

Interactive comment on “Assessing water resources adaptive capacity to climate change impacts in the Pacific Northwest Region of North America” by A. F. Hamlet

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First of all, I wanted to express my thanks for the detailed comments and thoughtful suggestions by Dr. Hans Schreier (University of BC) and Jason Eisdorfer (Bonneville Power Administration). I agree with all of these comments and suggestions, and have attempted to address all of them in making final revisions to the manuscript.

Dr. Schreier suggested additional exploration and discussion in three areas: 1. Issues of scale as they relate to long-range planning and adaptation 2. Issues associated with water laws and regulations 3. Conflicts between economic development and environ-

C3258

mental services

I addressed 1) with additional discussion in (Section 6, page 20) of the potential advantages and pitfalls of attempting to shift adaptation to more local scales. I addressed 2) with additional discussion (Section 5, page 10-11) on the implications of existing legal structure and prospects for change. I addressed 3) with additional discussion in (Section 6.2, page 18) of defacto priorities related to these different kinds of management objectives and prospects for adjustments in these priorities. Discussion of the intractability of the salmon problem (as below) also relates to the ability to resolve conflicts between traditional water resources objectives and ecosystem services.

Mr. Eisdorfer was primarily dissatisfied with my overly cautious discussion of the salmon issue in the Columbia basin and recommended an attempt to identify some overarching issues contributing to the intractability of this problem, and to connect these to similar issues in the context of climate change adaptation. I have attempted to traverse this potential minefield with additional discussion in Section 6.2 pg 16-20. The risk in such an attempt is that the level of controversy on this issue is so intense that an attempt to establish any consensus on the cause of the apparent failure to address the salmon issue is probably impossible. Some would even argue that we have not failed to address this issue (although I do not share this view). I have attempted to frame some of the major issues I am aware of and why I think they are important to this discussion. Where appropriate, I attempt to provide multiple viewpoints. By their nature this discussion probably reflects my own biases in these matters to some extent. Despite these potential limitations, I feel that I've successfully encompassed the intent of Mr. Eisdorfer's good suggestion, in that the additional discussion leads to a more comprehensive understanding of the nature of the fundamental obstacles to climate change adaptation that underlie the salmon problem, and by extension climate change adaptation to cope with other environmental impacts that compete with traditional water resources management objectives. This discussion also nicely overlaps with item 3) in Dr. Schreier's comments.

C3259

In addition to these changes a number of smaller editorial changes have been made throughout the revised manuscript, including a few additional references and updates to several existing references which have been published in the intervening months since the paper was first posted for discussion.

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C3260