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Application of the IEAB's *Recommendations and Guidance for Economic Analysis in Subbasin Planning* to the Clearwater Subbasin Management Plan

Introduction

This paper is being provided for two purposes; 1) to suggest improvements related to economic content of the draft Clearwater Subbasin Management Plan (the draft Clearwater Plan), and 2) to help subbasin planners understand and implement suggestions provided in the Independent Economic Analysis Board's (IEAB) *Recommendations and Guidance for Economic Analysis in Subbasin Planning* (Economic Recommendations) by reference to the draft Clearwater Plan.

The draft Clearwater Plan was released before the Economic Recommendations were developed. Therefore, our suggestions should not be taken as criticism of the Clearwater Plan. Rather, we take this opportunity to suggest improvements in the draft plan related to economics, and we use the Clearwater Assessment and Plan as points of departure to show how the Economic Recommendations might be implemented. The Clearwater Assessment does include some socioeconomic information, and this information can be used as a basis for suggestions on how to make such economic information more useful to planners and the Council.

The IEAB has reviewed the Independent Science Review Panel's (ISRP) "Review of the Draft Clearwater Subbasin Plan." This paper builds on the ISRP review by showing how some of the ISRP recommendations are closely related to economic as well as biological concerns.

In summary, the Clearwater Subbasin Plan did not progress far enough to allow for meaningful economic analysis and interpretation of recommended actions as contemplated by the IEAB in the Economic Recommendations. In particular, recommendations for specific habitat and hatchery actions are not provided.¹ Instead, the Clearwater Management Plan is focused on general goals and objectives. The Inventory provides a detailed list of ongoing projects in the region, but the Management Plan does not provide enough information about future priorities to suggest how future projects might be different from the status quo. The IEAB believes that more evaluation and bundling of ongoing, proposed and potential projects as examples of strategies and actions could focus a revised Clearwater subbasin plan and future subbasin planning

¹ Most potential hydrosystem and harvest actions are not within the subbasin, so they were not evaluated by the Plan.

efforts. This approach would also be more likely to provide opportunities for economic impact and cost-effectiveness analysis.

The Technical Guide for Subbasin Planners (the Technical Guide) is not mandatory. Given flexibility, a variety of interpretations for plan requirements, focus of effort, key terminologies, and methodologies for prioritizing actions may be adopted. Such variations among subbasin plans will not be helpful for the Council, because ultimately decisions will have to be made that cut across subbasins. A focus on ongoing, proposed and potential projects would focus limited planning resources on the most immediate and likely actions and their effects.

The Economic Recommendations are provided below with the associated sections of the Clearwater Plan identified. The Clearwater Plan information is discussed, and related ISRP comments are mentioned if relevant. Changes are suggested that would improve the usefulness of the economic information. Again, the Clearwater Plan should not be faulted if its economic information could be improved, because the authors did not have the Economic Recommendations available when the Plan was developed. Rather, this evaluation by the IEAB is intended to help improve the Management Plan as it moves from the current draft to the final version.

Scoping Economic Impacts

IEAB Recommendation #1. Economic impacts should be scoped during the public involvement process

The Council's Technical Guide for Subbasin Planners (2001) states that "Subbasin Plans will be developed locally and in collaboration with fish and wildlife managers, local governments, interest groups and stakeholders and other state and federal land and water resources managers" (p. i.). The ISRP found that "Development of the . . . Plan is laudable for several reasons. . . b) the Policy Advisory Committee (PAC) brought diverse public and private interests together for subbasin planning."

Appendix C of the Clearwater Management Plan documents the public and government participation plan. Phase 1 of public participation "reconnoitered how the proposed philosophy behind the Clearwater Subbasin Plan coincides with the public philosophy." Phase 2 was designed to report on progress, and Phase 3 was to collect comments on the final draft.

A compilation of comments from Phase 1 meetings shows that many were related to economics. Some comments expressed a desire for more diversified or natural resource based economic opportunities. Other comments were focused on natural resources of local value such as salmon and elk. However, it appears that specific actions were not discussed during the Phase 1 meetings. Therefore, comments about economic impacts of actions were not obtained. Documentation of comments from later public meetings is not

provided, so we have no information on what was said about economic impacts beyond the first meeting.

However, as discussed below, it appears that much of this plan and the planning process were focused on background information and general concepts, objectives and strategies, rather than specific planning for actions or projects. If the process were more action-oriented, the types of comments received might be different.

Economic Information in the Subbasin Assessment

IEAB Recommendation #2. The IEAB recommends that the Assessment section of each subbasin plan briefly describe the relationships between stakeholders and the potentially affected natural resources, including the economic dimension of these relationships.

Section 3.10 (Population and Land Uses) of the Clearwater Subbasin Assessment provides discussion organized into subsections on demographics, urban development, recreation, roads, timber, agriculture, grazing and mining. Tables and maps show land use and ownership, population, timber harvest, indicators of agricultural production, and distribution of grazing activities. Data are provided on recreational fishing, development patterns, and road construction.

This section is generally useful. However, the discussion tends to focus on the adverse impacts of human activities rather than the economic importance of them. The first focus is useful, but the latter is equally relevant. In particular, it would be useful to name and discuss the communities and stakeholder groups in the region in terms of their unique relationships to natural resources. For example, the fact that Lewiston is a port town is not mentioned. The industries in Lewiston that depend on barge transportation and natural resources should be mentioned and the economic importance of these activities quantified or at least discussed. For other communities, recreation, agricultural, forest products and mining interests should be discussed. All of this information could be provided within the current report organization. Alternatively, information might be provided as a one or two-page table, where each row would summarize the economic relationships between a community or stakeholder and the region's natural resources.

Economic data such as employment, value of sales by industry, wage and salary payments, and other personal income are generally not available at the community level. However, the assessment could display the amount and share of county economic activity (employment, perhaps) in natural resource industries such as forestry, agriculture and mining. The draft Clearwater Assessment provides data on "indicators of agricultural production" (Table 22, page 82), none of which are measured in employment or dollar terms. Economic data by industry are available from the Regional Economic Information System. Detailed data on agricultural activity are available from the U.S. Agricultural Census or county sources. Also, regarding Table 22, it would be useful to disaggregate crop production acreage into irrigated and non-irrigated land.

The Assessment Section of the Clearwater Plan is approximately 450 pages with a four-page Table of Contents. The Technical Guide provides a half-page outline. The IEAB is concerned that future subbasin planning efforts will not have the funds available to both develop a detailed assessment and conduct the actual analysis needed to develop a management plan. Better guidance may be needed to prioritize the types of information to be collected and presented in a subbasin assessment.

Recommendations Related to Economic Impacts in the Management Plan

IEAB Recommendation #3. The IEAB recommends that each management plan include a general description of the adverse and beneficial economic impacts of proposed actions. More detailed analysis, including quantitative analysis, may be justified if specific projects are proposed.

IEAB Recommendation #4. Strategy development should consider and reduce adverse stakeholder impacts while achieving beneficial improvements for fish and wildlife. Subbasin plans should include proposals to compensate those who suffer adverse economic impacts either through direct payments or countervailing benefits from other program elements. Cost-sharing with stakeholders who benefit from the plan should be included where feasible.

These two recommendations suggest that a subbasin management plan should evaluate economic impacts and be sensitive to these impacts in formulating strategies. Unfortunately, the Clearwater Management Plan did not progress to the point where such evaluation would be possible. Generally, the Plan does not specify strategies or actions in enough detail to develop a basis for predicting economic impacts.

The Plan does exhibit a concern for economics. For example, "Social, economic and political factors in the Clearwater basin are important considerations. Accounting for the human component will increase the probability that this plan will be successfully implemented" (Page 7).

Two specific clarifications to the Management Plan regarding economics are suggested.

1. The IEAB is concerned about the opening statement in the Preamble of the Management Plan, which concludes that fish returns in 2001 yielded \$24 million in direct expenditures by anglers in the subbasin. This conclusion is undocumented, and it may be misleading. With 61,000 angler trips, expenditure per trip would be about \$400, but catch per trip was only 0.4 fish. Some of the expenditure may not have been made within the region, some may have been made partly for recreation other than spring chinook fishing, and some may represent expenditure by residents that would have been spent in the region anyway. At a minimum, the dollar figure should be documented.

2. The IEAB is concerned about the goal in §3.2 of the Management Plan that references the “recovery” of natural resource-based economies. The Plan does not suggest a standard for assessing what “economic recovery” might mean or how it would be monitored, and there is no discussion of the trade-off between recovery of fish populations and recovery of the local economy. The discussion in §3.3 of the “economic ramifications” clearly suggests that the authors of the Management Plan recognized this trade-off. While the IEAB recognizes that recovery of the local economy is critical to the citizens in this subbasin, there is a need for more specific description and evaluation of “economic recovery”, and how the subbasin plan might contribute to such recovery.

The content of the Management Plan, with emphasis on its content related to economic impacts and local effects, is described below. Then, general suggestions for the planning process related to economics are provided.

The Management Plan attempts to provide a hierarchy, from a vision statement to actions, which can guide fish and wildlife planning in the subbasin. Following a statement of vision and goals, the Plan provides a "working hypothesis," regarding the condition and behavior of the subbasin ecosystem, and "component hypotheses," derived from the working hypothesis, which are grouped into categories of biological, environmental or socioeconomic. The component hypotheses are, generally, conditions that could be improved to benefit fish and wildlife. Each component hypothesis is followed by a number of "objectives," which include a variety of biological, protection and restoration goals and targets, and research and planning goals.

The component hypotheses under socioeconomics are summarized below:

#18. Management Plan integration with existing programs, projects and initiatives can achieve benefits beyond the value of an individual program or project and will promote the application of ecosystem management principles.

#19. Economic factors play an important role in determining the effective and efficient implementation of habitat-related improvement or protection strategies.

#20. Long-term program implementation is more successful where projects are locally developed.

Each objective has at least one "strategy" to accomplish it. The Technical Guide defines strategies as "sets of actions to accomplish the biological objectives" (Page 13). "Strategies are not projects but are instead guidance for the development of projects as part of the implementation plan."

Under the socioeconomics category, some strategies include: seeking local support, develop a prioritization process, coordinate plan implementation; develop tools to evaluate economic effectiveness and efficiency; minimize loss of local government

(property) tax revenues; utilize local labor forces, contractors and supplies; and assist local groups.

Then "subsequent sections address more specific and finer scale restoration concerns and recommended actions" (Management Plan page 6). These subsequent sections are, apparently, a research, monitoring and evaluation plan (Section 3.4), and a section that attempts to prioritize habitat goals and "restoration issues" within the subbasin (Section 3.5).

Neither the strategies nor the habitat restoration issues are defined well enough to infer what their economic effects might be. The ISRP found that the management plan "does not enunciate true strategies" (p. 19). In general, the IEAB must concur with this finding. The Clearwater Management Plan is not specific enough in terms of actions and quantifiable objectives to provide any opportunity for meaningful analysis.

The IEAB believes that future subbasin planning efforts should focus more effort on ongoing, proposed and potential projects as examples of actions that might be bundled to constitute strategies. "Strategies are not projects" but projects should be used as examples of how a strategy might be implemented. Project descriptions, with sufficient detail to estimate biological and economic effects, are necessary in order to evaluate the cost-effectiveness of proposed actions, both within each subbasin and across subbasins. The ISRP states "the inventory presents a comprehensive list of existing actions, as well as some past and planned activities, but needs to analyze. . . how well present activities are addressing the needs of fish and wildlife populations, and provides interpretive conclusions. . ." (Page 1) The logical result of this exercise would be a list of strategies, each with a list of ongoing, proposed and potential projects under that strategy, with information regarding their effectiveness in meeting fish and wildlife objectives. Cost data could be provided as part of this summary. These data could provide a basis for consideration of local economic impacts.

Recommendations Related to Cost-Effectiveness Analysis in the Management Plan

IEAB Recommendation #5. The IEAB recommends that the management plan include a short section on cost-effectiveness analysis. This section should identify alternative projects or strategies that could achieve the same result. Cost-effectiveness analysis may be justified for these projects if the results and costs can be measured, and if the costs are large enough to justify the additional analysis.

There is no section on cost-effectiveness analysis in the Clearwater Management Plan. For the great majority of strategies, no meaningful analysis could be conducted given their current form. Appendix A provides an opportunity to think about cost-effectiveness: Table 7 provides numerical goals for a variety of species at different life stages. If specific actions and strategies were related to these goals, a cost-effectiveness analysis might yield a quantification of the cost of achieving them. It may be the case that these

goals are themselves not cost-effective when compared with other subbasins. The Council will eventually be allocating scarce financial resources across several subbasins, and information on cost-effectiveness should help guide those decisions.

The Clearwater Subbasin Inventory provides the list of ongoing projects within the basin. Some information on biological benefits is provided. As discussed above, the inventory section could be improved by providing information regarding the results and costs of these projects. If these projects were grouped into strategies in the management plan, then some cost-effectiveness analysis might be possible. If existing and proposed projects could be grouped under strategies, then alternative means for implementing a strategy might be identified and evaluated.

IEAB Recommendation #6. The Council may need to prioritize projects according to their cost effectiveness for meeting regional goals and objectives, and subbasin projects may be compared to mainstem actions. Therefore, subbasin planners should provide information on biological and physical benefits and economic costs of all subbasin strategies and projects for use in cost-effectiveness analysis at the regional level.

In prioritizing "opportunities for action" by Potential Management Units (PMUs, Section 3.5), the Management Plan assumed that opportunities would be high, medium and low on federal, private/mixed, and timber company land, respectively. This may be a highly simplistic and inaccurate representation of potential costs. Restoration and protection goals for habitat improvements within each PMU are prioritized based on largely qualitative factors that are explained for each goal. It does not appear that cost-effectiveness played any role in this process.

The Research, Monitoring, and Evaluation (RM&E) plan in §3.4 should include continuing evaluation of the cost-effectiveness of the specific actions that are eventually implemented in the subbasin.

The IEAB notes that Action 151 provides for BPA to experiment with water brokerage arrangements that could help increase tributary flows. This action appears to be consistent with suggestions made by the IEAB in the "Economics of Water Acquisition Projects" (IEAB 2001-1) January 2001. Water transfers and exchanges are often under-utilized as cost-effective mechanisms for improving instream habitat. Subbasin plans may be a useful way to implement some of these ideas.