Asotin

Review Summary

The Asotin Subbasin Plan is a very good initial effort that closely follows the planning guidance provided by the Council. The regional approach shared between the Walla Walla, Asotin, Tucannon, and Lower Snake Mainstem is a strong feature of the plans for those subbasins. The intent to integrate aquatic and terrestrial components is also a very good aspect of this plan. The plan substantially meets many of the scientific elements for subbasin plans called for in the Council's 2000 Fish and Wildlife Program and the Subbasin Planning Technical Guide.

Wildlife assessments within the subbasin are not as strong as aquatic assessments. These wildlife assessments follow the template and process of other subbasins in this region, referring almost entirely to Ashley and Stoval (2004) and a southeast Washington framework. A regional approach to many of the wildlife species seems appropriate, but for plant and animal species unique to the subbasin or with unique attributes within the subbasin, a more local treatment would improve the planning exercise.

In general, review comments and scores on the review checklist for the four subbasins in this set (Walla Walla, Tucannon, Lower Snake Mainstem, and Asotin) are very similar, because similar approaches were used in preparation of the subbasin plans. This is particularly true for the terrestrical sections of the plans.

Assessment

The Assessment provides a lengthy description of the physical, biological, social and economic conditions and history of the subbasin (as well as relationship with neighboring subbasins). The geographical, demographical, and environmental contexts for fish and wildlife within the basin are provided or referenced. Especially useful are the numerous maps providing spatially explicit detail to conditions and status.

The Assessment identifies a series of focal fish species. In most cases, inclusion was obvious, however, exclusion of any dace, sculpins, lamprey, suckers, etc. is avoided - although some attention will be paid as "Species of Interest". Inclusion of one or more non-salmonid resident species (e.g., sculpin or dace) would complete the breadth of ecologically important resources to the watershed.

Overall, this is a very good assessment except for the lack of use of QHA on bull trout and the need for more rigorous assessment of future conditions. However, the listing of complete documents as appendices made this plan difficult to review. The appendices were not well connected to the text and should be more completely synthesized in the Assessment.

Inventory

Tables and maps indicate an extensive inventory of conservation and restoration activities ongoing throughout the basin. However, formal assessment of past activities (effectiveness) and synthesis for needed actions are not well-described, if undertaken. Again, extensive reference is

made to information in appendices without adequate synthesis in the text. Some referenced material could not be found in the appendices.

Management Plan
The plan is a good initial effort overall. The effort to combine aquatic and terrestrial portions of the planning is an especially good aspect of the plan. The primary strength of the Management Plan is a focus on land management activities to affect habitat characteristics that are likely to promote adequate ecosystem functions. The primary weakness of the Management Plan is a lack of performance measures for habitat characteristics.

The plan's fish objectives and strategies must be further developed and integrated with habitat objectives. Reviewers would like to see the plan proceed with quantitative numeric objectives for plants and animals in the basin. Numerical objectives for habitat and the ecosystem should be related to what it will take to assure viable populations. This process will help identify what habitat is needed to produce the needed distribution and abundance of focal fish and wildlife populations across the subbasin.

The draft Bull Trout Recovery Plan being developed by the U.S. Fish and Wildlife Service is not directly incorporated because it is still in draft form. The subbasin intends to consider incorporation of selected Bull Trout Recovery Plan strategies into the subbasin plan once the recovery plan is finalized.

A regional approach is followed for development of biological objectives and strategies for terrestrial focal habitats and wildlife species. This seems appropriate, but for plant and animal species unique to the subbasin or with unique attributes within the subbasin, a more local treatment would improve the planning exercise.

Further prioritization of strategies and development of a research, monitoring, and evaluation (RME) plan would improve the Management Plan. As it stands, however, the plan can effectively provide some direction on project development, funding, and review, and represents a document that will evolve to be more effective in assisting a decision process over time. The list of RME activities is comprehensive and complex and needs to be reworked to make some key observations.

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

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. 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: This section is concise and describes the salient features of the watershed. It clearly links summary information provided with more extensive treatments.		Yes	0
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: This section provides an appropriate overall description of the watershed's macro-environment and water resources.		Yes	0
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: The assessment defines the nature (i.e., conversion to agricultural grass and cropland) and extent of present and future challenges in terms of watershed (both in-channel and out of channel) uses & disturbances. Sediment loads and temperature effects for aquatic species and loss of grasslands for terrestrial species seems to have had the greatest effects.		Yes	
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: The fish and wildlife descriptions appear complete, but the lists should indicate whether the fish species are native or non-native			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: Threatened or endangered plants are not discussed. Plants of cultural importance to NPT are listed in Appendix I. This section should be improved without necessarily giving precise locations of the plants.		Partial	2

I.A.2. Subbasin in the Regional Context		*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
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)?		
Reviewers: The assessment describes the watershed within a regional context - especially in relationship to neighboring subbasins.		Yes	0
I.A.2.2	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.[1]) where this information was available during the planning process?		
Reviewers: The assessment describes the context of the biota within ESUs and BTPUs in a general sense. Planners might discuss why ESU delineations are important to the species and how the population(s) within the basin contribute (or fail to do so) to the status of the ESU.		Partial	
I.A.2.3	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)?		
Reviewers: Yes, as well as the present data and state of knowledge permit.		Yes	0
I.A.2.4	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)?		
Reviewers: The assessment identifies macro-climate and human use trends, but in a superficial manner. Effects of future human use changes and trends should receive more attention.		Partial	2
	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?		
Reviewers: The assessment generally describes or references these contexts for fish and wildlife within the basin. Especially useful are the numerous maps providing spatially explicit detail to conditions and status. The listing of complete documents as appendices made this plan difficult to review. The appendices were not well connected to the text and should be synthesized in the assessment.		Yes	1

I.B. Species Characterization and Status *General question: Does the assessment adequately describe the current status of fish and wildlife focal species?*	*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*

[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.)

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.		
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.		
Reviewers: The assessment identifies a series of focal species. In most cases, inclusion was obvious, however, exclusion of any dace, sculpins, lamprey, suckers, etc. is avoided - although some attention will be paid as "Species of Interest". Inclusion of one or more non-salmonid resident species (e.g., sculpin or dace) would complete the breadth of ecologically important resources to the watershed.	Yes	1
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?		
Reviewers: Acceptable for the focal fish species given data available. The assessment is minimal for identification and characterization of focal habitats. The subbasin intends to consider incorporation of selected Bull Trout Recovery Plan results into the subbasin plan once the recovery plan is finalized.		
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)?		
Reviewers: The assessment describes the current & historic status of the focal fish species along with trend data. The assessment provides output from EDT on steelhead/rainbow trout, but bull trout were not modeled by, e.g., QHA. IBIS is used in the assessment for terrestrial wildlife. A lot of the information is in the appendices and should be better synthesized in the text.	Yes	
I.B.4. Does the assessment describe the population's life history, including identifying distinct life stages?		
Reviewers: The assessment describes life histories for each species. Further information is needed for bull trout.	Yes	
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?		

[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: Genetics is considered only in a general sense for focal species (hatchery genetics plans and discussions of wild fish fitness). Given that no apparent supplementation is ongoing in the basin, the planners should explore the effects of out-of-basin anadromous fish straying into the basin.	Yes	
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: The assessment generally describes in-subbasin harvest and out-of-basin harvest conditions affecting aquatic populations. There is little given on terrestrial species.	Yes	2
Summary comments and evaluation on the Species Characterization and Status Subsection: Does the assessment adequately describe the current status of fish and wildlife focal species?		
Reviewers: The assessment identifies a series of focal fish species. In most cases, inclusion was obvious, however, exclusion of any dace, sculpins, lamprey, suckers, etc. is avoided - although some attention will be paid as "Species of Interest". Inclusion of one or more non-salmonid resident species (e.g., sculpin or dace) would complete the breadth of ecologically important resources to the watershed. The subbasin planners should have used QHA to help assess the status of bull trout and limiting factors. There is a need for further editing and better synthesis of information from the appendices.	Yes	2

I.C. Environmental Conditions *General question to be addressed: Does the assessment adequately describe the effect of the environment on fish and wildlife populations?*			
I.C.1. Environmental Conditions within the Subbasin		*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
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?		
Reviewers: The assessment is incomplete for bull trout because they do not have consensus among stakeholders on the draft USFWS bull trout recovery plan and QHA was not conducted. The terrestrial focal habitats do not have the same degree of consideration of condition of the current or future environment.		Partial	2

[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.

I.C.1.2	Does the assessment classify 6th 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 planners do not base analysis, protection, or restoration on 6th HUCs, but rather (and appropriately) with defined Geographic Areas (GAs) and stream reaches.		Yes	
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.		
The Assessment discusses out-of-subbasin issues related to the mainstem Columbia and ocean conditions to some degree. The plan does not adequately address out-of-subbasin effects on wildlife species. SARs applying to fish returning to the subbasin are incorporated into the EDT analysis, thus integrating out of basin effects. Out-of-subbasin effects are given an adequate treatment through the use of EDT, this allows for estimates of what magnitudes of population increases can be achieved by in-basin activities. The planners should continue this line of inquiry and should think in terms of what kind of actions can be implemented in the subbasin to address external effects, such as enhancing salmonid life history diversity.		Yes	
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: Overall, the Assessment develops a series of external effects and tables on key relationships. It includes a brief summary of TOAST 2004, which addresses hydrosystem problems. There is not a sufficient explanation of how out-of-subbasin effects are quantitatively treated in the EDT analysis. There was no attempt to calculate out-of-subbasin effects on terrestrial species.		Yes	2
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: EDT analysis is conducted for steelhead and Chinook, but no quantitative analyses are conducted for bull trout (even though QHA is possible).		Yes	

	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: The Assessment provides a general discussion of the effect of the environment on fish and wildlife. The results of EDT and IBIS are presented in extensive detail relating to environmental conditions. However, QHA for bull trout was not completed/presented.		2

I.D. Ecological Relationships *Question to be addressed: Does the assessment describe the key inter-species relationships and the key functional relationships?*	*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
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: Inter-species relationships are addressed in very general terms only by predator-prey interactions between the wildlife and salmon. The plan states that only great blue heron interact with aquatic species. The plan does not consider beaver to be associated or interactive with salmonids, which is an incorrect characterization. According to the presentation to the ISRP/AB, the planners understand this inaccuracy and explained this lack of association is reflective of IBIS being based on trophic relationships. Consequently, interactions between species are generally described as trophic, and competition and genetic issues are not covered. A fuller treatment of interactions would improve the plan. The plan does not appear to consider the effects of exotic or invading fish or wildlife species.		
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: In general terms, the top seven KEFs are discussed. Better descriptions are given for terrestrial focal species than aquatic species. More consideration of disturbance regimes and how they shape habitat and contribute to natural variation would improve the plan.		2

I.E. Interpretation and Synthesis / Limiting Factors and Conditions

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 uses EDT to summarize limiting factors and propose those conditions that inhibit populations from achieving the abundance and productivity expected with properly functioning conditions. Because EDT is not very transparent, the limiting factors are not currently validated. Bull trout are excluded from the analysis in spite of the fact that QHA is a tool that could be used to examine them.	Yes	2
I.E.2. Key Findings 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?		
Reviewers: The assessment made good use of the EDT assessment tool for steelhead and spring chinook and presented results in a quite readable format. None of the key findings appear to conflict with reason. If the planners are confident that the data input are relatively error-free, they have a good output and understanding for identifying important hypotheses and strategies within the subbasin. The analysis for bull trout is not complete. Overall, the analysis is inadequate for species interactions. Further relations to be developed via proposed RME.	Yes	2
I.E.3. Subbasin-wide Key Assumptions/Uncertainties ("Working Hypothesis") 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?		
Reviewers: The plan's working hypotheses and uncertainties are considered in the Management Plan and the RME section. The plan lists its key factors and assumptions, but it is difficult to determine the data sources relied upon.	Yes	

	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).		
Reviewers: Overall, the assessment provides a lengthy description of the physical, biological, social and economic conditions and history of the subbasin (as well as relationship with neighboring subbasins). The terrestrial description provides an extensive integration of multiple species with the vegetation and habitat types. This is a very good assessment except for the lack of use of QHA on bull trout. Future conditions should be assessed more rigorously.		Yes	

II. The Inventory

(This checklist section was developed from pages 11-12 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 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).

II.A. Existing Protection		*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
II.A.1	Does the inventory identify areas with protections through stream buffers, municipal or county ordinances, conservation designations, or water resources protection?		
Reviewers: Protection by State and Federal agencies are mentioned. If there is minimal or no protection at the local level, then that should be mentioned.		Yes	1
II.A.2	Does the inventory assess the adequacy of protections for fish, wildlife, and ecosystem resources?		
Reviewers: The plan offers an extensive list of existing protections, but it does not provide an evident discussion of the adequacy of existing protections.		Partial	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 provides an extensive list and discussion of existing programs.		Yes	0

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: Consistency of existing plans with the subbasin assessment and adequacy in protection is not adequately discussed.			2
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: Ongoing programs and projects are listed and described.		Yes	0
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: Lists of programs are given with locations on maps, but there is inadequate discussion and synthesis.		Yes	
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: The Inventory briefly discusses key findings and identifies management actions.		Yes	
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: Summarization of accomplishments/failures is largely absent (or at least, not obvious as a formal analysis or presentation).			3
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: The inventory is not explicit in identification of gaps between existing projects and needed actions. The inventory is particularly inadequate, for wildlife and terrestrial habitat projects.		Partial	2
	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).		

[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?

Reviewers: Tables and maps indicate an extensive inventory of conservation and restoration activities ongoing throughout the basin. However, formal assessment of past activities (effectiveness) and synthesis for needed actions are not well-described, if undertaken. Extensive reference is made to information in appendices without adequate synthesis in the text.	Partial	2

III. The Management Plan

(Derived from pages 12-16 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 management plan.

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).

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):	*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
Reviewers: The desired future condition is generally described, is very broad and is consistent with the FWP. The vision is so broad and vague that almost any management strategy could fulfill it; this is true of most, if not all, of the subbasin plan's vision statements.	Yes	1

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?

Reviewers: A regional approach is followed for development of biological objectives and strategies for terrestrial focal habitats and wildlife species. This seems appropriate, but for plant and animal species unique to the subbasin or with unique attributes within the subbasin, a more local treatment would improve the planning exercise. The Plan lays out a reasonable and logical pathway for moving between working hypotheses, objectives to address the hypotheses, and strategies to accomplish the objectives that should be useful in implementing the Plan. The objectives and strategies, as stated, are exceedingly perscriptive. There is a need for a level of objectives that are more general than the perscriptive ones and that describe what the specific objectives are intended to accomplish for each Geographic Area. What is missing is a general objective that describes what is to be achieved at the population and ecosystem level by, for example, a reduction in sedimentation and a	Partial	3

correspondent increase in survival. The general objectives should address desired changes in fish populations as well as habitat.. In essence the general objectives define goals for protection and restoration in each GA. The general objectives do not need to be expressed solely as numeric escapement goals, although they could be. The general objectives should bridge the gap between the vision and the specific objectives, provide the NWPCC with a broader picture of what the Plan is intended to accomplish, and clarify, for purposes of project review, the principle purposes of the Plan.		
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 Council's Fish and Wildlife Program is directed specifically at protection, restoration, and mitigation of fish and wildife in the Colimbia River Basin. Subbasin plans must provide biological objectives directly related to achieving the FWP goal. The reviewers agree that objectives and strategies in the Asotin plan are appropriately aimed at ecosystem/habitat changes, with the assumption that these changes will enhance fish populations. Reviewers would also like to see the plan proceed with quantitative numeric objectives for plants and animals in the basin. Numerical objectives for habitat and the ecosystem should be related to what it will take to assure viable populations. This process will help identify what habitat is needed to produce the needed distribution and abundance of focal fish and wildlife populations across the sub-basin.	Yes	
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 plan's biological objectives appear to reasonably flow from the Assessment and appear to be based on Assessment tool outputs for the most part. Fish information from the assessment is not incorporated into the biological objectives. The wildlife objectives do come directly out of the assessment.		
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: Other planning documents referenced in the Plan give biological objectives that relate to the numbers of animals and plants. The planners assume this subbasin planning process is a habitat related exercise, so their objectives are associated with changes in physical habitat and are measurable. The plan would be more useful if the two approaches were	Yes	

[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.

more closely tied together.		
III.B.4. Are biological objectives identified for both the short and long-term?		
Reviewers: The Asotin Plan tends to focus on the short term, 10 to 15 years, but the Plan does identify needs for immediate and longer term projects.	Yes	1
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: It appears that the biological objectives are complementary to programs of tribal, state and federal land or water quality management agencies in the subbasin. There is no explicit comparison of the subbasin plan with other plans affecting the subbasin.	Yes	1
III.B.6. *Clean Water Act*: 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]		
Reviewers: The plan's biological objectives include meeting the TMDL goals of the CWA. A more thorough analysis of what is needed to achieve this would be helpful.	Yes	1
III.B.7. *Endangered Species Act*: 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: The Management Plan adequately describes the links between objectives for aquatic species. The planners should consider being aggressive about defining the numeric needs for ESA recovery, or assurance of persistence. They seem to have expertise associated with this effort to complete that charge rather than wait for products from NOAA/FWS planners.	Yes	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: The level of stakeholder input and agreement with the Plan is not clear. Disagreements were discussed relative to the draft bull trout recovery plan and that EDT results were not consistent with beliefs. The plan also gives a brief discussion of disagreements relative to land	Yes	0

[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 (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.

acquisition and use of agricultural as a cover type.		

III. C. Strategies[10]		
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 plan's strategies are generally linked to the stated habitat objectives, but an explicit linkage of strategies to viability of fish populations in the assessment and vision is not included in the plan.	Yes	
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: In general, the plan's strategies are consistent with the program. The emphasis on habitat/ecosystem in the aquatic component of the plan is a welcome change from many Plans reviewed.	Yes	0
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 offers little description of alternative management responses. This is partly done for some specific examples (e.g., LWD placement v. tree stand creation). It is unclear in other cases what the alternatives might be and whether these were considered and dismissed for supportable reasons.		
III.C.4. **Prioritization.** Does the Strategies Section describe a proposed sequence and prioritization of strategies?		
Reviewers: The planners made good use of EDT in identifiying limiting factors. The EDT analysis was consistent with other analyses of limting factors conducted for the subbasin. EDT results were used to rank protection and restoration potential of each reach based on the sum of the of the percentage gains in	Partial	2

[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.

[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.

diversity, productivity, and abundance. This ranking provided the first step in identifying priority areas but was modified where needed by several additional considerations. A concern in this process is the use of the sum of diversity, productivity, and abundance to develop ranking scores. These three parameters are not independent and therefore cannot be summed. For example, abundance is dependent on both productivity and capacity, and diversity is dependent on productivity and abundance. Strategies were not prioritized. Prioritization of strategies is anticipated to occur at the provincial review level when proposals are considered for funding.		
III.C.5. **Additional Assessment Needs.** Does the Strategies Section describe, if necessary, additional steps required to compile more complete or detailed assessment?		
Reviewers: The plan's additional assessment needs are EDT related; the planners should conduct a more comprehensive examination of the additional steps necessary to compile a more complete or detailed assessment. This subject is also dealt with in the RM&E section.		
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: The plan appears to be consistent with the TMDL process but the TMDL process is not completed.	Yes	1
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: The plan needs to include quantitative objectives for gaining the structure and abundances needed to be confident that these species will persist in the basin. Section 7.3 addresses ESA issues/goals for fish and Section 7.4 for terrestrial wildlife.	Yes	2

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?	*(Y)es, (P)artial, (N)o*	*Need for additional treatment (0-4)*
Reviewers: The plan outlines a general research strategy. Two specific plans are presented in the appendices, but these two plans are not coordinated. The material provided is very general and does not establish clear immediate research priorities.		Partial	3
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: The RME section identifies information needs and areas of insufficient information in very general terms in the appendices. Objectives are defined well for some terrestrial habitats and focal species, but less so for others. Objectives for aquatic habitats and focal species need considerable fleshing out to be useful.			
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: The section is incomplete. These need to be further developed to be helpful - especially for the aquatic RME section.		Partial	3
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: Data and information archival are not discussed.		No	3
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: Other than identifying the sources of the RME sections in the appendices, the actual "who" of the RME responsibilities is not outlined. There is no reference to coordination or costs. Appendices have not been accepted by the subbasin planners and all stakeholders. Regardless, there is some extensive coordination and communication among this planning group and those from neighboring subbasins		No	3

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: A regional RME plan needs to be developed. The list of RME activities is comprehensive and complex and needs to be reworked to make some key observations. This process is too complex to develop from the bottom-up and direction from the Council, CBFWA, NOAA at a regional level is needed. The planners would likely agree with this observation.		Partial	3
	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 plan is a good initial effort overall. The effort to combine aquatic and terrestrial portions of the planning is an especially good aspect of the plan. The primary strength of the Management Plan is as a focus on land management activities to affect habitat characteristics that are likely to promote adequate ecosystem functions. The primary weakness of the management plan is a lack of performance measures for habitat characteristics. The plan's fish objectives and strategies must be further developed and integrated with habitat objectives. The draft Bull Trout Recovery Plan being developed by the U.S. Fish and Wildlife Service was not directly incorporated because it is still in draft form. The subbasin intends to consider incorporation of selected Bull Trout Recovery Plan strategies into the subbasin plan once the recovery plan is finalized. A regional approach is followed for development of biological objectives and strategies for terrestrial focal habitats and wildlife species. This seems appropriate, but for plant and animal species unique to the subbasin or with unique attributes within the subbasin, a more local treatment would improve the planning exercise.		Partial	2

General Council Question. Consistency with the Fish and Wildlife Program and its Scientific Foundation

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:

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.

See 2000 Fish and Wildlife Program, pages 14-15 for full detail.

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.

Summary comments and evaluation of the subbasin plan's consistency with the eight principles of the Fish and Wildlife Program's Scientific Foundation:

Reviewers: The Plan is a good start toward an ecosystem approach for both aquatic and terrestrial resources. The plan is consistent with the eight principles, but its lack of analysis of trajectories of ecosystem change and coordinated monitoring and data management program make it unlikely that it would implement the conservation and restoration efforts as effectively as possible. Reviewers would also like to see the plan proceed with quantitative numeric objectives for plants and animals in the basin. Numerical objectives for habitat and the ecosystem should be related to what it will take to assure viable populations. This process will help identify what habitat is needed to produce the needed distribution and abundance across the subbasin.		