

February 25, 2003

Mr. Mark Walker
Director of Public Affairs
Northwest Power Planning Council
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e-mail: comments@nwppc.org

RE: Comments on the ISAB's Review of Flow Augmentation: Update and Clarification, Document ISAB 2003-1

Dear Mr. Walker:

Thank you for the opportunity to submit comments on the above referenced ISAB Review. We appreciate the opportunity to provide these comments in support of the Council's review of flow augmentation and flow targets. We continue to support the Council's efforts to bring meaningful change to the management of the water resources of the basin and protection of the basin's fish and wildlife.

These comments are submitted on behalf of the Committee of Nine and the Idaho Water Users Association (hereinafter "Idaho water users"). The Committee of Nine is the official advisory committee for Water District 1, the largest water district in the State of Idaho. Water District 1 is responsible for the distribution of water among appropriators within the water district from the natural flow of the Snake River and storage from U.S. Bureau of Reclamation reservoirs on the Snake River above Milner Dam. The Committee of Nine is also a designated rental pool committee that has facilitated the rental of stored water to the Bureau of Reclamation to provide water for flow augmentation (FA) pursuant to the 1995 and subsequent Biological Opinions. The Idaho Water Users Association was formed in 1938 and represents about 300 canal companies, irrigation districts, water districts, agri-business and professional organizations, municipal and public water suppliers, and others.

We are encouraged by the ISAB's conclusion that the prevailing FA paradigm is no longer supportable and does not agree with information now available. Their suggestion that it may be possible to achieve improved survival through the lower Snake River while using available stored water for other purposes is consistent with our own findings and we will continue to work with the Council in an effort to implement that approach.

We are concerned, however, the adoption of NOAA Fisheries' "broken stick model" not be accepted as a cause and effect model until the underlying mechanism of the model be fully understood. One of our longstanding criticisms of the rush by some to accept and advocate a flow survival relationship is that simple correlation of flow and survival does

not automatically mean that a cause and effect relationship exists. As we have pointed out many times in the past, flow, turbidity, temperature, and calendar date (in relation to migration timing) are frequently confounding. Without understanding the mechanisms of mortality, simply correlating flow and survival leads to a statistically significant but meaningless relationship.

These views are consistent with the ISAB's Appendix 1, Review of Fish Passage Center Findings on Flow Effects. We concur fully with the ISAB's belief that it would be fruitful to examine the physical and biological mechanisms in the river-reservoir system (Appendix 1, p 40) but believe that examination should also look at all survival factors in addition to flow.

We recognize the assignment given to the ISAB for this report was a review of FA but believe factors other than flow should have at least been mentioned when they were pointed out as part of the data gathering for this paper. In particular, Appendix 4 discusses the possibility of a model based upon a constant instantaneous rate of mortality but no mention is made of a mortality distance relationship that has been part of the passage-survival relationship discussion for many years. A recent evaluation of a distance survival relationship was completed by Dr. Jim Anderson and provided to the ISAB as part of the data collection for their current paper.

Dr. Anderson's analysis also was provided to the Council as attachments to the Idaho water users' comments to the Draft Mainstem Amendments—Attachment 2, titled "A Collision Theory Based Predator-Prey Model and Application to Juvenile Salmonids in the Snake River Basin;" and Attachment 3, titled "An Analysis of Smolt Survival with Implications to Flow Management." Dr. Anderson has provided additional comments relative to the ISAB Review and his analysis of the FA questions submitted to the ISAB, which were submitted directly to the Council. Dr. Anderson's comments are based upon the application of his XT model, described in the above attachments. His conclusion is that any analysis based upon the single variable of flow is inadequate, and when other relevant survival factors are considered (e.g., temperature and turbidity), FA is not a viable management tool because those other factors are primarily responsible for salmonid survival or mortality.

Our scientists looked briefly at the seiche theory briefly discussed in Appendix 3 of the ISAB Review. It is not yet clear if the theory needs to be examined further, but if it is to be further analyzed, the hourly data apparently used in Appendix 3 is probably inadequate because the time step is too long. Further analysis should begin by using data with not more than a 15 minute time step, or less if it is available, and the analysis should be for a period of the year when fish are migrating, not January as reported in Appendix 3.

In summary, we are encouraged by the ISAB report. Data is becoming available to better understand the causes of mortality as migrants pass through the FCRPS on the mainstem of the Snake and Columbia Rivers. We hope the Council will direct others to use that data in a manner to better understand how to improve migration survival through the FCRPS by looking at all factors affecting survival.

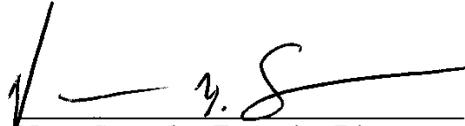
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We appreciate this opportunity to provide comments on the ISAB Review as part of the input to the Council's Draft Mainstem Amendments and continue to commend the Council for the careful consideration and hard work they are putting into the Draft Amendments.

Respectfully submitted by,



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On behalf of the Committee of Nine



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