model development that will appropriately address, among other things, the concerns expressed above. We are encouraged with our recent discussions with you and staff and your willingness to work with us to address these issues and encourage further progress along those lines.

We believe the approach should first identify the critical management questions, and then develop a model to analyze alternative actions or hypothesis. We also believe the juvenile passage model must be linked to a life cycle model to provide a more complete perspective for alternative actions analysis. Specifically, we recommend a formally facilitated workshop process similar to the Comparative Survival Study workshop on delayed mortality be adopted, where a weight-of-evidence approach to developing hypotheses for further testing was employed. The weight-of-evidence approach has been extremely successful when varied views are represented among a group. There may be better approaches for addressing the important research questions than developing another passage model. We hope to provide some suggestions on alternative approaches in our future discussions. We suggest that NOAA Fisheries consider the workshop approach to engage the other co-managers in a more collaborative fashion. We look forward to working with NOAA Fisheries to develop a more meaningful process that will lead to agreed upon alternatives and actions to consider in the analytical process the will better meet our respective needs.

Sincerely,



Ron Boyce, ODFW



Tom Lorz, CRITFC



Russ Kiefer, IDFG



Dave Statler, Nez Perce Tribe



David Wills, USFWS



Keith Kutchins, Shoshone Bannock Tribe

## CITATION

Carpenter, S., J. Collie, S. Saila, and C. Walters. 1998. Conclusions and Recommendations from the PATH Weight of Evidence Workshop. Vancouver, BC Canada. C. Peters, I. Parnell, D. Marmorek, R. Gregory, and T. Eppel, eds. October 21, 1998