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January 13, 2003

MEMORANDUM

TO: Council
FROM: Steve Waste, Manager, Program Analysis and Evaluation
SUBJECT: Draft Research Plan for the Columbia River Basin

Staff has submitted a "Draft Research Plan for the Columbia River Basin" to the Council for review. This draft plan was presented to the Council on December 31, 2003 in response to the directive from the Four Governors to produce such a plan by years end. This memo provides an overview of the major elements of the plan, an assessment of the status of each chapter, and issues for discussion prior to plan refinement. No action by Council is required at this time.

Overview of Chapter Topics, Assessment of Status, and Plan Refinement Issues

Chapter I. Planning for the Future, Taking Stock of the Present

Overview - The chapter provides the background and rationale for the draft plan.

Assessment of Status - Chapter I. is ready for review, but subject to minor revisions.

Discussion Issue - No issues for discussion.

Chapter II. Mandate for a Columbia River Basin Research Plan

Overview - This chapter describes the mandates for the plan. Specifically, the 2000 Program established a basinwide vision for fish and wildlife along with biological objectives and action strategies consistent with that vision. The purpose of the research strategy in program is to identify and resolve key scientific uncertainties. The program calls for the development of a basinwide research plan to address those uncertainties. This chapter also defines the objectives, audience, and scope of the plan, and the relationship to other existing research plans within the basin.

Assessment of Status - Chapter II. is ready for review, subject to minor revisions.

Discussion Issue - No issues for discussion.

Chapter III. The Development and Implementation of the Columbia River Basin Research Plan

Overview - This chapter describes prior efforts to identify research priorities, the prior draft research plan, and mechanisms for implementing and evaluating the plan.

The ISRP (Council Document ISRP 2002-4) found that the prior draft plan essentially defined existing research as the research program. In contrast, this plan is designed to organize future work on research recommendations for which there is no current activity.

The ISRP also commented that in the prior plan work underway at the project scale, or as elements within projects, did not constitute a program nor provide a sense of future direction. This plan, by conducting an analysis of where the current research program actually stands in relation to research recommendations, provides direction for the future. Rather than addressing policymakers, the prior draft plan tried to address multiple audiences, providing detailed guidance for those contemplating submission of a research proposal, as opposed to those managing a program. In contrast, this draft plan is designed to provide a simple, practical, and transparent framework for organizing priorities within the Fish and Wildlife Program, and organizing the research entities within the basin regarding priorities and funding. In order for this plan to be successful, it must provide guidance to Council members and other executives in the basin who are decision-makers operating in a planning arena.

Assessment of Status - Chapter III. is ready for review, but subject to revisions on the following issues.

Discussion Issue 1. - New Review Criteria for the ISRP - The draft plan recommends new decision criteria for reviewing projects be introduced for consideration by the ISRP. These criteria would provide additional guidance to implement the research priorities identified in the draft plan.

* Does the proposed project address a discrete research priority or a discrete sub-issue of a complex research priority, which is defined in a request for proposals (RFP)?

* Will resolution of the research question facilitate later treatment of related research questions?

* Does the proposed mode of implementation require collaboration with other parties under a shared mandate?

Discussion Issue 2. - Project Selection Process - The future form of the project selection process has yet to be determined. Future project solicitations that occur after completion of the research plan may attract research proposals that address the recommendations in the plan. However, for research recommendations for which no proposals are forthcoming, and/or for recommendations the Council decides to implement in the interim, requests for proposals could be initiated.

Discussion Issue 3. - Requests for Proposals - In the past, the Council identified questions of particular importance and initiated requests for proposals in coordination with Bonneville as needed. The draft plan recommends that Request for Proposals (RFPs) should be used independent of, or in concert with, broader solicitations to ensure the efficient effort of project

sponsors, the ISRP, the managers, and the Council. RFPs should be used increasingly, in consultation with fish and wildlife managers, the ISAB and the ISRP to address specific research questions identified in this draft plan. Explicit review criteria for the particular research topic could be included in the RFP.

Chapter IV. Critical Uncertainties and Research Recommendations for the Columbia River Basin

Overview - The critical uncertainties identified in this document were generated from evaluation of independent science group reports, recommendations from national science groups, the fish and wildlife program, the biological opinions, and other regional research plans. These were organized into thirteen research topics that varied in terms of their magnitude. Some topics were dominant in terms of current activity, such as hydrosystem and hatchery effectiveness. Research activity in other areas was modest, or nascent in the case of emerging issues such as toxics or invasive species.

Assessment of Status - Chapter IV. is ready for review, but needing more detail. The tables of research recommendations for each topic need to be revised to achieve greater consistency in language. This chapter is also subject to change depending on the results of further analysis recommend in Chapter V.

Discussion Issue - No issues for discussion.

Chapter V. Charting A Course for the Future: Identifying Research Priorities

Overview - This chapter summarizes current research projects under the fish and wildlife program, compares these projects with the recommendations for future research set forth by topic in Chapter IV, and identifies the remaining gaps in knowledge. Chapter V describes the number of projects and costs associated with on-going research by these topics. The relationship between research that is recommended and that which is on going is also summarized. This shows the extent to which research recommendations are addressed by current projects and the extent of “gaps.” It is important to consider that the current pool of research projects developed over time in response to: long-standing objectives of the Council’s Fish and Wildlife Program; Provincial Review project solicitations; and the requirements of the federal biological opinions and other planning documents

Assessment of Status - Chapter V. is ready for review, but subject to revisions on the following issues.

Discussion Issue 1. - Further Analysis - Table 1. was generated from a search of project proposals that sorted the projects into research topics based on key words in the proposal titles and short descriptions. Many projects mingled research, restoration, and monitoring activities to a degree that defied easy definition. Consequently, this approach may have missed some research elements especially those embedded within management, restoration, and monitoring and evaluation projects.

The summary of results of the analysis identifying knowledge gaps indicates that many of the research recommendation set forth in Chapter IV are already being addressed by current or recent projects. This explains why the number and or salience of those that remain may appear

unexpectedly low for some research topics. Yet the apparently large degree of project coverage for some research topics by itself does not mean that the hard work is over. More realistically, it means the existing projects provide a strong start on a research program. Future analysis could more closely examine the connections between current projects and research recommendations and identify opportunities for existing projects to address remaining gaps closely associated with project objectives. Additional analysis could also identify an optimal sequence for addressing the issues within the groups of short and long-term recommendations.

A more detailed case-by-case analysis appears warranted, in light of some of the specific results of this approach. For example, the ISAB expressed deep concerns regarding hatchery effectiveness, yet the initial analysis indicates that all of the research recommendations except one are currently being addressed. At a minimum, further analysis of the current set of hatchery projects is warranted in order to verify the degree of coverage of hatchery gaps, which appears significant. This situation provides an example of a problem this plan intends to solve, the appearance that specific research recommendations are being addressed because of a large amount of related research activity.

Discussion Issue 2. - Prioritization - ISRP reviews have highlighted the need for a basinwide research plan that would help close these knowledge gaps by evaluating the salience of on-going research, identifying needed shifts in emphasis, and identifying emerging research topics. The ISRP recommended that the research plan address overarching questions and assist in making decisions about the relative importance among projects by providing a prioritization for future research. The independent science groups at their workshop, and the Committee on the Environment and Natural Resources in their report recommended that closing key gaps in knowledge should be the priority of the research plan.

To implement this recommendation, the draft research plan proposes to address knowledge gaps in the following way. A “gap in knowledge” is considered to exist whenever a research recommendation set forth in Chapter IV is not being implemented or addressed by a research project under the Fish and Wildlife Program. The research recommendations that remain unaddressed are considered to be research priorities. The research recommendations deemed most pressing are presented in Chapter VI as short-term recommendations, that is three-years, and the remaining recommendations are presented as long term recommendations, that is six or more years. This analysis was conducted by staff, and would be revised as part of the review of the research plan by the Council, ISAB, fish and wildlife managers, and others. The significance of the remaining gaps is a management and policy issue.

Chapter VI. Developing and Implementing a Regional Research Agenda

Overview - The chapter begins with a section on cooperative management that proposes a mechanism for negotiating a regional research agenda, using this plan as a point of departure. It sets forth the short and long-term research recommendations identified in this plan, and provides a rough framework on which discussion of implementation amongst potential partners can focus. The recommendations are presented by topic and accompanied by descriptions of partners and programs that could play key roles in funding or implementing future research.

Assessment of Status - Chapter VI. requires significant work and is in rough form at this time. It is not intended to provide a complete research agenda for the region, but to show an approach to

developing one, through the identification of potential partners, programs, and funding sources for working on research questions held in common.

Discussion Issue - Cooperative Management - To achieve cooperative management in support of research within the Columbia River Basin this draft plan recommends that an informal forum be convened to provide a point of interface for research program leads, such as a research consortium or partnership. The region currently lacks a forum where researchers can cross disciplinary and institutional boundaries and find peer support for potentially controversial recommendations. A key challenge for such a research partnership is to move beyond the piecemeal solutions that have undercut the overall success of past restoration efforts, and design a comprehensive effort to reduce sources of mortality across the life cycle of the salmon. Therefore, this draft plan recommends that policy makers such as the Council members and regional executives should foster integration of the currently compartmentalized research agendas and budgets of entities that share common objectives.

In the past, attempts have been made to convene executive level multi-agency groups and fora for the purpose of coordinating resource management decision-making across the Columbia River Basin. These unsuccessful efforts indicate that it may not be possible to convene a single “super-group” that can address management decisions across all subject matter areas of resource management in the Columbia River Basin. This plan proposes an alternative approach, which would provide “book-ends” to this spectrum of resource management issues. This would be achieved through the convocation of a consortium of three separate, collaborative partnerships. One would be a Research Partnership able to transcend the institutional impediments described in the section on adaptive management. Many of the resource management entities contacted during the development of this research plan expressed support for this concept. (The 2000 fish and wildlife program states that a meeting of fish and wildlife agencies, tribes and hydrosystem operating agencies should be convened regularly to identify key uncertainties about the operation of the hydrosystem and associated mainstem mitigation activities.) The second would be a Data Management Partnership, a concept for which Council sponsored projects and support already provide significant substance. The third would be a partnership for monitoring, which already exists in the form of the Pacific Northwest Aquatic Monitoring Partnership. This group would provide the feedback mechanism that is missing at the programmatic scale.

If such a configuration of partnerships were to become viable, the research partnership would increase the ability of the region to reduce scientific uncertainty, the data partnership would provide a repository for analytical manipulation, and the monitoring partnership would support the evaluation that has long been missing from the Columbia River Basin. This plan recommends that a research partnership should be convened to provide a forum for the identification of shared research priorities and development of collaborative implementation strategies. Even if the three partnerships were only semi-formal in an administrative sense, and only loosely coupled in a decision-making sense, the synergy that would result could significantly increase the ability of the region to re-direct its efforts based on ongoing experience.

Next Steps

Conduct More Detailed Analysis - Because this analysis provides the foundation for the plan, it is essential that it be solid. In light of the uncertainties previously described, staff recommends taking the analysis another step.

Update Chapters Based on Independent Science Group Reviews - As noted throughout the draft plan, several of the research topics are currently being reviewed by the ISAB and/or ISRP. Pending the completion of these reviews these sections of the plan will be updated.

Review Process - The fish and wildlife program recommends that the process for developing the research plan and associated budget include review by the Council's independent scientific review groups and input from fish and wildlife agencies and tribes, independent scientists, and other interested parties in the region. After comment from the Council and Governors the plan will be submitted to the Council's Independent Scientific Advisory Board (ISAB), Independent Scientific Review Panel (ISRP), and Independent Economic Analysis Board (IEAB) for review. An extensive review process by the contributors to the research plan will be conducted prior to finalizing the plan, following this proposed sequence of steps:

1. Council responds to the draft Columbia Basin research plan - 1/04
2. Independent science and economic groups (ISAB, ISRP and IEAB) review draft - 3/04
3. Columbia Basin tribes and fish and wildlife managers review draft - 5/04
4. Other independent scientists and the public review the Research Plan - 5/04
5. Council adopts final Columbia Basin Research Plan, which provides context for the next project selection process - 6/04