

Palouse

Review Summary

The plan appears to be severely limited by the lack of information on habitat and population conditions in this subbasin. Even acknowledging these data constraints, the plan falls short of adequately using what little information is available. The plan is hindered by the lack of a comprehensive Assessment section. The Assessment does not include a synthesis that identifies limiting factors and lists key findings. Consequently, assessment information is not subsequently linked in the Management Plan to identified objectives with strategies to meet them. In sum, this plan does not meet most of the scientific elements of a subbasin plan called for in the Council’s 2000 Fish and Wildlife Program and Subbasin Planning Technical Guide.

Because of the subbasin’s data and funding/resource limitations, a revised edition of the plan should focus on the establishment of a process to gather needed information, improve its assessment, and ultimately develop a technically sound restoration strategy. A section indicating what information is still needed and an RME section detailing how this information will be gathered, archived, and interpreted should be included in the plan. The plan should highlight the few key restoration and protection strategies that could be justified given the data that is available.

Agency and public participation was attempted but is limited. The plan does not provide evidence of any public review comments; a revised edition of the plan should include such evidence.

Review Checklist

I. The Subbasin Assessment		
(See generally pages 4-6, 9-10 of the Technical Guide; the checklist is derived from 18-24 of the Technical Guide.) Reviewers should consider the soundness, completeness, analytical approach, and transparency (documentation of methods and decision-making process) of the following components of a subbasin assessment.		
I. A. Subbasin Overview		
<i>General Question to be addressed: Does the assessment provide the geographical, demographical, and environmental context for fish and wildlife resources in this subbasin? The Council specifically asked that the independent scientific review evaluate whether the subbasin assessment was thorough and substantially complete. The following checklist is to aid reviewers in that determination.</i>		
I. A.1. General Description		(Y)es, (P)artial, (N)o Need for additional treatment (0-4)
I.A.1.1	Does the assessment provide a general orientation to the subbasin (location, size, distinguishing natural and cultural features, land use, land ownership) and an overview of jurisdictional authorities (state, county, federal lands, tribal lands and fishing rights)?	

Reviewers: More discussion of state or federal laws governing land use would make the presentation of this topic more balanced. Only county-level issues are thoroughly addressed. There was no real treatment of tribal lands/jurisdiction beyond a reference, and no mention of fishing rights.		Partial	2
I.A.1.2	Does the assessment provide a general description of the subbasin's macro-environment (geology, climate and weather, land cover, vegetation) and of the subbasin's water resources (hydrography and watersheds, hydrologic regimes, water quality, riparian and wetland resources), water uses, and modifications to water resources (hydropower projects and operations, water diversions, channel modifications)?		
Reviewers: There was little reference to specific modifications to the aquatic systems in the subbasin - i.e., what type and where they are located.		Partial	1
I.A.1.3	Does the assessment provide a general description of anthropogenic disturbances to the aquatic and terrestrial environment, organized by the source of disturbance (urbanization, agriculture, forest practices, water development, mining, transportation, and other)?		
Reviewers: There is a very complete treatment of the agricultural impacts within the subbasin and a nice historical treatment of overall land usages. However, the effects of land use activities such as forestry and urban development are not as well documented. Because many of the restoration opportunities may occur in forested portions of the subbasin, a more complete treatment would be useful.		Partial	1
I.A.1.4	Does the assessment provide a list of native and non-native fish and wildlife species present in this subbasin including those species that: a. have been designated as threatened or endangered under the Federal Endangered Species Act or state equivalents, b. have been recognized by applicable federal, state, or local resource management agencies, or by the Nature Conservancy or state heritage program, as being especially rare or significant in the local area, c. have special ecological importance within the subbasin, d. are recognized by Native American tribes as having special cultural or spiritual significance, or e. are not native to this subbasin?		
Reviewers: Yes, but with inadequate mention of potential tribal issues.		Yes	1
I.A.1.5	Does the assessment identify plants that have been designated as threatened or endangered under the Federal Endangered Species Act or state equivalents, and/or that are recognized by Native American tribes as having special cultural or spiritual significance, or (optional) that have special ecological importance within the subbasin?		
Reviewers: Yes, but with inadequate mention of potential tribal issues.		Yes	1
I.A.2. Subbasin in the Regional Context		(Y)es, (P)artial, (N)o	<i>Need for additional treatment (0-4)</i>
I.A.2.1	Does the assessment describe how this subbasin fits within its regional context (size in relation to the total Columbia Basin, placement within the ecological province and relationship to other subbasins in this province, qualities that distinguish this subbasin from others in the province)?		

<p>Reviewers: Although there is a brief description of the location of the Palouse relative to adjoining watersheds, the Palouse Subbasin's relationship to the other provinces and subbasins of the Columbia River are only broadly suggested. There is no indication of what unique features the Palouse Subbasin might possess that would distinguish it from other subbasins and provide a direction for restoration priorities.</p>	<p>Partial</p>	<p>2</p>
<p>I.A.2.2</p>	<p>Does the assessment describe this subbasin's relationship to Endangered Species Act planning units (NOAA Fisheries-designated evolutionarily significant units (ESU) and U.S. Fish and Wildlife Service-designated bull trout planning units.) where this information was available during the planning process?</p>	
<p>Reviewers: The plan does not provide details regarding ESU's, bull trout planning units, or the ESA in general. However, this question is marginally applicable with fish. Bull trout apparently are extirpated from the basin.</p>	<p>na</p>	<p>na</p>
<p>I.A.2.3</p>	<p>Does the assessment summarize external environmental conditions that might have an effect on fish and/or wildlife in this subbasin (the ocean, the estuary, the mainstem downstream from the subbasin, and, as relevant, upstream areas and adjacent subbasins)?</p>	
<p>Reviewers: The potential significance of out-of-subbasin effects is only superficially addressed. The extent to which some of these factors might limit the effectiveness of restoration efforts should be more fully explored.</p>	<p>Partial</p>	<p>1</p>
<p>I.A.2.4</p>	<p>Does the assessment identify macroclimate and human occupation and use trends that may affect hydrological or ecological processes in this subbasin over the long-term (50 years into the future and beyond)?</p>	
<p>Reviewers: The plan notes that, in some areas of the subbasin, residential development is expanding and will continue to do so. Beyond that, the plan's comments are very general and provide no spatial details or predictions of future patterns of change. There is no discussion of potential changes in agricultural practices or forestry practices (other than fuels reduction). There was also no mention of long-term climate change.</p>	<p>Partial</p>	<p>2</p>
	<p>Summary comments and evaluation on the Subbasin Overview: Does the assessment provide the geographical, demographical, and environmental context for fish and wildlife resources in this subbasin?</p>	
<p>Reviewers: The initial portion of the assessment describing subbasin resources is clear and easy to follow. However, no demographic information is provided for any of the focal species. There should be more information provided than lists or habitat-type descriptions. There are few details as to what things are happening in the subbasin, where they are happening, and what it all means.</p>	<p>Partial</p>	<p>2</p>

¹ The USFWS bull trout planning hierarchy includes, from large areas to small, distinct population segments, recovery units, recovery sub-units, core populations, core areas, and local populations. A subbasin would typically correspond to a recovery unit or sub-unit.)

I.B. Species Characterization and Status		
<p><i>General question: Does the assessment adequately describe the current status of fish and wildlife focal species?</i></p> <p>Note to reviewers: for this section of the review, the checklist should be applied to each focal species. Please identify which species your evaluation applies to in the comment field. Use the ranking fields (Y,P,N; 0-4) to give an overall evaluation across all focal species. Note differences among approaches to species in the comment field. If necessary, once the plans are received, assignments will be made to cover an individual species or a series of focal species.</p>	(Y)es, (P)artial, (N)o	Need for additional treatment (0-4)
<p>I.B.1. Does the assessment identify a series of focal species that will be used to characterize the status of fish and wildlife species within the subbasin? These should include one or more wildlife, resident fish, and, where present, anadromous fish species. Anadromous fish may also be included in subbasins where they were historically present and where there is a reasonable probability that these fish could be restored to sustainable levels. Criteria suggested for selecting focal species include a) designation as Federal endangered or threatened species, b) local ecological significance,² and c) cultural significance.</p>		
<p>Reviewers: No fish species are designated as focal species. Instead a large number (27) of terrestrial species were listed as focal species, with some not seeming to be very good choices to be sentinel species capable as serving as indicators of habitat change. No quantitative information as to the status of these species was provided. Is it appropriate to use a non-native species (ring-neck pheasant) as a focal species? (See discussion on the selection of focal species in the ISRP/AB programmatic comments.)</p>	Partial	3
<p>I.B.2. Does the assessment identify and characterize focal species populations; i.e. delineate unique population units and, as applicable and where information is available, meta-populations, subpopulations and/or other genetic/behavioral groupings used by scientists or managers?</p>		
<p>Reviewers: Although an attempt is made to define populations for a few species (e.g., bull trout), this information is not provided for a majority of the focal species.</p>	Partial	3
<p>I.B.3. Does the assessment describe the current and historic status of each focal species population and summarize available population data (abundance, productivity, spatial structure, etc., with particular emphasis on trend data)?</p>		
<p>Reviewers: The plan did not adequately provide this information. The description of the giant Palouse earthworm did, however, provide an entertaining aside.</p>	No	4
<p>I.B.4. Does the assessment describe the population's life history, including identifying distinct life stages?</p>		
<p>Reviewers: Only a superficial amount of information was provided in the Habitat Attributes for Terrestrial Species (Tables 6-11).</p>	Partial	3
<p>I.B.5. Does the assessment characterize the genetic diversity of the population, especially regarding possible effects of artificial production? Specifically does the assessment describe the historic and current status of introductions, artificial production, or captive breeding programs in this subbasin or affecting the subbasin through straying or other means, and describe the relationship between the artificial and naturally produced populations?</p>		

² Species that could be considered under the ecological significance criterion might include those that: a) are particularly rare within the subbasin (regardless of ESA classification), or b) perform a particularly important or unique ecological function.

Reviewers: Very little information is provided about the potential genetic effects of stocking fish in the subbasin. Although some information is provided on stocking histories for non-natives, the assessment does not clearly indicate the status of past, present, and future stocking activities in the subbasin.	No	4
I.B.6. Does the assessment describe historic and current harvest, including both in-subbasin harvest and downstream or ocean harvest affecting the focal species?		
Reviewers: A description of regulations and desired harvest rates for mule deer and the subbasin's "Put and Take" fishery is provided, but no quantitative data are provided. Given that anadromous salmonids are not a concern in this subbasin, this information may not be as critical to the formulation of restoration strategies as it may be in other subbasins.	Partial	3
Summary comments and evaluation on the Species Characterization and Status Subsection: Does the assessment describe the current status of fish and wildlife focal species?		
Reviewers: This plan presents only a static listing of species with little information on the current, past, or future status of the focal species that would be useful in the prioritization of restoration strategies. There are far too many focal species proposed. It would not be possible to collect the type of information necessary to determine how this large group of species is responding to the application of restoration measures. The list should be reduced to a small number of species for which collection of population data would be more realistic. Fish species seem ignored relative to terrestrial ones. Further treatment of fish species or a more detailed discussion justifying this lack of treatment would improve the plan.	Partial	4

I.C. Environmental Conditions <i>General question to be addressed: Does the assessment adequately describe the effect of the environment on fish and wildlife populations?</i>		
I.C.1. Environmental Conditions within the Subbasin	(Y)es, (P)artial, (N)o	<i>Need for additional treatment (0-4)</i>
I.C.1.1	Does the assessment describe the current condition of the environment in this subbasin, and characterize the condition of the environment under the following reference conditions: a) historic, ³ b) potential, ⁴ c) future/no new action, ⁵ and the potential condition of aquatic and terrestrial habitats within the subbasin? Does the assessment include a determination of the difference between current conditions and the various reference conditions?	

³ The historic condition refers to the state of the environment at the time of European settlement, or 1850.

⁴ The potential condition is defined as the optimal condition for the subbasin in the year 2050, but it acknowledges cultural modifications that are not reversible such as urbanization.

⁵ The future/no new action condition is the state of the environment in 2050 assuming that current trends and current management continues.

Reviewers: A good description of historic and current environmental conditions is provided. However, there is little discussion relative to what might be achieved with restoration or what might be the likely change in environmental conditions with no restoration effort.		Partial	3
I.C.1.2	Does the assessment classify 6 th field HUCs (or other appropriate assessment units) within the subbasin according to the degree to which each area has been modified and the potential for restoration?		
Reviewers: The plan did not provide adequate information on this topic.		Partial	2
I.C.2. Out-of-Subbasin Effects and Assumptions			
I.C.2.1	Does the assessment identify factors outside of the subbasin that have a significant effect on each focal species, with particular attention to bottlenecks? These might include effects associated with upstream conditions, downstream conditions, and, in the case of migratory wildlife, conditions in adjacent subbasins. Outside effects are particularly relevant for anadromous fish and may include mainstem passage and habitat, estuary conditions, ocean conditions, and harvest.		
Reviewers: There was some generic discussion of out-of-basin effects for some migratory species (e.g., songbirds) but no quantitative treatment of the relative importance of out-of-subbasin effects on population performance. Due to the large number of focal species identified, a thorough analysis for each would be a daunting undertaking.		Partial	3
I.C.2.2	For each focal species, does the assessment establish assumptions for each external effect that can be used to calculate the effects of external conditions on the productivity and sustainability of fish and wildlife within this subbasin?		
Reviewers: Although this subbasin plan supports continuing a “Put and Take” fishery stocked with non-native fish, the potential impacts of these species within and outside the subbasin is not adequately discussed. No information is provided that could be used to gauge the potential impact of external effects on the focal species.		No	4
I.C.3. Environment / Population Relationships			
For each focal species, does the assessment identify, for each life stage, environmental factors that are particularly important for the species' survival and determine the characteristics that constitute optimal conditions for species health? Does the assessment describe and make a finding regarding the environment's ability to provide such optimal conditions, or conditions that support the long-term viability of these populations.			
Reviewers: The information on the specific habitat requirements of the focal species is very general. There is no true assessment of the capacity of either the current environment or a restored environment, to provide conditions capable of supporting the long-term viability of any of the focal species.		Partial	3
Summary comments and evaluation on the Environmental Conditions Section: Does the assessment adequately describe the effect of the environment on fish and wildlife populations?			

Reviewers: This plan does not adequately describe the effect of the environment on fish and wildlife populations. Focal species are not referenced at all after they are named - beyond the listing of certain habitat attributes for a few of them.	No	4
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I.D. Ecological Relationships <i>Question to be addressed: Does the assessment describe the key inter-species relationships and the key functional relationships?</i>	(Y)es, (P)artial, (N)o	<i>Need for additional treatment (0-4)</i>
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I.D.1. Inter-species Relationships		
Does the assessment identify important inter-species relationships or interactions, both positive and negative, with specific attention to relationships between anadromous fish and wildlife and specifically identify: 1) wildlife species and habitats that may be influenced, positively or negatively through direct effects of changes in fish abundance or fish community composition; 2) fish species and habitats that may be influenced, positively or negatively, through direct effects of changes in wildlife abundance or wildlife community composition; and 3) key species relationships within this subbasin based on the above?		

Reviewers: There is some discussion of the impact of introduced species on populations of native animals and plants. Because anadromous fish are no longer found in the subbasin, interactions of these fishes with wildlife populations may not represent a currently important consideration. However, chinook and steelhead did inhabit the lower six miles of the mainstem historically, and they may have made a contribution to the conditions in this area of the subbasin.	No	3
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I.D.2. Processes and Functions		
Does the assessment identify key ecological functions for species within this subbasin and assess the current status of ecological processes and functions in the subbasin?		

Reviewers: This plan does not, all told, adequately identify key ecological functions and processes; interactions are addressed only for a few species.	No	3
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I.E. Interpretation and Synthesis / Limiting Factors and Conditions		
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I.E.1. Limiting Factors and Conditions		
Does the assessment describe:		
1) Historic factors or conditions that led to the decline of each focal species and of ecological functions and processes?		
2) Current key factors or conditions within and without the subbasin that inhibit populations and ecological processes and functions relative to their potential.		

Reviewers: The plan includes a description of the historical factors that led to alterations in the environmental conditions in the subbasin, and there is some discussion of the current factors that are impacting ecological processes and thereby limiting recovery of focal species. In a process sense, however, there is not sufficient treatment given to any species in particular, nor explanation of how the limiting factors exist currently or are changing over time. In addition, there is little	Partial	3
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<p>consideration of the extent to which out-of-subbasin factors contribute to the current status of the focal species.</p> <p>The limiting factor discussion involves only a brief review of eight categories of habitat change that are apparently lifted from the WDFW/IDFG lists in the summary.</p>		
<p>I.E.2. Key Findings</p>		
<p>Is the knowledge gained through the assessment synthesized in regard to: 1) the status of species, 2) the status of the subbasin environment, 3) the biological performance of focal species in relationship to the environment, 4) the health of the overall ecosystem, 5) potential conflicts and compatibilities between individual species and ecological processes, 6) a determination of the key factors that impede this subbasin from reaching optimal ecological functioning and biological performance?</p>		
<p>Reviewers: The synthesis of the information provided in the assessment was incomplete. It appeared as though the identification of limiting factors was accomplished using the opinions of local experts, yet the extent to which these experts used the information provided in the assessment to identify the factors is not clear. There was no formal process used to identify limiting factors. In addition, for the limiting factors listed there was no indication of their relative significance.</p>	<p>No</p>	<p>4</p>
<p>I.E.3. Subbasin-wide Key Assumptions/Uncertainties (“Working Hypothesis”)</p>		
<p>Does the assessment describe the key assumptions (including uncertainties) that have been made in the “Key Findings” above, and document the data sources and/or analytical tools relied upon?</p>		
<p>Reviewers: The plan does not adequately identify key assumptions/uncertainties.</p>	<p>No</p>	<p>4</p>
	<p>Overall impression and evaluation of the Assessment: Does the assessment adequately synthesize the information regarding the health and functioning of this subbasin ecosystem? Does it adequately: a) bring together the single-species and community assessments to form a holistic view of the subbasin’s biological and environmental resources, b) provide a foundation for the development of scientific hypotheses concerning ecological behavior and the ways that human intervention might prove beneficial? As needed elaborate on your evaluation of the various Sections enumerated above. If the plan provides additional analysis beyond what is laid out above in the checklist please comment here (e.g., socio-economic descriptions or analysis).</p>	
<p>Reviewers: Although the assessment provides a nice perspective of the changes that have occurred in the subbasin over the last 150 years, the bottom line is that there is no attempt to accomplish a) or b) above. There is essentially no synthesis whatsoever, only superficial descriptions, mostly in the form of lists of species, etc. There is basically no scientific approach here. There is little quantitative information provided and no analysis conducted to verify that the assumptions of the authors regarding the key problems in the subbasin are valid. Real limiting factors need to be identified and key findings synthesized. That process should form the basis for the entire planning exercise.</p> <p>It is very unclear how the large number of focal species that have been identified will be used to judge progress towards a restored environment.</p>	<p>Partial</p>	<p>3</p>

<p>In fact, it appeared as though there was little information available about the current status of many of the focal species. A more rigorous treatment of the existing data is needed to support the subbasin plan.</p> <p>In addition, fish seem to be substantially underrepresented in this Assessment. Further treatment of fish species or a more detailed discussion justifying this lack of treatment would improve the plan.</p>		
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II. The Inventory		
<i>(This checklist section was developed from pages 11-12 of the Technical Guide.)</i>		
<i>Reviewers should consider the soundness, completeness, analytical approach, and transparency (documentation of methods and decision-making process) of the following components of a subbasin inventory, specifically whether the inventory includes an assessment of the adequacy of current legal protections, plans, and projects to protect and restore fish, wildlife, and ecosystem resources. Does the inventory adequately synthesize past activities and their biological achievements? Planners were requested to, as applicable, describe the extent to which these programs and activities extend beyond the subbasin to a larger scale (provincial and basin-wide).</i>		
II.A. Existing Protection	<i>(Y)es, (P)artial, (N)o</i>	<i>Need for additional treatment (0-4)</i>
II.A.1	Does the inventory identify areas with protections through stream buffers, municipal or county ordinances, conservation designations, or water resources protection?	
Reviewers: The Inventory identifies protected locations only in a very general sense. The spatial distribution of different protective measures is provided for only a few of the programs described. Also, there is some unevenness in the level of detail among the programs included in the inventory. For example, the buffering requirements under Idaho's forest practice rules are provided, but a comparable description of the Washington regulations is not given.		2
II.A.2	Does the inventory assess the adequacy of protections for fish, wildlife, and ecosystem resources?	
Reviewers: There is no real overall assessment. There is merely a listing of the various agencies with responsibilities and a brief summary overview of those for each agency.		2
II.B. Existing Plans		
II.B.1	Does the inventory identify and review applicable local, state, tribal, and/or federal fish and/or wildlife management plans and water resource management plans that affect fish and wildlife?	
Reviewers: The Inventory lists the various agencies with responsibilities, provides a brief summary overview of those for each agency, and identifies existing plans, but provides little detail on the components of those plans. There is no real overall assessment.		1
II.B.2	Does the inventory assess the extent to which existing plans are consistent with the subbasin assessment and their adequacy in protecting and restoring fish, wildlife, and ecosystem resources? (It is possible that this analysis is done in another section of the plan, e.g. in the management plan.)	
Reviewers: The plan does not adequately cover this topic in the Inventory or Management Plan.		3

II.C. Management Programs / Restoration and Coordination Projects			
Does the inventory identify management programs implemented through on-the-ground restoration and conservation projects that target fish and wildlife or otherwise provide substantial benefit to fish and wildlife? These include, at a minimum, those implemented within the past five years regardless of funding source.			
II.C.1	Does the inventory identify ongoing or planned public and private management programs or initiatives that have a significant effect on fish, wildlife, water resources, riparian areas, and/or upland areas? ⁶		
Reviewers: The Inventory identifies the relevant plans and agencies/organizations. The description of tree planting projects is the most thorough.		Partial	1
II.C.2	For each management program (or project where not clearly part of an overarching management program), does the inventory describe the program, project or activity; identify the management or lead entity; identify how the program/project was authorized and who is responsible for implementation; identify the funding source; and identify the relationship to other activities in the subbasin?		
Reviewers: Some of these aspects of the programs are covered, but not all. Tree planting projects are thoroughly described. An exhaustive treatment of the organization and administration of the various organizations involved doesn't seem to be a critical element of the plan.		Partial	2
II.C.3	For each management program (or project where not clearly part of an overarching management program), does the inventory identify limiting factors or ecological processes the activity is designed to address?		
Reviewers: Although the inventory addressed the land-use activities governed by agencies and the major objectives of non-regulatory organizations, there is no explicit treatment of limiting factors or processes that fall under the jurisdiction of each program or project. It does not seem, however, as though this level of detail is required to support the management plan.		Partial	1
II.C.4	For each management program (or project where not clearly part of an overarching management program), does the inventory summarize accomplishments/failures of activity		
Reviewers: Effectiveness of the programs or projects is not provided because the effectiveness of many regulatory programs has not been assessed.		Partial	2
II.C.5	Does the inventory relate the assessment to the existing activities and identify the gaps between actions that have already been taken or are underway and additional actions that are needed to address the limiting factors and meet recovery and other goals, and identify inadequacies in both design and implementation?		
Reviewers: Gaps are not identified. This information would be useful in terms of identifying areas or ecological processes not currently being addressed with existing programs.		No	3

⁶ Among other programs, the Technical Guide requested for artificial production programs that the inventory include and summarize relevant HGMPs (both BPA-funded and non-BPA funded programs) and Council APRE evaluations?

<p>Overall impression and evaluation of the Inventory: As needed elaborate on your evaluation of the various Sections enumerated above. If the plan provides additional information or analysis beyond what is laid out above in the checklist please comment here (e.g., socio-economic descriptions or analysis).</p>		
<p>Reviewers: The inventory does a good job of identifying the various programs that affect land use activities in the Palouse subbasin. It does not, however, provide details on the elements of the various regulatory programs (with a few exceptions). This level of detail does not seem crucial to the development of the management plan. Some identification of items currently not covered by regulatory programs would be valuable in developing the subbasin management plan, and this information should be added to the inventory. There is basically no synthesis given at all.</p>	<p>Partial</p>	<p>3</p>

<p>III. The Management Plan <i>(Derived from pages 12-16 of the Technical Guide.)</i> <i>Reviewers should consider the soundness, completeness, analytical approach, and transparency (documentation of methods and decision-making process) of the following components of a subbasin management plan.</i></p> <p>These checklist tables incorporate Council Question 4, Consistency with the Provincial- and Basin-level Program: Are the vision, objectives, and strategies proposed in the subbasin management plan consistent with those adopted in the program for the province and/or basin levels? This is a three-part question and reviewers must be familiar with the vision, objectives, and strategies described in the 2000 Fish and Wildlife Program (pp. 13-33) and, for mainstem subbasin plans, the Mainstem Amendments (pp.11-28).</p>		
<p>III.A. The Vision for the Subbasin Does the Vision Section of the Management Plan: 1) describe the desired future condition for the subbasin; 2) describe a vision that will drive development of the biological objectives and thereby the strategies that are incorporated to change conditions within the subbasin; and 3) incorporate the conditions, values and priorities of the subbasin in a manner that is consistent with the Vision described in the Council’s 2000 Fish and Wildlife Program? (Council Question 4 to the ISRP):</p>	<p><i>(Y)es, (P)artial, (N)o</i></p>	<p><i>Need for additional treatment (0-4)</i></p>
<p>Reviewers: Although the vision statement does not address the three components of a vision statement listed above, there are "visions" essentially embedded in the objectives that are much more specific than that provided in the “Vision” section. The vision statement is very generic, making it difficult to assess how the detailed objectives listed and described later in the management plan could contribute.</p>	<p>Partial</p>	<p>2</p>
<p>III.B. Biological Objectives Does the Biological Objectives Section of the Management Plan describe physical and biological changes within the subbasin needed to achieve the vision?</p>		
<p>Reviewers: The objectives consist of a list of environmental attributes that need to be protected or restored to achieve the vision of "reasonable and sustainable populations.” The first 15 objectives are too general to be useful. Basically, they are statements that simply suggest there is a need to protect or restore one of a list of specific habitats. The next seven are also overly general (although not always aimed at specific habitats), and the last (#23) is simply a listing of put and take regulations combined with an unsubstantiated call for continued hatchery production. There is no attempt</p>	<p>Partial</p>	<p>3</p>

to quantify the amount of habitat required to achieve the population goal in the vision.		
III.B.1. Are the biological objectives consistent with basin-level visions, objectives, and strategies adopted in the program? (Council Question 4) The 2000 Fish and Wildlife Program, pages 16-18, provides general descriptions for basin-level goals, objectives, and strategies. The Mainstem Amendments provide additional biological objectives as well on pages 11-14. ⁷		
Reviewers: The plan does not adequately address this area.	No	4
III.B.2. Are the biological objectives based on the subbasin assessment? (This question relates to the Logic Path in the subbasin plan. Question III.C.1 is a similar question for the Strategies Section.)		
Reviewers: The objectives connect back to the assessment only in that they attempt to protect or restore habitats that have been degraded or removed by land-use activities in the subbasin. The focal species are not addressed explicitly in the objectives, being relevant only by the fact that these species do use the habitat types that are the focus of the objectives. Because the assessment was so general, this is the only manner in which the plan could be tied to the assessment. The addition of more quantitative information to the assessment might enable a tighter coupling of the assessment and the management plan.	Partial	3
III.B.3. Where possible, are the biological objectives empirically measurable and based on an explicit scientific rationale; i.e., quantitative with measurable outcomes?		
Reviewers: The objectives are not quantitative. In fact, many of the objectives include actions to collect the information required to ultimately develop quantitative goals. Apparently no information exists that would enable establishment of such goals at this time. This element is critical to the plan. More effort should have been devoted to developing preliminary objectives from the available data.	No	3
III.B.4. Are biological objectives identified for both the short and long-term?		
Reviewers: The plan does not adequately address this aspect.	No	3
III.B.5. Are the biological objectives complementary to programs of tribal, state and federal land or water quality management agencies in the subbasin?		
Reviewers: Although the plan addresses this in a general way, it does not identify biological objectives at a level of specificity sufficient to assess this question.	Yes	2
III.B.6. <i>Clean Water Act</i> : Does the management plan describe how the objectives and strategies are reflective of and integrated with the water quality management plan and Total Maximum Daily Load schedule within that particular state? I.e., does this subsection of the management plan assess and describe the consistency-coordination-findings of the Water Quality Plan with the subbasin plan? ⁸		

⁷ Given the Fish and Wildlife Program's emphasis on building from subbasin level management plans upward into provincial and basin level objectives, reviewers should evaluate whether the plans have a framework that will facilitate the development and linkage of objectives from the subbasin to the province to the basin.

⁸ *Clean Water Act*: The Water Quality Management Plans developed for watersheds within each state includes the following information: 1) Management measures tied to attainment of TMDL; 2) Timeline for implementation; 3) Timeline for attainment of Water Quality Standards; 4) Identification of responsible parties; 5) Reasonable assurance of implementation; and 6) Monitoring and evaluation. The status of Total Maximum Daily Loads

Reviewers: The objectives in some cases are the elements driven out of the CWA, such as implementation of TMDLs for water-quality limited portions of the basin. The extent to which the plan's objectives will contribute to attaining the CWA objectives is not explicitly addressed.	Partial	2
III.B.7. <i>Endangered Species Act</i> : The USFWS and NOAA Fisheries are developing recovery plans for listed species (bull trout, white sturgeon, salmon). Recognizing that those ESA-based efforts are in various states of completion across the Columbia basin (some efforts are well underway, others just beginning), does the management plan describe how the objectives of the subbasin management plan are reflective of and integrated with the ESA-based goals for listed species within the subbasin? ⁹		
Reviewers: These species are identified in the assessment and linked to the habitats they require. The plan includes very general objectives to increase the representation of these habitat types. There is also a table that indicates which of the objectives will contribute to NOAA's goals for anadromous fishes, but there is not a detailed explanation of how the plan will contribute to attaining ESA objectives.	Partial	2
III.B.8. If there are disagreements among co-managers that translate into differing biological objectives, are the differences and the alternative biological objectives fully presented? (The Council's review will examine whether the plan is consistent with legal rights and obligations of fish and wildlife agencies and tribes with jurisdiction over fish and wildlife in the subbasin, and agreed upon by co-managers in the subbasin.)		
Reviewers: This plan does not address alternative objectives.	na	na

III. C. Strategies¹⁰

III.C.1. Internal Consistency of the Plan. Does the Strategies Section of the Management Plan explain the linkage of the strategies to the subbasin biological objectives, vision and the subbasin assessment? (Council Questions 2 and 3) ¹¹		
Reviewers: The strategies listed are too general in nature to assess the above question. The descriptions included with many of the objectives indicate that development of strategies is one of the products of plan implementation. It probably is not possible to include a strategy section	No	2

(TMDLs) is generally the responsibility of the state, which is delegated the responsibility for implementing the CWA. Each state has a schedule for completing TMDLs, which include a Water Quality Management Plan that describes how the allocations in the TMDL will be met. Basic information on TMDL's can generally be found on the web (see Resources).

⁹ E.g. NOAA Fisheries has provided interim targets in a letter from NOAA Fisheries to the Council, Bob Lohn to Larry Cassidy: http://www.nwcouncil.org/library/2002/nmfstargets2002_0404.pdf.

¹⁰ *Definition*: Strategies are sets of actions to accomplish the biological objectives. Strategies are not projects but instead are the guidance for development of projects as part of the implementation plan. Strategies identified within the subbasin plans will be used as a basis for Council recommendations to the Bonneville Power Administration regarding project funding. Proposed measures will be evaluated for consistency with biological objectives and strategies. The strategies may be organized by categories of habitat, artificial production, harvest, hydrosystem passage and operations, and wildlife.

¹¹ This is one of the most important review questions. The set of seven questions from Council asks the ISRP to evaluate the internal consistency, scientific soundness, and thoroughness of subbasin plans. Internal consistency means there is scientific support for the conclusion that the strategies proposed in a subbasin plan will in fact address the problems identified by the subbasin assessment; i.e., does the Strategies Section take into account not only the desired outcomes, but also the physical and biological realities of the subbasin environment. The ISRP's Subbasin Plan Logic Path flow chart, attached below, provides a straightforward illustration of the logic path reviewers should look for in subbasin plans. Rick Williams, ISRP chair, developed and has presented this flow chart to subbasin planners around the basin, emphasizing the importance that subbasin plans demonstrate a clear logic path.

until sufficient information has been collected to develop effective strategies; i.e., the objectives and assessment are deficient, so getting to sound strategies at this point is not tractable.		
III.C.2. Consistency with the Fish and Wildlife Program. Are the Strategies proposed in the subbasin management plan consistent with those adopted in the program? (Council Question 4)		
Reviewers: Based on the lack of strategies presented, there was no real way to assess this question. The strategies listed for Objectives 22 and 23, however, seem absolutely unsubstantiated; continued stocking of non-native fishes in the name of providing sport-fishing opportunities needs to be better justified.	No	2
III.C.3. Consideration of Alternative Management Responses. Does the Strategies Section explain how and why the strategies presented were selected over other alternative strategies (e.g. passive restoration strategies v. intervention strategies)? (Council Question 5) ¹²		
Reviewers: The plan does not adequately address alternative management approaches.	No	2
III.C.4. Prioritization. Does the Strategies Section describe a proposed sequence and prioritization of strategies?		
Reviewers: The plan does not adequately address prioritization.	Partial	3
III.C.5. Additional Assessment Needs. Does the Strategies Section describe, if necessary, additional steps required to compile more complete or detailed assessment?		
Reviewers: Some of this information is included in the description of the objectives. Because information on current conditions appears to be very limited for this subbasin, more detail on additional steps required to improve the assessment is important.	Partial	3
III.C.6. Clean Water Act: Does the management plan describe how the strategies are reflective of and integrated with the water quality management plan and Total Maximum Daily Load schedule within that particular state?		
Reviewers: This occurs only in that compliance with the terms of the TMDL is a component of several of the objectives.	Partial	2
III.C.7. Endangered Species Act: Recognizing that ESA-based efforts are in various states of completion across the Columbia basin, does the management plan describe how the strategies of the subbasin management plan are reflective of and integrated with the ESA-based goals for listed species within the subbasin?		
Reviewers: As noted above, a table is included that attempts to relate plan objectives with RPAs from the NOAA BiOp. There is nothing specific about how the plan would contribute to ESA goals for species under the jurisdiction of the USFWS.	Partial	2

¹² The 2000 Fish and Wildlife Program directs that the subbasin management plan’s strategy section must include an explanation of how and why the strategies presented were selected over other alternative strategies (e.g. passive restoration strategies v. intervention strategies). The Council does not expect subbasin plans to be structured like an Environmental Impact Statement with a list of alternative actions and descriptions of why each were not recommended. The Council’s primary interest is on why and how a strategy was selected -- the rationale for the selected strategy -- which necessary includes some discussion of alternatives.

III.D. Research, Monitoring, and Evaluation

This RME Checklist Section provides the review elements necessary for the ISRP/ISAB to answer *Council Question 6. Plan for Assessing Progress toward Subbasin Goals*. The ISRP/ISAB is asked to determine whether a subbasin plan includes a procedure for assessing how well subbasin objectives are being met over time. This question focuses on accountability and self-assessment, and reflects on the adequacy of the Management Plan’s research, monitoring and evaluation component. This RME component needs to be closely connected to a limiting factors analysis and the biological and environmental objectives. A prioritized RME agenda reflecting the critical uncertainties and limiting factors should be developed and presented with the detail requested below (Technical Guide pp. 14-16). *NOTE: The focus of the RME component should be on the strategy level rather than individual project level.*

Subbasin planners were encouraged to incorporate, or link their RME framework and strategies with the “regional” RM&E strategies being developed by the Pacific Northwest Aquatic Monitoring Partnership and the Columbia Basin-Wide Research, Monitoring and Evaluation (RM&E) Program, a coordinated effort developed by State, Federal, and Tribal entities in response to the Basin-wide Salmon Recovery Strategy 2000 and the FCRPS 2000 Biological Opinion. Products from these regional RME efforts could be used to meet elements of a subbasin plan’s RME section (Technical Guide pp. 14-16), particularly in the areas of monitoring protocols and methodologies. The subbasin plan should also explain how they incorporated existing monitoring guidance from state programs.

III.D.1	Research: Does the RME section of the plan describe a research agenda with specific conditions and situations identified in the subbasin that will require specific research studies to help resolve management uncertainties? Is the research agenda framed around the relationships between the assessment data and the stated vision, biological objectives, and strategies in describing uncertainties? Does the RME section prioritize research topics that are of critical importance to the subbasin?	<i>(Yes, (P)artial, (No)</i>	<i>Need for additional treatment (0-4)</i>
Reviewers: An RME subsection is not provided. The need for additional monitoring is noted in the description of the objectives, but no details are provided. Because so little quantitative information is provided, the need for more monitoring would appear to be critical for this subbasin. A detailed RME section should be developed.		No	4
III.D.2	Monitoring Objectives: Does the RME subsection identify what kind of information needs to be collected in order to determine if the plan’s vision and objectives are being met? I.e., what indicator variables will be monitored?		
Reviewers: Although some indication of needed information is included in the descriptions of the objectives, all told, this plan does not adequately address monitoring objectives.		Partial	4
III.D.3	Monitoring Indicators: Does the RME subsection identify measurable indicators of physical, chemical, biological, or socioeconomic conditions that may act as environmental signposts by which progress towards achieving the stated vision can be evaluated? E.g., does the RME subsection describe performance standards or quantitative benchmarks for reference conditions against which observations can be compared? Does the plan prioritize which indicators are most needed to answer management questions (include a short list)?		
Reviewers: This plan does not adequately address monitoring indicators. No RME specifics are provided.		No	4
III.D.4	Data and Information Archive: Does the RME subsection describe an infrastructure to archive relevant data and meta data generated through monitoring efforts in existence for the subbasin (e.g., locally or at a regional Fish and Wildlife Program funded database such as StreamNet, the Fish Passage Center, or DART)? Specifically, does the RME subsection include discussion of quality assurance/quality control (QA/QC), data management and analysis, and data reporting?		

Reviewers: This plan does not adequately describe a data and information archive.		No	4
III.D.5	Coordination and Implementation: Does the RME subsection describe who will collect the information and data collection methods whether collection is done by a subbasin, provincial, state, or a regional entity, or a combination of entities? This should include a description of coordination with regional RME efforts in the basin (Regional Partnership, Action Agencies Research, Monitoring, and Evaluation Plan, etc) with standardization of data methods. It should also include estimates of how much the proposed M and E will cost.		
Reviewers: This plan does not adequately address coordination and implementation.		No	4
III.D.6	Summary Question. RME Logic Path (Evaluation and Adaptive Management): Does the subbasin plan provide a scientifically supportable procedure for refining the biological objectives as new information becomes available about how fish, wildlife, and the environment interact, and in relationship to how the plans are implemented over time? (Council Question 7) Specifically, does the RME subsection describe a scientifically sound logic path for how to test if the subbasin plan's strategies are helping to reach the stated vision and objectives? I.e., Is the RME agenda adequately framed around the relationships between the assessment data and the stated vision, biological objectives, and strategies in describing uncertainties?		
Reviewers: An RME subsection is not included.		No	4
Overall impression and evaluation of the Management Plan: As needed elaborate on your evaluation of the various Sections enumerated above. If the plan provides additional analysis beyond what is laid out above in the checklist please comment here (e.g., socio-economic descriptions or analysis).			
Reviewers: The bottom line is this plan does not meet most of the elements of a subbasin plan as described in the Council's 2000 Fish and Wildlife Program and Subbasin Planning Technical Guide. The plan appears to be severely limited by the lack of information on habitat and population condition in this subbasin. Even after acknowledging these data constraints, the plan falls short of adequately using what little information is available. There is no development of a comprehensive assessment and then no further synthesis identifying limiting factors and producing key findings, all severe hindrances to the development of any real planning effort. There is essentially no synthesis of assessment information into identified objectives with any strategies to deal with them. There is a general lack of focus on any fish species. Furthermore, there are too many wildlife focal species, resulting in a dilution of attention to real issues. Because of the subbasin's data and funding/resource limitations, a revised plan should focus on the establishment of a process to gather this information, improve its assessment, and ultimately develop a technically sound restoration strategy. A section indicating what information is still needed and an RME section detailing how this information will be gathered, archived, and interpreted should be included in the plan. The plan should highlight the few key restoration and protection strategies that could be justified given the data they do		Partial	4

have. Agency and public participation was attempted but is limited. There is no evidence of any public review comments.		
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<p>General Council Question. Consistency with the Fish and Wildlife Program and its Scientific Foundation</p> <p>The Council asks the ISRP to evaluate a subbasin plan for its consistency with the Scientific Foundation adopted as part of the Program and with the requirements for “biological objectives” as described in the program. The core of the Council’s Scientific Foundation is a set of eight Scientific Principles:</p> <ol style="list-style-type: none"> 1. The abundance, productivity, and diversity of organisms are integrally linked to the characteristics of their ecosystem. 2. Ecosystems are dynamic, resilient and develop over time. 3. Biological systems operate on various spatial and time scales that can be organized hierarchically. 4. Habitats develop, and are maintained, by physical and biological processes. 5. Species play key roles in developing and maintaining ecological conditions. 6. Biological diversity allows ecosystems to persist in the face of environmental variation. 7. Ecological management is adaptive and experimental. 8. Ecosystem function, habitat structure and biological performance are affected by human actions. <p><i>See 2000 Fish and Wildlife Program, pages 14-15 for full detail.</i></p> <p>Questions on consistency with the objectives and strategies section of the Fish and Wildlife Program are incorporated in the table above. Consistency with the Program’s scientific foundation is interwoven throughout the checklist, and this comment table provides reviewers a place to specifically summarize and identity how well the eight principles were addressed.</p> <p>Summary comments and evaluation of the subbasin plan’s consistency with the eight principles of the Fish and Wildlife Program’s Scientific Foundation:</p>		
Reviewers: Very few of the eight principles were adequately addressed by this plan.	No	4