United States Department of Agriculture

Forest Service

United States Department of the Interior

Bureau of Land Management

Interior Columbia Basin Supplemental Draft Environmental Impact Statement

Appendix 4 - Response to Comments

March 2000

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Interior Columbia Basin Ecosystem Management Project

Interior Columbia Basin Supplemental Draft Environmental Impact Statement

Appendix 4 - Response to Comments

Lead Agencies

USDA Forest Service, Intermountain, Pacific Northwest, and Northern Regions
USDI Bureau of Land Management, Idaho, Montana, Oregon, and Washington

Responsible Officials

Dale Bosworth, Regional Forester, Forest Service Northern Region
Jack Blackwell, Regional Forester, Forest Service Intermountain Region
Harv Forsgren, Regional Forester, Forest Service Pacific Northwest Region
Martha Hahn, Idaho State Director, BLM
Larry Hamilton, Montana State Director, BLM
Elaine Zielinski, Oregon/Washington State Director, BLM

For further information contact

Susan Giannettino, Project Manager
304 N. Eighth Street, Room 250
Boise, ID 83702
Telephone 208/334-1770; Fax 208/334-1769

Geoff Middaugh, Deputy Project Manager
P.O. Box 2344
Walla Walla, WA 99362
Telephone 509/522-4033; Fax509/522-4025

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Appendix 4

Response to Comments

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Introduction

On June 6, 1997, the Eastside and Upper Columbia River Basin Draft Environmental Impact Statements (EISs) for the Interior Columbia Basin Ecosystem Management Project (project) were released for public review, initiating a formal 120-day comment period. The comment period was extended several times and lasted a total of 335 days, ending on May 6, 1998.

Approximately 82,895 letters and internet responses were received. The comments were recorded and consolidated by the Content Analysis Enterprise Team, an independent content analysis team made up of federal employees. Contracting with this team was done to promote an objective and consistent approach to the content analysis process.

The comments were read and coded based on content and intent and then re-read and coded by an additional analyst to reduce subjectivity and promote consistency in coding. Each comment received was given a unique tracking number and entered into a database. The public comments were then categorized and summarized by the Content Analysis Enterprise Team, and reported in the *Final Analysis of Public Comment for the Eastside and Upper Columbia River Basin Draft Environmental Impact Statements* (October 1998).

Of the total responses received, approximately 77 percent were from outside the project area. Within the project area, Idaho residents submitted the majority of responses. All but 930 of the 82,895 responses were submitted by individuals or families. The remaining 930 were submitted by a variety of organizations including: interest groups; businesses; federal, state, county, and local government agencies; elected officials; tribal governments; and professional societies.

Approximately 77,460 of the 82,895 responses received were from organized response campaigns and included: petitions, postcards, resolutions, comment forms, electronic mail messages, and form letters. Approximately 38 different types of organized responses were received. The majority of these organized responses (69,800) were coordinated by Working Assets and the Northern Rockies Campaign.

Every comments was considered, regardless of whether it was one comment repeated by thousands of people or a comment submitted by only one person. The emphasis was placed on the *content* of the comment rather than on the *number of times* a comment was received. Input generated during the comment period does not constitute a statistically valid random sample of the public's views, nor does it necessarily reflect broader societal values or trends.

See Appendix 3 for more detail on the project's public involvement process.

The results of the content analysis were critical to the development of the Supplemental Draft EIS. Following are the consolidated comments and the responses developed by the project staff. They are divided into three major topic areas: comments related to the proposed action and purpose and need statement, comments related to biophysical components of the ecosystem, and comments related to social-economic-tribal components of the ecosystem.

Proposed Action, Purpose and Need

Purpose and Need

Comment: The EIS cannot fulfill the purpose and need for various reasons, including:

- **the EIS will not assure a sustained and predictable level of products and services.**
- **the EIS will not restore long-term ecological health and biological diversity.**
- **the purpose and need statements are incompatible: resource protection and economic/social development appear to be unrelated or contradictory; the balance between ecosystem integrity and economic health should be revisited.**

Narrative: *Many respondents assert that the EIS as written cannot fulfill its purpose and need for various reasons. People who are dependent on timber from federal lands, for example, feel the EIS will not assure a sustainable and predictable level of products and services. They feel that this uncertainty will jeopardize their jobs, families, and the stability of their communities. They feel the EIS not only predicts decreased timber harvest levels, but also fails to quantify how severe these decreases may be. They say the Draft EISs alternatives were ranked by the amount of timber to be harvested but don't specify allowable sale quantities. Some say that although the Draft EIS contains standards for the purpose and need of restoring long-term ecosystem health and integrity, they believe that there are no standards for the health and integrity of their livelihoods. Others feel that ecosystem health or recreation are only 'value-based' estimates which should not take precedence over quantifiable economic values.*

Some feel that the two parts of the purpose and need (resource protection and economic/social development) should be integrated to demonstrate the compatibility of seemingly divergent resource uses. Other respondents believe that economics and ecosystem management are exclusive of each other. Some perceive an emphasis in the Draft EISs on economic goals, dealing with commercial and extractive practices, which cannot function at the ecosystem level. Others feel that capitalism, based on competition, cannot accommodate a healthy environment (see also Ecosystem Management).

Some hold the view that the methods called for in the various alternatives, will not accomplish the on-the-ground work to restore forests, grasslands, wildlife habitat and aquatic resources (see also Range of Alternatives).

Response: Long-term and short-term predictability of outcomes is discussed in Chapter 4 and was discussed in Chapter 4 of the Draft EISs, page 190. Long-term predictability is expected to increase because the intent of the alternatives in the Supplemental Draft EIS is to lead to ecological systems with more predictable and less extreme disturbance regimes, providing for more predictable human uses. An increase in long-term predictability should increase long-term stability to individuals, families, and communities. The preferred alternative should have a better chance than current land use plans of being implemented because it will provide a land-use strategy more responsive to social values that can be implemented at a cost in line with historical funding; therefore, it is more likely to be funded and more likely to provide goods and services as projected. Short-term predictability may be less secure as a consequence of managing for more predictable disturbance regimes and as a

consequence of implementing a new management strategy that departs from current practices. Allowable sale quantities for timber will be established at the local level (that is, at the Forest Plan or Resource Management Plan level). A dollar value has not been assigned to ecosystem health, but it is essential to long-term predictability of products that do have a quantifiable economic value.

The two parts of the statement of need (resource protection and economics / social development) are linked. Ecological integrity and ecosystem health are tied together with social and economic health and integrity. Providing for human uses and values must be consistent with maintaining healthy, diverse ecosystems, because livelihoods that are based on natural resources depend, for sustainability and predictability, on the ecological health and integrity of those resources. Chapter 1 has been clarified to reflect this intended meaning.

Standards have been refined, rewritten, and streamlined throughout Chapter 3 of the Supplemental Draft EIS so that they are more understandable and, therefore, more enforceable. The discussion of the effects of the alternatives in Chapter 4 documents the degree to which each alternative would be effective in restoring ecosystems if implemented. A monitoring plan will be developed before the Record of Decision is signed to track implementation, ensure accountability, and identify where management changes are needed because effects are not what was expected.

Comment: The EIS should not defer to National Forests/BLM Districts or other subregional levels decisions that could limit the agencies' ability to achieve the purpose and need.

Narrative: *Some people feel that the planning process contains inherent problems that will block the agencies' ability to fulfill their congressional mandate. They assert that timber harvest levels and other commodity production levels cannot be predicted until Forest Service and BLM land use plans are revised. In addition, they worry that continued Ecosystem Analysis at the Watershed Scale (EAWS) will only delay on-the-ground decisions. Others feel that adaptive management is another delay tactic and will only increase uncertainty about their future. They feel that complex and conflicting standards and objectives in the EIS will delay implementation, as will current policies, regulations, and a possible lack of funding (see also Ecosystem Analysis at the Watershed Scale (EAWS), Priorities).*

Response: Existing land use plans provide the management foundation for the lands administered by the Forest Service and BLM in the project area. Much of that foundation, especially the finer-scale direction, will remain unchanged by the Record of Decision. The hierarchy of management, together with the step-down process for bringing broad-scale direction down to the local level (by district or national forest), are intended to meet the need for a well-defined plan amendment and implementation process.

Standards have been refined and streamlined for alternatives S2 and S3 in the Supplemental Draft EIS. A monitoring plan will be developed before the Record of Decision is signed to track implementation, ensure accountability, and identify where management changes are needed.

Comment: The EIS should include aquatic species recovery goals in the Purpose and Need Statement.

Response: The purpose and need for the EIS was defined prior to development of the Draft EIS or Supplemental Draft EIS and has not changed. Species recovery goals are covered in the purpose and need statement by: "restore and maintain long-term ecosystem health and ecological integrity"; and "restore and maintain habitats of plant and animal species, especially those of threatened, endangered and candidate species"; and "provide long-term, broad-scale management direction to replace interim strategies (PACFISH, INFISH, and the Eastside Screens)."

Proposed Action

Ecosystem Management

Comment: The Draft EIS should use a clear, scientific definition of ecosystem management.

Narrative: *Noting the complex and diverse definitions of the word ecosystem, some wonder how decision-makers will agree upon a suitable definition, not to mention develop a plan to manage such a system. Several interpret ecosystem management as a vague, arbitrary, ill-defined and therefore inappropriate cornerstone for a proposed action of this magnitude. The concept of an ecosystem, some state, is not based on scientific theory but social, political, philosophical, or religious values.*

Some feel the vague terminology allows planners and managers to fit their actions to any Record of Decision they choose. Quoting several government officials who have noted the lack of a precise definition for 'ecosystem' or 'ecosystem management,' many people question whether a

document that relies on these concepts can ever attain the needed clarity, authority, and freedom from future gridlock, confusion and litigation.

Response: The definition of Ecosystem Management in the Draft EIS and Supplemental Draft EIS was derived from *A Framework for Ecosystem Management in the Interior Columbia Basin published by the Science Integration Team* in June 1996. It is a peer-reviewed scientific definition and provides a clear, common concept for scientists, agency managers, and field staff in both the Forest Service and BLM to use in understanding and implementing the direction in the preferred alternative of the Supplemental Draft EIS.

Comment: The EIS should better define and clarify the management emphasis terms of Conserve, Restore, Produce for the forest and range clusters. There needs to be a clearer distinction between Restoration and Conservation that will give clear guidance to managers prioritizing projects.

Narrative: *Some respondents feel that the definitions of management emphasis (Conserve, Restore, Protect) are so blurred and overlapping that they do not adequately differentiate among the management options. Other respondents suggested that they believe the emphasis [categories] really are meant to convey particular conservation and restoration management activities that are consistent with wilderness and other areas that are currently "closed to resource use." Others feel that restoration should be defined by activity types and separated out from resource development (logging and grazing) to avoid public misunderstanding.*

Response: Definitions for Conserve, Restore, and Produce were included in sidebars in the Description of Alternatives (Chapter 3) of the Draft EISs and in the glossary. The concept of forest and range clusters was used for description and analysis in the Draft EISs. Management emphasis has been refined in the Supplemental Draft EIS, eliminating the Conserve, Restore, Produce terminology. The use of clusters to specify management areas has been replaced by the Resource Advisory Council and Province Advisory Committee areas in the Supplemental Draft EIS in response to this and similar comments.

Comment: The EIS needs to establish legal justification for using ecosystem management concepts.

Narrative: *Many assert that no legal authority or congressional mandate exists for the use of the concept of ecosystem management in management plans. Some warn that the size of the project area and the lengthy time frame of the project put too much at risk with a plan that stresses such an unproven and nebulous concept. At least one respondent calls ecosystem management a tool to achieve goals rather than a goal in itself, and therefore dismisses the concept as inappropriate for a statement of proposed action.*

The legality of ecological health as a goal for the plan is problematic for many respondents. They point out that long-standing laws and policies relating to multiple-use require a balance of resource goals. They say that placing ecosystem health above all other considerations may violate such laws (see also Restoration, Ecosystem Management).

Response: Chapter 1 of the EIS describes a number of directives and commitments made through interim direction that provide requirement or authority for permanent, ecosystem-based management direction. A number of current laws governing management of federal lands—including Federal Land Policy and Management Act, National Forest Management Act, Endangered Species Act—as well as court decisions support this ecosystem-based management approach as a tool to achieve management goals. These laws are summarized in Appendix 1.

Comment: Public comments diverge on whether ecosystem management should more strongly emphasize economic and social needs of humans or protection and management of natural resources.

Narrative: *Many commenters feel the role of humans and their economic and social health are ignored by the definitions of ecosystem health. They assert that humans are part of the ecosystem, but that the EISs' various definitions of ecosystem health fail to consider people in the equation. Some perceive a biocentric, anti-human, or nature-knows-best bias in the project, placing the well-being of other life forms ahead of the interests of humans. With ecosystem health as the stated goal, some foresee economic disaster for people, companies, and towns that depend on commodities produced by public lands. (see also Purpose and Need).*

Response: The Supplemental Draft EIS contains a specific socio-economic component to the ecosystem management strategy in both Alternatives S2 and S3. The project charter, purpose and need statement, EIS goals, and specific direction from the Secretaries of Agriculture and Interior all state that the Record of Decision will include social and economic factors as a part of ecosystem management. The *Framework for Ecosystem Management for the Interior Columbia Basin* shows that socio-economics is a part of ecosystem management. The discussion of ecosystem health in Chapter 1 includes providing products and places for people as part of the definition.

Comment: Ecosystem management and multiple-use mandates under the Multiple-Use/Sustained Yield Act of 1960 may not be compatible.

Narrative: *Some respondents strongly suggest that the protection of ecosystem health and integrity "above all other factors" is fundamentally inconsistent with existing multiple-use laws. They suggest that the measure of integrity should be the ability to provide multiple-use "outputs ," and that the weak references to human and economic welfare in the Draft EISs are "purposefully deceitful rhetoric crafted to obscure that the project is designed to ultimately end the legitimate and productive non-recreational use of public lands." They see all alternatives as increasing uncertainty for timber producers, which they feel contradicts the cornerstone (predictability) of multiple-use management of federal lands. A "radical departure" from multiple-use management to "a new, untested method" is seen as leading to a drastic reduction in future levels of output and profound economic and social impacts to all communities in the project area. By incorporating new objectives for ecosystem management and establishing ecosystem health and ecological integrity, some feel that the project is violating the Forest Service mandate under the Multiple-Use/Sustained Yield Act to establish and administer lands for outdoor recreation, range, timber, watershed, and wildlife and fish purposes.*

Others who favor ecosystem management insist that providing multiple human benefits must be done within the capabilities of the ecosystem and the limitations of ecological integrity, health, and diversity. They feel that while multiple use may be valid to assure a consideration of various resource uses, most multiple-use management to date has not provided for conservation of salmonid habitats and other resources. These respondents want the EIS to ensure that the first priority for any multiple use of these federal lands is to ensure the health of biological diversity.

Response: The use of an ecosystem management approach to achieve ecological integrity is not only compatible and in compliance with the mandates of the Multiple-Use/Sustained Yield Act of 1960 (MUSY) and Federal Land Policy and Management Act of 1976 (FLPMA), but it is considered to be necessary in the interior Columbia Basin to "adjust to changing needs and conditions," as the law requires, and to resolve management issues across this large area. Section 4 of the MUSY states that "'multiple use' means the management of all the various renewable surface resources, outdoor recreation, range, timber, watershed, and wildlife and fish purposes of the National Forests....and harmonious and coordinated management of the various resources... without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." Multiple-use outputs of various resources, as defined by the law, are to be provided only within the context of ecologically unimpaired (healthy) lands.

Section 102 of FLPMA states it is the policy of the United States that management be on the basis of multiple use and sustained yield. "Multiple use" is defined in FLPMA as "...the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output."

Ecosystem Health and Ecological Integrity

Comment: Ecosystem health and ecological integrity should have quantifiable definitions to provide a real basis for comparison to understand the conditions described in the EISs.

Narrative: *The perceived lack of any solid definition for 'ecological health' or 'ecological integrity' causes concern for many, who believe there is no meaning for such terms that can pass peer-review. Some note the absence of clear definitions will necessitate a reliance on subjectivity and inexact science. These respondents call for quantitative and absolute data regarding the health of the area, and they warn against the use of social sciences, "soft science," and jargon. Some feel that by definition it is impossible to determine if the need for ecological integrity is addressed or matches the range of alternatives because absolute measures do not exist. Some feel that the language of the ecological sciences is deliberately vague so that government officials can take whatever action they like, and then justify it with " bureaucratic jargon and the nebulous notion of ecosystem health" (see also Ecosystem Management).*

Response: Definitions of ecosystem health and ecological integrity used for this project were developed by the Science Integration Team (SIT) and underwent peer review. As discussed in Chapter 2 of the Draft EISs, ecological integrity was estimated in a relative sense because of the acknowledged difficulties in measuring it directly. "Proxies" or representative processes and functions were used to estimate where integrity was considered to be higher or lower than other places. The SIT determined that these "proxies" were sufficient to measure and evaluate the relative performance of the various alternatives presented in the EIS with regard to ecosystem health and ecological integrity.

Comment: Public comments diverge on whether active management degrades or improves ecosystem health, and, therefore, to what degree management should be active or passive.

Narrative: *While many people concur there is a need to address forest health in the project area, opinions diverge on whether active management would improve or degrade the situation and on the level of activity needed. Some individuals feel the issue of what actually constitutes a healthy forest was not adequately addressed in the Draft EISs. Some feel that less active management should be proposed, especially in unroaded areas; others asked that more active management be implemented to address declining forest health in a manner benefitting local economies dependent on management activities such as timber harvesting. In the opinions of many, public lands within the interior Columbia River basin require restoration, especially lands on which a long history of management activities such as logging, grazing, mining, and road building have damaged ecosystem health. There is disagreement, however, on the level and type of management activities people feel should be a part of the restoration efforts.*

Response: The alternatives presented in the Supplemental Draft EIS (Chapter 3) provide for a balance between the two management techniques; the degree and intensity vary among the alternatives. All three alternatives contain a variety of active and passive management activities, outlined in the objectives, standards, and guidelines (Chapter 3), that meet the Purpose and Need of the project.

Alternative S1 (No Action Alternative) continues current management, which includes the interim direction as the long-term strategy for federal lands in the project area. Alternatives S2 and S3 focus on restoring and maintaining ecosystems and providing for the social and economic needs of people. Alternatives S2 and S3 differ on the level of acceptance of short-term risk: Alternative S3 accepts more short-term risk, as is acceptable within the requirements of the Endangered Species Act, Clean Water Act and Clean Air Act. For example, passive management is emphasized in the short-term in aquatic A1 subwatersheds and source habitat in terrestrial T watersheds in both Alternatives S2 and S3; while active management is emphasized in subbasins identified as being high priority for restoration at the broad-scale.

Restoration

Comment: Restoration does not provide enough timber management direction.

Narrative: *Some respondents acknowledge the need for a primary focus on restoration work but they do not understand why there is no additional direction for timber management aside from restoration. They feel that multiple-use objectives, particularly timber production, should be treated as equal objectives to be achieved through the Interior Columbia Basin Ecosystem Management Project strategy, and not just restoration.*

Response: Timber harvest is an important part of restoration and of the economic strategy. Long-term sustainable levels of timber harvest depend on healthy forests from which to harvest trees. Therefore, management direction which improves the long-term health of the landscape including forests, improves the long-term sustainability and predictability of timber supplies. Several base-level and restoration objectives address the need for timber harvest from an economic standpoint. Although they may not specifically mention timber harvest, it is one of the "goods and services." For example: the Supplemental Draft EIS states "Derive social and economic benefits, promote commercial activity, and foster demand for labor and capital formation through producing a variety of goods and services from Forest Service- and BLM-administered lands according to land management plan allocations and management direction."

This is also reflected in the base level Social-Economic-Tribal Component description and management intent where it says "major areas of focus... include... management direction that emphasizes the production of commercial products or services from Forest Service- or BLM-administered lands..." Similar language can be found in the description and management intent under the Products and Services from Public Lands and Support Economic and Social Needs of Communities and Cultures Sections of Chapter 3 of the Supplemental Draft EIS.

Although there are fewer objectives and standards addressing the production of goods and services

compared with restoration, this does not mean production of those goods and services are any less important. More management direction on production of goods and services could be redundant.

Comment: The EIS should clearly state what restoration methods will be used and how restoration activities will be prioritized. The distinction between 'restoration' and 'conservation' needs to be clarified to give clear guidance to managers prioritizing projects.

Narrative: *Respondents requested that the specifics of restoration methods be clearly stated and supported scientifically. They want to see further analysis demonstrating that improved conditions can be reasonably predicted for species that rely on those habitats. They feel that alternatives for accomplishing restoration need to offer different concrete approaches to the challenge, prescribe limits on experimental logging-based approaches, and set up rules or standards for choosing among restoration techniques in different ecological circumstances.*

Some recommend prioritizing where restoration activities would be most cost effective; they think restoration activities should be prioritized during subbasin review and Ecosystem Analysis at the Watershed Scale (EAWS), and restoration should focus on first securing strongholds and currently productive habitats at risk. Some respondents feel that a "real" restoration alternative would focus on watershed and terrestrial restoration in areas of high ecological potential but low ecological integrity as identified by the Science Integration Team.

Response: From a broad-scale perspective, subbasins have been identified in the Supplemental Draft EIS as high priority for restoration, from a functional and an integrated aspect. These high priority areas are where restoration would be most effective. In addition, the Supplemental Draft EIS identifies source habitat for families or groupings of terrestrial species. A restoration objective is to restore terrestrial source habitats to provide for species needs. Tables in Chapter 3 identify which source habitat, in terms of cover type and structural stages, need to be increased (in extent and connectivity) for the various terrestrial families. Broad-scale priority for restoration is identified by Resource Advisory Council/Provincial Advisory Committee area. Guidelines suggest specific restoration techniques to consider for different ecological circumstances. The analysis of projected success of restoration is found in Chapter 4.

Another restoration objective is to use broad-scale aquatic/riparian restoration opportunities and the geographic extent of the A1/A2 network during Subbasin Review. This will provide context when developing local long-term restoration opportunities and priorities. The first consideration for aquatic/riparian restoration priorities is securing A2, and as needed A1, aquatic areas from internal or adjacent subwatershed risks. A1 and A2 subwatersheds represent areas that support the strongest fish populations and highest native diversity and integrity.

Subbasin Review

Comment: Subbasin reviews will take longer than the two to three weeks as described in the EISs. The subbasin review process should either be simplified and clarified, or the time frame should be made more realistic.

Narrative: *Because Subbasin Reviews would involve large amounts of complex data and coordination among government agencies and tribes, some people question the assertion these reviews will take only two to three weeks to complete. Some respondents recommend the EIS Team define the desired outcomes of subbasin review rather than pre-determining that they will take three weeks to complete. Others noted that the time required to evaluate the information contained in subbasin reviews needs to be recognized as an early planning requirement. Some feel that the chance to identify meaningful, realistic opportunities is limited if the review is intended to be brief and to use only existing information. More guidance on what subbasin review entails and the methodology to be used is requested by some.*

Many feel the quantity and types of data available are problematic as validation tools. For example, they state that new mid-scale data may reveal little about existing broad-scale data, not to mention data that is estimated from limited samples or is anecdotal. They feel that inconsistencies in the nature of data required by the Subbasin Review process lengthen the time needed to approve implementation of management activities. If any information is not correct, people predict that new valid data will take a long time to gather. Some specifically ask that the validation process to be used be clarified.

A few note that Subbasin Reviews will cross jurisdictional boundaries and private property, which they feel creates a problem. Some propose reviews and authorization by BLM state directors or Forest Service regional foresters, or by local managers under the auspices of approved land use plans. Others want better guidance and latitude for local managers to coordinate across administrative boundaries.

Response: Subbasin Review (SBR) is intended to be a concentrated review and validation of broad-scale science data, in part to see whether more detailed analysis is needed. It is intended to take place in a

relatively short period of time depending on the complexity of the area and the issues to be analyzed; it is possible that the process could take longer in some situations. The concentrated work time devoted to assembling and displaying review area information should be about four to eight weeks for core team members; the start-to-finish review should be maintained within a six-month time period.

A Subbasin Review Guide has been developed and is intended to provide guidance for SBR, similar to that provided in the *Federal Guide for Watershed Analysis.* Public review and participation in SBR is discussed in the Subbasin Review Guide.

Requirements for SBR have been re-written in an attempt to clarify them and to respond to comments on the Draft EIS. Management intent has been added to augment the direction for SBR, with standards that SBR shall be conducted according to the Subbasin Review Guide; subbasins with less than 5 percent BLM/Forest Service ownership or where collaborating partners agree the intent has already been met are exempt from SBR; in Alternative S2, SBR for subbasins identified as broad-scale integrated priority for restoration shall be completed within 2 years; other required SBR under Alternative S2, and all required SBR under Alternative S3 shall be completed within 5 years.

Comment: Public comments diverge on when subbasin reviews should be completed. Some feel they should be completed prior to signing the Record of Decision (ROD), while others feel that whenever they are completed they shouldn't delay management activities.

Narrative: *Unless there are compelling reasons, some feel that on-the-ground projects should not have to wait for completion of subbasin reviews, especially in areas where similar reviews have already addressed project issues. People do not want to see lengthy delays in more ecologically complex areas and want local agency mangers to have authority to continue activities without completion of subbasin reviews. They feel that forests and rangelands, wildlife, water, and other resources, and people who depend on commodities from public lands, will suffer from management delays. Some feel that the EIS should state clearly that previously approved actions and ongoing activities may continue at current or increased levels. Some are concerned that funding is not available to shut down a third of the forest and rangelands for a year to do lengthy subbasin reviews while also trying to do ongoing programs.*

An opposing view is that no management activity should take place until subbasin reviews have been completed. Some respondents interpret the direction to mean that no management activities will occur during the first year of plan implementation and request that this statement be clearly stated or refuted in the EIS. Others feel that subbasin review should have been accomplished as part of the Draft EISs, stating that they are necessary for the public and decision makers to understand components and implications of various alternatives.

Response: As noted in other responses, Subbasin Review (SBR) is intended to be a concentrated review and validation of broad-scale science data, in part to see whether more detailed analysis is needed. We do not expect this review to significantly delay future on-the-ground projects. The SBR process will help in identifying areas for future management activities in the context of the Selected Alternative. Projects that have been approved and are being implemented, will be considered during the SBR, but it is not the intent of the SBR to prohibit resource management activities from occurring prior to completion of the review.

Comment: Category 1 subbasins should be used as models.

Narrative: *It was recommended that an additional status be given to Category 1 subbasins, which are said to be currently successful in managing for positive ecological status. Respondents suggest that these subbasins should be designated as "adaptive management models" and given a "demonstration" status so that the success in management can be adapted for use in other areas.*

Response: In this EIS, management direction is no longer directly tied to subbasin categories. Subbasin category information was used in this EIS to assist in identifying broad-scale integrated restoration opportunities in Alternatives S2 and S3. In Chapter 3, the adaptive management section describes how the Forest Service and BLM will design and locate areas for experimentation and field trials to accelerate learning.

Comment: There is a need for clear guidance to administrative units on implementation of subbasin reviews in the first three years, and a need for assurances that the results of the subbasin review process will be used to direct land management planning during project implementation. Standard EM-S1 in the Draft EISs is contradictory, suggesting that management activities can occur with or without completion of subbasin reviews.

Narrative: *Some respondents believe that standard EM-S1 in the Draft EISs does not provide an adequate prioritization system for designating which areas would go through subbasin review in the first three years. They feel*

that this standard should spell out the progression from broader to finer scales of information. Others suggest that EM-S1 as written may result in inappropriate prioritization of subbasin review and avoidance of some subbasins in the first year so that activities can proceed. They recommend that an interagency prioritization schedule be developed for the selected alternative, and that it include a description of what information must be included in a subbasin review, at what scale, and at what level of detail. They also suggest development of a certification and monitoring process to obtain quality assurance of step-down analysis products and use of analytical results.

Others feel that the standard does not provide an adequate understanding of how the information among subbasin reviews will be shared in order to set priorities at a larger scale; they suggest that the direction for subbasin review be as clear as the Federal Guide for Watershed Analysis.

Response: Requirements for Subbasin Review (SBR) have been re-written in an attempt to clarify them and to respond to comments on the Draft EIS. Standard EM-S1 has not been carried forward to the Supplemental Draft EIS. Management intent has been added to augment the direction for SBR, with standards that SBR shall be conducted according to the *Subbasin Review Guide*, which is intended to provide clear and detailed instructions comparable to the Federal Guide for Watershed Analysis.

Comment: In EM-G1, the wording of this statement, 'subbasin analysis could assist...' does not give any guidance to the manager. Restate the guideline so that it provides useful management guidelines. (Eastside Appendix 3-2; page 246)

Response: Description and management intent of subbasin review and objectives and standards have been rewritten in the step-down section of Chapter 3 to provide useful management direction. Guideline EM-G1 was not brought forward to the Supplemental Draft EIS.

Comment: In EM-G3, it will not be possible to 'verify' the broad-scale assessment without crossing administrative boundaries. Restate the guideline to give proper guidance on coordination among administrative units.

Response: Description and management intent of subbasin review and objectives and standards have been re-written in the step-down section of Chapter 3 to emphasize the intent that subbasin review shall be conducted in a collaborative fashion. The Forest Service and BLM administrative units (national forests and BLM districts) are directed to work collaboratively with the U.S. Fish and Wildlife Service, Environmental Protection Agency, and the National Marine Fisheries Service to provide opportunity to discuss resource conditions on Forest Service- and BLM-administered lands within the subbasin. Guideline EM-G3, which suggests that the agencies consider coordinating subbasin review across Forest Service or BLM administrative boundaries, was not brought forward to the Supplemental Draft EIS.

Ecosystem Analysis at the Watershed Scale (EAWS)

Comment: Public comments diverge on whether EAWS is needed to provide the ecological context for land management.

Narrative: *Some question whether EAWS is necessary. Because analyses are tiered from basin to subbasin to watershed, some respondents have doubts about the analyses' applicability and anticipate delays in their completion. They fear the process will become a bureaucratic bottleneck and assert that the purpose and need of the Draft EISs, whether restoring ecosystem function or providing goods and services, will be held hostage to another planning process.*

It is felt that the EAWS process currently lacks adequate guidance and ecological standards for goals, objectives, standards, procedures, or analytical processes. They cite "empirical evidence" that EAWS will not adequately protect aquatic systems and note that in many cases National Environmental Policy Act and National Forest Management Act requirements are far more ecologically relevant and specific than what is required under the proposed EAWS guidance. Noting the four years of experience that some areas have had in conducting EAWS under the Northwest Forest Plan, they feel that the Forest Service has been unable to demonstrate that EAWS has consistently been effective in preventing or reducing damage to aquatic resources.

Others argue that EAWS is needed to estimate environmental impacts. They feel that more site-specific data on existing environmental conditions are needed to determine which management activities are appropriate for a given piece of land. If any activities are deemed appropriate, many feel EAWS is needed to fully estimate environmental consequences, especially when trying to estimate impacts from prescribed burning, weed invasion, sedimentation and stream channel morphology impacts in rare fish habitats, human safety and health concerns, and the possible loss of native plant species.

Response: EAWS is a tool. The step-down section of Chapter 3 has been rewritten to more clearly state the intended use of Ecosystem Analysis at the Watershed Scale. Two alternative management strategies were analyzed to let the decision-makers weigh the advantages and disadvantages of different levels of EAWS requirements.

EAWS is an issue-driven process that is valuable in understanding the conditions and risks to resources. It is intended to help balance short-and long-term risks through the proper placement and timing of management actions within a watershed. While the intent of the EAWS objective is to use watershed-scale information to manage risks associated with threatened, endangered, and proposed species and those species with habitat that has declined significantly from its historical extent, the expectation is that EAWS will be used to meet the broad-scale objectives in this EIS.

Comment: Public comments diverge on when EAWS should be completed. Some feel that it should be completed prior to signing the ROD, while others feel that whenever it is completed it shouldn't delay management activities. Once completed, opinions diverge on how the analysis findings should be applied to management decisions and how priorities should be set.

Narrative: *Many believe that the findings of EAWS will be difficult to quantify. Some feel that EAWS should have been completed as part of the scientific assessment for the Draft EISs rather than being postponed until after the Record of Decision, so that the effects of the alternatives could be stated more clearly. Many fear that no management activities will be possible until EAWS are completed, while others want projects to be able to proceed during and prior to any watershed analysis.*

Some respondents are concerned that to proceed with management actions before analysis is completed may preclude opportunities to meet other Project objectives. They feel that without explicit guidance for prioritizing EAWS, analyses could be deliberately delayed until management actions are completed in some areas, contravening the intent and precluding achievement of the purpose and need. One state agency feels that the requirements preventing management prior to EAWS are too restrictive and should be modified to a more common sense prioritization that delays action in sensitive areas while aggressively managing other areas.

Response: Many national forests and BLM districts are currently conducting watershed analyses. Those and other EAWS will be completed before the decision for this EIS is signed. The purpose of watershed analysis (EAWS) is to identify and describe ecological processes of greatest concern, establish how these processes are functioning, and determine the conditions under which management actions should take place. The results of EAWS will establish the context for subsequent decision making processes, including planning, project development and regulatory compliance. It is not the intent of the EAWS requirement to prohibit resource management activities prior to EAWS completion.

Comment: The EIS should provide clear direction for conducting EAWS and assurances of their consistent and predictable application on the ground.

Narrative: *Some respondents point out the Draft EISs reveal little about how Ecosystem Analysis at the Watershed Scale (EAWS) will be conducted after the Record of Decision is issued. They feel that the Draft EISs do not provide adequate direction to assure consistent, predictable application of analyses findings as a foundation for management decision. They believe that resource concerns should drive the scope of EAWS, and that subsequent results of EAWS should drive the management prescriptions on-the- ground, rather than projects or funding priorities driving those prescriptions. They recommend a clear, precise process of multi-scale ecosystem analysis that accounts for both aquatic and terrestrial conditions; the process should be multi-disciplinary and involve input and consensus from a variety of sources. Respondents further note that the assumption that EAWS will reduce short-term risk and uncertainty of outcomes is valid only if EAWS information is used in a manner that promotes conservation of watershed, aquatic, and riparian resources and reduces risk; "EAWS is a tool for assessment, it alone does not reduce risk to species," they note. They feel that this should be accounted for in analysis of the alternatives.*

One state agency believes that the federal agencies should not need to complete as much EAWS in the short-term as is called for in the Draft EISs standards; with available employees and funding, four years is too short a window to complete EAWS. For this respondent, the importance placed on EAWS and aquatics-dominated standards, objectives, and guidelines puts too much management direction in the hands of aquatic scientists.

Response: The Step-Down Section of Chapter 3 has been rewritten to more clearly state the intended use of ecosystem analysis at the watershed scale. The purpose of EAWS is to identify and describe ecological processes of greatest concern, establish how these processes are functioning, and determine the conditions under which management actions should take place. It is an analytical, interdisciplinary, issue-

driven process that provides information concerning resource conditions, risks, and opportunities in a systematic way, thereby enhancing the agencies' ability to estimate effects of management actions. The results of EAWS will establish the context for subsequent decision making processes, including planning, project development and regulatory compliance.

New objectives and standards have been provided to guide managers in conducting and following up on EAWS. The *Federal Guide for Watershed Analysis*, which is required to be followed, provides detailed guidance for conducting EAWS. New ICBEMP monitoring and evaluation objectives and standards are provided to ensure that ICBEMP goals and objectives related to EAWS are followed, and to assure consistent and predictable application of EAWS.

There is no longer a four-year window to conduct EAWS. The location and timing of EAWS in priority-to-restore subbasins is now to be determined through Subbasin Review (Alternative S2) or other appropriate step-down processes (Alternative S3).

Comment: EAWS should consider all lands, regardless of ownership, in a watershed or in groups of watersheds.

Narrative: *Although some people appreciate that EAWS requires the use of hydrologic units, they feel this methodology may not be a perfect tool and that ecosystem analysis must encompass issues on both broader and finer scales. They argue that adjoining watersheds aren't necessarily ecologically isolated, and that management in one can affect the other. Because resources such as plants and animals or even roads cross these boundaries, respondents are concerned that any analysis must consider different management activities, such as prescribed burning, grazing allotment, and transportation plans. Ecological variations within any given watershed, others argue, must be closely examined in any analysis. For these respondents, this ecological variability can include conflicting management strategies for private lands or other public lands. Some feel that EAWS is needed for all areas, while others recommend a screening process to identify any possible areas that might be exempt.*

Response: In order for a team to assess watershed condition, an analysis of the current and historical uses of a watershed needs to be done. Involvement of other resource users, including landowners, and other government entities is critical in identifying opportunities for cooperation in activities and identifying information useful in analysis. Although EAWS is is not a decision-making process, it does contribute to meeting land management and regulatory requirements. Where it is possible, attainment of complete data coverage of an analysis area (including other ownership) provides a better description of the conditions in the watershed and a higher level of confidence in recommendations derived from such analysis. Otherwise, data may need to be extrapolated from representative areas or layers to fill in data gaps. Exemptions from EAWS are provided for in Chapter 3.

Comment: The screening process described in EM-S11, to determine which land management activities are exempt from EAWS, needs to be defined prior to signing the ROD.

Narrative: *Some respondents are concerned that the agencies cannot establish a standard for, and the public cannot reasonably evaluate, a screening process that hasn't yet been developed by an unidentified intergovernmental team. Others suggest that the EIS either describe the screening process in detail or not allow any exemptions. They suggest strong consideration be given to incorporating, at a minimum, standards or goals pertaining to "no net loss" or "no further deterioration" of the environmental baseline for biophysical resources in those areas in the alternatives excepted from the requirement for EAWS. They further suggest that the EIS spell out the categories of activities that are exempt, as well as the process for making future exceptions to the EAWS requirements. Some respondents recommend that an interagency team be assembled and the process be conducted as soon as possible.*

Response: The process for determining when Ecosystem Analysis at the Watershed Scale and Subbasin Review need to occur has been better defined in the Step Down section of Chapter 3 of the Supplemental Draft EIS. Standard EM-S11 has been rewritten to require review and approval by the Regional Executives for any exemptions to the EAWS requirement.

Comment: RM-S4 is not implementable and should be deleted. Most subwatersheds are not large enough for transportation planning in isolation from surrounding federal lands.

Response: This standard is now incorporated into the road management direction in the base-level section which requires each administrative unit to develop or revise Access and Travel Management Plans to address risks identified in roads analysis. Long-term transportation needs also need to be developed or revised within 10 years after the Record of Decision is signed.

Comment: The EIS should clearly describe the methods and processes that will be used in interpreting and implementing the Federal Guide for Watershed Analysis and Forest Service/BLM policy implementation guides as described in standard EM-S5.

Narrative: *There is concern that the Federal Guide for Watershed Analysis has been variously interpreted and implemented. The EIS should more clearly define the scope, scale, goals, and process for its use.*

One group feels that any changes to EAWS methodologies (either the EAWS or implementation guides) should be developed through an interagency, intergovernmental process. They feel it is appropriate to require watershed analysis prior to allowing changes in standards and guidelines, particularly Riparian Conservation Area (RCA) boundary changes and Riparian Management Objective (RMO) changes. However, they note that one of the shortcomings with this approach is that the current version of the Federal Guide for Watershed Analysis is inadequate by itself to analyze the effects of modifying RCAs. They feel that a document similar to the "riparian reserve module" would be needed for the project area if changes in the boundaries and management within RCA are allowed.

Some are concerned that there is no step in the Federal Guide for developing RMOs, yet the Draft EISs give national forests, BLM districts, and line officers total discretion regarding RMOs as established by EAWS. They feel this will not result in consistent or coordinated protection of fish and other aquatic resources.

Response: A description and management intent of analysis at the watershed scale has been added to step-down direction (Chapter 3) to clarify its scope, scale, and goals. The *Federal Guide for Watershed Analysis* and the process for EAWS were developed several years ago. It is not the intent of the EIS to change this established process, which is described in the *Federal Guide*.

The process for delineation of Riparian Conservation Areas (RCAs) is explained in the Aquatic/Riparian/Hydrologic Component section of base level direction. Prior to completion of either EAWS or programmatic planning processes, including land use plan revisions, RCA widths shall follow interim criteria described in this section for Alternatives S2 and S3. During EAWS or through appropriate programmatic planning processes this interim criteria shall be replaced with ecologically appropriate criteria consistent with the attainment of objectives. Rationale for RCA delineation shall be documented through appropriate NEPA decision-making process and documentation.

Comment: Opinions diverge on whether requirements for EAWS should be expanded in standards EM-S8 and EM-S12, or whether the "triggers" for analysis are too restrictive.

Narrative: *Suggestions were made to expand or clarify the requirement for triggering EAWS. Some respondents feel that requirements under Alternative 6 are more protective of candidate and sensitive fish species and should be incorporated into the selected alternative. They suggest that standard EM-S8 should clarify the difference between proposed or designated "critical" habitat and habitat that is used by the species.*

These respondents recommend that the presence of listed species or critical habitat should be among the criteria for prioritizing subbasin reviews and EAWS. They suggest that subbasin reviews should include evaluation of the status and distribution of species in a given area, and set priorities for EAWS where there is an identified risk of conflict between management actions and species recovery. The description of standard EM-S12 for Alternative 6 also should be applied to the selected alternative so that all areas may benefit from the analysis process set forth in the EIS. Additional triggers should be added, including catastrophic land-altering events, such as fires and floods.

One concern is that the triggers for watershed analysis are tied to the initiation of individual management projects or actions, not necessarily to restoration priorities or programs. They feel the triggers for watershed analysis should be driven by the restoration priorities identified through the completion of analytical process (for example, subbasin review, road risk inventory, water quality management plans), not based on where prior or future planned projects would occur. One recommendation was to edit standard EM-S12 to require watershed analysis in all categories of subbasins (not just Category 1).

One group felt that the EAWS "trigger" related to federally listed species is too restrictive; with recent and expected listing of several fish species, most of the basin will meet this "trigger." They would like to see a new, less restrictive scheduling standard that will not shut down management while EAWS is taking place.

Response: The standards requiring Ecosystem Analysis at the Watershed Scale have been simplified and clarified in response to comments. In Alternative S2, EAWS is required prior to planning and designing management activities where they have the potential to negatively affect threatened, endangered, or proposed aquatic species or their habitats, or their source habitats within terrestrial T watersheds that have declined substantially in geographic extent from the historical period. Alternative S3 has no EAWS

"triggers" or requirements, but relies upon Subbasin Review to identify priorities and schedules for conducting necessary EAWS. (See the Step Down section of the base level management direction in Chapter 3 of the Supplemental Draft EIS).

Comment: Opinions differ on whether standard EM-S13, regarding changing EIS standards after EAWS, is too restrictive or not restrictive enough.

Narrative: *One state agency feels that EM-S13 is too restrictive because it doesn't allow changes to be made through site-specific National Environmental Policy Act analysis unless EAWS is completed first. Subbasin review and site-specific analysis should be sufficient to warrant an exception to standards with approval of the regional office or proxy. They would like to see an objective that states that alterations to standards after EAWS can occur under more than just rare circumstances, but that in the spirit of adaptive management "after EAWS" should not be interpreted so literally.*

Another commenter feels that standard EM-S13 should be deleted. To this person, the standard overreaches the intent of the broad-scale direction of the project, because Riparian Management Objectives (RMOs) and Riparian Conservation Areas (RCAs) are site-specific and should be adjusted according to site-specific information. While others state that it is appropriate to require watershed analysis prior to allowing changes in standards and guidelines, particularly RCA boundary changes and RMO changes, some believe that the level of detail expected from an EAWS to accomplish this site-specific standard is unrealistic and would be too expensive to complete, and that changes should be made according to forest plans.

Other respondents suggest that the standards are rigid, uncompromising, inflexible, and difficult to modify. They feel that they do not allow the agency personnel who are most familiar with conditions in their management areas to make decisions that fit site-specific conditions without first proposing to modify or amend the EIS or land use plans. These respondents feel that the Draft EISs propose to place limits on the scope of decisions that can be made under National Environmental Policy Act by specifically disallowing modifications to RCAs and RMOs without a watershed-scale ecosystem analysis. They believe the Draft EISs also attempt to add the EAWS process to the NEPA process by requiring that an EAWS be performed in situations where a NEPA analysis is being conducted.

On the other hand, some commenters feel that the current standards are not strong enough and would result in unacceptable risks to aquatic resources. They also feel that additional site-specific analyses should be required in addition to watershed analysis in some instances. One commenter does not support the use of optional default standards in lieu of completing watershed analysis; this person feels that the standards for watershed analysis in Alternative 3, Alternative 4, and Alternative 5 are inadequate and will result in unacceptable risks to aquatic resources, including anadromous salmonids.

Response: In the Draft EISs, Standard EM-S13 for the preferred alternative provides that standards in the EIS, including riparian management objective values and riparian conservation area boundaries, can be changed only after conducting ecosystem analysis at the watershed scale. Simplifying and clarifying the direction has been done in the Supplemental Draft EIS.

The "triggers" for ecosystem analysis at the watershed scale have been simplified in Alternative S2 and eliminated from Alternative S3. As explained in the Step Down section of Chapter 3, under Alternative S2, EAWS is required prior to planning and designing management activities where they have the potential to negatively affect threatened, endangered, or proposed aquatic species or their habitats, or their source habitats within terrestrial T watersheds that have declined substantially in geographic extent from the historical period. Adjusting RCA boundaries so that they are appropriate to local conditions can be completed through similar processes.

Selecting either of the action alternatives in the Supplemental Draft EIS would establish interim riparian conservation area definition criteria. Then, as EAWS or programmatic planning processes (including land use plan revision) are conducted, the interim criteria for delineating RCAs would be replaced with criteria identified using scientific information and local knowledge and information on riparian processes and functions. The rationale for final RCA delineation criteria will be presented through appropriate NEPA decision-making processes.

Comment: The requirement for "no net increase in road density in subwatersheds with road densities less than 0.7 miles per square mile" described in EM-S9 should be included in the selected alternative, or revised to require EAWS for any increases in road density in roadless or low road density areas.

Response: The direction in the Supplemental Draft EIS no longer includes standards related to road density. For areas that are unroaded or where few roads exist, the direction in the Supplemental Draft EIS states that new roads in these areas would be rare and would first require a roads analysis to take place that weighs the relative habitat values against the need to address large-scale environmental damage. As discussed in Chapter 1 of the Supplemental Draft EIS, the Forest Service rulemaking

regarding protection of the remaining roadless areas in the National Forest System will affect future management of these lands.

Comment: The requirement that "EAWS shall be completed prior to activities requiring an EA/EIS and that significantly modify large blocks of existing native rangeland plant communities..." described in EM-S10 should be included in the selected alternative.

Response: Large blocks of existing native rangeland plant communities were key habitats in the Draft EIS because relatively unfragmented blocks of native rangeland were deemed important for terrestrial wildlife species in *An Assessment of Ecosystem Components* (Quigley and Arbelbide 1997.) These relatively unfragmented native rangeland plant communities are retained as a focus in the Supplemental Draft EIS Alternatives S2 and S3, in identified terrestrial (T) watersheds. Management direction for these T watersheds emphasizes conservation and restoration (if needed) of certain source habitats contained within.

In Alternative S2, EAWS shall be conducted in T watersheds before planning and designing resource management activities where these activities have the potential to negatively affect source habitats that have declined substantially in geographic extent from historical to current periods. This includes large blocks of existing native rangeland plant communities (*see also, Ecosystem Analysis at the Watershed Scale [EAWS]*).

Comment: Standard EM-S4, to use information from Subbasin Reviews in subsequent ecosystem analysis and land use plan revisions, is too vague.

Narrative: *Some respondents feel that standard EM-S4 is too vague to be measurable, trackable, or meaningful, because they see no way to determine if subbasin review information was used to provide context or not. They feel this standard is more of an objective that they would like to see required. They say that EAWS would most benefit watersheds that are in need of restoration, presumably Category 2 and 3 subbasins, and that the use of watershed analysis as a protective measure leads to a confusion about where to locate watershed analysis. They feel that the scale of subbasin categorization also leads to inappropriate prioritization; although some subbasins will need restoration more than others because of the range of conditions, they feel that distinctions cannot be made at the subbasin scale. Therefore, these respondents feel, watershed categorization should not be used to vary management direction.*

Response: All standards that were brought forward from the Draft EIS to the Supplemental Draft EIS have been revised and rewritten to improve clarity and understanding. The intent of EM-S4 was to provide context for finer scale decision to be made at the local level. The Step-down Section of Chapter 3 of the Supplemental Draft EIS contains a similar objective which more clearly defines the appropriate use of information obtained through Subbasin Review.

Comment: Standard EM-S6, requiring Line Officers to set the scope of Ecosystem Analysis, is inadequate.

Narrative: *Some respondents feel that standard EM-S6 should be deleted and replaced with clear standards by which the scope of analysis will be determined. Still others recommend that certain elements or issues be addressed in all EAWS; they feel that the list of minimum requirements should include: aquatic and watershed restoration needs, terrestrial restoration needs, and forest and/or rangeland restoration needs.*

Response: The process for determining when Ecosystem Analysis at the Watershed Scale and Subbasin Review need to occur has been better defined in the Step-down Section of Chapter 3 of the Supplemental Draft EIS. Subbasin Review establishes the need and priorities for conducting EAWS; EAWS, in turn, provides context for management through description and understanding of specific ecosystem conditions, capabilities, risks, and opportunities.

Comment: The EIS should ensure funding for Ecosystem Analysis at the Watershed Scale (EAWS).

Response: If EAWS is required by the Record of Decision, then the costs of the process will be included in the project funding. The Congress has the final approval of funding levels through the normal appropriations processes. Ecosystem Analysis at the Watershed Scale is not intended to be a costly process, and field experience has shown that the process helps the agencies become more efficient and effective in their project planning, project implementation, and decision making.

Comment: The selected alternative should not require Ecosystem Analysis at the Watershed Scale for management activities in special species habitat.

Narrative: *Some people question why EAWS are required for management actions when there is already normal NEPA planning. Stating that all projects in some areas*

would be subject to this analysis, they believe it is a waste of time and money since ESA consultation would be required anyway.

Response: EAWS is intended to supplement information in the NEPA process. It often covers a larger area and therefore provides context for, and helps to prioritize, subsequent projects. ESA consultation is an important piece that feeds into EAWS, with the intent of streamlining consultation on individual projects within that watershed.

Scale/Decisions

Scale

Comment: Data used to characterize the project area do not fit all the local areas.

Narrative: *Some question the methodologies and data used to study ecosystems in the project area. They note that to say that portions of land are in poor ecological condition, should not be construed to mean that the whole landscape is unhealthy. They feel that classifications using this aggregated data give a poor picture of the existing ecological condition of the basin, do not portray site-specific risks, and can mask good ecological health. One respondent finds limitations in resolution when the data sets are applied spatially to finer scales of management; the scientific foundation for the Draft EISs is felt to be inadequate because of flaws in the data for fine-scale analysis.*

People question how cumulative effects can be predicted from alternatives when ecosystem classification data varies in its scale and resolution, or when only isolated subsample data were used to characterize the entire project area.

Response: Information on conditions was not meant to imply that the whole landscape is unhealthy, but only that at the broad-scale certain trends can be detected. The Supplemental Draft EIS includes additional information as well as maps of places where specific landscapes, habitats, and watersheds are in need of restoration, and other areas that are healthy and should be maintained.

One objective of Ecosystem Analysis at the Watershed Scale and Subbasin Review is to verify the broad-scale information in various specific places to provide the basis for adjusting management as needed at the local level. Through these processes final delineation of such designations as Riparian Conservation Areas, aquatic A1 and A2 subwatersheds, and terrestrial T watersheds will be made by local land managers from mid- and fine-scale data and knowledge.

Objectives and standards have been revised to more appropriately reflect the broad scale of the scientific data and the goals of the project, along with a process for local managers to apply the remaining broad-scale objectives and standards to the local level.

Comment: Comments diverge on whether broad-scale direction is necessary:

- **Some feel the EISs are currently too broad-scale and should be more fine-scale and specific;**
- **Others feel the EISs are too narrow and should be more broad-scale;**
- **Some feel some parts of the direction should be broad-scale but some parts should not.**

Narrative: *Some comments state that the standards and objectives are too general to assure attainment. They raise concern about the interpretation of objectives and standards during implementation, some feeling that the standards and objectives do not provide measurable goals and time lines. These respondents suggest that broad-scale standards be eliminated and a set of objectives be developed that is not so broad-scale. Many want stronger and more enforceable standards.*

Others believe the broad-scale approach does not adequately recognize the on-the-ground knowledge and expertise of local land managers. They feel the size of the project area makes the preferred alternative unresponsive to local concerns and prescribes inadequate collaboration with other agencies and affected parties. They feel planning and management should not be controlled by a top-down approach, but rather directed on a case-by-case basis by local people who are familiar with the land. Many view the motive for using the broad approach not as sound ecological management, but rather as a matter of social and political control.

Many people feel that broad-scale direction in the Draft EISs cannot analyze and manage an area as vast, complex, and diverse as the project area. Many believe that only direction for fine-scale areas such as administrative units, watersheds, or landscapes will lead to effective management. Some feel that the Draft EIS, if implemented as written, will cause additional ecosystem degradation because of conflicting directions and management standards.

Response: The Supplemental Draft EIS took a different approach than the Draft EISs to better define

the specific issues needing to be addressed at the broad-scale by outlining a process for taking the broad-scale terrestrial, aquatic, landscape, social, and economic direction and "stepping it down" so that the local land manager has the ability and flexibility to use local knowledge and information to make local decisions. This approach recognizes that an array of landscapes and resources exist across the project area, while giving guidance and direction to provide for consistency and accountability *(see also Decisions).*

Comment: Most of southeastern Oregon and southern Idaho have more in common with the Intermountain Basin than they do with the interior Columbia River Basin. If we are developing a broad-scale EIS, then it would make more sense to include these areas in an EIS on the Intermountain Basin.

Response: An ecosystem can be defined by many criteria. The geographic boundary of the Interior Columbia Basin Ecosystem Management Project was identified through a combination of factors, including the need for a logical, identifiable boundary and for achieving efficiency in administration. The interior Columbia River Basin east of the federally administered lands already being addressed in the Northwest Forest Plan was chosen as being logical and identifiable. Those portions of the Great Basin and Klamath Basin within Oregon were added for efficiency in administration, since all of the Forest Service- and BLM-administered lands in the state of Oregon are overseen from one Forest Service Regional Office and one BLM State Office. Land in southern Idaho is drained by the Snake River. Issues in that drainage area are a significant part of the issues being addressed in this EIS.

Comment: The EIS should clearly identify appropriate uses of cluster designations and further delineate circumstances where finer-scale information is needed.

Narrative: *The cluster designations were seen by some respondents as being a poor tool for making management decisions, because the range and forest clusters were defined at such a broad scale. There is concern about the scale of the spatial data used in developing the alternatives, and about how the vital components of ecosystem function and viability can be viewed and managed at this scale. This respondent feels there must be clear and specific mechanisms in place to further delineate ecosystem needs at finer scales. Some feel that forest and range clusters are artificial groupings which have more diversity than implied in the plan.*

Response: The concept of range and forest clusters was used for description and analysis in the *Integrated Scientific Assessment* (Quigley, Haynes, and Graham 1996) and the Draft EISs but was not brought forward to the Supplemental Draft EIS, partially in response to public comments. The project area has been organized sub-regionally according to existing Resource Advisory Council and Provincial Advisory Committee (RAC/PAC) areas in the Supplemental Draft EIS to be more useful for implementation purposes. Direction in Alternatives S2 and S3 is divided into the *step-down* process which explains how finer-scale information is documented; *base level* management direction - an integrated approach to accomplishing an acceptable level of risk to resources across the planning area; *restoration direction* - an integrated approach to restoring ecosystems at risk; and direction specifically for for *aquatic A1 and A2 subwatersheds* and *terrestrial T watersheds*. (See Chapter 3 for an explanation of each category of direction.)

Decisions

Comments: Comments diverge on whether local people and regional/subregional Forest Service and BLM managers should make resource and management decisions, including decisions regarding riparian health.

Narrative: *Some commenters believe the project promotes a "top-down'' management philosophy that does not, in their view, adequately consider economic or social consequences. They perceive the project as an unnecessary move towards centralized control. These individuals would like to see local authorities have control over site-specific management. They say that working and living with the natural resources promotes scientific knowledge and common sense lacked by those sitting far away at a desk. One individual would like to see language included in the preferred alternative to include permittees in the decision-making process. Other respondents feel that local land managers, with more local knowledge and the ability to respond quickly to conditions, should have more control over the specific guidelines regarding aquatic health such as buffer zones, vegetation management, canopy, debris, and temperature.*

Response: The direction in the Supplemental Draft EIS provides a broad context in which fine-scale decisions made at the local level are able to support the needs of large-scale issues (such as anadromous fisheries) that could be affected by local actions. This will allow a consistent and coordinated approach to the local decisions by establishing parameters and providing scientific information. The Supplemental

Draft EIS contains a "step-down process'' which enables local decision-makers to apply this broad-scale scientific information and management direction to local conditions.

Comment: Policy decisions for an EIS of this nature should be made by citizens and states, not by Forest Service or BLM employees.

Response: The Federal Advisory Committee Act (FACA) requires that decisions on the expenditures of federal money, policies, programs, plans , and projects (this includes decisions for lands administered by the federal government) in general must be made by federal officials, with citizen input and participation and in compliance with applicable state laws and regulations. Consensus-type decisions may be made with an officially chartered "Federal Advisory Committee." A "Federal Advisory Committee" is a collaborative group of individuals, including both federal and non-federal members selected by a federal agency or official and approved by the Department Secretary to give advice to federal officials, such as the Department of Interior's Resource Advisory Councils. The intent of this is to ensure that policy decisions are made in a professional, unbiased manner for the benefit of the American public, without undue influence from any particular interests or individuals.

Comment: An informed selection of a preferred alternative cannot be made until a Supplemental Draft EIS is prepared and circulated for public discussion.

Response: The project was directed in October 1998 by the Secretaries of Agriculture and Interior to prepare a Supplemental Draft EIS that will be available for a 90-day public review and comment period.

Comment: The legal justification for including standards in this programmatic EIS should be clarified.

Narrative: *Questions are raised about whether a programmatic EIS should set standards that will directly cause environmental changes and determine levels of goods and services without site-specific National Environmental Policy Act analysis. One respondent, citing an apparent lack of case law in support of providing standards for management under programmatic decisions, asks that the EIS explain the legal justification for this kind of action.*

Response: The Council on Environmental Quality regulations on implementing the National Environmental Policy Act of 1969, describe the categories into which federal actions tend to fall (40 CFR 1508.18). These categories include "Adoption of formal plans...which guide or prescribe alternative uses of federal resources, upon which future agency actions will be based." The Interior Columbia Basin Ecosystem Management Project falls into this category. Standards for broad-scale direction are analyzed at the broad-scale. The outputs of livestock forage and timber harvest resulting from each alternative analyzed, for example, are estimated at the basin or Resource Advisory Council/Provincial Advisory Committee level. The step-down direction in Chapter 3 explains how the broad-scale direction would be applied at the local level, including site-specific NEPA documentation of the levels of goods and services resulting from local implementation actions.

Comment: The EIS needs to better define the authority of the 'responsible official' to select or modify an alternative.

Narrative: *One individual's response indicates confusion about the "freedom afforded the Regional Foresters/State Directors to select one of the alternatives or to modify an alternative." This respondent feels that such flexibility makes it difficult for the public to analyze the eventual ramifications of the Draft EIS, and believes that the EIS should address whether the selected alternative must apply to every forest in a region and to all Forest Service- and BLM-administered lands in a state, or whether the flexibility also pertains at a smaller unit of area.*

Response: If, in reviewing environmental effects of alternatives and public comment on the Draft EIS and Supplemental Draft EIS, the responsible officials (Forest Service regional foresters and BLM state directors) determine that the decision should be a modified form of one of the alternatives already considered and reviewed by the public, then a determination would be made whether the modification constituted a "substantial" change. If it did, then the EIS would be supplemented and subjected to further public review and comment. The Council on Environmental Quality's (CEQ) regulations (40 CFR 1503.4) say that agencies preparing an EIS shall assess and consider comments and state the response in the document. One possible response is to modify alternatives, including the proposed action. The same regulations (40 CFR 1502.9) require that federal agencies prepare supplements to draft or final environmental impact statements if they make substantial

changes in the proposed action that are relevant to environmental concerns.

Chapter 1 of the Supplemental Draft EIS explains that the management direction does apply to all identified Forest Service- and BLM-administered lands within the project area. All of the Forest Service and Bureau of Land Management administrative units (forests and districts) to which the decision applies are identified in the Purpose and Need section of the Supplemental Draft EIS.

Public Trust and Federal Authority

Comment: The project appears to some people to be taking control of lands in the Northwest, as a vehicle of either the federal government or the United Nations.

Narrative: *Numerous respondents say that not only does the project bypass all legal mechanisms for land management and planning, but they feel it is a massive federal takeover that threatens to depopulate the Northwest, lock up public lands, and steal state and local power in favor of federal or even international control. In comments ranging from suspicious to hostile to furious, many call the project a back-door land grab and a conspiracy, or they equate the project with socialism, communism, or dictatorship. These respondents feel that Congress has neither mandated this EIS, nor authorized ecosystem management as a driving principle for planning. Many reject the notion of public collaboration in the plan, stating that federal officials decided the outcomes of the planning process long ago.*

International organizations such as the United Nations appear in the comments of a few respondents, who claim that the project is a manifestation of such pan-national edicts as the United Nations Biodiversity Treaty, the Man and the Biosphere Program and "Agenda 21." Some feel that these items are threats to American sovereignty, proposing to return much of North America to a state of wilderness. Within the United States, some who fear a loss of national sovereignty accuse the President's Council on Sustainable Development and various non-governmental organizations of collaborating with international interests to the detriment of American citizens.

Response: The agencies recognize the existence of mistrust or disapproval of government agencies and employees among some individuals, groups, or organizations. We have emphasized an atmosphere of open and frequent communication with the public throughout the process to help people learn about and participate in the development of the alternatives and the management direction. There is no connection between this project and any international or other organization. *(See also Ecosystem Management).*

Comment: The Draft EISs do not adequately address impacts on private existing timber rights, grazing rights, access rights, and mining claims on affected public lands, and do not address corresponding legal and financial recourse the public may have when such impacts are incurred.

Response: Because of the broad scale nature of the EIS, the potential effects of ongoing and foreseeable activities on non-federal lands was considered as a part of the cumulative effects analysis conducted by the Science Team. Legal and financial recourse for potential impacts, both positive and negative, is beyond the scope of this EIS.

Comment: The EIS will infringe on states' rights concerning water rights, control over navigable streams, and management of fish and wildlife populations.

Narrative: *Most people addressing water rights strongly believe in the use of water as a personal right governed by the states, not the federal government. Some say that states' rights could be compromised because of the assertion of federal control over water rights and/or the assertion of control over the beds of navigable streams as a result of adopting ecosystem management. They are concerned that their rights may be compromised by the EIS, and they demand to know how the federal government intends to manage waters for irrigation and other uses. They feel that ecosystem management cannot succeed without simultaneous management of wildlife and fish populations, thereby infringing upon the rights of the states which are charged with management of these populations.*

Response: The Record of Decision would make no management decisions that would impose regulations on state, local, tribal, or private lands that affect rights, privileges, regulations, policies, or provisions that are the responsibility of state or local agencies or private landowners. Water rights are under state authority and are established through water rights adjudications. The direction outlined in the Supplemental Draft EIS would apply only to lands administered by the Forest Service and BLM and would be consistent with all federal statutes and, to the maximum extent possible consistent with federal law, state and local statutes.

Federal agencies exercise rights to divert water pursuant to state water laws, and participate as do private parties through state water permitting processes. Federal agencies also participate in state-generated water right adjudication processes when those adjudications are McCarren Act adjudications. The Forest Service and BLM are involved in two adjudications in the project area, the Snake River Adjudication and Klamath Basin Adjudication, both of which are administered by agencies separate from the project.

The right to use water is granted by the states through each state's water laws. If water is diverted on Forest Service- or BLM-administered lands, the Forest Service or BLM have authority to regulate uses of these lands, and the agencies are required to issue special use permits, easements, or equivalent permits. These permits must be consistent with land use plans.

Management direction focuses on habitat for fish and wildlife and does not directly address populations, which are managed by the states.

Comment: All federal land holdings should be turned over to the states.

Narrative: *Many respondents, angry at the federal government for perceived mismanagement, demand that all federal holdings be returned to the states. These respondents believe that it is a constitutional right for states to control lands within their boundaries, and that the Forest Service and BLM are circumventing Congress and the people by imposing federal laws and regulations.*

Response: The lands administered by the Forest Service and BLM were established through federal law (such as the Organic Act of 1892 and Weeks Act of 1911) in accordance with congressional direction to set aside lands for the public to ensure long-term protection and management of the resources (such as water, timber, fire protection). Whether these lands should be divested from federal management and returned to the states is more appropriately addressed at the executive and congressional level.

Comment: The project should continue its public collaboration process.

Narrative: *A few commend the project for their collaboration process and for viewing the region as an ecosystem in need of restoration and attempting to restore ecosystems.*

Response: The project charter outlined that the project be conducted using an "open public process." Interacting with the public across such a broad area has been challenging at times; however, every effort has been made through public meetings and various communication tools to keep members of the public, interested stakeholders, and organizations informed and involved throughout the process.

Global Climate

Comment: The EIS should consider the consequences of global climate change.

Narrative: *Some respondents say that the EISs and science documents do not adequately address global warming. Some, citing the perceived gravity of the issue, state that such an omission is a major flaw. Noting the project's advocacy of prescribed burning as a management tool, some wonder if planners considered global climate when writing the Draft EISs. Some predict cataclysmic effects that might take place if human activities "do not change for the better." A few claim the best way to combat global warming is to harvest and use timber, thus preventing its carbon from re-entering the atmosphere as part of greenhouse gases. Others claim that no such global warming trend exists and that human activity has not caused any change in global climate; therefore, the EIS should drop all mention of global warming.*

Response: Global warming, or climate change is currently being debated within the scientific community. Climate has always changed over time, resulting in continuing adjustments by aquatic and terrestrial ecosystems. Vegetation is especially sensitive to climate change. Healthy ecosystems are better able to withstand environmental stresses and disturbances; therefore, management that promotes healthy ecosystems inherently provides some protection from global climate change. Ecosystems with high volumes of accumulated fuels, and those with vegetation types and structures described in the EIS, are at much greater risk from uncharacteristic wildfire; fuel reduction, whether by the use of prescribed fire or mechanical or manual thinning can gradually reduce that risk across landscapes. It unknown how much human activities have contributed to the documented warming of the climate in the Pacific Northwest and globally. However, it is well known that climate strongly influences ecological processes such as biological productivity, fire regime, soils, streamflow, erosion, and human uses of the land and resources. For these reasons, global climate change and its implications are appropriate topics of consideration for the ICBEMP. The *Scientific Assessment* addresses climate and climate change in Jensen et al. (1997) and Hann, Jones, Karl, et al. (1997); the Supplemental Draft EIS includes a discussion of climate and climate change in Chapter 2.

Use of Science

Comment: Decisions in the EIS should be based on science and objective analysis, not on political or personal biases. The EIS should be more consistent with the findings of the Science Integration Team.

Narrative: *Many assert that the Draft EISs are politically driven, and they claim that the preferred alternative ignores the advice of the agencies' own scientists. They believe the scientific findings of poor resource health (for example regarding salmon or other fish, the minimum amount of old growth, detrimental effects of roads, soil productivity, unnatural buildup of fuels, or poor range condition) are impartial. They criticize don't feel the EIS Team is impartial and believe they have influenced the structure of the alternatives and selection of the preferred alternative. Some think the EIS should address a continually changing world and population, and not set standards that cannot change with the decades to come. A few feel the agency is collecting the best data possible and commend the science used by the team. Another view is that the project should be terminated and the science forwarded to the local Forest Service/BLM administrative units for their consideration and use when revising their land use plans.*

Response: The Science Integration Team did the Evaluation of Alternatives in the Draft EIS and the Science Advisory Group conducted the Analysis of Effects for the Supplemental Draft EIS to reflect the cumulative effects analysis required by NEPA. They were able to bring forward, through that process, areas of inconsistency with the science findings. In addition, a Science Consistency Report was developed to identify where management direction in the Draft EIS preferred alternative was inconsistent with the *Assessment of Ecosystem Components*. The EIS Team and the Executive Steering Committee reviewed this report and made necessary adjustments to the Supplemental Draft EIS to address potential inconsistencies.

Comment: The validity and credibility of science used in the project should be peer-reviewed by non-agency scientists.

Narrative: *A few criticize scientific methodology, citing faulty assumptions and a lack of detailed analysis. They doubt the credibility of the science collected, claiming that the Science Integration Team (SIT) used old data and did not do any field work of their own. Others wonder why the SIT didn't collect available data from local communities that had recent findings. Many assert that the science that was collected should be sent through a peer review, but not by Forest Service or BLM scientists. They believe the science would have more credibility if it had been collected by outside agency scientists.*

Response: The scientific information was compiled and synthesized by more than 300 scientists and technical specialists. Individuals were affiliated with federal agencies, state agencies, universities, tribal governments, and private contractors. The scientific information was brought forward through task groups, scientific panels, workshops, field trips, literature reviews, and technical reviews.

The scientific reports were peer reviewed with oversight from an independent peer review board to assure credibility of the scientific analysis and findings. The Science Integration Team was not informed of who the reviewers were and the reviewers were not informed of who the authors were; this is called a double-blind peer review. Internal and external groups were allowed to provide names of potential peer reviewers to the review board for consideration.

EIS Alternatives

Range of Alternatives

Comment: The Draft EISs did not consider a wide enough range of alternatives.

Narrative: *Some respondents feel that although a broad range of conservation and restoration strategies are analyzed, little consideration is given to increasing the amount of timber, grazing, and motorized recreation. One person notes that only one cluster in one alternative was designed for high intensity commodity management.*

Some respondents feel that the range of alternatives is inadequate because all action alternatives effectively adopt the same standards. One respondent felt that a range of riparian management alternatives was not considered. Another wants to see an expanded range of alternatives that encompasses more accelerated and flexible vegetative treatment strategies. For the EIS to represent a broad range of alternatives, some organizations want their own alternative to be considered in detail.

According to some, none of the Draft EIS alternatives frame the major choices facing the region, reflect credible science, or respond to public input. The respondents believe that the action alternatives do not offer effective, implementable strategies for dealing with major management issues. To these commenters, none of the alternatives protect key resources and values or address ecosystem restoration in a sound fashion. All alternatives are felt either to be "non-adoptable" or to have too much discretion to offer meaningful choices for the region.

Some respondents feel that no alternative represents an integrated approach that recognizes the need for both active restoration and reserves, because Alternative 4 calls for "aggressive" silvicultural management across the landscape—even in roadless areas and other areas with high ecological integrity, which they feel could be degraded by such management.

One respondent asks that the EIS specify those alternative management methods that were eliminated from detailed consideration.

Response: Seven different management alternatives were presented in the Draft EISs. An additional three alternatives are presented in the Supplemental Draft EIS. The three "no-action" alternatives, and seven "action " alternatives were developed from scoping across the basin and public comments received on the Draft EIS.

Each alternative presents a different strategy to address the issues raised during scoping and the public comment period. Each alternative describes a different level of commodity outputs and protection. All 10 alternatives (including those presented in the Draft EIS) are available for selection by the deciding officials.

The National Environmental Policy Act requires the agency to explore and evaluate "all reasonable alternatives" which respond to the "underlying purpose and need." The alternatives presented in this Supplemental Draft EIS and the previous Draft EISs meet these requirements. To date, no complete alternatives have been submitted to the project. One partial alternative was submitted, but it was not analyzed because it was incomplete and did not respond to the purpose and need in Chapter 1. Alternatives with significantly higher levels of commodity management were not analyzed because they would not likely meet requirements in the Endangered Species Act. The action alternatives in the Supplemental Draft EIS were restructured to include both active restoration in certain identified areas (high priority restoration subbasins) that are at high risk of resource damage from natural disturbances, such as insects and disease and uncharacteristically intense wildfires, and protection of areas with high ecological integrity (A1 and A2 subwatersheds and T watersheds). Many alternatives were initially considered but were not given detailed analysis for various reasons (see Alternatives Considered but Eliminated in Chapter 3).

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Comment: The alternatives should all be presented in a parallel fashion.

Narrative: *In discussing the design of alternatives, some respondents suggest parallel organizations for all alternative descriptions, including references to traditional land uses and management actions. For example, in some descriptions of alternatives, grazing is discussed but not timber harvest, roads; levels of timber harvest, or road reductions.*

Response: Because some of the public found it difficult to follow the projected traditional management actions (such as livestock grazing and logging) among alternatives in the Draft EISs, the Supplemental Draft EIS (Chapter 3) discusses the themes, objectives, standards, and guidelines for each alternative that directs the management of activities on BLM- and Forest Service-administered lands. All alternatives in the Supplemental Draft EIS are presented in a similar fashion.

Comment: The alternatives do not provide a limit to the cumulative and direct disturbance to soils, vegetation, and other resources that could occur within watersheds and the whole project area.

Narrative: *Some commenters expressed a concern that previous forest plans at least provided a limit to the cumulative and direct disturbance to soils, vegetation, and other resources that could occur within project areas and watersheds. They feel that such limits are absent in the Draft EISs, except for some aspects of Alternative 7, even though cumulative disturbance and resultant effects are at the heart of the broad-scale issue of how alternatives are likely to affect aquatic resources.*

Response: The EIS addresses these issues at the broad scale, while allowing local management flexibility on implementation to meet the long-term goals of the project. The direction for each of the alternatives has been developed to meet these long-term goals, but the level and intensity of management varies between the alternatives. This direction, in conjunction with local land use plans, will provide resource protection in the long term.

Combinations of Alternatives

Comment: The selected alternative should be a combination of alternatives, to include both protection of a series of reserves plus the restoration of other non-reserve areas, and/or to provide for substantial levels of forest and range restoration and social-economic needs along with resource protection.

Narrative: *Many people suggested that the selected alternative should be a combination of two or more of the alternatives described and analyzed in the Draft EISs. The concerns expressed in these suggestions generally focus on the following themes: aquatic, forest, and rangeland health must be restored; we should proceed cautiously with restoration efforts; we should be more aggressive in restoration attempts; we should establish and protect a series of reserves; more needs to be done to meet the social and economic needs of people and communities.*

Specifically, some recommend a balance between Draft EIS Alternatives 4 and 7, because they feel that while areas of high ecological integrity must be preserved as reservoirs of ecological health, more aggressive treatment of disturbed areas as recommended in Alternative 4 should also be included. Some suggest it would be prudent to continue a policy of 'hands-off' on roadless lands to ensure that most, if not all, of these lands remain roadless and unmanaged (reflected in Alternative 7).

Some respondents think the selected alternative should incorporate more of the experimentation, local research, and monitoring of Alternative 6 into Alternative 4 because such features appear to be essential for adaptive management to succeed. Some respondents suggest that an alternative be developed and selected that combines components of restoration (as highlighted in Alternative 4), adaptive management (Alternative 6), and site-based management prioritization.

Some respondents feel that combining restoration features of Alternative 4 with adaptive management features of Alternative 6, and reserve design (Alternative 7) and elimination of roads would hold the best prospects: aggressively restoring conditions to benefit wildlife, going slow where uncertainties exist, and reserving the maximum area possible in roadless condition. Some would use the Alternative 4 approach where conditions are healthy, Alternative 6 if problems exist in the watershed or subwatershed, and Alternative 7 if the situation "looks bad" until the area improves to acceptable standards. Others would use Alternative 7 for all unroaded areas, using restoration (Alternative 4) only where preservation would be inadequate to return the land to ecological integrity, with caution (Alternative 6) to be used where questions indicate a need for further study.

Some would combine the caution and experimentation of Alternative 6 with restrictions on management activities in certain areas (Alternative 7). Others prefer adding mitigation strategies to a combination of Alternatives 6 and 7, to avert negative socio-economic effects on isolated, non-resilient communties. Some see Alternative 6 as showing the most promise to provide a healthy mix of forest stages and composition, restore landscape health, and control noxious weeds, with establishing a system of reserves on federal lands (Alternative 7).

Some would prefer a combination of Alternatives 3, 4, and 5 or Alternatives 1, 2, and 5 because they feel that social and economic needs of society would be better met by an alternative that would provide substantial levels of forest and range restoration, riparian restoration, hard commodity targets, greater road densities, more grazing, and fewer wilderness and roadless areas than Alternatives 2 alone or Alternatives 6 and 7 would allow.

Response: The Supplemental Draft EIS describes and analyzes additional alternatives. Alternatives S1, S2, and S3 portray different approaches to many of the concerns expressed. Alternative S1, no-action, would continue with present management unchanged; it is an "updated" version of Alternative 2 of the Draft EISs, recognizing that the interim management for protection of old forests and anadromous and other native fish habitat has become part of Forest Service and BLM land use plans.

Alternatives S2 and S3 include several aspects of the Draft EIS alternatives that were favored by many respondents. Areas of high ecological integrity and importance to fish and wildlife species have been identified and mapped (aquatic A1 and A2 subwatersheds and terrestrial T watersheds). The management intent in these areas is to protect those that are in good condition and to restore the others to improve their condition. These areas can serve as a core of important habitats from which to build a connected network. Roads can rarely be constructed in unroaded areas, and only after a roads analysis. Other areas that have risk of resource damage and opportunity for improvement have been identified as high priority for restoration. Restoration activities are intended to occur first in those areas that are near isolated and economically specialized communities.

Adaptive management is a key feature of both Alternatives S2 and S3. Objectives and standards (Chapter 3) in both alternatives call for the use of adaptive management and monitoring, and for opportunities for scientific experimentation and field trials. Implementation of the ICBEMP decision will use an adaptive management approach—a continual process to modify plans and activities over time. Details of the implementation and adaptive management framework are provided in Appendix 10.

Although Alternative S2 has been identified as the preferred alternative, all ten alternatives (the seven from the Draft EISs plus the three from the Supplemental Draft EIS) are available for selection by the deciding officials, who may select one of those alternatives or an alternative that combines features from several.

Comment: The EIS should not combine pieces of existing alternatives.

Narrative: *Some respondents feel that the project should not attempt to combine pieces of existing alternatives to make a new one. They believe that such an attempt would lead to failure because: (1) the public would not have sufficient involvement; (2) a composite alternative would contain internal thematic conflicts since the themes of the alternatives vary; (3) all of the action alternatives contain too many prescriptive standards that are inappropriate in a programmatic plan; and (4) no alternative supports a timely active management approach.*

Response: Alternatives S2 and S3 represent some elements drawn from the previous alternatives; however, the management direction contained in these two new alternatives was primarily developed based on public comments, new science information, and agency direction and input. Alternative S1 is based on Alternative 2 from the Draft EISs updated with several recent biological opinions issued by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service.

Comment: There should be only one no-action alternative.

Narrative: *Some respondents suggest that the comparison of action and no-action alternatives is flawed because of the presence of two no-action alternatives. The description of no-action should be revised to reflect the actual management direction in place at this time.*

Response: The Draft EISs recognized the temporary nature of the direction provided by these interim directives. This provided the possibility for the EIS Team to consider two "no-action" alternatives - Alternative 1, which is a continuation of management guided by the land use plans for Forest Service- and BLM-administered lands prior to interim direction, and Alternative 2, which includes the interim direction as part of the long-term strategy. The Supplemental Draft EIS describes only one no-action alternative (S1) which reflects the current management on federal lands (Forest Service and BLM) in the project area. Alternative S1 would include the interim direction (PACFISH, INFISH and where appropriate Eastside Screens) as long-term direction on BLM- and Forest Service-administered lands in the project area.

New Alternatives to Consider

Comment: The EIS should give full consideration to the Forest Service Employees for Environmental Ethics (FSEEE) plan.

Narrative: *Some commenters feel that the FSEEE alternative is a low-cost, low-risk alternative patterned after the Northwest Forest Plan, which they feel has been successfully implemented in the Pacific Northwest. Some cite the critical importance of combining watershed restoration with protection of riparian areas, old-growth forests, and roadless areas, which they believe is embodied in the FSEEE plan. Others believe the FSEEE plan offers an aquatic conservation strategy to restore the ecological integrity of entire watersheds, not just riparian areas or in stream habitat, and that it also proposes an extensive system of old-growth reserves and new standards for salvage logging, road building, grazing, and mining.*

According to some respondents, the FSEEE alternative is the only one that can provide the three things that they believe an ecosystem-based plan for the interior Columbia River Basin should do: (1) establish a reserve system to protect key areas of fish and wildlife habitat, including old-growth forests and roadless areas; (2) implement strong watershed restoration and habitat enhancement measures in priority areas; and (3) restore to the fullest extent possible the important ecological role of fire and other disturbances.

Response: In the development of alternatives for the Draft EISs, FSEEE presented its 1995 publication of *The AFSEEE-Sponsored Ecosystem Management Alternative for the Interior Columbia River Basin* to the project for incorporation as one of the alternatives to be analyzed in the Draft EISs. In reviewing the alternative presented by FSEEE, as well as issues identified by other publics, the EIS team used those concerns, as appropriate, that would meet the Purpose and Need for the project in the development of the original seven alternatives.

Based on comments received on the Draft EISs, the EIS Team developed and analyzed three additional alternatives (S1, S2 and S3) in the Supplemental Draft EIS, which reflect the overall issues presented by all those involved in the project, including FSEEE. NEPA

recognizes that issues drive alternatives to a proposed action and that the agencies need to analyze a "reasonable range of alternatives" that meets the Purpose and Need, addresses the public's concerns and ensures the best management of the land in the long-term. This is what is presented in both the Draft EISs and the Supplemental Draft EIS.

Comment: The EIS should consider the NRDC alternative, which halts commercial logging and grazing in old-growth and unroaded areas and cor-rects past damage in those areas with active restoration.

Narrative: *Some ask for endorsement of the management plan supported by the Natural Resources Defense Council (NRDC) and other conservation groups; their plan would halt commercial logging and grazing in the interior Columbia River basin's old-growth areas and in areas currently without roads. These respondents request that the agencies "undo the past damage in these areas with active restoration." Some suggest that "adopting a process with minimal trammeling by industrial society would be a viable alternative." One calls for adoption of an alternative that prescribes preservation of all roadless areas as roadless and unmanaged, a concerted program of road obliteration in areas already roaded, and a return of wildfire rather than continued fire suppression. Some respondents feel that continued commercial logging and continued heavy grazing is damaging to the ecosystem; these people feel that "we must protect our natural resources and turn a deaf ear to commercial interests."*

Response: The direction in the Supplemental Draft EIS seeks to promote old forest conditions and protect old forests from both natural and human-caused disturbances. The alternatives in the Supplemental Draft EIS do not prohibit all logging and grazing in old forest and unroaded areas. For areas that are unroaded or where few roads exist, the direction in the Supplemental Draft EIS states that new roads in these areas would be rare and would first require a roads analysis to take place that weighs the relative habitat values against the need to address large-scale environmental damage.

Comment: The EIS should consider an alternative that incorporates input received from the Columbia River Bioregion Campaign, Indian tribal nations, and others.

Narrative: *Some people feel the project has not included a critical alternative that flows from the science compiled by the Science Integration Teams, the objectives of the project, and input from the Columbia River Bioregional Campaign (CRBC), Indian tribal nations, and others. They note that the CRBC alternative would involve carefully selected restoration actions which are closely monitored and would involve varying levels of activity and controls in some areas, so that management is always tentative, adaptive, and comparable to natural processes. To these respondents, large, well-functioning and recovering areas within which natural processes can predominate, should be protected and restoration activities should be undertaken lightly, appropriately, and non-commercially wherever possible. They feel that non-motorized recreation should be emphasized in this alternative. They ask the EIS Team to seriously consider the CRBC's call for a fully funded ecosystem alternative that protects migration corridors, old-growth forests, and key watersheds.*

Some respondents feel that the Draft EISs must be revised to include evaluation of at least one alternative that has high levels of active restoration of road networks in watersheds with anadromous fish and a suspension of road construction as recommended. They feel that the EIS must include an alternative that completely protects RCAs from degradation from logging, road construction, mining, and grazing in all watersheds with anadromous fish, because these actions are essential to rebuilding anadromous fish runs and providing some contribution toward viability. They state that such an alternative is needed for tribes to credibly assess the effectiveness of reasonable approaches to protecting and restoring anadromous fish habitats consistent with federal trust responsibilities, the Clean Water Act, and other applicable laws.

Response: Many of the concepts offered by various organizations and other governmental agencies, including tribal governments, have been incorporated into Alternatives S2 and S3. They can be found in the direction for aquatic A1 and A2 subwatersheds and terrestrial T watersheds to protect and restore aquatic and terrestrial habitats and meet other requirements of laws and treaties.

Comment: The EIS should consider an alternative that incorporates Oregon Governor Kitzhaber's 11-point timber plan.

Narrative: *Some suggest the team look closely at Oregon Governor Kitzhaber's 11-point timber plan, which calls for protection of remaining old-growth stands, protection of riparian and roadless areas, and generally advocates a closer look at what constituents and professional scientists are saying.*

Response: Many of Governor Kitzhaber's 11-points are compatible and consistent with Alternatives S2 and S3. The intent of many standards, objectives, and guidelines is to improve ecosystem health through the maintenance and restoration of riparian, forest, and rangeland vegetative structure and composition, or what Governor Kitzhaber refers to as active management. In addition, adaptive management, monitoring and review are vital components of both Alternatives S2 and S3. Appendix 10 contains more information on the adaptive management and monitoring framework.

Comment: The EIS should consider an alternative that incorporates input received by the Deschutes Provincial Advisory Committee.

Narrative: *Some support the approach to the alternatives presented by the Deschutes Provincial Advisory Committee. They believe that the Alternative 4 'active restoration' approach will begin to meet the federal trust responsibility if it is modified to include certain objectives found in Alternatives 5, 6, and 7 regarding harvestability of culturally significant fish, wildlife, and plants, including the establishment of reserves that will promote hydrological integrity of anadromous fish-yielding streams.*

Response: The direction in the alternatives developed for the Supplemental Draft EIS incorporates many of the concepts that were included in the Draft EISs and is also responsive to the comments received by the Deschutes Provincial Advisory Committee.

Comment: An alternative should be developed that would allocate specific areas for emphasis of certain management priorities.

Narrative: *Some respondents strongly recommend developing a new alternative that identifies specific locations in the interior Columbia River basin where commodity extraction and other human uses such as grazing and recreation would be emphasized. They say that such an approach could assure predictable future outcomes and successfully meet habitat needs while providing for human uses.*

Response: Alternative 5 in the Draft EISs assigned timber production, forage production, wildlife, fish, and recreation management emphases or priorities to "priority areas" most suited for particular uses.

Alternatives S2 and S3 prioritizes areas for aquatic and terrestrial species health, and other areas for restoration activities. An emphasis is placed on conducting managment activities near isolated, economically specialized communities first.

Comment: A new alternative should be included that involves a broad cross-section of management themes across the planning area (such as Conserve, Conserve/Restore, Restore, Restore/Produce, Produce/Conserve themes).

Response: The concept of Conserve / Restore / Produce management emphases in range and forest clusters was not brought forward to the Supplemental Draft EIS. Alternatives S2 and S3 in the Supplemental Draft EIS identify areas of priority for aquatic and terrestrial species health, as well as areas of priority for restoration activities.

Comment: An alternative should be developed with management actions that contribute to species recovery and preclusion of future listing.

Narrative: *Some respondents recommend that the EIS include an alternative with management actions that contribute to species recovery and that preclude future listings. Standards and objectives which assure the recovery and conservation of all proposed and listed species in the project area should be developed.*

Response: To the greatest degree possible, analysis and management direction is built into Alternatives S1, S2, and S3 to reduce the potential to list additional species, where all or a major portion of the species population resides on federal lands. In addition, the intent of the EIS is to provide the necessary direction to contribute to species recovery. This intent is clearly written into the goals for the project in Chapter 3.

Specific Alternatives

Comment: Comments diverge on the validity of Alternative 1.

Narrative: *Some feel that Alternative 1 is simply 'business-as-usual' and does nothing to fulfill the purpose and need of restoring ecosystem health; they believe that in the long-term it also will not provide a reliable flow of goods and services. Other respondents see Alternative 1 as*

invalid as a true "no-action" alternative because the land management agencies have already agreed to implement PACFISH and INFISH, and decisions would have to be made to cease the implementation of those interim strategies; therefore, it does not have value for comparing action alternatives.

Others feel that current management probably now represents the collective values of how the public wants Forest Service- and BLM-administered lands managed, and they feel the alternative maintains access for producing commodities. Some feel strongly that Alternative 1 is the most appropriate alternative for managing the project area public lands.

Response: Alternative 1 in the Draft EISs was included as a legally required no-action alternative against which to compare the proposed action alternatives. As a no-action alternative, Alternative 1 was neither intended nor required to fulfill the Purpose and Need and did, intentionally, represent "business as usual." Alternative 1 intentionally does not contain the provisions of PACFISH, INFISH, and Eastside Screens because these are interim measures; it was necessary to present and evaluate the consequences of continuing management direction that existed before any modification occurred. However, recognizing that the interim measures have, in fact, been in place for some time, a second no-action alternative (Alternative 2) that does include those provisions was presented in the Draft EISs to enable a full comparison to both situations.

In the Supplemental Draft EIS, Alternative S1 is similar to Alternative 2 from the Draft EISs, but it is updated with the addition of the Biological Opinions issued by the National Marine Fisheries Service and U.S. Fish and Wildlife Service since the release of the Draft EISs.

Comment: Comments diverge on the validity of Alternative 2.

Narrative: *Relatively few comments were received on Alternative 2, with most people feeling it contains the same problems as Alternative 1, with additional constraints to management approaches. Others feel since Alternative 2 is essentially a "no change" alternative, calling for implementation of existing plans and adherence to PACFISH and INFISH.*

Response: The relationship between PACFISH / INFISH and Draft EISs standards have been clarified in the Supplemental Draft EIS in the discussion on Alternative S1. PACFISH / INFISH were originally analyzed and documented in an environmental assessment rather than an EIS because of their interim nature. Considering them here in the EIS process identifies their consideration as long-term direction in the project area.

Comment: Alternative 3 should be chosen as the selected alternative.

Narrative: *Alternative 3 received few comments. Some people recommend selection of Alternative 3 because of what they perceive to be its cost-effectiveness, immediacy, and retention of a moderate amount of harvesting activity.*

Response: Alternative S2 has been identified as the preferred alternative. Of the 10 alternatives considered, the decision makers feel Alternative S2 best meets the Purpose and Need.

Comment: Comments diverge widely on the validity and reasonableness of Alternative 4.

Narrative: *The Draft EISs preferred alternative, Alternative 4, received the most comments of all the alternatives. Some feel it represents a reasonable compromise between social demands for commodities and ecosystem health. Others question whether restoration activities will truly resemble ecological processes, especially in areas which already have high ecological integrity or are capable of recovering by themselves. Others feel that the Final EIS needs to explain the active management activities which will be promoted and how they differ from past management activities.*

Response: As part of the National Environmental Policy Act process, comments received on the Draft EISs assist the Forest Service and BLM to gain a better understanding of the public's concerns on the future management of Forest Service- and BLM-administered lands. This input, as well as other issues raised by the public, resulted in the development of the three alternatives presented in the Supplemental Draft EIS. The objectives, standards, and guidelines for each alternative have been developed to assist local land managers in deciding which management activities (both active and passive) should be implemented in an attempt to resemble ecological processes.

The Supplemental Draft EIS attempts to better clarify what management activities will be promoted through the alternatives. Much of the management direction from Alternative 4 was included in Alternative S2. In addition, the management intent was clarified and new direction was added.

Comment: Comments diverge on the validity of Alternative 5.

Narrative: *Alternative 5 is considered by some to be very similar to Alternatives 1 and 2, but they feel it moves too slowly toward ecosystem restoration. For many, the acceptability of this alternative remains unknown until it is "incorporated into local Forest Service and BLM land use plans.'' These respondents feel that it is not possible to determine the sustainability and predictability of timber benefits until forest plans are completed at some undefined future time.*

Response: The selected alternative will amend the current land use plans to meet the long-term goals and objectives of the project. The objectives, standards and guidelines will assist local land managers in deciding which management activities (both active and passive) should be implemented to address the need for sustainability and predictability of commodity products as well as amenities and services.

Comment: Comments diverge on the validity of Alternative 6.

Narrative: *Some respondents favor Alternative 6 but feel some areas should be designated as control points to evaluate different types of commodity use. Others like the slower and more cautious approach and feel it offers the best benefits to aquatic resources.*

Response: An adaptive management approach, similar to what was intended in Alternative 6, with options for controlled experiments as well as informal field testing and evaluation, form a key part of both Alternatives S2 and S3. More information about the adaptive management and monitoring framework can be found in Appendix 10.

Comment: Comments diverge widely on the validity and reasonableness of Alternative 7.

Narrative: *A number of people feel that too many of the areas designated to be reserves in this alternative are too degraded to fulfill their purpose, or they feel that areas with high ecological integrity were not included. Others suggest that the reason "Alternative 7 performs so poorly" is that it lacks many of the basic restorative programs and management safeguards that are included in other alternatives. These respondents feel that "active management and reserves are not mutually exclusive," and that many of the Alternative 7 reserves that encompass roads would likely benefit from more active restoration.*

Some respondents state that Alternative 7 needs further clarification. They note that while the alternative proposes a strategy that would protect large tracts of high quality habitat for the conservation and restoration, it fails in their opinion to: identify specific areas for protection, give clear direction for consistent identification of lands to be set aside, or propose a process of allocation as a means for reconciling conflicting land uses.

Respondents feel that by relying on wildfire to restore forest and rangeland conditions and by preventing road restoration and weed management, the framers of Alternative 7 designed an alternative that was guaranteed to receive low marks. They feel this alternative never had a chance and therefore fails to contribute to a range of reasonable alternatives.

Response: Alternative 7 presented a less intrusive approach to the management of Forest Service- and BLM-administered lands. The effects of implementing this reserve-oriented alternative were disclosed in the Draft EISs. The action alternatives in the Supplemental Draft EIS provide a different approach to protecting aquatic and terrestrial habitats, through the identification of aquatic A1 and A2 subwatersheds and terrestrial T watersheds, where low risk would be accepted. In addition, subbasins that are a high priority to restore are identified where more activities, including presribed fire, would occur.

Desired Range of Future Conditions

Comment: Desired Range of Future Conditions cannot accurately predict how landscapes and society will change over the next 50 to 100 years.

Narrative: *Many question the validity and usefulness of the Desired Range of Future Conditions (DRFC). They feel that any predictions of the future will fail because we cannot predict how landscapes and society will change over time. They argue that new laws and policies, and technological changes in energy, transportation, communication, and agriculture, will make the year 2150 as different from today as today is from 1850. One person suggests using only 50 years for the maximum, as the Forest and Rangeland Renewable Resource Act does. Others argue that the DRFC should vary among clusters and communities.*

Response: The DRFCs were intended to only show expectations of what the land, resources, social and economic conditions would be like sometime in the future. As society changes, and new laws are imple-

mented, changes to local land use plans will occur to reflect this through the appropriate planning process. The overall intent is to allow for an improvement to the lands administered by the Forest Service and BLM. In order to minimize confusion about the use of DRFCs, the Supplemental Draft EIS incorporates the descriptions of desired outcomes into the actual objectives or their rationales.

Comment: There is no scientific data to prove that the condition of these lands in the 1850s was ideal; therefore, historical range of variability should not be used as a guide for establishing DRFCs.

Narrative: *Many are upset that the concept of historical range of variability (HRV) was used in the Draft EISs. The use of HRV tended to confirm their perceptions that the project's implementation would make the basin look as it did in 1850, with perhaps only Native Americans left. They feel that European settlers and people since then have greatly increased the productivity and health of the land; they use as examples: dams have prevented flooding and riverbed scouring, and other developed water sources and agriculture have afforded some wildlife a much larger range. They question how anyone could know the exact conditions of that earlier time period, and if they did, how any estimate of variability could be made. Some argue that no scientific estimate of existing ecological health can be made, and certainly no estimates can be made of previous ecosystem health.*

Response: The historical range of variability (HRV) was not intended to be interpreted as representing ideal conditions. As described in Chapter 2 of the EIS, HRV was used only to represent ecological conditions and processes that scientific evidence suggests occurred prior to settlement of the project area by Euroamericans in the mid 1800s. These conditions, which always have varied between some high and low points, were selected only as a baseline set of ecological conditions for which sufficient scientific or historical information was available to enable comparison to current conditions. For purposes of the project, areas that were found to be significantly different from historical conditions (outside the high or low points that would have been expected based on what we know of the past) were considered to be more in need of restoration to allow ecological processes and functions to operate well and provide the goods and services that humans desire. This information helped the EIS Team understand important broad-scale changes in vegetation, wildlife and fish habitats, water quality, and other resources, which in turn helped them design management strategies that would best restore and maintain ecological processes and functions across the project area.

Objectives and Standards

Comment: The clarity of the objectives and standards needs to be improved and the EIS needs to clarify an apparent contradiction regarding the flexibility of standards.

Narrative: *Some respondents note that navigating Table 3-5 was so difficult it needed a seven-page index. Some say that the relationship between objectives, standards, and guidelines is not clear and will result in confusion during implementation. Some feel that the EIS Team must provide a clear display of the spatial relationship of how the objectives, standards, and guidelines relate to landscape-level management. Some feel that most of the objectives, standards, and guidelines are vague, without clear purpose, or they create management conflicts.*

They ask that the EIS clarify the assumption that "objectives will be implemented within 10 years"—whether this refers to full accomplishment of objectives, or initiation of work toward them. They suggest that work toward meeting objectives needs to begin immediately after a Record of Decision, and their progression through 10 years needs to be displayed.

One respondent notes that there is no "clear road map" in the objectives and standards that tells how the management plan will unfold, and that clarification of how implementation of the standards, objectives, and guidelines will lead to desired future conditions is needed. Another respondent feels that the standards in the Draft EISs do not meet the definition identified in the National Environmental Policy Act as the minimum criteria for mitigation measures; it is felt that the standards here largely dictate process, not the prevention of certain future impacts, minimization of environmental impacts, or mitigation.

Response: Table 3-5 was not carried forward to the Supplemental Draft EIS. The objectives and standards for Alternatives S1, S2, and S3 are provided in an easier-to-read format. A definition and description of the relationship between objectives, standards, and guidelines is located in the Key Terms box at the beginning of Chapter 3 of the Supplemental Draft EIS.

Objectives, standards, and management intent are all considered management direction to be followed. Only guidelines are optional direction to be considered as suggestions on how to meet the standards, objectives, and management intent. In addition, a

hierarchy of management direction was developed and is outlined in Chapter 3. The hierarchy is intended to minimize conflicts between overlapping direction. This programmatic EIS is intended to provide broad-scale direction while providing local managers flexibility in meeting the management intent.

Comment: Stronger, more enforceable standards should be provided.

Narrative: *Respondents feel that the Draft EISs do not include "rules (standards)" adequate to guide on-the-ground management to achieve landscape restoration and species conservation. Without firm standards, they feel, "the agencies are likely to continue with the business-as-usual management that degraded these land and waters over the past 100 years." Some respondents feel that enforceable standards, by definition, must contain explicit time lines for implementation, must contain explicit wording laying out standardized procedures to determine compliance, and must commit agency personnel to clearly defined, non-discretionary "action triggers."*

Response: The direction for each alternative (S1, S2 and S3) has been developed to meet the long-term goals outlined in Chapter 3, but the level and intensity of management varies between the alternatives. Each alternative has a variety of objectives, standards, and guidelines requiring land managers to meet the needs of the land and the project's Purpose and Need, yet allowing them the flexibility to pick and choose those activities that are appropriate at the local level. Objectives and standards are mandatory for land managers to use when implementing projects, thus meeting the "enforceable" concern voiced by some of the public. The ultimate goal is that following the direction outlined here, in conjunction with local land use plans, will result in the protection needed that is best for the resources.

Comment: Some standards conflict with each other.

Narrative: *Some respondents feel that standard TS-S3 may conflict with TS-S1 regarding conversion to non-native species. They also ask for a definition of "ecologically appropriate species" under TS-S2. Others suggest that standard TE-S9/A1 limits on even-aged openings less than 40 acres could conflict with TE-S16/Al and TE-S17/A1, especially if open, single-storied stands are desired to provide big game winter range or to rehabilitate rangelands invaded by conifers.*

Response: Comments such as these helped the EIS Team remove conflicts and redundancy between the standards. Changes in the standards and guidelines are reflected in Chapter 3 of the Supplemental Draft EIS. As for the definition of "ecologically appropriate species" these are species which were part of the historical context of the ecosystem and those introduced species (such as brown trout) that play an integral and beneficial role in the ecosystem, both ecologically and socially, over the long term.

Comparison of Alternatives

Comment: The evaluation criteria and indicator variables are not objective and don't represent the issues people care about.

Narrative: *Some respondents feel that the EIS Team needs to address the degree to which the alternatives addressed each goal. These people didn't feel that the evaluation criteria or indicator variables were objective or representative of the issues people care about. Attempting to compare alternatives at such a broad scale with subjective criteria is neither practical nor meaningful because of the amount of guesswork and aggregation involved.*

Response: The alternatives in the Draft EISs and the Supplemental Draft EIS were reviewed by the Science Team to have an independent science evaluation. The EIS Team developed a set of evaluation criteria based on the Purpose and Need statement, issues, goals, and public comments and concerns, to help guide the evaluation of alternatives. The EIS Team and the Science Team then jointly agreed on a set of indicator variables (quantitative, objective measures of ecological, economic, and social conditions), which were used in the evaluation.

The Science Team and the EIS Team evaluated alternatives on the basis of the data and relationships described in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), which included published and unpublished research, studies, and reports. Conclusions regarding future conditions were based partly on a series of computer models to simulate the management direction as it would reasonably be implemented during the next decade (short term) and the next century (long term). Many of the models were developed as part of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) or the *Evaluation of EIS Alternatives* (Quigley, Lee, and Arbelbide 1997). Some new models were developed specifically for the analysis of the Supplemental Draft EIS. Inferences were based on available information and model results.

Collaboration/ Involvement

Public Involvement/ Adequacy of Process

Comment: The process for public involvement in the project and subsequent plan modifications should be clearer and more accessible.

Narrative: *Most individuals who commented on the adequacy of the project's public involvement process agree on the importance of public input. But many are frustrated with the process for public collaboration and suspect their input is not being considered by government decision makers.*

There is concern among many people that the very size of the document and supporting data is so large that it discourages participation and understanding. If the local impacts of each alternative were presented in a clear and accessible format, some suggest, the public could more easily identify their concerns and offer constructive comment.

Throughout the 11-month comment period, many respondents requested that officials extend the time for public comment.

Response: During the public comment period, nearly 40 public meetings were held and more than 70 briefings were given to many different constituents. At the beginning of the public comment period, nearly 1,000 people viewed an information-sharing teleconference, produced by the project and broadcast to more than 60 communities in the project area. The *Assessment of Ecosystem Components*, Draft EISs, and the *Final Analysis of Public Comment* are all located on the project's website, as well as in many public libraries. Since the public comment period began in June 1997, more than 2,500 copies of the Draft EISs have been distributed. Also since that date, 11 issues of the project newsletter have been mailed to more than 7,000 people, providing periodic updates on the project.

More than 83,000 public comments on the Draft EIS were received, reviewed, and analyzed. Alternatives S2 and S3 in the Supplemental Draft EIS were developed using ideas, concepts, and suggestions received from the public, new science information, and internal (Forest Service and BLM) input.

Comment: Input from the public residing within the project area should be more influential than input from outside the project area.

Narrative: *Some feel that comments from the public living within the project area should be more influential than those from outside the project area. One person suggests that comments from outside the project area be separated because more distant people have a less crucial stake in the outcomes. Others state the opposite, that since public lands belong to the entire nation, the entire American public should have a say in decisions concerning public lands. To some, the level of comment on an issue is not an indication of public sentiment, but merely a reflection of the political campaigns of interest groups which have mailed thousands of form letters aimed at influencing the process.*

Response: By law, comments are considered based on their content and substance rather than by where they come from or how many there are. In part, this is because public comments are not a valid statistical sample of how all people with a stake and interest in federally administered lands feel about the management of those lands. The number or origin of comments cannot be used as a 'vote' or a way to unduly influence federal officials.

Comment: The project should continue its methods for public involvement, updating these methods when possible.

Narrative: *A few people approve of the use of newer technology to present project information, and offer suggestions to make it work better. For example, at least one suggests that the EIS could be divided into smaller on-line documents, each with a table of contents. This would enable computer users at home to download and print their particular areas of interest, rather than the entire document.*

Response: Use of up-to-date technologies (such as video teleconferences and the internet), as well as standard public meetings and newsletters, have been used to update people on the project. Most of the published project documents, updates, newsletters, and news releases have been posted on the project website in an easily accessible format; the Draft EISs are divided into chapters on the website.

Comment: The project staff should be more informative and more interactive with the audience at their public meetings.

Narrative: *While some appreciate government efforts, such as public meetings, designed to clarify the project, others say they wish the public's questions could be better answered at the meetings. Many say such meetings provide only a one-way flow of information from the government to the public, rather than an opportunity for the public to express their concerns to government officials. Some people believe the public input process began only after a list of alternatives was presented to them and state they could have participated in the process more effectively if they had been invited from the start.*

Many suspect the government has already made its decision under pressure from well-funded interests. Some feel the process for public collaboration is more an exercise in propaganda than a real quest for the public's concerns. Some suspect the cumbersome and confusing nature of the documents conceals an ulterior motive, such as a deliberate attempt to exclude the public from interfering with implementation of decisions already made.

Response: During the formal EIS scoping period in 1994 and 1995, the project held 17 scoping meetings plus a far-reaching video teleconference broadcast simultaneously to 27 meeting locations across the project area. Besides these, more than 20 general public meetings were held prior to the release of the Draft EISs. Public meetings have been structured to include extensive question-and-answer periods as well as general project updates. The project has strived to use an open public process since its inception and take valid input into account throughout the development of the EIS. Project staff and other agency employees attempt to provide adequate answers but may occasionally need to refer technical questions to specialists on the EIS Team and the Science Team.

Relationship to Other Planning Processes

Relationship to Existing Forest Service and BLM Land Use Plans

Comment: Existing local Forest Service/BLM planning processes should be relied upon because of perceived conflicts between the EIS and local plans and processes.

Narrative: *Many respondents note that Forest Service and Bureau of Land Management administrative units already have their own plans as mandated by the National Forest Management Act (NFMA) and Federal Land Policy and Management Act (FLPMA). They feel that these local land use plans enjoy broad local support, use valid scientific methods, and are the result of years of hard work, planning, and compromise. Respondents worry that a decision made on this large a scale will prohibit flexibility for local managers when appeals and litigation already have prevented implementation of many such local plans. Many people think the selected alternative in the EIS will supersede these plans, which some state would violate NFMA and FLPMA (which establish rules for revising or amending plans) and also add yet another layer of regulation and procedure many see as unnecessary.*

Others are concerned that strategies and commodity output levels established in the individual plans will be superseded by the EIS's more general broad-scale output goals. Suggestions are made to provide a well-defined land use plan amendment/revision process before proceeding with an EIS or Record of Decision. Respondents want to know how this new approach will improve the ability of the agencies to withstand legal challenges to existing plans; they want a full discussion of this topic to be precise and clear and not buried in an appendix.

Response: The project has followed the planning processes prescribed in regulations for the Forest Service (36 CFR 219) and the Bureau of Land Management (43 CFR 1610)., including the process for amending land use plans. From the outset the project has stated that this planning action would amend Forest Land and Resource Management Plans and BLM's Resource Management Plans and Management Framework Plans (collectively referred to as land use plans). Alternatives in the Supplemental Draft EIS (S2 and S3) simplify direction by focusing on four basin-wide components: aquatic habitat; terrestrial species habitat; landscape health; and human needs, products, and services. A hierarchy of management direction has been added to Chapter 3. It explains that existing land use plans provide the management foundation for the project area and that much of that foundation, especially the finer-scale direction, will remain unchanged by the Record of Decision. The hierarchy of management, together with the step-down process for bringing broad-scale direction down to the local level (national forest or BLM District), are intended to meet the need for a well-defined plan amendment and implementation process.

Comment: The EIS should describe how the selected alternative will affect certain provisions in existing Forest Service/BLM land use plans (outputs, allocations, etc.); the EIS should not be used to modify commodity outputs of local Forest Service/ BLM land use plans without adequate analysis.

Narrative: *Some respondents feel that, at a minimum, the Draft EISs must show how the alternatives will affect the existing forest plan resource output schedules, and explain the procedures and outcomes whereby the project direction will be integrated with forest plans and project analyses. Some note that National Forest Management Act requires that these tradeoffs be considered during a significant forest plan amendment, and they find it remarkable that the Draft EISs "make no estimate of effects for individual forests which would provide for meaningful comparisons to existing forest plans." They feel that the Draft EIS assignment of management output emphasis to clusters affects which lands are suitable for timber production and the level of resource outputs, but NFMA and forest plans prohibit changing the land assignments to management areas and management emphasis without revising the forest plan. These respondents feel that rather than serving as a foundation for efficiency, such a process will generate additional headaches, noting that "from a resource user's standpoint, the specter of a plan that cannot be implemented to produce tangible outputs, being overlaid on a suite of nearly dysfunctional plans, is a nightmare."*

Some feel that providing specific data in Table 3-6 sets up unreasonable expectations for the public that may drive future decisions regarding timber outputs. Some people feel that Tables 3-6 and 3-7 essentially revise the commodity outputs, such as timber allowable sale quantities, in current land use plans, without mid-level or fine-scale analysis. Others feel that the EIS is incomplete without an estimation of Allowable Sale Quantity (ASQ) or Probable Sale Quantity (PSQ) of timber. They believe that communities need to know if predictable levels of harvest will continue year to year so that banks will have the needed criteria to make loan decisions and so that governments and schools can draft their annual budgets. Others allege that changes in Allowable Sale Quantity and Probable Sale Quantity can and should be estimated to provide more accurate information in the analysis, such as how many mills will close. To ensure ASQ and other outputs will be achieved, some believe the Forest Service and BLM must commit to a legally binding plan. A few point out the required schedule of forest level outputs as required by NFMA are not disclosed.

Response: Existing land use plans provide the management foundation for the lands administered by the Forest Service and BLM in the project area. Much of that foundation, especially the finer-scale direction, will remain unchanged by the Record of Decision. The hierarchy of management, together with the step-down process for bringing broad-scale direction down to the local level (forest or district), is intended to meet the need for a well-defined plan amendment and implementation process. It is during the plan revision or amendment process that the schedule of forest-level outputs would be disclosed.

The EIS does not propose to change existing land allocations. An estimation of effects on the levels of goods and services can be found in Chapter 4. Any changes in the level of goods and services attributed to the selected alternative can be compared with Alternative S1 (description of the current situation).

The revised strategies (Alternatives S2 and S3) in the Supplemental Draft EIS include a more detailed description of how local Forest Service and BLM managers and their staffs can take the broad-scale information and management direction, and "step it down" to mid- and fine scales. The step-down processes allow local managers to consider site-specific conditions when designing activities to meet broad-scale expected outcomes.

Activity Tables 3-6 and 3-7 were generated for the Draft EIS to provide a basis for evaluating the effects of the alternatives. They have been replaced in the Supplemental Draft EIS with a series of "storylines" which the EIS Team provided to the Science Advisory Group (SAG) as guidance for modeling activities, based on the management intent and direction in the EIS. The storylines can be found in Appendix 14.

Comment: The EIS should explain its relationship with the Federal Wildland Fire Management Policy and Program Review.

Narrative: *Some maintain that the* Federal Wildland Fire Management Policy and Program Review *mandates the use of fire in certain areas. These respondents question whether the EIS will conflict with this plan.*

Response: The *Federal Wildland Fire Management Policy and Program Review* was chartered by the Secretaries of the Interior and Agriculture in response to the challenge of managing the increasing complexity and magnitude of wildland fire in the United States (USDA and USDI 1995).

The *Review* addressed major topic areas, guiding principles that are fundamental to wildland fire management, and recommended a set of 13 federal wildland fire policies. The proposed federal policies were developed as an "umbrella" that do not replace

existing agency-specific policies but compel each agency to review its policies to ensure compatibility. Individual agency policies are reflected through the land and fire management planning processes, as well as by manual direction.

The *Review* covered five topic areas: (1) the role of wildland fire in resource management, (2) the use of wildland fire, (3) preparedness and suppression, (4) wildland / urban interface protection, and (5) coordinated program management. The *Review* does not mandate any particular fire management action in any particular geographic area, or on any land allocation or land use. However, it encourages the use of fire in its natural ecological role, where it is consistent with other land and resource management objectives, as well as with other social concerns and objectives (such as safety, risk management, air quality management, and economic efficiency). Furthermore, the use of fire must be consistent with agency policy.

The Supplemental Draft EIS is consistent with the recommendations of the *Federal Wildland Fire Management Policy and Program Review*. This is demonstrated by the incorporation of the role of fire as an ecological process and natural change agent, and the inclusion of newly available scientific analyses (such as in Chapter 3 of *An Assessment of Ecosystem Components* [Quigley and Arbelbide 1997]).

Comment: **Before an EIS and Record of Decision are signed, administrative planning rules should be modified to regulate and direct broad-scale analysis and decisions.**

Narrative: *A county representative finds it "noteworthy [that] the planning has occurred prior to the development of any guidelines or direction for planning at this scale." This respondent asks how a Record of Decision can expect to amend current BLM and Forest Service land use plans at various levels when each has a different administrative process to follow for making amendments. The commentor feels that an EIS is not an appropriate vehicle for setting policy, and that people must either follow existing regulations or amend the regulations before going around them.*

Response: The guidelines or direction for planning at this scale are found in *A Framework for Ecosystem Management* (Haynes, Graham, and Quigley 1996). The process for making plan amendments, as detailed in planning regulations of the two agencies (36 CFR 219 for the Forest Service, and 43 CFR 1610 for the Bureau of Land Management) is virtually the same up to the point of administrative remedy associated with the decision. The Forest Service signs the record of decision and then offers a 30-day period in which to appeal the decision. The Bureau of Land Management circulates a proposed decision and offers a 30-day period in which to protest before the Record of Decision is signed.

The two agencies are exploring ways to use the same administrative process for appeal / protest. Using one process would be more efficient, ensuring that both agencies arrive at the same decision. Whichever process is used, it will allow other agencies or the public to make known their views on the decision or proposed decision and offer a real opportunity to alter the decision.

Relationship to Interim Strategies (PACFISH, INFISH, and Eastside Screens)

Comment: **Public comments diverge on whether the EIS should rescind, incorporate, or improve upon the interim strategies (PACFISH, INFISH, and Eastside Screens).**

Narrative: *PACFISH, INFISH and the Eastside Screens are interim strategies involving management methods designed to protect salmon, wildlife, and old forests in the project area. A few respondents comment on these plans, but people disagree on whether the EIS should rescind them, continue them with no further direction, or improve upon them with more stringent standards.*

Some say these interim plans have hurt local economies and they want to see the interim guidelines dropped. Individuals suggest there will be a significant reduction in timber produced from the basin if these standards are employed. Surrounding communities, they declare, will face economic hardship and severe distress as a result.

Others feel that existing programs such as state Best Management Practices (BMPs) combined with PACFISH/ INFISH already provide sufficiently strict controls over activities that could affect aquatic health, so no further direction is necessary. Some feel the replacement standards in the Draft EISs are even more restrictive than PACFISH and INFISH. Claiming that the agencies are simply reiterating these interim guides in a new format, some individuals request that these strategies be replaced with functionally based approaches. They feel that these measures are not based on science. One respondent feels that the Forest Service should remove all the interim guidelines and use the existing forest plans.

While many feel that the riparian protections in these interim measures are necessary and that the EIS should incorporate them, some are suspicious that the Eastside

Screens in particular will be used improperly to exempt ongoing activities if the activities make it through the screening process.

Others feel the EIS should permanently adopt INFISH and PACFISH standards to protect fish habitat for the long-term, unless there are defensible biological rationales from the agencies for moving away from these interim strategies. Some individuals believe that none of the alternatives in the Draft EISs include RCA widths safe for anadromous fish populations. They assert that grazing, clear cutting, mining, and road construction on channel banks, should not be allowed within these RCAs. Some say that the EIS should include a discussion of the applicability of PACFISH RMOs for project area streams within the RMO discussion for Alternatives 2 and 3.

Response: The interim strategies (PACFISH, INFISH, and Eastside Screens) were initiated to preserve future management options until permanent direction, in the form of the ROD based on this EIS, replaces it. The interim strategies take a one-size-fits-all approach to halt the decline of aquatic and terrestrial habitats and begin the recovery process. Because of this, many of the interim directions are purposely restrictive because they were only meant to be in place for the short term while this long-term strategy was developed. The Record of Decision will permanently replace PACFISH, INFISH, and the Eastside Screens.

Where appropriate to the intent of the long-term strategy, specific direction from the interim strategies has been incorporated into the action alternatives (Alternatives S2 and S3). In addition, some specific elements of the interim strategies are incorporated as interim or "default" standards in Alternatives S2 and S3.

Management direction is provided for RCAs in the Supplemental Draft EIS (Chapter 3), to conserve and restore aquatic and riparian-dependent resources. Management activities, such as silvicultural treatments, livestock grazing, and road construction, would have to be modified or eliminated if they take place in or would affect RCAs such that existing RCA conditions would not be maintained or improved and the activities would not meet the intent of ICBEMP standards and objectives.

Comment: The economic analysis for the Draft EISs didn't completely or properly address the social and economic effects of the interim strategies (PACFISH, INFISH, Eastside Screens).

Narrative: *Some respondents claim that the interim strategies (PACFISH, INFISH, and Eastside Screens) have negatively affected thousands of jobs. They interpret the Draft EISs as saying that these strategies will be discontinued with signing of the Record of Decision, yet they believe that the interim guidelines are incorporated into the EIS standards, objectives, and guidelines. They note that we already have some history with the economic and social impacts of these strategies, but that such information, they believe, has not been completely or properly addressed in the economic analysis.*

Response: The effect of imposed restrictions from the interim strategies on federal timber sales through the interior Columbia Basin was recognized explicitly in the discussion of decreased wood manufacturing employment in the Draft EISs, Chapter 2.

The Draft and Supplemental Draft EISs present several alternatives to display the social, economic, and other effects of keeping the interim strategies, such as replacing them with more restrictive standards and guidelines as well as standards and guidelines that allow higher levels of resource production and use. Alternative 2 in the Draft EISs and Alternative S1 in the Supplemental Draft EIS were designed to continue PACFISH, INFISH, and Eastside Screens. Other alternatives address different standards, objectives and guidelines to achieve soil productivity, water quality, and species viability requirements, and to address management objectives.

The discussion of estimated timber harvest levels and the associated wood manufacturing employment in the Draft EISs uses a base period that included several years that did not reflect implementation of PACFISH, INFISH, and Eastside Screens. This problem is noted in the Draft EISs. However, the action alternatives were not recalibrated. The Supplemental Draft EIS uses a correct base period for all alternatives.

Following the release of the Draft EISs, the report *Economic and Social Conditions of Communities* (1998), was published to more completely address the social and economic effects of the alternatives at the community level. Effects of the interim strategies as incorporated into Alternative S1, are disclosed in Chapter 4 of the Supplemental Draft EIS.

Comment: The EIS needs to be clear about whether the objectives and standards of the Northwest Forest Plan apply to all alternatives in areas of overlapping jurisdiction.

Narrative: *Respondents ask that the EIS state clearly that where the project and Northwest Forest Plan (NWFP) overlap, entire watersheds should be managed under the Northwest Forest Plan. They note that while Chapter 1 of*

the Draft EISs explains that the EIS would not supersede the Northwest Forest Plan without specific, subsequent amendments to the NWFP, Chapter 3 describes the NWFP as a component of Alternative 1, but does not mention it under any other alternatives. They feel that clarification of the relationship between the two plans is needed.

Response: The ICBEMP decision will not apply where the Northwest Forest Plan is in effect. The Northwest Forest Plan decisions will not be superseded by the ICBEMP Record of Decision. The wording in Chapter 1 has been revised to improve clarity and understanding.

Relationship to Other Planning Processes

Comment: The EIS should evaluate and clarify its relationship with, and incorporate where appropriate, provisions of local, county, state, tribal, and other federal plans.

Narrative: *Many believe that the Draft EISs do not recognize many existing local, state, and federal plans, disrupting plans that they believe work, causing overlap, and creating conflicts. Some claim the Draft EISs do not recognize the successes of other plans, such as Best Management Practices in Montana and numerous county zoning or land-use plans. Some are simply mystified by what they see as the project's apparent ignorance of plans that some think carry the weight of law.*

A few respondents claim that the EIS is strikingly similar to the Northwest Forest Plan (NWFP), which they feel is destructive to western Oregon; they urge the EIS Team not to emulate it too closely. Among federal plans, at least one respondent notes that the EIS does not take into account findings of the Northwest Power Planning Council. Some respondents feel that the Draft EISs do not include the Columbia River Systems Operation Review Final EIS *(1995) from the U.S. Army Corps of Engineers and the Bureau of Reclamation, or the Wy-Kan-Ush-Mi Wa-Kish-Wit (1995) . Both of these documents are said to encompass the same ecosystem as the Draft EISs and should be incorporated or referenced in the EIS.*

On the state level, respondents mention Oregon Governor Kitzhaber's 11-point timber plan and Washington's Growth Management Plan. Some respondents point to state programs such as the Forest Practices Act, Cumulative Watershed Effects Assessment Process, the Beneficial Use Reconnaissance Project, and the Governor's Bull Trout Recovery Plan, which are in place and have been found effective through on-the-ground audits.

Others assert that local plans, such as at the county level, are the best way to manage local areas, and that federal programs should conform to those plans. At least one respondent feels that the Draft EISs do not adequately evaluate county and community land use plans, economic development plans, zoning plans, and other resource related plans. Some feel that county land-use plans and plans such as the Wallowa County Nez Perce Tribe Salmon Habitat Recovery Plan must not be superseded by the selected alternative.

Response: Nothing in the EIS management direction would change the management of state, private, or tribal lands. Some federal laws contain provisions for state administration of specific environmental programs or for making state laws applicable to federal lands and facilities. State and local laws relating to the health, safety, and welfare of people apply to activities on federal lands so long as the activities are also consistent with federal laws and regulations. The Record of Decision will not preclude compliance or commit the agencies to actions that would violate such legal requirements.

The authority of the Forest Service regional foresters and BLM state directors extends only to the administration of the national forests or BLM districts within their jurisdiction. The decision to be made and documented in the Record of Decision will not supersede plans developed outside the agencies' authority. Many county plans have been reviewed. The project has had involvement from county commissioners within the project area on the development of the Draft EISs and Supplemental Draft EIS.

Comment: The project should revisit and improve consistency review efforts.

Narrative: *Respondents noted that with 104 counties and 476 communities in the project area, a sampling of 32 county and community plans is not sufficient to be in compliance with 43 CFR 1610.3-2 and 30 CFR 1502.16. These regulations require a discussion of possible conflicts between the proposed action and the objectives of federal, tribal, regional, state, and local land use plans, policies, and controls for areas concerned. It is noted that reference is made in the Draft EISs of the County/Community Vision Statement Project (August 1995), but the report is not included as an appendix and is not discussed fully as it should be in the Draft EISs.*

Response: Many county plans have been reviewed and the project has had involvement from county commissioners within the project area on the development of the Draft EISs and Supplemental Draft EIS. The Final EIS will be sent to the respective states' Governors to undertake a Governor's Consistency

Review as is required by the BLM planning process. The project will ensure that it is in compliance with federal, state, tribal, and local laws, to the extent possible, prior to issuing a final decision. The report referenced above can be found in the EIS administrative records, and is available upon request to anyone who would like to see how conclusions were determined during the analysis process.

Comment: The EIS should address and incorporate into the selected alternative the Standards for Rangeland Health and Guidelines for Livestock Grazing Management.

Narrative: *Several respondents state that since the Standards for Rangeland Health and Guidelines for Livestock Grazing Management, known as the Healthy Rangeland Initiative, were issued after the Draft EISs were released, these Standards and Guidelines should be incorporated on a local level. Others, however, believe that some inconsistencies between the Rangeland Reform effort and the Draft EIS need to be resolved before the Record of Decision is issued. They strongly recommend that the selected alternative provide direction to restore rangeland conditions.*

Response: The alternatives analyzed in the Supplemental Draft EIS include management direction intended to complement or support the Healthy Rangelands Initiative. The rangeland standards and guidelines were developed by the BLM state directors of Oregon/Washington, Idaho, and Montana, in consultation with the affected Resource Advisory Councils (RACs) and Provincial Advisory Committees (PACs). They were approved by the Secretary of the Interior in August 1997 and are being implemented. Healthy Rangelands standards and guidelines are presented in Appendix 13 of the Supplemental Draft EIS.

Effects on Other Public Lands and Private Lands

Comment: The EIS should address adverse effects on the rights of private property owners and private citizens, including the effects of the Endangered Species Act on private lands and the increased pressure on private lands from restrictions on ranching on public lands.

Narrative: *The effects of the Draft EISs on private property cause great concern among the majority of respondents who discuss this subject. Many fear that the project's vast scope and philosophy of ecosystem management cannot help but negatively affect private property values and the rights of property owners. They feel that the Draft EISs only hint at the effects on private lands, and many people view this with suspicion and anger.*

Many fear that public use and resource production on public land will be curtailed by the selected alternative and will increase stresses on private lands, resulting in degradation of those lands and increased commodity prices. Some respondents are concerned that restrictions on public lands will increase the pressure on private lands. They feel that the EIS should address this issue. Others feel there will be no effects on private property.

Many believe that increased restrictions on private lands, which many feel will inevitably arise if the preferred alternative is implemented, will lower land values and amount to an illegal taking, in violation of the Fifth Amendment of the U.S. Constitution. Others believe that the Draft EISs do not include a Takings Implications Assessment as required by executive order and do not include such analysis of impacts on rural counties or provide provisions for flexibility for rural counties as required by congressional mandate.

Response: Decisions made though this EIS will provide direction only for public lands administered by the Forest Service or BLM in the project area and would make no management decisions for and would not impose regulations on state, local, tribal, or private lands. These decisions are not intended to affect rights, privileges, regulations, policies, or provisions made by state, or local agencies, tribal governments, or private landowners.

However, how Forest Service- and BLM-administered lands are managed could either positively or adversely affect other lands just as current management of federal lands affects other land and private land management affects federally administered lands. In other words, when an action takes place on federal land, it may cause direct, indirect, or cumulative effects on non-federal lands. For example, a wildfire that begins on federal land may burn to adjacent private land; and noxious weed infestations that began on private land may infest adjacent federal lands. Through the direction in this EIS, adjacent landowners may benefit indirectly from better controls on noxious weeds and less severe forest fires.

The National Environmental Policy Act (NEPA) requires that federal land managers look at both how they might affect surrounding lands as well as how management on those lands might affect federal lands. Because of the broad-scale nature of the EIS, the potential effects of ongoing and foreseeable activities on non-federal lands was considered as a part of the cumulative effects analysis conducted by

the Science Team. Chapter 4 outlines the possible cumulative effects on all lands.

Comment: The EIS should consider its consequences on other public lands.

Narrative: *Some state that the project is unclear or silent regarding its effect on the numerous public lands other that those administered by the Forest Service and BLM. One respondent expressed concern that no apparent consideration was given to the effects of the proposed actions on National Park Service lands, including Crater Lake National Park. They feel that in general the actions proposed in the alternatives are too broadly described and that specific implementation plans are still lacking. They believe that it is therefore difficult to ascertain the likely effects on National Park Service lands, and that future opportunities for input are desired as specific implementation plans are developed. They believe the section titled Cumulative Effects on Federal Lands in Chapter 4 of the Draft EISs is misnamed, since it discusses effects only on Forest Service- and BLM-administered lands. They feel that cumulative effects analysis is needed on the National Park System and other federally administered lands.*

Response: Management direction for other federally administered lands are the responsibility of the respective federal agencies. The *SAG Analysis of Effects* is presented for both Forest Service- and BLM-administered lands and for all lands, including lands administered by other federal agencies, to provide an insight into potential cumulative effects. These effects are disclosed in Chapter 4 of the Supplemental Draft EIS.

Comment: The EIS should clarify coordination efforts and planning considerations with regard to cumulative effects of tribal plans.

Narrative: *Respondents note that the "Other Planning Efforts" subsection of Chapter 1 of the Draft EISs states that tribal plans were considered in analyzing cumulative effects. But the Yakama Nation feels there was not serious consideration of the Salmon Recovery Plan adopted by the Yakama Nation. They ask for an explanation of this contradiction; they feel that the EIS should be more specific about the amount of consideration given tribal plans, and the conclusions or assessments made after their consideration.*

Some respondents suggest that a Memorandum of Understanding be written to establish a true partnership between the local governments and federal agencies. In addition they suggest that provisions similar to T1-O1, T1-S1, and T1-S2 be incorporated relative to the relationship between the federal agencies and the counties.

Respondents think that the overall goals of Draft EIS are generally consistent with the Wallowa County Nez Perce Tribe Salmon Habitat Recovery Plan, but that the specific objectives and standards throughout the Draft EISs make it incompatible with their local plan.

Response: During the planning process the EIS Team considered the consistency of the preferred alternative with local planning efforts. This involved the collection and review of many county land use, economic development, and other plans. Extensive efforts were made to coordinate with tribes and to consider tribal rights, interests, and plans. Early in the project, the ICBEMP Tribal Liaison Group contacted 22 tribal governments, representing numerous tribes that reside within or have rights and interests in the ICBEMP project area. The purpose of the contact was to help develop, based on a government-to-government relationship, a consultation process with each tribal government and to work closely and continuously with each other to integrate tribal rights and interests in the planning process. All the tribal governments participated to varying degrees and at various times. Five tribal summit meetings were scheduled for government-to- government consultation with the 22 tribal governments; and three summits were held with representatives of the eight tribal governments that chose to participate. A Tribal/ Executive Steering Committee Working Group was formed as a result of a meeting between the Secretary of the Interior, federal representatives, and representatives of 10 of the 22 affected tribal governments. The Working Group's charge was to identify and work toward mutual resolution of tribally identified basin-wide issues. Coordination and planning efforts with the tribes are discussed in detail in Chapter 1; effects of the alternatives on tribal rights and interests are disclosed in Chapter 4.

Comment: The EIS should describe its effects on and address the protection of National Historic Landmarks and National Natural Landmarks on lands affected by management actions in the EIS.

Narrative: *Respondents did not see any attention given to the effects of this plan on National Historic Landmarks (NHLs) or National Natural Landmarks (NNLs). They point out that there are six designated NHLs and 18 designated NNLs within the planning area managed by the Forest Service, BLM, National Park Service, U.S. Fish and Wildlife Service, Corps of Engineers, Washington State Parks, Oregon State Parks, Washington Department of Natural Resources, Washington Department of Fish and Wildlife, Whitman County, the Nature Conservancy and private landowners. These respondents feel that it is*

important that the EIS address protection of natural and cultural resources of these sites.

Response: Many decisions are not appropriately made at the broad-scale of this EIS. Analysis of issues pertaining to specific national historic landmarks requires more site-specific condition information and data than what was collected or relied upon for analysis of effects in this EIS. The protection of specific national historic landmarks managed by the Forest Service and BLM are addressed in specific Forest Service or BLM management or project plans.

Comment: The EIS should disclose the effects of land exchanges, both current and planned.

Narrative: *Some respondents feel that the National Environmental Policy Act is being violated because the Draft EISs do not address the effects of pending land exchanges. They think the EIS should analyze and disclose the impacts of potential habitat loss and the cumulative effects of other new ownerships with regard to unanticipated management activities, such as resource extraction and development.*

Response: Analysis of issues pertaining to the effects of land exchanges requires more site-specific condition information and data than what was collected or relied upon for analysis of effects in this EIS. The ownership data layers came from existing maps, which were last updated in 1995. The data layers were created for broad-scale modeling, analysis, and reporting for the project. The data layers on ownership will be updated to reflect more up-to-date ownership information during implementation and monitoring.

Land exchanges for the Forest Service and BLM occur occasionally within the interior Columbia River Basin. The potential effects of those exchanges are evaluated and disclosed by the appropriate Forest Service or BLM manager.

Implementation

Priorities

Comment: Vague and conflicting direction and the abundance of standards in the EIS create uncertainty and confusion for decision makers and the public, leading to costly delays and difficulties in implementation.

Narrative: *Some respondents feel the preferred alternative in the Draft EIS imposes hundreds of new management standards on land managers, many of which are vague and conflicting. They feel that this creates an atmosphere of uncertainty and confusion for managers and the public alike, leading to excessive and costly delays in decision-making. According to these people, the ambiguous wording in the alternatives will impede implementation of the EIS. For example, it is suggested that the premise for Alternative 4 is inconsistent and sets up a conflict: vegetation management is designed to maintain or restore ecosystem processes; at the same time vegetation management is supposed to reduce risks to property, products, and economic and social opportunities. Where such purposes come into conflict, respondents ask which will have priority. Some people feel that the abundance of aquatic standards in the Draft EISs will make implementation difficult.*

Response: The design of the overall strategy for the project has been refined based on public, agency, and science input on the Draft EISs, new scientific information, and discussions with tribal and interagency partners. This refined focus was emphasized in a letter from the Secretaries of Agriculture and the Interior (October 8, 1998) to members of the Congress. This letter put emphasis on a new approach for management direction to address a limited number of issues to be resolved at the basin level, while allowing flexibility for other issues to be dealt with at finer scale or local levels. A result of this refinement, fewer standards and objectives are included in the revised alternatives as described in Chapter 3.

The Supplemental Draft EIS attempts to improve clarity, focus, and implementability of the proposed management direction. A hierarchy of direction, as described in Chapter 3, was developed to resolve conflicts in direction. The step-down process was clarified to minimize delays and difficulties in implementation.

Comment: The EIS should discuss how the project will gain local and congressional support for implementation.

Narrative: *How the project will be implemented is a growing concern for many people, who feel the Draft EISs do not address this issue. They feel that a plan should be developed for gaining acceptance from Congress of implementing the EIS. They worry that promotion of ill-conceived management plans by senators and representatives mean that any rational and well-thought-out plan has little chance of acceptance.*

Others note that federal land management agencies have been dealing with low levels of public trust in land management for the past several years. They suggest that the EIS should thoroughly discuss the importance of building public trust in the interior Columbia River Basin to achieve implementation. They point to Governor Kitzhaber's 11-point forest health strategy, which asks for delays in treatments in controversial areas, old-growth, and sensitive riparian areas; they feel that after the agencies have built a record of success in other areas, they can move forward in more controversial areas with a higher level of public support.

Response: The project has maintained an open dialogue with members of the congressional delegations from the states within the project area, to ensure they are aware of the status and content of the Supplemental Draft EIS. This includes projected implementation costs and the effects on the lands administered by the Forest Service and BLM if the project were funded at lower levels than necessary to meet the goals and objectives of the project. While preliminary in nature, it gives congressional members, as well as the general public, an idea of how the plan will be implemented.

Comment: The EIS should establish a schedule (where, when) for implementing at the local level.

Narrative: *Where to begin, some feel, is a big question that is not addressed in the Draft EISs. They believe the EIS should set a schedule for conducting projects in local areas so the communities will know what is occurring. Some feel that the EIS should not be implemented until a Record of Decision has been signed. Some ask what will be done to maintain the objectives once the selective alternative has been implemented.*

Response: Chapter 3 of the Supplemental Draft EIS has been revised to include:

- step-down process showing what analysis is needed (mid-scale analysis [Subbasin Review], Ecosystem Analysis at the Watershed Scale [EAWS], or site-specific NEPA analysis) and links among decision levels;
- a monitoring plan linked to step-down (see Appendix 10);
- increased focus on interagency and intergovernmental collaboration;
- a budget strategy showing funding assumptions.

Implementation of land use plan decisions analyzed in the EIS alternatives will not begin until a Record of Decision is signed.

Comment: Methods used to implement the selected alternative should be ecologically sound.

Response: The Executive Steering Committee and project staff are committed to ensuring that the selected alternative will be implemented in an ecologically sound manner, thereby meeting the purpose and need for the project and allowing for the best management of Forest Service- and BLM-administered lands in the long term.

Comment: Implementation of ecosystem management principles should be applied first to a smaller test area; upon successful implementation, the concepts of ecosystem-based management could be applied to the remainder of the project area.

Narrative: *Some respondents suggest that implementing ecosystem management principles on a smaller scale would allow problems to be identified and resolved on a limited, more manageable scale before applying the strategy to an area the size of the interior Columbia River Basin. They feel that considering a demonstration pilot project on selected areas would be useful since there is no history of implementing a plan covering 72 million acres.*

Response: Much of the existing, effective direction in current BLM and Forest Service land use plans will continue when the Record of Decision (ROD) for this project is signed. Broad-scale management direction in the ROD will augment, and in some cases replace, the direction in the land use plans. The step-down process has been refined in the Supplemental Draft EIS to more clearly explain its intent to provide a process for stepping the broad-scale decisions and science findings down to site-specific areas using a methodical hierarchical approach. This should provide a smooth transition for implementing the ROD; therefore, a demonstration pilot project on selected areas would not be necessary.

Funding

Comment: Project planning and implementation costs far outweigh potential benefits, and the project should be stopped.

Narrative: *Many respondents to this topic don't want any more money allocated for the project. They believe too much money has been spent, with what they perceive have been too few tangible results. Many respondents want local land managers to be given "what can be salvaged" but do not want to "waste" an additional $120 million per year on implementation.*

Response: The estimated costs for implementing the alternatives in the Supplemental Draft EIS are reduced from those in the Draft EISs. Implementation costs are discussed in detail in Chapter 4 of the Supplemental Draft EIS, which includes four tables of implementation costs and estimated outputs based on several different funding levels.

Comment: The EIS should identify how to fund implementation, as well as how to fund and implement at lower levels if full funding is not received.

Narrative: *Many want to know where the money will come from to implement the project. Some believe that restoration should be charged to those who caused the damage, such as logging companies, and should not come from taxpayers pockets. Others believe that funding should come from the Congress, not from timber sales. Some assert that some funding should come from timber receipts, but they doubt with the call for harvest cutbacks in the Draft EISs, enough money will be available. They wonder if the project has a back-up plan if funding is not available.*

Some feel that sufficient funding will not be available to carry out all provisions of the selected alternative, including Subbasin Reviews and Ecosystem Analysis at the Watershed Scale. They feel that the first priority for management activity levels, if and when funding becomes limited, should be to strive to meet all ecosystem objectives and remove interim management standards.

Some believe that the Congress will not approve such a large funding request, because these respondents plan to voice their opposition to their representatives.

Response: The Supplemental Draft EIS displays the projected program costs of implementing the decisions in the amended land use plans for both Forest Service and the BLM. As with all land use plans, the Congress will ultimately decide what funding is made available to implement the actions called for in the Record of Decision.

An important component of implementation will be the monitoring necessary to assure that the project meets the intention of the restoration actions. Built into the funding made available by the Congress to achieve various restoration actions will be the necessary actions called for such as analysis, Subbasin Review, monitoring, collaboration, and in some cases research. The management strategies called for in the management direction are intended to support an ecosystem management approach rather than an individual project-by-project basis.

Comment: Implementation costs to the government need to be displayed in the EIS.

Narrative: *Some argue that the Draft EISs do not contain a full cost accounting of implementing the project's direction, which they believe is "critical to assessing which alternative is best for taxpayers." Others point out that reduced production, reduced agency revenues, and increased subsidies represent an "irresponsible" strategy. Specifically, a few want to know how local logging operations are to afford the new equipment required with the alternatives.*

Response: The Supplemental Draft EIS displays and describes the programmatic costs of implementation of the alternatives (Chapter 4), assuming various levels of funding, including an assumption of no additional funding. The Supplemental Draft EIS also describes the effects of the alternatives on the economies of communities within the project area, including how the alternatives may affect agency revenues and receipts to local governments. It is difficult for a land use plan to estimate all of the individual decisions that private business may make to adjust to changing economic circumstances.

Collaboration

Comment: Interagency and intergovernmental collaboration should be thoroughly addressed in the EIS implementation plan.

Narrative: *Some respondents believe that working with the Forest Service and BLM will be neither beneficial nor productive. They feel many federal agencies cannot work together and the project will fall apart. Other respondents suggest that objective EM-O2 (implementing the plan using intergovernmental collaboration) should clearly define which entities will be involved in which processes at what level; they feel that a standard should state that the best, most recent scientific information will guide analysis and management. Still others feel that the interagency,*

intergovernmental collaborative approach does provide for early involvement, which could increase efficiency and credibility of the products of all agencies.

Response: The standards and objectives brought forward from the Draft EIS have been revised and rewritten to improve clarity and understanding. Collaboration and coordination are a key feature in numerous objectives and standards which spell out the kinds of collaboration intended to be undertaken in such areas as noxious weed control, roads management, water quality protection, social and economic matters, tribal concerns and issues, and other areas. Specific objectives with corresponding standards call for collaboration and increased intergovernmental coordination in planning, implementation, monitoring, and technology transfer. Chapter 3 now includes an increased focus on interagency and intergovernmental collaboration. The *Subbasin Review Guide* also outlines collaboration requirements for Subbasin Review.

Comment: The EIS should address who will be responsible and accountable for its implementation, monitoring, and outputs of goods and services.

Narrative: *Many feel that the Draft EISs do not establish who will be responsible for implementing the Record of Decision. They want each alternative to list how the activities will be monitored and by whom, including responsibility for determining when ecosystem health is reached. Some feel that monitoring of plan implementation should not be left exclusively to the Forest Service and BLM field units; rather, they feel, the Forest Service regional and BLM state offices should have oversight of compliance and effectiveness. Some feel that one approach for increased accountability is to reflect specialists' input in the form of contract clauses.*

Some respondents think that a lack of accountability is a possible violation of the Endangered Species Act because it does not address foreseeable actions on a site-by-site basis. Some say that the Draft EISs look at accountability only as meaning how well the different agencies collaborate, ignoring how actual production of goods and services will be monitored. They believe that if the agencies do not produce any commodities, then no accountability objective or standard will have been violated.

Response: At the local level forest supervisors and district managers will have the responsibility for implementing and monitoring the decisions documented in a Record of Decision. In order to coordinate the implementation of the selected alternative across federal agencies and administrative unit boundaries, the agencies'organizational structure would need to include a mechanism for basin-wide coordination and subregional interagency coordinating committees. The Executive Steering Committee, established to guide the project, would function on an *ad hoc* basis to resolve basin-wide issues. More specific guidance will be developed for the Record of Decision.

An estimation of effects on the levels of goods and services can be found in Chapter 4 of the Supplemental Draft EIS.

Implementability

Comment: A framework for developing cumulative effects at multiple levels has been omitted in the Draft EIS, Appendix 3-1/I. Credible cumulative effects analysis and procedures need to be conducted and described to reveal impacts of decisions, at the broad scale of this project and at subsequent finer scales.

Response: The National Environmental Policy Act regulations require consideration of direct, indirect, and cumulative impacts. A "cumulative impact" is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7). A cumulative effects analysis of the three new alternatives is incorporated into the discussion of effects in Chapter 4 of the Supplemental Draft EIS. For this EIS, potential cumulative effects include those that were assessed for all land ownerships, including lands administered by other federal agencies and non-federal lands.

Comment: The meaning and intent of standard A-S4 are unclear about whether measurable standards are to be implemented before ecosystem analysis or NEPA analysis.

Response: Standard A-S4 "Implement accountable, measurable standards" has not been carried forward to the Supplemental Draft EIS. Standards that were brought forward have been revised to improve clarity

and understanding so that they are more enforceable. Accountability of Forest Service and BLM managers will be addressed in the Record of Decision.

Comment: Language should be included in objective AM-O2 to ensure that monitoring decisions occur locally, and that professionals will collect monitoring data. Measures to be included in annual monitoring should be clarified.

Narrative: *Some respondents feel that monitoring is a great idea and that the most knowledgeable people should complete it. They feel that local management and decision-making in monitoring is critical. Others feel that a range of conditions, not a singular state, must be set as a monitoring target; this range of conditions and goals will require continuous monitoring and adaptation to new information. Some want more emphasis on effective monitoring to provide reliable feedback for adjusting management, focusing more on 5- to 10-year goals and impacts.*

Some feel that standard AM-S4 should be removed, along with other standards that "cause unnecessary implementation delays and analysis." Others feel that the Draft EISs ignored the changing nature of our knowledge of environment and the need to adapt management through monitoring, by "requiring specific monitoring actions that may not be required to reach the goal."

Response: Monitoring and evaluation are an integral part of adaptive management and are key to achieving the short- and long-term goals and objectives of the project. The wide diversity and variability of biophysical resources and socio-economic conditions within the project area require that management direction be outcome-based rather than prescriptive. Success in meeting project goals and objectives requires that the effects of this outcome-based direction be monitored and evaluated in a timely manner with the appropriate people to determine if modifications are needed. The monitoring and evaluation framework is described in Appendix 10.

Comment: Standard AM-S7 requires Forest Service districts and BLM resource areas to modify actions if the objectives are not being met; however, it suggests that EIS objectives can be modified if they do not work. The intent of this standard and the procedures for modifying objectives should be clarified to explain how observations at the district or resource area level can be used to change an objective that applies to the entire project area.

Response: Standard AM-S7 pertaining to monitoring objectives has not been carried forward to the Supplemental Draft EIS.

Comment: Although there is flexibility to change standards at the local level, the process may be neither practical nor feasible.

Narrative: *Many questions remain about how decisions in the EIS will be translated to decisions on the ground. Some feel that when faced with a specific land management decision, local land managers will be bound to the EIS, even if goals are contradictory or make little sense. They worry that land managers must somehow balance problems such as reducing fire fuels vs. the need for downed wood, fire risks vs. impacts of harvest on aquatic resources, or watershed restoration vs. recreational opportunities. Respondents believe that local land managers will be "straddled with hundreds of new standards, the impossible task of proving the science wrong, or justifying any course of action." They feel that the ultimate result will be uncertainty, and costly delays. Many suggest that standards be more flexible and serve only as scientifically sound guidelines for local managers.*

Some respondents perceive that implementing the selected alternative at the regional level will invalidate their local or cultural integrity (which they see as the ability of community members to make land management decisions at a local level). They feel it is unfair for anyone outside their community to make decisions that could affect the integrity of their culture and lifestyle. A few people suggest that the project needs to integrate the lifestyles of resource-based communities into the documents to adequately consider the outcomes of future decisions, and that policies must work to reduce the stress resulting from changes to their lifestyles.

Response: The revised strategies in the Supplemental Draft EIS include a more detailed description of how local Forest Service and BLM managers and their staffs can take the broad-scale information and management direction and "step it down" to mid and fine scales. The step-down processes allow local managers to consider site-specific conditions when designing activities to meet broad-scale expected outcomes. Implementation procedures are further discussed in Appendix 10 and the Subbasin Review Guide, currently in draft form and subject to further refinement.

Relationship to Laws

Specific Laws

Comment: The selected alternative in the EIS should comply with the American Folklife Preservation Act.

Narrative: *In 1976, the U.S. Congress passed the American Folklife Preservation Act (P.L. 94-201). This Act defines folklife as a way of life for various groups in the United States that share traditional expressive culture. Some respondents feel the project seeks to ignore this culture that has been defined over two centuries, usually by oral means. They feel that this culture is no more or less significant than any other culture present in America.*

Response: The American Folklife Preservation Act established an American Folklife Center in the Library of Congress and authorized the Center to develop and implement programs of research and training, and performances and exhibits; to maintain a national archive and to procure and collect creative works, artifacts and other records related to American folklife. The actions outlined in the Supplemental Draft EIS will have no bearing on this Act.

Chapter 3 of the Supplemental Draft EIS includes a section titled *Support Economic and Social Needs of Communities and Cultures*. The objectives and standards are designed to promote agency support for, and collaboration with, local and tribal communities when developing methods to support their social and economic needs. The intent is to integrate the needs of local and tribal communities more thoroughly into agency decision-making and management activities. Methods may range from targeting contracts for the local workforce to a greater coordination and streamlining of agency planning efforts.

Comment: The selected alternative should comply with the Regulatory Flexibility Act and the Small Business Regulatory Enforcement Act.

Narrative: *Some people believe that the Forest Service and BLM violated the Regulatory Flexibility Act (RFA), also referred to as the Small Business Regulatory Enforcement Act. They believe that the RFA applies because the EIS can be considered a rule that sets standards. They note that Congress passed the RFA in 1980 after learning that uniform federal regulations produced a disproportionate adverse economic hardship on small entities.*

Response: The respondents were apparently drawing a parallel between the planning process the project is engaged in pursuant to National Environmental Policy Act, and rulemaking. The Forest Service and BLM are not engaged in rulemaking through this EIS. The project is not drafting regulations for purposes of these acts, and the requirements of the Regulatory Flexibility Act do not apply.

Comment: The selected alternative should comply with Presidential Executive Order 12866—Regulatory Planning and Review.

Narrative: *Respondents ask whether each of the federal requirements listed has been addressed with all local governments in the area, citing Presidential Executive Order 12866-Regulatory Planning and Review and the National Environmental Policy Act (NEPA).*

Response: The Forest Service and BLM are not publishing regulations that would impose regulatory requirements that might affect other governmental entities in this EIS. The commenters were apparently drawing a parallel between the planning process the project is engaged in pursuant to NEPA, and rulemaking. The Forest Service and BLM are not engaged in rulemaking through this EIS.

Comment: The selected alternative should comply with Revised Statute RS-2477.

Narrative: *Some people state that statutory authority exists for the right to access in connection with natural resource development, transportation, energy transmission, and water, and for roads and easements existing before 1976 that were created by RS 2477 and other legislation. They fear potential loss or restriction of existing or future access to private or state lands that border or are intermingled with Forest Service- or BLM-administered lands, and they fear potential loss of access to traditionally used access routes, many of which they claim cannot be closed because the routes are public rights-of-way covered under RS 2477. These respondents feel that the Draft EISs do not adequately address the legal implications of these land use restrictions on both private and public lands.*

Response: Section 2477 of the Revised Statutes of 1878 (43 U.S.C. 932) authorized rights-of-way for construction of highways over public lands not

reserved for public uses. Section 706(a) of Public Law 94-579 repealed the existing law effective October 21, 1976. However, valid and existing rights, including rights of ingress and egress, existing on October 21, 1976, were not invalidated. In 1996, the Omnibus Appropriations of 1997 Act (Public Law 104-208) provided that "No final rule or regulation of any agency of the federal government pertaining to the recognition, management, or validity of a right-of-way pursuant to Revised Statute 2477 shall take effect unless expressly authorized by an Act of Congress subsequent to the date of enactment of this Act, September 30, 1996."

Roads management objectives and standards in the EIS are intended to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. The direction intends for the use of a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. The biggest change to the existing road system is expected in areas that are highly roaded and have high road-related risks to resource values, where action has not already been taken to address the problem. It is not expected that any valid and existing rights to road access will be affected by the decisions made in this EIS.

Comment: The Draft EISs do not comply with the spirit and intent of NEPA because the preferred alternative does not sufficiently consider the economic impact on small rural communities.

Response: The *Economic and Social Conditions of Communities* (1998) report included a social and economic characterization of 543 communities in the project area, identified geographically isolated (rural) towns, and identified various community categories to describe and compare towns; it further assessed the possible impacts of implementing the Draft EIS alternatives on categories of communities and discussed cumulative economic and social impacts. Chapter 4 in the Supplemental Draft EIS further discusses the effects of the three alternatives on small rural communities in the project area.

Comment: The Draft EISs do not comply with NEPA for many perceived procedural violations, which in turn may encompass compliance questions within the Administrative Procedures Act.

Narrative: *Alleged NEPA violations include: "bad science and analysis" leading to inadequate cumulative effects models; missing information that should be disclosed for comment; connected actions not taken into account; purpose and need not met by alternatives (see also* Purpose and Need*); range of alternatives not large enough to fulfill public needs (see also* Range of Alternatives*); and environmental effects not disclosed because the EIS is too vague to begin with.*

Response: The Science Team and the EIS Team examined a substantial amount of credible information about the topics addressed in the Draft EISs to estimate the effects of those alternatives. Alternative development and analysis complies with current laws and regulations. The Science Team documented their analysis of the EIS alternatives in *Evaluation of EIS Alternatives by the Science Integration Team* (Quigley, Lee, and Arbelbide 1997) and *Science Advisory Group Effects Analysis for the SDEIS Alternatives* (Quigley 1999). NEPA requires that environmental analysis be based on "reasonably foreseeable" future actions. The EIS Team incorporated the Science Team's analysis and disclosed the environmental effects in Chapter 4 (Environmental Consequences).

A refinement to the design of the overall strategy for the project was initiated based on public, agency, and input from the Science Team on the Draft EISs, new scientific information, and discussions with tribal and interagency partners. This new approach is presented in the Supplemental Draft EIS and was evaluated by the Science Advisory Group in a manner similar to that used for the Draft EISs.

Alternative S2 was identified as the preferred alternative in part because it best addressed the Purpose and Need. The range of alternatives includes both the seven alternatives in the Draft EIS and the three alternatives in the Supplemental Draft EIS.

Comment: The Draft EISs do not comply with the National Forest Management Act (NFMA) or the Federal Land Policy and Management Act (FLPMA) because of procedural violations such as not having one lead agency to standardize a decision or use one regulatory implementation process and because of lack of protection for sensitive species and habitats on the edge of being listed.

Narrative: *Some feel that by not falling completely under the Forest Service or the BLM, the process has been circumvented, leaving decision makers the ability to decide anything without abiding by one set of rules alone. Some say that NFMA is violated because the preferred alternative does not provide sufficient protection for sensitive species and habitats that are close to being listed under the Endangered Species Act.*

Response: The agencies have the discretion to manage public lands pursuant to the NFMA and FLPMA. In 1994, both the Forest Service and BLM felt that the need to prepare a regional assessment and analysis of lands within the interior Columbia River basin could be coordinated. Under the NEPA, federal agencies "may act as joint lead agencies to prepare an environmental impact statement (40 CFR 1501.5(b))." Subsequent land management planning and analysis will be accomplished during the amendment or revision processes of the Forest Service or BLM land use plans.

The risks and opportunities associated with conservation of rare plant communities and habitat for plant, animal, and fish species of concern in the interior Columbia River Basin was addressed to the degree appropriate at the broad-scale in the Draft EISs and the Supplemental Draft EIS, and they will be further addressed through the appropriate step-down processes (programmatic planning processes, Subbasin Review, EAWS, or site-specific NEPA analysis). (See Appendix 6 for the list of species.)

Species listed under the ESA or classified as Sensitive Species through Forest Service or BLM processes will continue to be addressed through established agency policy.

Comment: The Draft EISs do not comply with National Forest Management Act (NFMA) because TS-O6 states that timber production is a by-product of restoration activities. NFMA land classifications were changed to meet the Riparian Conservation Area requirements and are clearly outside the law. By not analyzing the effects on allowable sale quantities, the Draft EISs also fail to comply with NFMA.

Response: The Supplemental Draft EIS includes a standard that states "During land use plan revision, RCAs [riparian conservation areas] shall not be included in the suitable timber base used to calculate the allowable sale quantity." The NFMA implementing regulations (36 CFR 219.14) describes timber resource land suitability. The regulations indicate that the identification of lands not appropriate for timber production is based on a consideration of multiple-use objectives. In this case, the concern for aquatic habitat and watershed condition, and the objectives associated with improving riparian areas, precludes including the RCAs as part of the suitable timber base for purposes of determining the allowable sale quantity.

It is appropriate for each national forest to analyze their Allowable timber Sale Quantity (ASQ). Forest Plans set an ASQ for the administrative unit. The ASQ will be reanalyzed by the individual Forests at the time they prepare land use plan amendments or revisions.

Comment: The Draft EISs do not comply with National Forest Management Act (NFMA) or Federal Land Policy and Management Act (FLPMA) because of procedural violations such as not integrating decision-making processes regarding the additional layers of analysis (including Subbasin Review and Ecosystem Analysis at the Watershed Scale [EAWS]) that would establish new regional direction initiating land management amendments. The Draft EISs do not specify the extent of further National Environmental Policy Act (NEPA) and other planning processes regarding significant amendments resulting from this project. Regional Guides, Forest Plans and Resource Management Plans will all be affected.

Response: The use of an ecosystem management approach to achieve ecological integrity is compatible and in compliance with the mandates of the NFMA and FLPMA. The *Scientific Assessment* and planning process was necessary for the Forest Service and BLM to adjust to changing needs and conditions, as the law requires, and to resolve management issues across the interior Columbia River basin.

The revised strategies in the Supplemental Draft EIS include a more detailed description of how local Forest Service and BLM managers and their staffs can take the broad-scale information and management direction, and "step it down" to mid- and fine scales. The step-down processes allow local managers to consider site-specific conditions when designing activities to meet broad-scale expected outcomes.

Step-down processes may include programmatic planning processes, Subbasin Review, EAWS, or site-specific NEPA analysis. These are described in more detail in Chapter 3.

Comment: The Draft EISs do not comply with the Forest and Rangeland Renewable Resource Planning Act (RPA).

Narrative: *Respondents ask how the RPA program is incorporated into the project, and they cite violation of the National Forests Management Act (NFMA) by not identifying an RPA alternative as regulated. Reasoning comes from the idea that if the project will be automatically amending portions of forest plans then it must follow the planning regulations. One respondent believes the project should be stopped until the 1995 RPA Program is signed, since the RPA provides program guidance for the Forest Service which might be contradictory to the project, such as changing from multiple-use to ecosystem management.*

Response: The authority for the Forest Service to prepare this EIS is found in the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (16 USC 1601-1614); and the implementing regulations of NFMA (36 CFR Part 219). The NFMA provides guidance on the development, maintenance, and revision processes for forest plans, and does not require the EIS to identify an "RPA alternative."

This EIS is programmatic, recognizing that later NEPA documents will be required to disclose site-specific environmental and cumulative effects. In this case, the EIS will provide a broad framework for management of National Forests and BLM Districts within the interior Columbia River Basin.

In 1995, the Forest Service issued a draft strategic plan to meet the requirement of the RPA, and presented a broad approach to guidance for national and international Forest Service programs. It has not been finalized.

Comment: The Draft EISs do not comply with the Americans with Disabilities Act because of a lack of emphasis on access for recreation.

Narrative: *Respondents feel that there is not enough emphasis on access and recreation, and that when recreation is even mentioned it is in the form of monitoring it for ecological reasons, not to ensure the recreational experience. Some worry this is a forecast for fewer and fewer opportunities, especially people with disabilities with limited access.*

Response: The Draft EISs do not propose site-specific changes to road use or recreation access. The detail needed to assess access to specific recreation sites requires fine-scale analysis, and was not considered in the Draft EISs. The Americans with Disabilities Act of 1990 will continue to be addressed and complied with in plans at national forest and BLM district levels, as appropriate, where decisions regarding recreational use are made.

Comment: The Draft EISs do not comply with the Clean Water Act.

Narrative: *Clean water is a concern for many who do not believe the project will have strong enough standards and objectives to enforce compliance with the Clean Water Act. The majority of comments referencing this Act express worry that there is too much compromise for active management, not enough protection of aquatic habitat, and not enough coordination with the states regarding existing management plans and regulations such as Best Management Practices.*

Response: A monitoring program and the adaptive management process will help ensure that water quality protection measures are meeting water quality and aquatic habitat objectives. The monitoring and adaptive management framework is presented in Appendix 10.

The intent is for coordination to occur with the states and other non-federal landowners during Ecosystem Analysis at the Watershed Scale. Cooperation with non-federal landowners has the potential to benefit water quality on both federal and non-federal lands and could reduce the potential need for developing total maximum daily loads under the Clean Water Act. Total Maximum Daily Loads (TMDL) are the allowable pollutant loadings allocated to various pollution sources as necessary to achieve water quality standards in a given water body. Best management practices (BMPs) are water quality protection measures developed pursuant to the Clean Water Act, certified by the state agency with water pollution control authority and approved by the Environmental Protection Agency. Existing Forest Service and BLM land use plans require the use of best management practices. Therefore, best management practices must be followed to meet water quality requirements pursuant to the Federal Clean Water Act.

Comment: The Draft EISs do not comply with the Wilderness Act.

Response: This EIS does not propose to change, modify, or adjust existing designated wilderness areas, and it does not recommend designation of

new wilderness areas. The agencies may decide to consider the suitability of any area for preservation as wilderness during subsequent land use plan revision processes.

Comment: The Draft EISs are in violation of the Endangered Species Act.

Response: The effects on all listed species in the project area have been considered and disclosed. Coordination with the U. S. Fish and Wildlife Service and National Marine Fisheries Service has been underway since the project began, and formal consultation will be completed before the Record of Decision is signed. The two action alternatives developed in the Supplemental Draft EIS address concerns about terrestrial and aquatic species habitat based in part on new findings published in *Source Habitat for Terrestrial Species of Focus (Wisdom et al. in press).* Consultation on the Endangered Species Act is described in the federal, state, and Local Environmental Protection Laws and Policies section of Chapter 1 of the Supplemental Draft EIS.

Comment: The Draft EISs are not in compliance with the 1872 Mining Law.

Narrative: *Several respondents assert that the preferred alternative will potentially prohibit mineral operations in the project area when the Record of Decision is signed; they feel such effects would be in violation of the 1872 Mining Law.*

Response: The Draft EISs do not propose to withdraw from mineral entry areas of locatable, salable, and leasable minerals. The standards pertaining to permits, rights-of-way, and easements have been modified to reflect the limited authority the land management agencies have in achieving Riparian Conservation Area objectives where valid existing rights are present. In some cases, however, the agencies have the authority to require reasonable conditions to minimize the impacts of certain uses including mining.

Comment: Relationships of the EIS to other federal, state, and local laws and regulations is incomplete and does not address the full realm of environmental laws which must be met by BLM and the Forest Service.

Narrative: *Respondents ask that at a minimum the EIS should add a table or section addressing the following:*

- *Wild and Scenic River Act (federal/state)*
- *Safe Drinking Water Act*
- *Oregon Groundwater Act*
- *Resource Conservation and Recovery Act on Hazardous and Solid Waste regulations including underground and above ground storage tanks*
- *Other programs under the Clean Water Act such as 401 certification, storm water permits*
- *Toxic Use Reduction and Hazardous Waste Reduction Act*
- *Clean Air Act*
- *EPCRA Section 313*
- *TSCA*
- *Superfund Amendments*
- *Oregon Land Use Regulations*
- *Federal Livestock Grazing*
- *Surface Mining and Reclamation Act*
- *CERCLA*
- *Federal Water Pollution Control*
- *The Oregon Plan*

Response: Some federal laws contain provisions for state administration of specific environmental programs or for making state laws applicable to federal lands and facilities. State and local laws relating to the health, safety, and welfare of people apply to activities on federal lands so long as the activities are also consistent with federal laws and regulations. Many of the laws and regulations listed above address issues that are at a finer scale than this EIS

addresses. The intent of the Record of Decision is to be compatible with these legal requirements; however, compliance can be assured only at finer scale planning levels.

Comment: Implementation of standards AQ-S6 through AQ-S10 and R-S14 will lead to technical violations of state laws and rules in Montana.

Narrative: *With regard to standards AQ-S6 and R-S14 (Alternatives 4, 5, 6, and 7), some respondents suggest that Montana already has adequate, well accepted, effective, and institutionalized standards and guidelines for the protection of stream functions. They feel that the implementation of AQ-S6 through AQ-S10 will be confusing to administer. They also believe these standards will be confusing to Montana operators who are well versed in the application of Montana's Streamside Management Act (SMZ Law and Rules). Furthermore, these respondents suggest that the implementation of these aquatic standards will likely lead to technical violations of the SMZ law and rules, and by association, the Clean Water Act.*

Response: These standards, which were included under the aquatic standards-timber management section in the Draft EISs, are not included in the Supplemental Draft EIS. The concepts contained in them have either been incorporated into the restoration direction, identified as too fine-scale, or replaced by new Riparian Conservation Area direction.

The principal federal laws that apply to forestry practices and protection of water quality are discussed in this EIS and in the Forest Service and BLM land use plans that are being amended. Among the many laws that guide timber management activities are the National Environmental Policy Act, Federal Land Policy and Management Act, National Forest Management Act, Endangered Species Act, Clean Water Act, and Clean Air Act. State forestry practices rules apply to logging activity on state and private lands; therefore, implementation of direction in this EIS would not be in violation of Montana's state laws since they apply to different lands.

Biophysical Components of the Ecosystem

This section includes public comments specifically related to the biological and physical components of ecosystems in Chapters 2 (Affected Environment), 3 (Description of the Alternatives), and 4 (Environmental Consequences), and some of the appendices of the Draft EISs. Subsections include soil quality and productivity, air quality, wild and prescribed fire effects, insects and disease, forest health, rangeland health, aquatic health, plants, wildlife, effects on specific wildlife species, and fish.

Soil Quality and Productivity

Comment: Broad-based soils data and standards are inappropriate in light of local conditions such as geological and climatic variables. Such data and analysis used in the Draft EISs are inadequate for determining effects of the alternatives.

Narrative: *Some individuals note that discussion in the Draft EISs regarding downed woody debris levels may be inappropriate for arid areas. Some feel that the Draft EIS data and analysis fail to account for local geologic features, and fail to distinguish granitic and non-granitic soils. Some individuals feel that the soil analysis was opinion-based, qualitative, and unsubstantiated.*

Some state that cause-and-effect of declining soil productivity was unclear, and that a more detailed analysis is needed to clearly address this issue. According to some respondents, additional inventory should compare trends and annual forest productivity. Some ask for clarification or scientific documentation on statements claiming that "many soils take less than 50 years to recover naturally from compaction."

Response: The Draft EISs contain specific language for soil productivity, including large downed wood requirements, that provides flexibility in ecological prescriptions based on the geologic, climatic, and vegetative characteristics of a particular area. Since release of the Draft EISs, the Science Advisory Group (SAG) has used additional information to develop levels for large downed wood and snags that can be supported by potential vegetation groups (PVGs), which are based on historical levels of downed wood and snags and fire / disturbance patterns.

In the Supplemental Draft EIS, basic assumptions indicate Alternative S1 (no action) most closely resembles continuation of conventional management activities with a trend toward more conservative applications; Alternatives S2 and S3 contain a general emphasis to protect and restore ecological processes and conditions, and include new standards that address coarse woody debris recommendations for soil productivity.

Tables in the Draft EISs which display ranges for coarse woody debris requirements are based on research conducted in Rocky Mountain forests. The study areas are characteristic of the climate regimes, western montane soils, and habitat types / potential vegetation groups occurring within the interior Columbia River Basin. The ranges are intentionally conservative, which allow a margin of safety for varying geologic, climatic, and vegetative conditions, and also provide an emphasis for restoration of lands that have declining, or stable but below desired levels, of soil productivity resulting from past management activities (Graham et al. 1994). Following these assumptions and the information pertaining to the conditions, trends, and general effects of management activities on soil productivity in the *Biophysical Environment* (Jensen et al. 1997) chapter of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), effects from all alternatives have the intent of improving trends in soil productivity.

The expert panel contributing to the soils analysis was composed of scientists with specific knowledge of soil conditions and productivity trends across the interior Columbia Basin. Causes leading to declines in soil productivity stem from negative impacts to the physical and biological soil properties that result mostly from greater intensities of vegetation management, roading, and grazing. This information is presented in a condensed format in Chapter 2 of the

EIS, which was derived from the *Biophysical Environment* (Jensen et al. 1997) chapter of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997).

Soil Productivity

Comment: Terms such as 'soil quality' and 'soil productivity' are unclear and should be defined or clarified.

Response: Soil productivity was defined in the Draft EIS Glossary (under productivity) and in the Key Terms box at the beginning of the Physical Environment section of Chapter 2. These definitions have been included in the Supplemental Draft EIS. The soil quality discussion was removed from the soil productivity section in the Supplemental Draft EIS to clarify the discussion. The *Biophysical Environment* (Jensen et al. 1997) chapter of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) contains a more specific description of soil productivity.

Comment: The reliability and effectiveness of Best Management Practices remains unclear.

Narrative: *Some individuals feel that statements in the Draft EISs that support Best Management Practices and mitigation measures as tools for slowing or reversing decreases in soil productivity, were not supported by scientific evidence.*

Response: Best Management Practices (BMPs) language is commonly used in reference to nonpoint source pollution control and water quality. The root definition of BMPs can be found in 40 CFR 130.2, where the Environmental Protection Agency (EPA) guidance states, in part: "BMPs are methods, measures, or practices to prevent or reduce water pollution, including but not limited to, structural and nonstructural controls, operation and maintenance procedures, other requirements and scheduling and distribution of activities. BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility."

Following this guidance, BMPs that are either curative or preventative have been developed for a number of forestry and rangeland management activities. Those BMPs that have passed a high degree of technical, political, and regulatory rigor are contained in land management conservation practices handbooks or technical guides and reports and have been implemented by the Forest Service and BLM. Numerious scientific studies have been completed on the effectiveness of BMPs, specifically those related to forest practices (Seyedbagheri 1996). The common conclusion is that BMP effectiveness depends on the proper application and implementation rather than the practice itself.

Comment: The Draft EISs present conflicting statements regarding historical levels of soil organic matter and coarse wood. These statements require clarification and/or scientific documentation.

Narrative: *Some respondents note that the statement "levels of carbon and nutrients tied up in woody material are higher than they were historically" (Eastside Draft EIS, page 2-68) is in conflict with the statement, "soil organic matter and coarse wood have been lost or have decreased" (Eastside Draft EIS, page 2-18). They ask that these statements be reconciled or clarified.*

Response: The statement "levels of carbon and nutrients tied up in woody material are higher than they were historically" refers specifically to dry forest types where fire suppression has been the dominant human-related disturbance. According to Oliver (1994), the lack of naturally occurring frequent, but low intensity fires in these vegetation types converts open, shade-intolerant stands to dense, shade-tolerant forests. The net change is an overall increase in biomass (carbon) in standing, live trees and eventually downed woody material. If wildfire burns these areas, the unnaturally high levels of both standing and downed wood can contribute to severe, uncharacteristic effects where the additional volume of wood is consumed through longer burning time and higher temperatures that result in the carbon being volatilized and lost as available nutrients (Agee 1993). In terms of fire suppression, the statements in question do not conflict, but actually complement each other in that they have been identified as sequential events.

In addition to losses by wildfire, past activities such as timber harvest and livestock grazing that remove vegetation also create conditions where "soil organic matter and coarse wood have been lost or have decreased." Where human disturbances have primarily been the extraction of forest products, direct and indirect effects on soil productivity have occurred through the complete removal of standing and downed logs and loss of organic matter by erosion or other disturbances.

Comment: Information on vegetation loss and soil productivity should be clarified.

Narrative: *Some respondents note that the text states that vegetation manipulation in the direction of historical range of variability (that is, selective tree removal) is more likely to sustain soil productivity, but the Draft EISs imply that vegetation loss contributes to the loss of soil production. They ask that conflicting assumptions be clarified.*

Response: Past land management practices were generally not consistent with natural disturbance processes and patterns. Direct negative impacts on soil productivity occurred with large-scale removal of whole trees and limbs and soil compaction; indirect negative effects, including soil erosion and loss of organic matter, also occur from ground disturbance.

Current forest management approaches (within the past 10 years) are implemented with substantial changes in harvest methods and techniques and silvicultural prescriptions. Instead of large clearcuts and mechanical site-preparation, managers now use selective tree removals and low intensity burning. These changes are intended to emulate natural disturbance processes and patterns by vegetative type, and allow for maintenance and restoration of soil productivity and nutrient cycling under conditions similar to those under which the soils originated.

Management Activity Effects on Soil

Comment: The Draft EISs do not recognize that management activities affect soil conditions and productivity. Opinions diverge on whether emphasis should be on prevention of impacts, or on mitigation and restoration.

Response: The Summary of Conditions and Trends for Soil and Soil Productivity in the Draft EISs attribute current declines in soil productivity to greater intensities of vegetation management, roading, and livestock grazing (Eastside Draft EIS page 2-18, UCRB Draft EIS page 2-9). The alternatives in the Supplemental Draft EIS include management direction for prevention of impacts through mitigation and restoration of degraded areas with important ecological character.

Comment: The effects of the alternatives on soils in the Draft EISs should be clarified by organizing and comparing effects around each of the four bulleted Desired Range of Future Conditions (DRFCs) for soils.

Narrative: *Some individuals feel that effects on soils, fungi, and micro-organisms from logging activities—including road building, erosion, and soil compaction—were not adequately addressed. Some state that modern timber practices have greatly reduced unwanted impacts. Other individuals feel that effects on soils from grazing—such as soil compaction and the decline of native species—were not adequately addressed in the Draft EISs. Some respondents suggest that the EISs compare the desired range of future conditions in Chapter 3 to the soils effects in Chapter 4 and assess the effects of alternatives on DRFCs.*

Response: In the Supplemental Draft EIS, the DRFCs for soils have been incorporated in the appropriate objectives. The organization of the effects analysis in the Supplemental Draft EIS was improved to clarify how the alternatives affect soil productivity, and to better present the potential outcomes of soil productivity relative to the proposed management direction.

Mitigation of Impacts and Restoration of Soils

Comment: The Draft EISs do not adequately discuss the role of fire in site degradation and loss of soil productivity, comparison of fire and logging effects on soils, and the environmental consequences of increased levels of coarse woody debris.

Narrative: *Some individuals feel that the Draft EISs do not recognize that wildfire could decrease soil productivity and have greater long-term impacts than logging. They request more analysis of the relationship between coarse woody debris and fire and the environmental consequences of increased coarse wood. Some suggest a need for more active management to increase downed wood to restore soil conditions. Management after fire should include an explicit effort to restore soil crusts, not just vegetation and litter.*

Response: Both the Draft EISs and the Supplemental Draft EIS include a discussion in Chapter 2 of the role of fire and its potential to change soil characteristics and productivity. Effects of the alternatives on soil productivity, including those based on trends for uncharacteristic wildfire, and snag and downed wood amounts are analyzed in Chapter 4 of the Supplemental Draft EIS.

Comment: The Draft EISs do not adequately describe or prescribe levels of coarse woody debris and snags required to accomplish desired goals and outputs, especially for Alternative 4, objective PE-O4 and standard PE-S1.

Narrative: *Some individuals suggest that levels of coarse woody debris under Alternative 4 should be increased to restore soils, or that objective PE-O4 be clarified to identify levels of coarse woody debris needed. Others argue that the requirements under standard PE-S1 appear excessive and conflict with scientific literature.*

Some respondents feel there is a lack of scientific accuracy in the standards dealing with snags and woody debris and they ask that these standards be clarified in the EIS. Some say the management direction may alter restoration plans and affect expectations and prescriptions of timber harvests. Some believe snag densities and downed woody debris need a more comprehensive strategy to meet wildlife habitat needs in the project area. Some view these fuels as "match sticks" which can sway restoration and commercial harvest decisions. They believe that the snag densities for wildlife in the Draft EISs cannot be applied across the entire project area, suggesting that local standards are better suited for effective habitat planning. While some people suggest harvesting the trees to reduce fuel loading, others defend snags as essential for habitat needs and recommend their inclusion in preservation measures.

Response: Since release of the Draft EISs, the Science Advisory Group used additional information to develop levels for large downed wood and snags that can be supported by potential vegetation groups (PVGs), which are based on historical levels and fire/disturbance regimes. Alternatives S2 and S3 in the Supplemental Draft EIS include new integrated standards that address coarse woody debris and snag recommendations for wildlife, wildfire, and soil productivity. Appendix 12 contains more information on snags and downed wood.

Comment: Standards for Alternative 7 are incorrectly based on Table B; there is no justification for not using Table A standards which show higher values and are used for Alternative 4.

Response: In comparing alternatives in the Draft EISs, Alternative 4 would emphasize more aggressive restoration while Alternative 7 would simulate more current levels of activities with improving trend in conditions. The rationale for Alternative 7 using Table B was based on reductions in proposed activities (spatially and in overall numbers) combined with lower intensity in implementation of those activities under Alternative 7 as compared to Alternative 4. The rationale follows the assumption that Alternative 7 would result in less overall soil disturbance than Alternative 4, with greater emphasis directed toward natural processes to account for inputs of coarse woody debris.

Since release of the Draft EISs, the Science Advisory Group used additional information to develop levels for large downed wood and snags that can be supported by potential vegetation groups (PVGs), which are based on historical levels and fire/disturbance regimes. By using PVGs, the soil conditions and measures of soil productivity are expressed relative to the historical conditions on which the soils developed and the vegetation groups which they supported. Alternatives S2 and S3 in the Supplemental Draft EIS includes new standards that address coarse woody debris and snag recommendations for soil productivity. Appendix 12 contains more information on snags and downed wood.

Air Quality

Comment: Air quality in the interior Columbia River Basin was not analyzed adequately, including cumulative effects and current and historical conditions.

Narrative: *Some individuals contend that the Science Integration Team and the Draft EISs do not present a full air quality analysis of the project area, but instead inconsistently studied only convenient areas. They want to see trends and their causes across the entire area, not only for the present and future but also considering historical air quality conditions. At least one respondent feels that the Draft EISs don't recognize the effects that prescribed burning would have on the air quality of local communities.*

Response: The analysis for the Draft EISs and the Supplemental Draft EIS includes the cumulative effects of prescribed fire on federally managed lands across the basin. The results of modeling imply that air quality within the interior Columbia River Basin would not be seriously degraded, even with a 16-fold increase in prescribed burning over current levels. The precise locations and timing of future prescribed burns, and the meteorological conditions under which they might burn cannot be predicted with enough accuracy across the project area to predict potential human health impacts at this time.

Modeling at a finer scale might be possible for planning purposes; however, prescribed burn decisions are made with real time data and observation, including monitoring information, which are combined with mitigation measures to avoid impacts to human health. Emissions from prescribed fires are monitored

by personnel conducting the burns. The states, and sometimes the federal land management agencies in cooperation with states, currently monitor airsheds in many cities and a number of smaller communities. Observations from prescribed burn sites and data from the states' monitoring is regularly used in the decision process for selecting which, how many, and where, prescribed burns can occur, if any.

Historical air quality information across the project area is generally very lacking, and therefore an analysis of trends is not possible.

Comment: The EIS should fully analyze the impacts on human health caused by air quality degradation from prescribed fire, including cumulative effects.

Narrative: *Some people feel the Draft EISs did not sufficiently consider the potentially adverse effects of increased smoke to human health. Some individuals request clarification of how mitigation can occur through monitoring (Eastside Draft EIS page 4-18).*

Response: The analysis for the Draft EISs and the Supplemental Draft EIS compared varying levels of burning across the project area. The results of modeling imply that air quality within the basin would not be seriously degraded. However, a modeling analysis used to evaluate programmatic changes to a prescribed fire program cannot fully answer whether human health standards would be attained or violated. The precise locations and timing of future prescribed burns, and the meteorological conditions under which they might burn cannot be predicted with enough accuracy across the basin at this time.

Criteria pollutants emitted from prescribed fire could be mitigated by: (1) eliminating the source, (2) decreasing the emissions, (3) burning under better dispersion and mixing conditions, and/or (4) burning under a different wind flow pattern.

In the short term, emissions from prescribed fires are monitored by personnel conducting the burns. The states, and sometimes the federal land management agencies in cooperation with states, monitor airsheds in many cities and a number of smaller communities. Observations from prescribed burn sites and data from the states' monitoring is regularly used in the decision process for selecting which, how many, and where prescribed burns can occur, if any. The ignition process can also sometimes be halted. The meteorological conditions under which prescribed burns are ignited are also closely monitored (1) to avoid impacts of the burns, (2) to be analyzed in conjunction with smoke data, and (3) to assist with future decision making on the location, types, and number of prescribed burns that can be implemented without causing human health impacts.

In the longer term, project plans and prescribed burn plans can be designed to reduce the amounts and/or possible impacts of emissions by reducing the amount of fuel that can burn and the amount of time that larger fuels and duff can smolder. These plans are appropriately addressed at a finer scale than this broad-scale EIS.

Comment: Text in the Eastside Draft EIS, p. 2-28, states that PM_{10} affects humans but not ecosystems. This incorrectly implies that humans are not part of ecosystems.

Response: The authors of the Draft EISs did not intend to imply that humans are not part of ecosystem. However, regulations under the Clean Air Act distinguish between effects on human health, and those on the ecosystem or environment. The section in the Eastside Draft EIS that the commentor refers to (Protection of National Ambient Air Quality Standards), was specifically referring to the protection of human health, and the language is correct in this context. In an evolutionary context of fire being a natural ecosystem process, with smoke as a product of that process, the language is also correct.

Comment: The list of causes of effects on air quality is incomplete and should include: (1) differences in frequency and distribution of acres burned, (2) differences in total number of acres burned, and (3) differences in wildfire and prescribed fire emission factors.

Response: Analysis of acres burned by wildfire and prescribed fire by RAC/PAC and by alternative has been enhanced in the Supplemental Draft EIS. While it is acknowledged that there would often be differences in emission factors between wildfires and prescribed fire (such as the emission factors for crown fire versus understory burning), the emission factors used in the analysis within the Supplemental Draft EIS is limited to the current state-of-the-art scientific methods. Even had more emissions factors been available, the modeling would still need to make broad assumptions on the proportions of each type of fire (crown fire, understory fire, piles/accumulations, etc.) for both wildfire (which might burn over a number of days under quite variable weather and fuels conditions, and hence have highly variable fire behavior) and prescribed fire (which would tend to burn under variable conditions across landscapes).

Comment: The statement (Eastside page 4-28) that "visibility impairment is fairly equivalent between the March and May scenarios (Tables 4-8 and 4-9), while the October scenario (Table 4-10) has much greater loss of visibility" does not match the results shown in Tables 4-8 through 4-10. It appears that the wrong values were entered for Table 4-10.

Response: The necessary corrections to Table 4-10 are noted. This table is not included in the Supplemental Draft EIS, where prescribed burn scenarios are presented more graphically for the project area as a whole.

Comment: The EIS should provide an explanation of how negative outcomes for air quality can be projected for all alternatives while still meeting the purpose and need.

Response: The air quality modeling indicated that there may be much greater effects on air quality from wildfires than from prescribed fire. With the increase in amount of prescribed burning in Alternatives S2 and S3, fuel levels would decrease, which would decrease the frequency and intensity of wildfires, thus lessening negative effects on air quality in the long term. In addition, the management direction requires coordination with ohter agenices, consideration of other sources of particulates in the area, and a balance of short- and long-term risk to air quality and resource conditions.

Comment: Air quality impacts must conform to state and federal laws, including the Clean Air Act.

Narrative: *Some individuals feel that the Draft EISs inadequately addressed how prescribed burning will affect federal and state air quality standards called for under the Clean Air Act. They also believe that new National Ambient Air Quality Standards (NAAQSs) for fine particles and new regional haze rules for visibility need to be considered, and a Prevention of Significant Deterioration (PSD) analysis should be conducted.*

Response: Management activities must conform to applicable state and federal air quality regulations and laws. The Draft and Supplemental Draft EISs demonstrate adherence to applicable air quality regulations at the programmatic level, and state that "(m)ore detailed air quality analyses should be conducted at subsequent planning levels when emissions can be more accurately quantified and the locations and meteorology associated with a specific burn are known." The implementation regulations of new National Ambient Air Quality Standards (NAAQS) for fine particulates have been remanded to a U.S. District Court by an Appeals Court, and their implementation is unclear and uncertain at this time.

Implementation of other regulations adopted after the 1990 Clean Air Act Amendment have similarly been suspended as of this writing, and it is not yet clear if the regional haze regulations will be implemented as scheduled. The fine particulate matter implementation schedule that was suspended called for a few years of monitoring data, which is not yet available. Prescribed fires are considered area sources of emissions, therefore they do not fall under the new source review regulations for point sources, which require PSD analysis. Hence, the PSD analyses requirement does not apply to prescribed fires.

Comment: Methods and methodology in air quality modeling were flawed in the Draft EISs. They address only fire and not other emissions, and they underestimated the effects of prescribed fire. They should be corrected.

Narrative: *Some people feel that the analysis does not address emissions from any other activities, including industrial emissions, vehicle emissions, transported pollution, or building and use of roads. They note that states routinely consider the inventory of all existing sources in an air basin when considering a permit for a major new source of air pollutants. One respondent suggests using atmospheric dispersion modeling and other methods.*

Response: Industrial and urban emissions were not analyzed because they fall outside the project's jurisdiction and scope. The Draft EISs and the Supplemental Draft EIS focus on those criteria pollutants which could be generated by the potential management actions proposed and analyzed in the EIS. As stated in the EIS, these criteria pollutants would not likely have an impact on public health "because of the small levels produced and the rapid dilution or modification of these substances within relatively short time frames." However, it was acknowledged in the EIS that healthy and diverse ecosystems are better able to withstand the effects of these urban and industrial emissions.

Both dispersion modeling and emission production modeling were used in the analysis of air quality effects in the Draft EISs and the Supplemental Draft EIS.

States routinely consider the inventory of all existing sources in an air basin when considering a permit for a major new source of air pollutants. However, the new source review and permitting process apply only to stationary sources, not to area sources, and prescribed fire is classified as an area source.

Management direction was added to the Supplemental Draft EIS which requires consideration of impacts from other sources of particulates when considering a prescribed burning project.

Comment: Standard PE-S4 and objective PE-O5 do not require the same permitting and analysis for prescribed burns as for other emissions sources. This should be corrected in the EIS.

Response: The permitting and analysis process for prescribed fire emissions is not the same as for other sources of emissions because the laws and regulations for prescribed fire emissions are for area sources, rather than for stationary sources. Hence, the requirements are not the same. Standard PE-S4 was not carried forward to the Supplemental Draft EIS. However, many of its components can be found in the management direction for fire management and air quality.

Comment: The statement on page 2-17 of the Eastside Draft EIS , that general conformity requirements apply only within non-attainment areas does not agree with EPA guidance and should be corrected in the EIS.

Response: While the EPA had intended to generate a general conformity rule that covered all lands, the only applicable requirements for general conformity are those that have been passed in final form. For specific language on applicability to non-attainment areas and maintenance areas only refer to 40 CFR 51.853.

Comment: The Draft EISs do not consider that actions within 100 kilometers of a Class 1 airshed are subject to a public participation process.

Response: In reference to the new source review process that applies to stationary sources, the management actions proposed and analyzed in the Draft EISs and the Supplemental Draft EIS include prescribed fire, which is an area source, not a stationary source, by regulatory definition. In this case, the rule referred to does not apply. However, public involvement is an essential part of the appropriate National Environmental Policy Act process for project-level proposed actions. This would take place at the local level during site-specific analysis, and the public will have further opportunities to provide input to any proposed actions.

Comment: The EIS should include current and recent historical conditions, using existing federal, state, and local data.

Response: It does, to the extent possible and practicable. The analysis for the Draft EISs and the Supplemental Draft EIS used information which was available. Under the Clean Air Act, the states have been given the authority to monitor and enforce air quality standards. However, scientifically collected air quality data is very expensive; thus, states have collected data only where there were known or suspected air quality problems. Often, information was available only for specific locations and / or for a very short period of time. Historical air quality information across the interior Columbia River Basin is generally lacking.

Wild and Prescribed Fire Effects

Wild and Prescribed Fire Effects

Comment: The management strategies (Conserve, Restore, Produce) do not adequately accommodate disturbances because they do not allow for flexibility in application or include risk evaluation.

Narrative: *Some suggest that the Draft EISs do not accommodate necessary disturbance (both anticipated and unforeseen) because of " multiple-use zoning" and varying management emphases (Conserve, Restore, Produce). These respondents feel that management direction should be based on a holistic approach, with flexibility in standards to accommodate disturbances such as fire. Some say that the standards supporting the natural disturbance objective are weak and in need of a requirement for risk assessment associated with the development of prescribed fire plans.*

Response: Standards for fire management activities and wildland fire have been changed and clarified in the Supplemental Draft EIS. Direction is included for assessing and balancing fire risks at the broad scale; however, risk assessment of prescribed fire projects are best addressed in prescribed fire plans, which include site-specific information. Additionally,

adaptive management allows for changes in management methods to accommodate unforeseen and unpredicted local events.

Comment: The Draft EISs do not take into account the increased potential of catastrophic wildfires caused by an increased use of prescribed and natural fire.

Narrative: *Many respondents feel that prescribed burns are likely to become uncontrolled burns because of years of fire suppression and the fuel buildup associated with it.*

Response: As stated in the *Federal Wildland Fire Management Policy and Program Review* (USDA and USDI, 1995), "Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity... Planning must also consider the risks, probabilities, and consequences of various management strategies, such as fire use versus fire exclusion."

There is always some inherent risk with using prescribed fire as a management tool and allowing it to function as an ecosystem process. In some cases, manual or mechanical treatment may be necessary to reduce risk before prescribed fire can be used; in other cases, these methods may be required to replace fire when the risk and consequences are both too high. However, these are decisions that must be based on local, site-specific analyses, and cannot be addressed in a programmatic EIS of this scale. The EIS recognizes the magnitude of the problems associated with the accumulation of fuels and increases in forest stand density due to nearly a century of fire exclusion. New scientific analysis on these ecosystem changes have been incorporated in the Supplemental Draft EIS.

Restoring Fire as a Process

Comment: The Draft EISs do not adequately consider the role of wildfire as a tool for restoring ecosystems on public land.

Narrative: *Some individuals want a more careful comparison of probable effects of active and passive management activities and their potential to increase risks of damage from severe wildfire. Others suggest that the selected alternative should abandon fire suppression policies and practices and increase use of both prescribed and natural fire.*

Response: The *Federal Wildland Fire Management Policy and Program Review* (USDA and USDI 1995) stated that "Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity... Planning must also consider risks, probabilities, and consequences of various management strategies, such as fire use versus fire exclusion."

The *Federal Wildland Fire Management Policy and Program Review* stated that fire suppression must remain an integral component of fire management policy, "Federal agencies [will] maintain preparedness planning and suppression programs to prevent unacceptable loss from fire" (page 19). The recommended set of fire management policies of the review include the use of fire (wildland fire and prescribed fire) in its natural ecological role, where it is consistent with other land and resource management objectives as well as with other social concerns and objectives (such as safety, risk management, air quality management, and economic efficiency). In addition, the use of fire must be consistent with agency policy. Fire suppression remains a vital part of agency policy. Changes in ecosystem conditions due to fire exclusion and other management actions will sometimes preclude the use of fire, without some intervening active management action, such as removing accumulated fuels or changing forest stand structure or density.

The Supplemental Draft EIS recognizes the essential role that wildfire plays in ecological processes. Management direction in Chapter 3 further specifies that wildfire management should emphasize protection or restoration of key habitats.

Comment: The Draft EISs do not address adequately cumulative effects of prescribed fire on plants, terrestrial animals, and fish.

Narrative: *Some people believe that effects of prescribed spring and fall burning on plants and animals are not analyzed adequately. They feel that inherent conflicts and tradeoffs between desired conditions and habitat requirements for aquatic species, big game, and woodpeckers need to be displayed. Some request the elimination of all guidelines that promote prescribed natural fire, stating that prescribed natural fire should be promoted only under proper forest conditions.*

Response: Chapter 3 in the Supplemental Draft EIS provides direction on the use of fire, including "wildland fire use for resource benefit" (previously referred to as "prescribed natural fire"). Wildland fire use is permitted only under stringent management prescriptions, which include vegetation conditions, weather and fuel conditions, and other management considerations to evaluate risk and benefit. The Science Team considered prescribed fire levels and effects of fire on habitat components, such as on snags and large woody debris retention, during their evaluations of alternatives for the Draft and Supplemental Draft EISs. These effects (both direct effects and cumulative effects) are disclosed in Chapter 4 in the Supplemental Draft EIS.

Comment: The Draft EISs do not state the methods and rationale for computing annual wildfire acreage.

Narrative: *Individuals note that the Draft EISs do not indicate whether the incidence of wildfire in a grid cell influences the future probability of wildfire assigned to that cell. They ask that the methods and rationale for computing annual wildfire acreage be clearly stated.*

Response: The probability of recurrence of wildfire within a grid cell was dependent on the successional pathway that would occur in that cell (that is, the vegetation that was there before the fire, potential vegetation type, vegetation that would follow the disturbance, and type of management that would occur). Discussion of the methods used to compute wildfire acreage can be found on pages 4-56 through 4-61 of the Draft EISs. The Supplemental Draft EIS contains additional explanation of the methods used, as well as references to scientific documents that describe modeling techniques and that have been published since the Draft EIS.

Comment: The intent of the statement in the guidelines, "Consider using liberal prescribed natural fire prescriptions," is not clear. The words 'consider' and 'liberal' should be eliminated or clarified.

Response: Standards and objectives are required activities that must be adhered to, but guidelines are recommended courses of action to help meet the goals and objectives of a project. Therefore, a term such as 'consider' is appropriate when referring to guidelines, which are optional and in general do not have measurable outcomes. The term 'liberal' has been removed from the guidelines.

Fire Management

Comment: The EIS should fully analyze a proper balance among timber harvest, commercial thinning, and prescribed fire.

Narrative: *Some respondents argue that the current buildup of excessive fuels requires active management direction be given for a combination of salvaging and thinning timber before prescribed fire is to be implemented. Others state that timber harvest increases fire severity and should be accompanied by fuel reduction. They feel that the relationship among the different forest management activities needs to be clarified and evaluated.*

Response: Management direction in the Supplemental Draft EIS requires maintaining and promoting ecological processes; and managing vegetation structure, stand density, species composition, patch, pattern, and fuel loading and distribution to reduce the prevalence of uncharacteristically large and severe disturbances, and to facilitate resilience of landscape succession and disturbance regimes and terrestrial source habitats.

A mix of forest management activities is proposed at the broad scale to restore and maintain forest health, including timber harvest, thinning, prescribed burning, prescribed fire plans, decreased roading, and watershed restoration. Specific choices of which management activities would achieve goals and objectives will be made at the local level considering local conditions and management issues. Therefore, the specific balance of activities will depend on local conditions and needs.

Comment: Fire management information in the Draft EISs is incomplete.

Narrative: *Some respondents feel that the Draft EISs do not analyze adequately impacts of fire management direction on fire-prone areas, including utility corridors and private property at the wildland–urban interface. They think that impacts of weather patterns, timing of fire activities, and fire management in roadless areas need to be considered. Some feel that the Fire Regime Severity maps lack clarity and are misleading.*

Response: Effects of fire management direction on utility corridors and in specific roadless areas, effects of weather patterns, and timing of fire activities are more appropriately analyzed at a local scale, such as in Forest Service and BLM land use plans, site-specific environmental analyses, and local fire management

plans, rather than at the broad scale of this EIS. Dicussion of fire in urban-rural-wildland interface areas can be found in the Social-Economic-Tribal section of Chapter 2. Potential effects of prescribed fire/fuels management on communities can be found in the Social-Economic-Tribal section of Chapter 4. The fire regime severity map (Map 2-9) has been redesigned for enhanced clarity.

Comment: The coordination of fire management programs should not be optional but should be a requirement for the region to ensure successful implementation of EIS goals and objectives.

Response: Coordination and collaboration are key aspects of management direction (including objectives for fire management and air quality) throughout both action alternatives in the Supplemental Draft EIS. In addition to these objectives, at least one standard requires consultation with appropriate local, tribal, state, and other adjacent air quality management organizations prior to prescribed burning activities or decisions to use wildfire to achieve management objectives. Direction mandating coordination is also included in the *Federal Wildland Fire Management Policy and Program Review* (USDA and USDI 1995), which applies to both the BLM and the Forest Service.

Comment: Objective TS-O2 does not give resource managers the guidelines necessary to implement the stated fire management strategy.

Response: The *Scientific Assessment* and other studies conducted in the project area have shown that decades of fire suppression have caused unintended consequences, and that restoration of fire as a natural process would help achieve many land management and societal goals. Therefore, the importance of restoring fire as a natural disturbance process has been emphasized in the EIS. Objective TS-O2 has been rewritten and additional management direction has been added to the Supplemental Draft EIS to make this intent clearer.

Additional guidance can be found in the *Federal Wildland Fire Management Policy and Program Review* (USDA and USDI 1995).

Comment: The Draft EISs do not address the role of fire in the spread of noxious plant species.

Narrative: *One respondent asserts that the effect of prescribed burns on noxious species is not addressed. This person wonders if all native species are more fire adapted, and who decides which species to favor.*

Response: In the Supplemental Draft EIS, prescribed burning is described as a factor that could spread noxious weeds and other exotic undesirable plants. When prescribed burning is considered for use, the management direction recognizes that it may contribute to noxious weed increase and spread, and that subsequent weed control might be necessary. The intent of the direction is to plan ahead to reduce that risk.

Rehabilitating Burned Areas

Comment: The Draft EISs do not completely display the effects of standard TS-S4 to maintain soil productivity by resting burned areas from grazing, including economic effects and effects on cooperative relationships.

Narrative: *Some individuals feel that the standard in the Draft EISs discourages the ranching community from becoming involved in fire management on rangelands. They fear that if funding for monitoring rangelands decreases, then monitoring effectiveness will decline as well. Some people claim that not all burned areas require the prescribed resting period, and they feel that standard TS-S4 is insufficient to restore rangeland health. They feel that soil crusts as well as vegetation and litter need to be established.*

Response: Rather than being specific about how to graze livestock to maintain soil productivity after burning, the Supplemental Draft EIS focuses on soil outcomes to achieve adequate cover to promote infiltration, soil water storage, and maintain soil stability in upland areas; soil surface conditions that support infiltration; and soil and vegetation conditions that provide opportunity for establishment of desirable plants. The expectation is that livestock grazing would be adjusted as deemed necessary at the site-specific scale to achieve the soil outcomes.

Comment: Standards TS-S2 and TS-S3 for rehabilitating disturbed areas with ecologically appropriate species are unclear. The use of native and non-native species in revegetation and restocking programs should be defined and discussed in the standard.

Response: Native and non-native plants play an integral part in the restoration process. Restoring or maintaining biodiversity and productivity of native plant communities is the specific focus of several Supplemental Draft EIS objectives and standards. Maintaining or improving habitat for native plant and animal species is a key feature

of several other objectives and standards in the terrestrial component of the ecosystem management strategy. The Supplemental Draft EIS continues an emphasis on the maintenance and restoration of native plant communities.

However, there are some areas in the interior Columbia River Basin where rehabilitation efforts to bring back native species has failed. Until advances in technology and knowledge of these systems allows successful rehabilitation of these areas with native species, these areas should be stabilized, and to the extent possible, planted with select non-native species. Non-native species can be used to provide the same characteristics and structure that was provided by the native species. These intentions are spelled out in the objectives and standards in the base level and restoration sections of the Supplemental Draft EIS.

Comment: Grazing should be delayed until the effects of grazing on burned areas are understood.

Response: While increased knowledge of specific effects of livestock grazing on particular plants or sites under specific burned conditions may be helpful to local managers, sufficient information on the effects of grazing on burned areas is available for providing management direction at the broad scale. This information is discussed in the Factors Influencing Ecosystem Health section in Chapter 2 of this EIS, and in Hann, Jones, Karl, et al. (1997).

Comment: The Draft EISs do not take landscape features into consideration when prescribing rehabilitation treatments.

Narrative: *Some feel that unless the landscape context is considered, restoration and rehabilitation will not be effective in making forests and tree stands more resilient.*

Response: Objectives, standards and guidelines in the landscape component of the Base Level and Restoration sections of Chapter 3 of the Supplemental Draft EIS focus on landscape-level processes and functions. This includes succession and disturbance patterns and processes in concert with the climate, landform and biological and physical characteristics of the ecosystem. Direction in the landscape component includes aquatics, terrestrial wildlife and plants, and socio-economic needs. Landscape restoration is the foundation of the strategy to manage long-term risk to aquatic and terrestrial species. The intent of landscape restoration direction is to repattern vegetative patches and succession / disturbance patterns to restore watersheds and streams to a condition more consistent with the climate, landform, and biological and physical characteristics of the ecosystem.

Management of Insects and Disease

Comment: The Draft EISs do not fully address the cumulative effects of management activities on insect disturbances, including effects on non-federal lands.

Narrative: *Some individuals feel the Draft EISs do not consider effects of ecosystem management activities such as thinning, burning, and even-aged management on insect disturbance rates. Some people are concerned about management responsibility for insect disturbances spreading from federal lands. They feel that cumulative forest ecosystem health hazards and risks as they relate to wildfire, insects, and disease potential have not been adequately identified. They feel that these hazards and risks could negatively affect other components of ecosystems in the basin and should be analyzed. Some suggest a need for more exact restrictions against thinning in Douglas-fir/ grand fir forest types where root rot is present. Some suggest a need for more prescriptive measures to control insect disturbances.*

Response: Chapter 2 of the EIS discloses the current levels of insects, disease, and wildfire as well as changes from historical levels and trends. Chapter 4 discloses the expected effects of the alternatives on insect, disease, and wildfire levels. It also discloses the effects on other resources such as aquatic habitats, hydrologic resources, terrestrial habitats, social / economic, and tribal. These effects are based on the various levels of thinning, stewardship harvest, prescribed fire, and other restoration activities assumed to take place in each alternative.

Many privately owned forests are also susceptible to insect and disease outbreaks and wildfire. How susceptible these lands are to insects, disease, and wildfire depends on the current condition of those lands. The Science Advisory Group analyzed the effects associated with all land ownerships in the basin, to gain insights into potential cumulative effects. Their simulations assumed continuation of existing management direction and activity levels across non-Forest Service- or BLM-administered lands. Cumulative effects of the alternatives are disclosed in Chapter 4.

This EIS is broad-scale in its scope and outcome based in its nature. To add prescriptive standards and restriction concerning insect and disease control is inconsistent with the new focused direction (Babbitt/ Glickman letter) and the need to maintain flexibility for local managers.

Comment: Table 4-28 is difficult to understand. It should be clarified as to whether spring prescribed burning might increase insect and disease problems.

Response: Comments such as this assisted the EIS Team in better clarifying the information presented in the Supplemental Draft EIS. Table 4-28 is not carried forth into the Supplemental Draft EIS. However, uncharacteristic insect and disease effects are discussed in the terrestrial upland vegetation section of Chapter 4.

Comment: The Draft EISs ignore the role many insects play in maintaining ecosystem health.

Narrative: *Some respondents note that insects play an important role in ecosystem health, as pollinators, food sources, and biological controls of potentially damaging species; they feel that these roles are overlooked in Draft EISs.*

Response: Insects play a very important and varied role in ecosystem health. This topic is discussed in Chapters 2 and 4 of the Draft EISs and the Supplemental Draft EIS as it relates to landscape disturbances, especially in the forested environments. However, the pollination of plants by insects and their role in the food chain is too fine scale for this broad-scale EIS.

Forest Health

Forest Health

Comment: Analysis of forest potential vegetation groups (PVGs) and seral stages is inconsistent, incomplete, or difficult to determine and understand.

Narrative: *Some respondents are confused about how riparian shrub and riparian herb PVGs are addressed, because Eastside Draft EIS Summary (pages 4-5) suggests that only a single 'riparian shrubland herb' PVG was used, but Eastside Chapter 2 page 129 indicates that three PVGs (riparian woodland, shrub, and herb) were grouped together. Some respondents find Figures 2-8 and 2-9 difficult to understand; they felt these figures do not enable people to determine percentages of forest in various seral stages and shade tolerance categories. Some respondents feel that information is needed on what forest vegetation types have decreased to offset the increases in various vegetation types. Some feel that Table 3-2 (desired seral stages) should also include patch size ranges, and that standards HA-S2 and HA-S3 should be integrated with the desired seral stages.*

Some people feel it is confusing to have potential vegetation groups presented in the affected environment but the evaluation of alternatives based on terrestrial communities; they think that all chapters should be based on the same parameters and ecosystem indicators. Some respondents feel that it would be beneficial to compare the projections with the Desired Range of Future Conditions (DRFCs) for each alternative, to demonstrate whether the alternatives achieve the DRFCs for PVGs and seral stages.

Response: In the Supplemental Draft EIS, the terrestrial community types are better described, nested within PVGs, and crosswalked with PVGs. From the broad scale, classifying the landscape into potential vegetation groups is useful because it adds a time dimension to the classification. However, wildlife ecologists look more at the existing habitat (that is, cover type and vegetation structure) present on a site rather than at either the potential vegetation or possible future vegetation.

To improve understanding of the information in Figure 2-8 and 2-9 of the Draft EISs, the Supplemental Draft EIS communicates the shift from shade-intolerant forests to shade-tolerant forests more clearly. Interior ponderosa pine, western larch, western white pine, and whitebark pine cover types have declined within the project area as have the early seral and late seral forests, especially the late seral single story structure forest. This is stated in Chapter 2 of the Supplemental Draft EIS in text and figures.

The Supplemental Draft EIS better recognizes that forest and rangeland restoration are the same as terrestrial habitat restoration. Restoration activities that improve landscape health also improve terrestrial habitats because they help to provide a more appropriate mix of habitats on the landscape and make those habitats more sustainable in the long term. The Supplemental Draft EIS shows the inseparability of the desired conditions for the landscape and terrestrial habitats.

Comment: The potential vegetation group (PVG) classification is not adequate for determining need for restoration.

Response: Restoration needs were not determined from PVG classifications. To develop the alternative restoration strategies for the Draft EISs, information on forestland, rangeland, and aquatic ecosystems was organized by potential vegetation groups or watersheds and summarized by ecological reporting unit where possible. To provide an integrated picture, showing how existing conditions relate to each other and to identify where overall ecological conditions, opportunities, and risks are similar, the Science Integration Team also evaluated existing information and summarized current conditions around "clusters" of subbasins. These "clusters" exhibit similar sets of characteristics, reflecting common management needs, opportunities, risks, and conflicts. It was from this integrated view of integrity that restoration needs and priorities were described and analyzed in the Draft EISs.

In the Supplemental Draft EIS, broad-scale functional (that is, landscape, aquatic, water quality, old forest / rangeland habitat, economic, and tribal) restoration priorities were developed and mapped. Subbasins were identified for broad-scale integrated restoration priority, based on the following: risk to aquatic and terrestrial species and their habitats from natural disturbances; opportunity to reduce those risks, improve habitats, provide the appropriate mix of habitats, and fix succession / disturbance patterns; ability to provide connectivity for and expand scarce aquatic and terrestrial habitats; hydrologic processes; economic value to human communities; and restore other biophysical and / or social needs where opportunities exist. Additional aquatic priority subbasins were included to expand and improve extent, condition, and connectivity of aquatic habitat.

Comment: The Draft EISs present incomplete information on ecological integrity ratings (for forest integrity and hydrologic integrity specifically), including how they were calculated and how they are to be interpreted.

Narrative: *Some individuals feel that the proxies used for ecological integrity are crude and will likely lead to erroneous characterizations of integrity. These respondents feel that the selection of proxies deserves greater explanation, and that the validity of the proxy selection process needs to be demonstrated. They want an explanation of how composite ecological integrity ratings were calculated and how they are to be interpreted, especially because the composite ratings seem to deviate from the component integrity ratings. These respondents feel that there is no indication that basin hydrology was assessed, and they want the specific hydrology measures and watershed hydrology needs to be addressed. They also point out that 4th-code Hydrologic Unit Codes (HUCs) lack hydrologic integrity ratings on Map 2-44, and they want the missing integrity ratings with an explanation of why they were omitted.*

Response: How integrity was defined and measured is summarized in Chapter 2 of the Draft EISs, at the beginning of the section called Integrated Summary of Forestland, Rangeland, and Aquatic Integrity. Because these ratings have not changed, the Supplemental Draft EIS incorporates this information by reference but does not discuss further specific integrity ratings. The effects on ecological integrity can be found in Chapter 4 of both the Draft and Supplemental Draft EISs. Details of how individual and composite integrity ratings were derived are provided in the *Integrated Scientific Assessment* (Quigley, Haynes, and Graham 1996) and the *Landscape Effects Analysis of the SDEIS Alternatives* (Hemstrom et. al 1999).

Comment: Definitions of and criteria for delineating forest and range clusters are unclear or misleading and do not accurately reflect important differences in ecosystem integrity within clusters.

Narrative: *Some individuals feel that the criteria for delineating forest and range clusters are either in error or they do not clearly distinguish differences among forest- and range-dominated subbasins. Some suggest that the definition of cluster in the glossary and key terms indicates that management opportunities and risks within clusters are similar; they feel that the definition should be revised to indicate that similarities are relative to other clusters and do not reflect the diversity of conditions within clusters that would be revealed by a finer scale analysis. These respondents also feel that the size of clusters should be reduced to enable identification of important differences in ecosystem integrity within clusters.*

Response: The concept of range and forest clusters was used for description and analysis in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) and the Draft EISs but was not brought forward to the Supplemental Draft EIS. The clusters have been replaced by Resource Advisory Council and Province Advisory Committee (RAC / PAC) areas in the Supplemental Draft EIS in response to this and similar comments and to be more useful for implementation.

Comment: Table 4-31 (Major Trends in Forestland Condition) is unclear and does not describe the relevance of each condition and trend to the decision makers.

Narrative: *Some individuals feel that Table 4-31 could be reformatted to make it more understandable. They feel that it seems to present conflicting information.*

Response: Trends for forestland terrestrial communities toward or away from historical conditions are presented in a more simplified series of tables in Chapter 4. Table 4-31 is not carried forward into the Supplemental Draft EIS.

Comment: The Draft EISs fail to address dry Douglas-fir ecosystems.

Narrative: *One respondent asserts that dry Douglas-fir ecosystems, which make up a significant portion of the forested ecosystems in central Idaho, were historically maintained with non-lethal fires, yet there is no mention of managing such forests in the Draft EISs.*

Response: Interior Douglas-fir within the dry Douglas-fir type in central Idaho, often take the role of the shade-intolerant species which were historically maintained in open stands by a frequent, light fire regime. Management intent for these sites is similar to ponderosa pine sites where it exists. Management direction in the Draft EISs to "re-establish historical disturbance regimes" and "maintain dry site forests in open stands of large trees" was intended to be applied to the dry Douglas-fir type. Additional language has been added to the Supplemental Draft EIS to further clarify this direction.

Proposed Management Actions for Forest Health

Comment: The Draft EISs do not address how proposed management direction is different from previous management actions.

Narrative: *Some commentors expressed concern that "ecosystem management" does not really mean a change from past management practices, because they feel that proposed restoration activities such as logging and control of noxious weeds are the same practices that led to declines in forest health. They question the validity of using past methods to restore forest ecosystem processes.*

Response: The major distinctions between the proposed (the action alternatives) and past (the no-action alternatives) management are outlined in Chapter 3 of the Draft EISs, Differences Between the Alternatives and in the Supplemental Draft EIS in Chapter 3, Summary of Alternatives. Although restoration activities under the action alternatives were designed to restore ecosystem health through active management, they are distinct from current/past management in that they use an integrated ecosystem management approach based on sound scientific information.

The consistent, collaborative, science-based direction expected to result from this EIS is different from the previous management approach under which each individual national forest and BLM District made independent management decisions that did not take the broad scale into account.

Comment: Assumptions for Table 3-6 (forestlands activity levels) need clarification.

Narrative: *Some respondents feel that Table 3-6 is not clear about whether the harvest, thinning, prescribed burning, and watershed restoration acres are overlapping or mutually exclusive, or which category contains timber salvage operations; they want these assumptions to be clarified both in the table and in the alternatives.*

Response: Sometimes harvest, thinning, prescribed burning, and watershed restoration are needed on the same acre of forest. Inherently, none of these activities are mutually exclusive. Timber salvage, on the other hand, is a form of harvest and therefore should only be thought of in the context of harvest. Because of this and other similar comments, Table 3-6 has not been brought forward to the Supplemental Draft EIS.

Comment: There is disagreement about what forest composition and structure should be and what silvicultural practices should be used to get there.

Narrative: *Some individuals suggest that removing primarily smaller trees is not always desirable and that the greatest benefit in terms of forest and ecosystem health may come from removing some larger trees (diseased or genetically inferior) and leaving a stand of well spaced alternate tree species. They feel that increasing early successional, shade-intolerant species does not allow for the development of climax forests where they historically existed. Others say that standard TS-S17 should be revised to provide for conservation of some mid seral species and structures to provide for their transition to late-successional stages.*

Some feel that silvicultural manipulations should be limited to selective cutting to enhance the return of ponderosa pine and western larch where it has been high graded and reproduction is being crowded by shade-tolerant fir. Others note that tree densities called for in standard PE-S3 seem inconsistent with the desired future conditions to moderate the intensity of disturbances such as windthrow.

Some respondents feel that standard TS-S11 is overly restrictive and does not allow for situations where species composition is compatible with the desired range; they think the EIS should add unambiguous qualifiers to the standard to ensure that it is ecologically consistent with the dynamics of the landscape. Some feel that Alternative

2 (specifically, Standard A2/AQ-S1) is unacceptable because it prohibits timber harvest in Riparian Conservation Areas and eliminates silviculture as a tool to improve riparian conditions.

Response: The Draft and Supplemental Draft EIS do not provide management direction to remove smaller trees everywhere, increase shade-intolerant species everywhere, or remove all mid seral, multi-story forests. Some alternatives in the Supplemental Draft EIS require these changes where it will help to reestablish more appropriate succession / disturbance patterns, provide more sustainable vegetation, and increase scarce habitats.

The Supplemental Draft EIS focuses on outcome-based direction. In order to achieve the goals and objectives of the Supplemental Draft EIS, sometimes selective harvest is appropriate while at other times alternative methods of harvest would best achieve the desired outcomes. This decision is best left to the local land manager and collaborating partners to determine fine-scale details.

The snag and coarse woody debris management direction in Alternatives S2 and S3 in the Supplemental Draft EIS has been combined to fix problems of inconsistency between standards in the Draft EISs. It is based on historical conditions so that the direction will not call for higher numbers of snags and amounts of coarse woody debris than the site can sustain.

Several alternatives in the Draft EISs and Supplemental Draft EIS do allow timber harvest in riparian areas when it promotes riparian management objectives. The decision makers will consider many factors, including overall effects on riparian areas, when the selected alternative is identified.

Comment: The EIS should make clear which forest clusters are designated for active restoration and which are designated for passive restoration.

Response: The concept of range and forest clusters was used for description and analysis in the *Assessment of Ecosystem Components* and the Draft EISs, but was not brought forward in the Supplemental Draft EIS. The clusters have been replaced by Resource Advisory Council and Provincial Advisory Committee (RAC / PAC) areas in response to this and other similar comments.

Comment: The EIS should not assign a management emphasis to forests with high ecological integrity.

Narrative: *Some respondents argue that lands with high ecological integrity should not be in need of "forest health logging" or other management activities.*

Response: In the Supplemental Draft EIS, several areas were identified as being in good condition (high integrity) and / or important to fish or wildlife. Management activities in these areas (A1 and A2 subwatersheds and T watersheds) are somewhat restricted and must be consistent with maintaining or protecting their value as important habitats. Other areas were identified as having lower integrity and in greater need of restoration. This is a different approach than was taken in the Draft EISs.

Ecosystems change through time. In order to maintain an area with high ecological integrity over the long term, it may be necessary at some point to manipulate the vegetation using management techniques that resemble natural processes.

Comment: The Draft EISs do not fully address the impacts of grazing in forest clusters; livestock management in forest clusters should be included in Table 3-6 and in the analysis of effects.

Response: The concept of range and forest clusters was used for description and analysis in the *Assessment of Ecosystem Components* and the Draft EISs but was not brought forward to the Supplemental Draft EIS. The clusters have been replaced by Resource Advisory Council and Province Advisory Committee (RAC / PAC) areas in the Supplemental Draft EIS in response to this and similar comments and to be more useful for implementation purposes. Table 3-6 is not brought forward into the Supplemental Draft EIS.

Comment: Table 4-51 should be revised to include timber harvest activities as a means to restore forest structural stages and species composition and to reduce stand density and fuels.

Narrative: *Some people feel that Table 4-51 (Annual Restoration/Management Activities) should include timber harvest as a management activity. They think the EIS should analyze the implementation effects of the alternatives against the following: (1) standards that reallocate suitable timber base, (2) standards or objectives that constrain timber availability across space and time, and (3) processes or constraints that could impede or prohibit attainment of predictable resource outputs.*

Response: Setting timber harvest allocations is not addressed through this broad-scale EIS, but would be established at the local level through individual land

use plans. Chapter 4 presents the broad-scale effects but not the mid- or fine-scale effects of the alternatives on timber harvest levels.

Comment: Forest health guidelines are conflicting, inconsistent, or unclear.

Narrative: *Some respondents feel that guideline TS-G67 may be inconsistent with objective TS-O6 for all alternatives. They note that to convert late-seral stage multi-layered ecosystems to single-layered systems may not be a consistent objective among alternatives and may conflict with other objectives. They feel that guideline TS-G92 is neither consistent nor possible in an action management alternative because large blocks of late seral habitats which represent patterns that occurred with natural disturbance events could include areas the size of individual national forests or larger. For these respondents, guideline TS-G94 suggests that watershed restoration needs determine activity locations and frequencies, but they note that watershed restoration is not defined. They feel that TS-G109 needs a modifier such as "where appropriate" to ensure that sufficient scientific study underlies designation of any ridgetop as "important to linkage or movement of wildlife."*

Response: Some inconsistencies among guidelines are not unexpected, because guidelines are optional recommendations for various ways to achieve an objective. It is not expected that all guidelines would be adopted everywhere simultaneously. However, each guideline is intended to be clear and consistent with the objective itself. This has been improved in the Supplemental Draft EIS.

The key term in TS-G67 is "consistent with the biophysical environments and the disturbance regimes." The Draft EIS does not require managers to convert all late seral multi-story forest to single-story forest, but only where it makes ecological sense. TS-G67 is not brought forward to the Supplemental Draft EIS because it is redundant with other management direction.

Natural disturbances create patches and patterns of vegetation on the landscape. These patterns are variable because the landscape conditions are variable and the nature of the disturbances is patchy. Patches of any vegetation type, especially late seral forests, do not encompass an entire national forest or BLM district. The intent of guideline TS-G92 is to build the size of late seral forest so that there is less edge-effect on the interior forest wildlife species that use late seral forest. The term "large blocks" is relative to the way it is used; in relation to the size of most stands of late seral forest, "large blocks" would not be as large as the size of an administrative unit. This guideline was revised and rewritten in the Supplemental Draft EIS to improve clarity and understanding.

TS-G109 is not brought forward to the Supplemental Draft EIS; however, this issue is addressed through other objectives and standards. The Supplemental Draft EIS concentrates more on restoring and expanding habitats where it is ecologically and biophysically consistent than on physically linking habitats because those linkages may not be sustainable.

Comment: The Draft EISs incorrectly describe the effects of forest management activities.

Narrative: *Some individuals feel that the Draft EISs incorrectly describe the effects of roads, timber harvest, and other management activities. They claim that improved logging practices and current technology mean that ill effects do not result from these management activities; they feel that theories about negative impacts on the environment are unfounded as demonstrated by looking at "any clearcut or logging unit".*

Response: Negative effects from roads, timber harvest and other management activities have been documented in the Draft and Supplemental Draft EISs. Some negative effects can be mitigated through actions such as seasonal road closure, proper engineering and maintenance of roads, winter-season harvests, and maintaining buffer strips near streams. Some of the management direction in the Draft and Supplemental Draft EISs addresses mitigation of effects of resource management activities, including roads and timber harvest; however, many mitigation measures would be better determined on a finer scale by local managers.

Comment: The EIS should allow for site-specific flexibility in management and restoration of forest health.

Narrative: *One person feels that forest stands should be managed according to the unique requirements of their forest habitat type. Others feel that the plan needs to allow flexibility in managing areas for such site-specific issues such as insect and disease infestations or fuel load.*

Response: The Supplemental Draft EIS contains objectives and standards for managing vegetation structure, stand density, species composition, patch size, pattern, and fuel loading and distribution. This would provide for landscape succession / disturbance patterns and terrestrial source habitats that are resilient to disturbances such as wildfire, insects, disease. Site-specific flexibility is built into the

strategy, which provides broad-scale direction to be implemented at the local level. Guidance is provided for "stepping down" the broad-scale information to site-specific conditions.

Comment: The EIS should establish a clear policy against clearcutting in restoring forest health.

Narrative: *One person argues that clearcutting has a negative impact on forest health by increasing the risk of fire, raising water temperatures and stream siltation, and disturbing fish and wildlife habitat.*

Response: Direction in this EIS is of a broad scale. It neither prescribes nor prohibits specific silvicultural practices on specific sites. The desired outcomes are described in the objectives and standards, and it is up to the local manager to determine the appropriate management activity to achieve the desired outcome.

Comment: Species habitat requirements should drive forest health standards in the EIS.

Narrative: *Some respondents feel that objective TS-O6 is too open-ended and general to evaluate what will really occur on the ground with respect to species habitat requirements.*

Response: The Supplemental Draft EIS identifies and maps specific important habitats with intact succession / disturbance patterns. Alternative management strategies are described for these habitats, which include aquatic A1 and A2 subwatersheds and terrestrial T watersheds. Management activities in these areas must be consistent with the objectives and management intent of the area.

Comment: The EIS should allow commercial thinning in forest reserves under strict conditions.

Response: Although Alternatives S2 and S3 would not designate forest reserves, they do identify A1 and A2 aquatic subwatersheds and terrestrial T watersheds where some management activities would be restricted. Commercial thinning would be allowed in these areas as long as the activity meets the management intent for the area.

Mature and Old Forest

Comment: The Draft EISs do not set standards that would limit the diameter of trees logged for restoration purposes.

Narrative: *One respondent asserts that standards are needed to ensure fire-tolerant species and large-diameter trees are not removed from forest stands.*

Response: The Supplemental Draft EIS focuses on outcome-based direction. Objectives are provided for forest composition and structure, including increasing the abundance of shade-intolerant (fire-tolerant) species. Standards require maintaining and / or restoring large shade-intolerant trees and snags to be consistent with what is sustainable on the site.

Comment: The Draft EISs do not adequately address the long-term management of mature and old-growth forests.

Narrative: *Some individuals feel that a lack of standards in the EIS may jeopardize mature and old-growth forests and inadequately protect them from future logging, grazing, and other extractive activities. Alternative 4 in particular is seen as providing significantly less protection for old growth than current interim guidelines. Some people ask for increased protection for these forest types. Some feel that mature and old-growth forests should not be lumped together in management decisions and should be adequately defined in the objectives and standards; lumping old-growth forests in with mature forests is thought to seriously weaken the protection of old-growth forests.*

Response: Management options for late seral forests range from passive protection to actively securing them against wildfire, insects, and disease. In the Supplemental Draft EIS, Alternatives S2 and S3 use a short-term approach that combines active and passive management to secure scarce habitat where it exists and increase its geographic extent where it is consistent with the landform, climate, biological, and physical aspects of the ecosystem with an overall objective of preventing further loss of these old forest conditions. In the long term, late seral forests will vary across the landscape as mid seral forests mature and late seral forests are converted to early seral forest through disturbance. Appendix 17a provides specific guidance to managers regarding definitions of old forest.

Comment: Management objectives in the EIS should be tied to topographic/landform variations that allow for multi-layered forest structure.

Narrative: *One writer asserts that not all old-growth should be managed for single story structure, but that some sites should be left unmanaged to retain multi-story structure.*

Response: The Draft EISs and the Supplemental Draft EIS state that all late seral forests should not be managed for single story structure. In general, late seral multi-story forests were historically found in draws, on north slopes, toe slopes, or where there was enough moisture to preclude the frequent low intensity wildfire that maintained single-story structure.

Comment: The Draft EISs did not consider the impacts of grazing, road building, and mining on multi-story forests.

Response: Broad-scale effects of livestock grazing and road building are disclosed in Chapter 4 of both the Draft EISs and the Supplemental Draft EIS. Effects of the alternatives on ranching, mining, forestry-related, and other jobs are also disclosed in Chapter 4. Effects of mining on multi-story forests is not a broad-scale issue; and therefore, was not addressed in the EIS. Those effects, as well as finer-scale effects of livestock grazing and road building will be addressed in finer-scale analyses, such as land use plan amendments and site-specific environmental analysis.

Comment: The EIS should allow flexibility for logging large and old-growth trees.

Narrative: *Decisions as to whether or not a tree should be harvested depend on the function of each individual tree, one respondent argues. The key to determining whether an individual tree is functional or not is how silvicultural objectives are defined.*

Response: In the short term (10 years), the intent of management direction in the Supplemental Draft EIS is to maintain and prevent loss of old forest, and to actively manage to promote its long-term sustainability. Land managers will strive to promote old forest conditions and protect old forests from both natural and human-caused disturbances (such as harvest and wildfire) because old forests and their associated species are in such short supply. As the *amount* of old forest increases to desired levels through time, the *location* of old forest can change. The amount and location of old forest varies over time (within desired limits) because some patches of old forest will be burned, harvested, or otherwise disturbed, while other patches of mid-seral forest mature, developing into old forest.

In the long term, the intent of management direction is to increase the geographic extent of certain forest cover types and / or structural stages, including old forest. The location of old forest patches is not static through time; areas move in and out of having old forest characteristics, especially in cold and moist forest PVGs where a high proportion of the fire regime consists of stand-replacing fire.

Preventing the loss of old forest might include a "wildland fire use for resource benefit" program, prescribed fire program, removal of ladder fuels and smaller competing trees, a program of wildfire suppression, and conversion of some multi-story to single story forest.

Comment: The EIS should include more detailed mapping to develop a basis for old-growth management.

Narrative: *One respondent suggests a mapping exercise similar to that conducted by the Sierra Nevada Ecosystem Project, which used remotely sensed change and grid-based field sampling to classify land unit according to their relative degree of old-growth structural character, should be used in the EIS.*

Response: Data were not available to maps old forests at a fine scale throughout the project area. In lieu of this, the SAG used satellite imagery to develop a model which predicted amounts of old forest at a broad scale. This model has been shown to be accurate at the broad scale for which it was developed. However, when applied at finer scales, the accuracy is diminished substantially.

Comment: The EIS should address the dependency of wildlife on old-growth, and the selected alternative should identify adequate mature/old forests to support dependent species. The standard directing development of mature/old forest structural definitions (HA-S5) should be rewritten to include all forest structure stages and their attributes, as well as a scientifically sound definition of mature and old forest structure.

Narrative: *Many believe that old-growth forests are a vital element in forest ecosystems and need to be preserved and managed properly for wildlife needs. They argue that the Draft EISs fail to analyze separate old-growth stages and may compromise continuing health for species requiring unique mature/old forest stands. They claim that standard HA-S5 (defining mature and old forest structure) inappropriately defers a fundamental task that should have been performed for this Draft EIS, and that the standard emphasizes mature and old forest structural definitions to the detriment of total forest management. Some assert that none of the alternatives propose a framework to protect and conserve old-growth habitats. They want all patches of old growth protected, even those smaller than 100 acres, because of their value as wildlife habitat.*

Response: Discussion of the importance of old forests to wildlife has been improved in the Supplemental Draft EISs, using information from *Source Habitats for Terrestrial Vertebrates of Focus in the Interior Columbia Basin* (Wisdon et al. in press), which was completed after the Draft EISs were published. In addition, the management direction and intent for managing old forests has been rewritten to be more clear and comprehensive. In the short term (10 years), the intent of management direction in the Supplemental Draft EIS is to maintain and prevent loss of old forest, and to actively manage to promote its long-term sustainability. Preventing the loss of old forest might include a "wildland fire use for resource benefit" program, prescribed fire program, removal of ladder fuels and smaller competing trees, a program of wildfire suppression, and conversion of some multi-story to single story forest. In the long term, the intent is to increase the geographic extent of certain forest cover types and/or structural stages, including old forest.

The Pacific Northwest, Intermountain, and Northern Regions of the Forest Service have developed definitions of old forests. These definitions are available by contacting the project office in Boise or Walla Walla (ask for Appendix 17b). An abbreviated set of definitions can be found in Appendix 17a in Volume 2 of the Supplemental Draft EIS, and on the project's website (www.icbemp.gov).

Comment: Mature and old-growth vegetation may not be the best vegetation for all riparian areas, and the EIS should reflect this.

Narrative: *Some say that mid seral growth is a more desirable vegetation scheme to protect riparian health. They feel that AQ-S8 in Alternative 4 unnecessarily and improperly exposes vegetation management activities in Riparian Conservation Areas (RCAs) to one-size-fits-all direction. These respondents insist that it should not be a goal to move all riparian Zone 2a areas to 'mature and old forest conditions' because they feel that young- and intermediate-aged stands will be better 'adapted to natural disturbance regimes' than mature and old forest conditions. Others suggest that standard AQ-S7 regarding leaving large trees in RCAs should be clarified.*

Response: The riparian conservation area management direction in Chapter 3 of the Supplemental Draft EIS has been modified from the Draft EISs to better described the desired outcomes, for example to maintain sustainable forests consistent with disturbance regimes and other environmental factors. This would include mid seral forest conditions if they are outside a sustainable range. Standard AQ-S8 is not carried forward to the Supplemental Draft EIS. Specific direction to leave large trees in RCAs is not included in either Alternative S2 or S3. However, both alternatives include direction to favor and promote large trees and the intent of the direction is for restoration activities to occur in uplands before riparian areas, in general.

Rangeland Health

Restoring Rangeland Health

Comment: The Draft EISs do not adequately consider the positive and negative effects of livestock grazing on rangeland health.

Narrative: *The majority of comments submitted for rangeland health focused on livestock grazing and its effects on range ecosystem processes, including adverse effects on composition and structure and increased soil temperatures and soil compaction. Many feel that this grazing and rangeland health interaction is inadequately addressed within the Draft EISs.*

Some respondents say that native grasslands are in need of restoration because of grazing pressure; some seek to eliminate livestock where grazing would prevent or slow attainment of ecosystem health and integrity, or to restrict livestock where substrate, water temperature, and bank stability standards are not met.

Others claim these damages are overstated, and that grazing has beneficial effects because it mimics natural functions and promotes management objectives, including wildfire prevention and promotion of silvicultural objectives. Many say that livestock grazing improves habitat for wildlife such as deer and elk, and that it will be impossible to produce more forage while restoring rangeland health.

Response: Historical effects of livestock grazing on rangeland health are discussed in the Rangelands section of Chapter 2 of the Draft EISs. The aquatics and terrestrial sections discuss effects of livestock grazing on riparian and aquatic systems. Chapter 2 of the Draft EISs is a condensed version of what was provided by the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), where livestock grazing was identified as a major factor in the decline of rangeland and riparian ecosystems.

Chapter 2 of the Supplemental Draft EIS further discusses past livestock grazing effects. Positive grazing effects, such as forage conditioning for wildlife, was not emphasized because it is not a significant broad-scale issue. Direction to achieve

maintenance or improvement of healthy, diverse native rangeland, forestland, and riparian / aquatic ecosystems are provided in the Supplemental Draft EIS. This could be done through: adequate cover of plants, litter, and biological crusts to promote infiltration, soil moisture storage and stability, soil surface conditions that support infiltration, and moisture storage, soil and vegetative conditions to support establishment of desirable plants and maintenance of plant vigor, and maintenance or improvement of habitat for terrestrial species. Prescriptive management solutions, such as the number of Animal Unit Months, numbers of livestock, seasons of use, and resource utilization are site-specific decisions that are left up to the local managers who have the knowledge and local information and data to best meet the objectives in the EIS.

Comment: Disagreements exist about how much, if any, protection the selected alternative should provide for native plants.

Narrative: *Many respondents blame grazing, with associated disturbances, as the primary cause of decline of many plant species throughout the project area, particularly in the upland shrub group. Many feel that without additional actions in combination with Alternative 4, protection for native plant species will not be sufficient. These people believe that Alternatives 4 and 6 will further alter habitat conditions through proposed intensive manipulation and prescribed fire in sage brush communities. A few think that Alternatives 3, 5, and 7 will result in less favorable habitat conditions due to the spread of exotic species, habitat conversion to non-native seedings, grazing, and changes in fire regime.*

Many individuals are concerned about seed sources for the various plant species. They emphasize the importance of an alternative that provides refugia for varied plant species within the region. Many people hope that implementation will focus on restoration of species composition and not get "sidelined" by the preferred alternative's emphasis on restoration.

According to some respondents, native plant populations are not the final word in ecosystem management. They assert that even weeds can be native plants, and that the project should consider the effects of potential weed management policies on community livelihoods.

Response: A major focus of the EIS is the maintenance and restoration of native plants and native plant communities. The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) identified livestock grazing, and noxious weeds / exotic plant invasions as major factors affecting rangeland health on federal lands managed by the Forest Service and BLM. Alternative 4 of the Draft EIS identified an active approach to address the grazing and noxious weed concerns, fixing those areas presently not being properly grazed and implement grazing systems that address biotic and physical needs of the ecosystem. Although elimination of grazing may eliminate the problem of improper grazing in those areas where current grazing is not meeting native plant needs, it would not keep the noxious weed invasion from continuing to take over vast amounts of rangelands.

In addition, the increase in fuel loads subsequent to the elimination of grazing would significantly increase wildfire, especially in those areas where wildfire is not a desirable occurrence—such as cheatgrass ranges or areas where Wyoming big sagebrush is not abundant. Further, elimination of grazing would not be consistent with the purpose and need to support economic and / or social needs of people, cultures and communities, and provide sustainable and predictable levels of products and services from lands administered by the Forest Service and BLM. The EIS has focused its direction on outcomes such as healthy, diverse native plant communities. The direction in the Supplemental Draft EIS supports native plant maintenance through objectives and standards in the base level, restoration, and terrestrial T watershed sections. In addition, the Supplemental Draft EIS provides protection of key aquatic and upland habitats through the identification and management of A1 and A2 aquatic subwatersheds, and T terrestrial watersheds. Direction written for these areas emphasizes protection of key habitats protecting native plants from degradation.

Comment: Range management objective (TS-O12) is too vague. 'Restore' and 'maintain' are too vague. Reference to PFC and RMOs would be better.

Response: The Supplemental Draft EIS has added clarification to the restoration and maintenance of rangeland health in the objectives and standards of the base level, restoration, and terrestrial T watersheds sections. Clarification includes discussions of native plants, diversity, cover, fragmentation, patch size, litter, soil moisture storage, soil stability, infiltration, and other indicators of rangeland health.

Comment: The EIS should acknowledge that rangelands need fire to remain healthy.

Narrative: *Some say that fire is a natural part of healthy ecosystems including many rangelands, and that fire should be a part of range management. Others claim that livestock grazing mimics the impacts of fire with less damage to soils, erosion levels, and riparian areas.*

Response: The EIS recognizes the need for restoring historical fire patterns to the rangeland systems. Fire is emphasized in the base level, restoration and terrestrial T watersheds sections of the management direction. However, some rangeland areas—such as those dominated by cheatgrass, or Wyoming big sagebrush areas that are (1) highly susceptible to cheatgrass or noxious weed invasion and (2) relatively scarce in the subbasin or area of consideration—would be significantly damaged from fire. Fire as a disturbance to these areas would increase the presence of undesirable plants or noxious weeds and would potentially eliminate the sagebrush component in areas where sagebrush is critical to terrestrial wildlife species, such as sage grouse. The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) did not identify livestock grazing as a method of resembling (or mimicking) the impacts of fire and did not state that livestock grazing causes less damage to soils, erosion levels, and riparian areas than fire.

Comment: Contradictory information regarding current and historical rangeland conditions should be addressed.

Narrative: *Some note a discrepancy between the project and BLM data, noting that Map 2-48 in the Eastside Draft EIS shows a low level of rangeland integrity in the area that disagrees with similar data from the BLM Internet web page. According to another respondent, the BLM report is based on scientific inventory data which was collected, and ICBEMP's information was a subjective assessment of range integrity which has no precise definition, no direct measurement and no clearly stated goals or objectives.*

Response: A more refined approach regarding rangeland integrity was used in the Supplemental Draft EIS to better portray the condition of rangelands in the project area. This approach used a more comprehensive set of elements that reflected rangeland condition. Terrestrial T watersheds and high restoration priority subbasins were identified using this approach. Inherent in trying to assess rangeland integrity over such a large area as the project area is the use of data that are broad in scope.

Site-specific information from BLM administrative units may not be consistent with the project's broad-scale information. Subbasin Review would be required everywhere on Forest Service- and BLM-administered land within five years under Alternatives S2 and S3, partially so that inconsistencies in data due to scale differences can be identified and adjusted at the appropriate scale.

Comment: The Draft EISs do not adequately address adverse effects on rangelands from activities other than livestock grazing.

Narrative: *Many feel too much blame for degraded rangeland health is directed toward the rancher, when other factors such as recreation and wild horse impacts go unaddressed.*

Response: Localized effects from recreational and wild horse impacts are evident at finer scales. However, at the broad scale, these impacts are insignificant in comparison to the major factors that have affected rangeland health, such as excessive livestock grazing pressure, noxious weeds, and urban and agricultural expansion. The Supplemental Draft EIS focuses on broad-scale issues derived from the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997); finer-scale effects on rangelands will be addressed during finer-scale analyses.

Comment: Conflicts between grazing and recreation are poorly addressed in the Draft EISs.

Narrative: *A few say the potential conflicts between livestock grazing and recreation are quite large, citing birding, plant and wildlife viewing, photography, hiking, and recreational livestock use as activities with potential for conflict. Others note that rangelands are used by hunters and fishermen, and they preserve much-desired open space for growing residential communities. One individual notes that much recreation takes place where grazing is already prohibited or restricted, such as in and around rivers. On the other hand, some say that people are much more destructive than livestock.*

Response: Conflicts between grazing and recreation were not identified as a major issue at the broad scale. Although potential conflicts could be high in particular places between recreation and livestock grazing, the solutions to the conflicts are better addressed at the mid- or fine-scale where specific information and solutions can be used to resolve the issue.

Comment: The Draft EISs did not address effects of grazing on wildlife, including: interactions between domestic and wild animals, predation by wolves, effects on predator/prey relations, or conflicts between wild horses and livestock.

Narrative: *One writer questions the wisdom of grazing permits (for cattle trucked over 100 miles) in Bear Valley on the Lowman Ranger District in the Boise National*

Forest, near introduced wolves and the Frank Church Wilderness Area. Some say domestic animals spread disease to wildlife. Some feel that the Draft EISs do not address effects on predator/prey relations involving raptors, coyotes, grouse, turkeys, small rodents, and frogs.

Some individuals believe the proposed direction will create problems for corrective wildlife/livestock conflict control efforts. They claim that managing for predators will only lead to increased losses to livestock resources. Some assert that the standards do not define a process to mitigate or arbitrate when conflicts occur.

Some respondents feel that the EIS needs to further address the impacts of forage competition between big game and livestock. Some point out the negative effects on forage from increased levels of big game species in the project area from historical levels. They believe that big game populations are far above the capability of the land to sustain a healthy population of these species. Conversely, others view the decline in forage availability relative to the high levels of grazing by domesticated species on Forest Service- and BLM-administered lands.

Response: Livestock / big game interactions were addressed in Chapter 2 of the Draft EISs. Wildlife / livestock conflicts and issues are more appropriately resolved at the mid- or fine-scale because the solutions are best served through collaborative efforts among local entities, including ranchers, state fish and game agencies, the general public, and local Forest Service and BLM managers. Collaboration on such matters is strongly emphasized throughout the Supplemental Draft EIS. The Supplemental Draft EIS includes an objective in the Base Level Direction section in Chapter 3 regarding the interaction of domestic and bighorn sheep on federal lands. In general, the domestic sheep / bighorn sheep disease issue is addressed by existing Forest Service and BLM policy that pursues minimizing such interactions.

Comment: The EIS should include reserves that prohibit grazing in all degraded areas.

Response: The Draft EISs presented one alternative which essentially would prohibit grazing in reserve areas (Alternative 7). The Supplemental Draft EIS alternatives are outcome-based and do not prescribe or limit uses to meet those management outcomes. Those decisions are left up to the local Forest Service / BLM managers. In general, if the intent, objectives, and standards can be met with livestock grazing or other uses, then the use may continue; but if they cannot be met with the use, then it would be eliminated or modified through appropriate procedures. The Supplemental Draft EIS has management direction that prioritizes the need to address livestock grazing management if it is a factor causing an area to function at risk. Information from the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) did not indicate at the broad scale that grazing would have to be eliminated from degraded areas to meet objectives.

Comment: The EIS should explain criteria for range management emphases.

Narrative: *Some believe that more rangelands should be put in the "conserve" category. Some attack the categories themselves, such as Produce/Conserve, saying these categories are broad or meaningless, or that the placing of certain rangelands into certain categories seems arbitrary.*

Response: The management categories addressed in the Draft EIS have been dropped, and a revised strategy involving direction for base level, restoration, aquatic A1 and A2 subwatersheds, and terrestrial T watersheds is described in the Supplemental Draft EIS. Additional descriptions have also been added to clarify management intent in areas with a conservation emphasis vs. a restoration emphasis.

Using Science to Manage Rangeland Health

See also Use of Science

Comment: The Draft EISs do not properly use available information when formulating alternatives or standards or when determining their effects.

Narrative: *Some respondents feel that issues and standards regarding rangelands in particular are misleading because of incomplete or invalid information. They cite as an example page 2-90, paragraph 7 of the Eastside Draft EIS, "Slow to recover rangelands are either dominated by cheatgrass or noxious weeds"; they feel that neither the Draft EIS nor the Assessment of Ecosystem Components (Quigley and Arbelbide 1997) supports this conclusion. Another example cited is page 2-91 of the Eastside Draft EIS, where the text states that dry grasslands make up four percent of the project area, reduced from nine percent historically; the maps on the following pages indicate that this decline is not due to conversion to another type, but that these areas no longer exist as rangeland, or perhaps*

they are no longer federally owned. The respondents feel that Maps 2-9 (Eastside Draft EIS Forest Potential Vegetation Groups-Historical) and 2-10 (Eastside Draft EIS Forest Potential Vegetation Groups-Current) do not show an expansion of forest into these areas and they request information on the cause of this change in the extent of dry grassland. Other examples allege that scientific data are being directly contradicted.

Response: Because administrative units used many different methods and techniques for data gathering that rendered the data inconsistent and impractical to aggregate across the basin, the Science Integration Team and EIS Team were not able to use fine-scale information. The EIS Team considered and incorporated the findings of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), which addressed all lands in the interior Columbia Basin, regardless of ownership. Management direction in the EIS only applies to Forest Service- and BLM-administered lands.

Some vegetation groups, such as dry grasslands, have changed significantly at the broad scale from historical conditions primarily because of conversion to agriculture and secondarily because of exotic undesirable plant invasion, excessive livestock grazing pressure, and tree or shrub invasion The Supplemental Draft EIS describes the outcomes that are desired for a healthy rangeland ecosystem. It incorporated the concepts of BLM's *Healthy Rangelands Standards and Guidelines* and has modified alternatives to be consistent with those concepts. The *Assessment of Ecosystem Components* identified that improper grazing of native rangelands, especially dry shrublands, has been detrimental during significant drought conditions when native plants are highly susceptible to degradation.

Comment: Grazing should be prohibited or greatly curtailed on all public lands.

Response: This proposal is not consistent with the Purpose and Need for the proposed action or the findings in the *Assessment of Ecosystem Components.* Alternative 7, which proposed significant decreases in livestock grazing across the project area, was described and analyzed in the Draft EISs.

Comment: A capability and suitability analysis of all public lands for livestock grazing should be included in the EIS. Both suitability and capability should be established before livestock use continues to be authorized.

Response: Suitability for livestock grazing on BLM- and Forest Service-administered lands and the proper stocking levels for those suitable lands are determined through the land use planning process for each national forest and BLM resource area. It is outside the scope of the ICBEMP to revisit these decisions.

Comment: The conclusion on page 2-89 paragraph 1 of the UCRB Draft EIS is misleading and inaccurate. Ranchers have made adjustments when necessary, and improvement in allotments has been evidenced. The Draft EIS makes no mention of the improvements to allotments made by ranchers and federal agencies.

Response: Discussion of improvements in grazing and successful restoration efforts in some riparian areas is provided in UCRB Draft EIS Chapter 2, pages 122-124. Improved rangeland riparian conditions in the Big Cotton Creek watersheds on the Sawtooth National Forest in Idaho are featured on page 2-123. However, additional improvements continue to be needed in order to provide for a balance between the levels of use on Forest Service- and BLM-administered lands and resource protection of the resources over the long term. Both the Draft EISs and the Supplemental Draft EIS contain a section in the Introduction to Chapter 2 discussing the Positive Ecological Trends evident in the project area.

Comment: Additional information and clarification are needed for dry grass and dry shrublands.

Narrative: *Some respondents dispute the rationale for Objective TS-O15 in the Draft EISs, which states: "Dry grasslands, dry shrublands, and cool shrublands are highly departed in frequency and composition from historical levels and conditions," which they feel is contradicted by BLM ecological status data shown on its Internet web page. They say that evidence is doubtful to support the statement in the Draft EISs that "areas with native large bunchgrasses with sagebrush overstories would not be common across the planning area under Alternatives 3 through 7, but would be much more apparent than under Alternatives 1 and 2."*

Some people feel that the section on the dry grass potential vegetation group is too general, diminishing the focus of thousands of unique microsites.

Response: Dry grasslands and dry shrublands are described in Chapter 2 of the Draft and Supplemental EISs. Their geographical extent is significantly smaller than it was historically. This is predominantly

due to agricultural and urban expansion but also due to noxious weed and exotic plant invasion. The BLM website discusses only the conditions on public land administered by the BLM, whereas the data used in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) were based on all lands within the assessment area.

Chapter 2 of the Supplemental Draft EIS presents clarification and expanded information on the dry grass and dry shrub potential vegetation groups. Additional base level and restoration direction specific to dry grasslands and dry shrublands is presented in Chapter 3.

Comment: The relationship between livestock grazing and western juniper should be clarified and corrected in the EIS.

Narrative: *Some people feel that the EIS should acknowledge that livestock and over-grazing have increased juniper encroachment, especially in dry areas. Others question the connection between over-grazing and juniper expansion, and ask if fire exclusion has been considered as a factor. Some feel that juniper is a native species that establishes ecosystems and provides habitat for native wildlife. Many fear that removing juniper from rangelands will only increase the amount of noxious weeds already present.*

Response: The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) identifies impacts of livestock grazing, climate, and fire suppression on juniper encroachment. Historically, improper grazing, reduction of fine fuels to burn, active fire suppression policies, and a reduction in the understories of grasses and forbs, which compete with juniper seedlings, have played a major role in juniper encroachment. Management direction in the Supplemental Draft EIS is focused on outcomes that require livestock grazing strategies to protect native plant health, provide litter, support infiltration and other indicators of rangeland health.

Reduction in juniper within those areas where juniper has encroached upon sagebrush and grassland communities because of the lack of fire and/or improper grazing is one of the methods suggested to improve rangeland health. Noxious weed control efforts along with necessary reestablishment of native plant understory species is another method. The Supplemental Draft EIS contains a more in-depth discussion on the sequential activities that may be needed to control noxious weeds and to rehabilitate those areas that would not come back naturally as a result of juniper control. The Supplemental Draft EIS does not advocate the elimination of juniper on sites where fire did not occur naturally very often.

Comment: The EIS should clarify the classification of juniper as a shrub and should correct the costs of juniper control.

Narrative: *An individual was concerned about the wording on page 2-98, paragraph 5 of the Eastside Draft EIS, where juniper is classified as a shrub. This respondent also questions the figures shown for range improvement in Alternatives 1 and 2, which are thought to be very low. It is pointed out that using data published in BLM facts and conservative costs for various range improvement projects such as juniper control, pipelines and fences, the range cost for a typical year has been $350,000–400,000, which is said to be approximately double the $168,000 shown on the table.*

Response: The text of the Supplemental Draft EIS has been modified to clarify that juniper is a tree and not a shrub. The activity level tables have not been carried forward in the Supplemental Draft EIS; however, revised cost levels have been factored in while developing the Supplemental Draft EIS.

Comment: The Draft EISs make incorrect statements about grazing.

Narrative: *Some individuals say the Draft EISs incorrectly state that excessive grazing has caused ecosystem degradation, and that grazing has contributed to runoff and erosion by causing a decline in understory vegetation. One person says that medusahead was incorrectly identified in the Draft EISs as flammable and therefore calls into question statements about livestock, weeds, and fire. Some challenge the documents' identification of numerous plants as noxious exotics.*

Response: The EIS is based on findings in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), which documents impacts of excessive livestock grazing on rangelands. Medusahead is highly flammable when it is dried and cured out in the late summer. The identification of noxious weeds is consistent with the states' (within the interior Columbia River Basin) definitions and noxious weed lists for the project area. Cheatgrass, for example, was not identified as a noxious weed in any of the states so it was not considered a noxious weed. However, it is considered undesirable because of its invasive nature, short life cycle, and high flammability, which changes fire patterns in native sagebrush communities.

Comment: The EIS should address the effects of drought on all rangeland systems and plant types, using data and science appropriate to local conditions.

Narrative: *Some respondents point to standard TS-S23, addressing effects of drought only on dry shrublands, which they feel is inadequate because they believe all ecosystems are susceptible to drought and are subject to its adverse effects. Others feel that standards to protect dry shrublands from damage the year after drought are inadequate because the timing of the precipitation, rather than the amount, is more critical in growing vegetation. They believe that the Draft EISs fail to show that dry range systems recover more slowly than wetter systems, or that these lands are dominated by noxious weeds.*

Some respondents note an assumption that grazing would be limited during droughts throughout the planning area, yet the standard limits grazing only in one plant type. They feel that this is inconsistent and undermines the grazing effects analysis.

Response: Standard T5-S23 was not carried forward to the Supplemental Draft EIS. The management direction now requires outcome-based conditions that establish indicators such as vegetative cover, plant litter, infiltration, soil stability, and soil moisture storage. These indicators are required on all rangelands including dry shrublands and are pertinent for drought and non-drought periods. This direction is found in the Base Level and Restoration Management sections of Chapter 3.

Comment: The EIS should clarify the statement that, unlike wildlife species, livestock tend to stay in one place.

Narrative: *Some people take issue with the statement in the Draft EISs (UCRB page 2-87) that, unlike wildlife species, livestock do not migrate but tend to stay in one place as long as they have food, water, and other needs. They feel that this statement is unscientifically broad and ask "if it were true, why has there been a need for drift fences throughout the history of livestock grazing?"*

Response: In general, livestock do stay in one place in comparison to wildlife, as long as they have food, water, and other needs met. But "staying in one place" must be considered more figuratively than literally. Livestock will wander within a given area and therefore fencing is needed to keep them confined. Wildlife, on the other hand, will cover vast expanses of land to meet their needs; this disperses their impact on the landscape.

Comment: The statement "Only a few tree species including juniper and lodgepole pine and ponderosa pine are native to grasslands" (Eastside Draft EIS, Summary, page 5) is false and needs to be rewritten. This list does not include all the conifers, let alone the deciduous species.

Response: The Summary is intended only to give the reader a basic overview of the information presented in the Draft EISs. A more detailed discussion of the affected environment in relationship to rangeland can be found in Chapter 2.

The Supplemental Draft EIS changes the statement to read "The dry grass PVG includes primarily native grasslands, with lesser amounts of woodlands (dominated by conifers such as ponderosa pine and douglas-fir..."). These are intended only to provide examples, not an exhaustive list of species. For complete lists of species, see the *Integrated Scientific Assessment* (Quigley, Haynes, and Graham 1996.)

Comment: Paragraph 5 (Eastside Draft EIS, Summary, page 5) which addresses agricultural and urban areas, should be removed or rewritten because these areas are not part of the project.

Response: The information presented in this section is given so the reader will have a basic understanding of the current state of resource conditions and the challenges faced by the Forest Service and BLM in managing the lands they administer. The Draft and Supplemental Draft EISs clearly state that "Agricultural, urban...potential vegetation groups are not discussed in detail in this EIS because they are less related to or form extremely small components of Forest Service- or BLM-administered lands in the project area...." However, conversion of rangeland PVGs into agricultural and urban areas, and expansion of those areas, have implications for rangeland habitats on Forest Service- or BLM-administered lands. While the direction in the Supplemental Draft EIS is applicable only to Forest Service- and BLM-administered lands, the National Environmental Policy Act requires federal agencies to consider the cumulative effects from all lands in their analysis.

Comment: The EIS should address available grazing acreage, including the potential for longer lasting and larger acreage of forage under forest canopy.

Response: The focus of the Supplemental Draft EIS is not to prescribe fine-scale decisions, such as livestock grazing acreage, but to protect those areas of native rangeland plant communities that are relatively intact (see the terrestrial T direction in Chapter 3). For example, the amount of dry shrublands (such as, Wyoming sagebrush plant communities which are adapted to very dry areas) are relatively intact. These areas contain a full expression of the diverse native plants that make up the historical plant community, which is rare in the project area; many other sites have been degraded and dominated by exotic plants, such as cheatgrass, or are well below acceptable conditions.

Aquatic Health

Restoring Aquatic Health

Comment: The Draft EIS alternatives do not provide for adequate protection and restoration of riparian and aquatic health.

Narrative: *Many respondents believe that riparian areas have not been given enough protection in the preferred alternative. Many responses ask that the project "restore and rehabilitate" rivers and streams damaged by past logging, mining, grazing, and road activities. Some people believe that the preferred alternative does not establish clear standards for lands, permits, facilities, and management activities to guarantee protection for aquatic and riparian resources. Some feel that the selected alternative needs to go beyond proper functioning condition (PFC), that time frames should be identified, and that activities should be restricted in areas that do not attain PFC.*

Response: The intent of the aquatic-riparian-hydrologic management strategy is to maintain or restore conditions on Forest Service- and BLM-administered lands. Riparian management direction for Alternatives S2 and S3 require new activities and ongoing activities to comply with this intent. In addition, specific subbasins and aquatic A2 subwatersheds are prioritized for restoration.

Comment: The Draft EIS alternatives do not provide for adequate protection and restoration of watershed health.

Narrative: *Many comments address the need to restore/rehabilitate damaged watersheds (caused by roads, mining, logging, grazing) as the top priority. One response states that the elements of restoration activities were poorly described, making it difficult to estimate costs of restoration activities. Another respondent requests an explanation of watershed restoration management activities so the reader can understand what activities will result from the decisions following this EIS.*

Another respondent requests that the riparian management objectives (RMOs) and standards in the EIS ensure that the protection and rate of recovery of aquatic and riparian areas are greater than currently required by existing land use plans or interim management direction pursuant to PACFISH or INFISH. This respondent feels that the EIS should be clear that all activities occurring or proposed to occur in riparian areas cannot prevent the attainment of RMOs in order to ensure a recovery rate in these fragile areas that is near the 'natural state of recovery.'

Response: In this Supplemental Draft EIS, integrated restoration priorities, which includes aquatic and water quality resources and important aquatic conservation / restoration areas (A1 and A2 subwatersheds) are identified in Alternatives S2 and S3. Aquatic restoration direction has been revised to address strategic concepts and broad-scale issues.

The intent of the aquatic-riparian-hydrologic management strategy is to maintain or restore conditions on Forest Service- and BLM-administered lands. Riparian management direction for Alternatives S2 and S3 require new activities and ongoing activities to comply with this intent.

Watershed condition indicators (WCIs) are used in Alternatives S2 and S3 instead of riparian management objectives (RMOs). WCIs are an integrated suite of upland, riparian, and instream variables used to establish a baseline of current watershed condition, assess effectiveness of the strategy, and guide management activities.

Comment: The EIS should consider the effects of sediment on aquatic health, without blaming logging, grazing, or recreation for erosion/sedimentation that is naturally caused.

Narrative: *There is disagreement about how much sediment is natural or tolerable. Some respondents claim that standards AQ-S4, AQ-S12, AQ-S16, and AQ-S45, dealing with sediment, are unclear and should be reexamined. One respondent believes that AQ-S4 is not scientifically supportable, and that exceeding the threshold has not been shown to produce measurable instream effects in the project area. Others view sedimentation in streams as natural, even for areas with no grazing, logging, or roads, and suggest that fish can tolerate a great deal more than*

scientists claim. (See also Road Construction and Maintenance.*)*

Response: Recognition of the relationships between current conditions of erosion and sedimentation and past management or land use practices is helpful in understanding the nature and scope of problems and possible solutions. As discussed in Chapter 2, erosion and movement of sediments are natural geologic processes, but their amounts and frequency have been substantially affected by human activities, including logging, grazing, and recreation. Effects of high sediments and turbidity on water quality, channel conditions, riparian health, and fish habitats are analyzed in the EIS. This information is incorporated by reference, and further elaborated, in the Supplemental Draft EIS.

Comment: The term 'degradation of riparian' should be clearly defined.

Narrative: *A respondent notes that in paragraph 4, page 2-5, of the Eastside Draft EIS, the term "degradation of riparian" is broadly used to describe those changes in riparian areas resulting from geologic progression, ecological succession or regression, and short-term and long-term disturbances whether they are natural humans-caused. The respondent feels that degradation is a misnomer and should be removed from the text or limited to those circumstances where it is accurate.*

Response: The definition of "degrade" has been added to the glossary of the Supplemental Draft EIS. It is defined as: Degrade (habitats) - Measurably change a feature at a defined scale in a way that: further reduces habitat quality, where existing conditions meet or are worse than the objective; reduces habitat quality, where existing conditions are better than the objective.

Comment: Aquatic and riparian health should be clearly defined.

Narrative: *Many respondents question the scientific validity of the methods used to assess aquatic health. They complain that standards and objectives are based on broad data that ignore site-specific circumstances. One respondent feels that meeting the fine sediment RMOs is not enough to be considered 'healthy', and that there must be a plan, as in AQ-S4, to relate fine sediment levels to natural levels.*

Response: The Supplemental Draft EIS has added clarification to the restoration and maintenance of aquatic and riparian health in the objectives and standards for base level, restoration, and aquatic A1 and A2 subwatershed management direction. Clarification includes discussions on fish populations, maintenance of habitat, soil stability, infiltration, and other indicators of aquatic and riparian health. A definition of aquatic-riparian health has been added to the beginning of the Aquatic-Riparian-Hydrogic Component section of Chapter 2.

Comment: The terms 'restore' and 'maintain' regarding RCA management should be clearly defined (for example, standard AQ-S56).

Response: Management direction in the Supplemental Draft EIS was rewritten to clarify the intent. Expanded discussion on RCA delineation and management can be found in Chapter 3 of the Supplemental Draft EIS.

Comment: Private lands, watershed councils, and local comprehensive plans are already taking a multi-agency multi-owner approach to aquatic conservation, and these should be more closely examined in the EIS.

Response: The Aquatic Staff of the Science Integration Team prepared a section in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) which includes a review of 15 aquatic conservation strategies or assessments that had been completed between 1991 and 1995. The team noted that in general all strategies were based on similar concepts, identified the same suite of factors and processes as concerns, and proposed mitigation that included essentially the same suite of planning and protective measures. The differences lay primarily in the specifics of what was recommended, the implementation strategy, and the approach.

An aquatic conservation strategy has been incorporated into the development of the alternatives. Direction in Alternatives S2 and S3 is broken down into: the step-down process, which explains how to apply the broad-scale direction and information at finer scales; base level management direction, which is an integrated approach to resource management with an acceptable level of risk to resources across the planning area; restoration direction, which is an integrated approach to restoring degraded ecosystems; and specific objectives, standards, and guidelines for aquatic A2 and A1 subwatersheds and terrestrial T watersheds (see Chapter 3 of the Supplemental Draft EIS). Much of this direction is consistent with local comprehensive plans.

Comment: The project should coordinate with the National Marine Fisheries Snake River Recovery Plan.

Response: The project staff has met and discussed the draft Snake River Salmon Recovery Plan with the National Marine Fisheries Service, and have been in consultation with the National Marine Fisheries Service throughout the development of the EIS. The project is designed to address resource problems at the broad scale. One of the strategies embedded in the project is a long-term aquatic strategy that will replace the interim management strategies of PACFISH and INFISH. The Draft EIS and Supplemental Draft EIS include several points for interface with the adaptive management approach of the Snake River Salmon Recovery Plan. Most notably, these include the Subbasin Review and Ecosystem Analysis at the Watershed Scale standards and objectives in Chapter 3 of the Supplemental Draft EIS.

Comment: The EIS should recognize that riparian areas have a high frequency of invasion by non-native flora and fauna.

Narrative: *Some individuals say that the EIS should acknowledge that many lands in Oregon and Washington have experienced major invasion by exotic species in riparian areas.*

Response: The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) stated that exotic plant invasion is a factor in the decline of riparian area extent and diversity from historical to current. This trend is documented in Chapter 2 of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) in the section that discusses riparian area condition and trend. This information is reflected in the Supplemental Draft EIS in Chapter 2 (Current Conditions and Trends of Riparian Areas and Wetlands, and Factors of Influence / Noxious Weeds) and in Chapter 3 through objectives and standards on noxious weeds and aquatic-riparian restoration.

Comment: The selected alternative should include standard RM-S2, which restricts activities that affect riparian health.

Response: Although standard RM-S2 is not brought forward to the Supplemental Draft EIS unchanged, a similar standard for Alternatives S2 and S3 is located in the Base Level section of the management direction in Chapter 3.

Water Quality and Quantity

Comment: The Draft EIS alternatives do not adequately protect water quality or address watershed management issues such as water quality, water yield, restoration, and aquatic habitat quality.

Narrative: *Many people believe the following to be significant sources of water pollution: non-point source runoff from farm fields; waste from dairy operations; inadequately treated waste from sewage plants; logging; livestock grazing; and drainage from highways and dams. They feel that buffer zones should be enforced to keep these activities at a distance from riparian areas.*

Some respondents want a minimum standard to be 'to satisfy the Clean Water Act.' Many feel that the project does not keep water clean, and that an overall regional concept to protect water quality is lacking.

Others point to the progress that has been made toward protecting water quality and to new techniques being used to ensure protection. Some feel that stream temperature standards in the Draft EISs are neither realistic nor attainable, because they believe the standards are based on ideal conditions for particular cold water species of fish. They believe these fish can tolerate higher temperatures and still be productive.

Several responses address mining as a contributor to contaminated water. They state that mining waste should be cleaned up and prevented from entering riparian or underground water supplies.

Many people believe that clear and meaningful requirements (standards) for water management issues are lacking in the Draft EISs. Several people contend that universal aquatic management standards should not be applied across the landscape, because they believe such standards often are too broad and vague and do not allow for on-the-ground adjustments to local conditions and multiple-use goals. Some people feel that many of the water quality related standards are too restrictive.

Response: The management direction in the Supplemental Draft EIS applies only to lands administered by the Forest Service and BLM. Additional management direction for water quality is provided through continued application of the 303(d) protocol. The direction requires the Forest Service and BLM to restore water quality limited waterbodies within their jurisdiction to provide for beneficial use attainment, and to protect and maintain water quality where standards are currently being met or surpassed. The proposed water quality management direction is consistent with the Clean Water Act.

Comment: Requiring all management activities to improve water quality (as in standard AQ-S53) will conflict with other management goals.

Response: The management direction in the Supplemental Draft EIS emphasizes that water quality will be restored where water quality is threatened or water quality is limited (that is, the 303[d] list). In addition, it is the responsibility of the BLM and Forest Service to protect and maintain water quality in waterbodies that fully support their designated and existing beneficial uses. When management activities are proposed within watersheds containing 303(d) listed waterbodies, the 303(d) protocol ensures restoration of water quality while allowing continuation of activities.

Comment: The Draft EIS alternatives do not provide for protection of ground water for private and municipal drinking supplies.

Response: Restoration and maintenance of hydrologic processes and prevention of pollution are the main steps to ensuring that water quality will support beneficial uses of water, including drinking water. Restoration objectives and standards in the Water Quality, Aquatic-Riparian-Hydrologic, and Landscape sections are designed to restore hydrologic processes and water quality over the long term. Base level objectives focus on maintaining water quality necessary to support beneficial uses, and on collaborating with state agencies to develop partnerships to maximize efforts for water quality protection and restoration.

Comment: The EIS should clarify standard AQ-S52 concerning Outstanding Resource Waters declared by states or tribes.

Response: Each state or tribe within the project area is responsible for establishing guidance to identify and designate Outstanding Resource Waters (ORW). When a water body is nominated for ORW designation, the guidance generally provides for interim protection where the waterbody is managed for no degradation to existing water quality. Legal designation of an ORW by a state or tribe must include a formal management plan with EPA-approved standards for proceeding with existing and implementing proposed management activities to ensure water quality is not degraded.

One standard in the Water Quality section of Chapter 3 of the Supplemental Draft EIS addresses ORW. NEPA requires that proposed management direction be consistent with existing federal, state, local, and other regulations. It would be redundant to establish additional management direction for ORW when federal land management agencies are obligated under the Clean Water Act to comply with individual state's High Quality Water and ORW policies. There are no legally designated ORWs in the project area; however, one waterbody in Oregon and two in Idaho have been proposed or nominated as ORWs.

The Supplemental Draft EIS includes management direction within the Water Quality section of Chapter 3 to maintain water quality necessary to support beneficial uses including healthy riparian, aquatic, and wetland ecosystems.

Comment: The EIS should discuss the issue of tribal water quality standards and discuss the interactions of the Confederated Tribes of the Colville Reservation and the Confederated Tribes of the Warm Springs Reservation "treated as states" status for nonpoint source management of the Clean Water Act.

Response: A document titled *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters*, is a direct link to the Interior Columbia Basin Ecosystem Management Project, which has as one of its goals the restoration of aquatic resources and watersheds. Built into this protocol is the understanding that tribes have the legal right to implement the Clean Water Act (CWA) on tribal lands, including setting water quality standards. The project acknowledges the importance of coordinating and collaborating with tribes that have implemented the "treated as states" status for nonpoint source management of the CWA such as the Confederated Tribes of the Warm Springs Reservation and others. Management intent and direction referring to this can be found in the Water Quality and Hydrologic Processes section in Chapter 3 of the Supplemental Draft EIS.

Comment: Add the phrase 'so that water quality standards are attained' to the end of objective AQ-O13, making it consistent with AQ-S56.

Response: The management direction within the Supplemental Draft EIS for Alternatives S2 and S3 includes objectives for maintenance and restoration of water quality to support beneficial uses. Also included is a standard that directs application of a protocol to ensure restoration of water quality where water quality standards are not being met because of land management activities on Forest Service- or BLM- administered lands.

Comment: The standards for stream temperature are too strict and should be changed in the EIS.

Narrative: *Some respondents state that a standard of 50 degrees Fahrenheit (F) in bull trout habitat is too restrictive; they say that 59 degrees F would be a more appropriate standard.*

Response: Stream temperature is an important characteristic of suitable bull trout habitat (Lee et al. 1997). Within the project area, bull trout have repeatedly been associated with the coldest stream reaches (Lee et al. 1997). In the Supplemental Draft EIS, stream temperature has been modified from the Draft EISs for Alternatives S2 and S3. As documented in Chapter 3, an integrated set of aquatic, riparian, and hydrologic measures, referred to as Watershed Condition Indicators, will be used to measure effectiveness of the strategy and guide implementation. These indicators will be developed at a subwatershed or larger geographic scale by a local interdisciplinary team of experts to take into account local environmental variability.

Until Watershed Condition Indicators are developed, the National Marine Fisheries Service and U.S. Fish and Wildlife Service matrices of pathways and indicators will be used as interim measures (Appendix 9). The matrices contain several indicators to assess whether a watershed is functioning, functioning at risk, or functioning at a non-acceptable risk. An indicator that the U.S. Fish and Wildlife Service matrix contains is stream temperature for various bull trout life stages (such as incubation). These stream temperatures are based on information within the scientific literature. Stream temperatures within the matrix may be adjusted for local watersheds given supportive documentation.

Comment: The selected alternative should not affect water yield.

Narrative: *Some individuals believe that the project proposes to abandon active forest management across the project area, which they feel would result in significant water yield reduction as timber growth continues to exceed harvest. Other individuals feel that timber harvest increases water yield without damaging water quality. Others claim that at least one study (King 1989) conducted in the project area indicates no discernible increases in runoff or peak flows attributable to roads. These respondents want the EIS either to be revised to reflect this uncertainty of roads upon peak flows and water yield or to delete the discussion altogether.*

Response: There is no intent to abandon active forest management across the project area. Silvicultural activities will still occur on lands administered by the Forest Service and BLM. The management intent and objectives for forestlands are described in the Supplemental Draft EIS. The locations, types, and timing of activities needed to meet these objectives will be decided at the local unit (national forest or BLM district.) Given the overall size and complexity of the ecosystem within the project area, significant changes in water yield are unlikely based on the premise that growth would result in an overall net decrease in water yield. The effects of roads on the ecosystem are documented in the Draft EISs and discussed in the Supplemental Draft EIS (Factors of Influence, Chapter 2).

Comment: The first sentence of standard AQ-S36 should read: 'For hydroelectric and other surface water development proposals, instream flows and habitat conditions that provide for a balance of recreation opportunities, and restore or maintain riparian resources, favorable conditions of flow, and fish passage, reproduction, and growth shall be required'.

Response: The Riparian Conservation Area management direction in Chapter 3 of the Supplemental Draft EIS has been modified from the Draft EIS to better describe desired outcomes. In Alternatives S2 and S3, riparian management direction focuses on outcomes that maintain or restore natural riparian and wetland vegetation characteristics to achieve bank and shore stability, coarse woody debris for physical and biological complexity, thermal regulation, erosion rates, and habitat for riparian and wetland dependent species. New management activities would be conducted only if they achieve these outcomes. For management activities subject to valid existing rights, the Forest Service and BLM would use their existing authorities to mitigate and/or require design features that would contribute to or maintain outcomes. Also, an objective in the Ecosystem Processes and Functions section under the Landscape Component in Chapter 3 describes that management actions should achieve outcomes that sustain hydrologic processes (such as flow and sediment patterns).

Data and Analysis

Comment: Aquatics data, assumptions, and/or analyses are incomplete, inconsistent, and/or inadequate.

Narrative: *Many respondents feel that the data and/or analyses for aquatic ecosystems are flawed. Some suggest that the Draft EISs do not demonstrate the scientific need*

for further restriction of timber management to achieve riparian management objectives. Some respondents feel that the Draft EIS buffer width for controlling sediment delivery is appropriate only for highly erodible granitic soils that comprise less than 10 percent of the area. They believe that research on other types of soils suggest buffer requirements should be from one-half to one-tenth those given in the Draft EISs. Some feel it is inaccurate to claim that riparian habitats are seriously degraded everywhere, are getting worse, and desperately need protection, because riparian degradation for rangelands has been slowed or stopped.

Some individuals challenge what they see as other unfounded assumptions, unexplained categories, and broad statements in the Draft EISs, such as: absence of a clear definition of linkage areas; the notion that watershed analysis has sped restoration; unclear explanation of hydrologic integrity; the assumption of a high correlation between roads and impacts to aquatic health; the assumption that Alternative 7 would have the most desirable short-term effects; and others.

Response: The data, assumptions, and analyses in the Supplemental Draft EIS use the best available scientific information. The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), a peer-reviewed scientific document, characterized and described historical and current conditions and trends of the project area and provided information on important processes and structures that maintain ecosystems and supply goods and services. Many findings are broad in nature, appropriate to the large project area. The major findings of the assessment pertaining to Forest Service- and BLM-administered lands were brought forward and are described in Chapter 2 of the Supplemental Draft EIS. These major findings in combination with public scoping and public comment on the Draft EIS, were used to develop management direction contained within Chapter 3 of this EIS.

To ensure consistent application of scientific information, the EIS Team frequently interacted with members of the Science Integration Team and Science Advisory Group in development of the EIS. Project scientists periodically reviewed the EIS to ensure that the EIS Team correctly interpreted and applied scientific concepts, information, and assumptions. The *Assessment of Ecosystem Components* should be consulted if additional data or analyses are desired. Assumptions are in Appendix 16 in the Supplemental Draft EIS.

Comment: The Draft EISs do not adequately consider the Klamath Tribe's analysis of the Klamath Basin.

Response: The basis for the aquatic information in the EIS is the *Assessment of Ecosystem Components* (Lee et al. 1997). The *Scientific Assessment* did not use the analysis performed by the Klamath Tribe because of the need to use a consistent scale of information and data standards across the project area. However, the aquatic assessment did include the portion of the Klamath Basin within the project area and discloses its aquatic conditions and trends. This was summarized and included in Chapter 2 of the Supplemental Draft EIS. Also, Chapter 4 discloses the effects of the alternatives on aquatic resources in the portion of Klamath Basin included in the project area.

Comment: The EIS should not use Natural Heritage databases for decision making.

Narrative: *Regarding HA-G18 on page 268 of Appendix 3-2 in the Eastside Draft EIS, some respondents feel that the Natural Heritage Databases are incomplete and selective, and are not the result of comprehensive or statistical survey methods. They feel that these databases do not contain information about most special species where they exist, and do contain obsolete information that can no longer be validated. The respondent feels that these databases should not be used for decision-making.*

Response: HA-G18 was not brought forward from the Draft EIS; however, similar direction is included in the Supplemental Draft EIS. These databases are only one source of information, which are widely used by many agencies. It is suggested in Guideline HA-G18 that this information be considered in decision making. The guideline does not direct the databases as the sole source of information to be used or suggest that information in these databases be considered more accurate than other information.

Comment: Clarify guideline HA-G19 (Appendix 3-2, page 268) by explaining specifically why a corporate GIS database is needed.

Response: This guideline is not brought forward from the Draft EISs. The importance of a corporate GIS database is that common data standards among agencies would provide for more efficient sharing of data.

Comment: Streams have not been adequately surveyed to determine which ones require buffers; therefore, the use of buffer zones is unscientific and will not restore aquatic health.

Narrative: *Some individuals believe that large-scale approaches result in underestimated and under-surveyed*

streams in the interior Columbia River Basin, which inhibits effective planning. Some feel that delays in obtaining data and surveying subbasins will result in widespread use of default RMO standards. Others feel that the buffer zones are arbitrary, conflict with management objectives, and provide diminishing returns as the buffers expand.

Response: The Riparian Conservation Area (RCA) delineation in Alternative S2 and S3 has been modified from the Draft EIS and no longer contains a specific width value (such as 300 ft), although the interim default standards in other ways have similarities with some aspects of PACFISH and INFISH. RCA delineation in both alternatives depends on ecological and geomorphic site characteristics such as site potential tree height or extent of riparian vegetation. These characteristics were developed by the EIS Team using the best available science as discussed in Lee et al. (1997) to prevent degradation and improve aquatic and riparian habitat, meeting the purpose and need to restore and maintain ecosystem health and integrity and habitats for endangered and threatened species. Also, RCA widths are designed to protect riparian and aquatic habitats from unforeseen events and to incorporate scientific uncertainties.

Riparian Management Objectives (RMOs), which are numeric values for such things as number of pools and pieces of large wood, are not included in Alternatives S2 and S3. As documented in Chapter 3, an integrated set of aquatic, riparian, and hydrologic measures, Watershed Condition Indicators, will be used to measure effectiveness of the strategy and guide implementation for Alternatives S2 and S3. These indicators will be developed at a subwatershed or larger geographic scale by a local interdisciplinary team of experts to take into account local environmental variability. Until Watershed Condition Indicators are developed, the National Marine Fisheries Service and U.S. Fish and Wildlife Service matrices of pathways and indicators will be used as interim measures (see Appendix 9).

The effects of RCA delineation and management on aquatic habitat is discussed in Chapter 4 of this EIS.

Key Watersheds and Strongholds

Comment: The selected alternative should include identification and protection or restoration of important riparian areas and key watersheds, including detailed goal and objective statements for key aquatic ecosystem components, such as strongholds and refugia.

Narrative: *Some people believe that important watersheds that are readily restorable should be protected from new impacts and have the lingering effects of past management restored. However, they feel that the objectives are not supported by clear management standards which prevent activities already known to be incompatible with the attainment of the objectives for priority watersheds. Also, others feel strongly that refugia are needed to restore aquatic health, and that a robust, secure, and well-distributed refuge system is needed, free from long-term negative human impacts.*

Response: For Alternatives S2 and S3, aquatic A1 and A2 subwatersheds have been identified to maintain and restore key aquatic and riparian habitat areas, secure a network of connected habitats, and protect important fish populations. Specific standards, objectives, and guidelines for conserving, maintaining, and protecting important fish populations and key aquatic and riparian habitat are included. Much of the management direction was rewritten in the Supplemental Draft EIS to clarify the intent.

Riparian Conservation Areas and Riparian Management Objectives

Comment: Riparian Conservation Area delineation and management, including default standards, are unacceptable and should be fixed in the EIS.

Narrative: *The majority of comments for this issue express concern that the 300-foot buffer zone in riparian areas is unreasonable. Some individuals feel a 150-foot buffer would be adequate; others feel that all riparian areas need management to be sustained/healthy; others feel that RCA delineation should be based on the size that provides the greatest protection. They also feel that seeps and springs should be protected as riparian areas and that ranchers should not be allowed to constrain seeps or springs as water troughs.*

Many respondents fear that EAWS will not take place quickly, and that RCAs will be protected only with strict default standards. Others fear that default standards may fail to account for local conditions, may be inappropriate, and may interfere with management objectives.

Some respondents feel that to appreciate the implications of the alternatives, the acreages in Figure 4-50 should be converted to percentages of the entire project area. They feel that the EIS must include a competent analysis of RCA acreage in forested watersheds for each alternative to

consider and discuss how other processes and management objectives are affected by RCA delineation and management.

Response: The RCA delineation in Alternative S2 and S3 has been modified from the Draft EIS and no longer contains a specific width value (such as 300 ft), although the interim default standards, in other ways, have similarities with some aspects of PACFISH and INFISH. The RCA delineation in both alternatives is dependent upon ecological and geomorphic site characteristics such as site potential tree height or extent of riparian vegetation. These characteristics were developed by the EIS Team using the best available science as discussed in Lee et al. (1997) to prevent degradation and improve aquatic and riparian habitat and meet the purpose and need to restore and maintain ecosystem health and integrity and habitats for endangered and threatened species. Also, RCA widths are designed to protect riparian and aquatic habitats from unforseen events and to incorporate scientific uncertainties.

Riparian Conservation Aea management direction in Alternative S2 and S3 has been modified from the Draft EIS to focus on achievement of objectives instead of promoting or prohibiting management activities. Management activities that would not maintain existing conditions or lead to improved conditions would be inconsistent with the management direction in Alternatives S2 and S3.

In Chapter 4, the area within RCAs is displayed for each alternative. Values are calculated using broad-scale information on stream miles which tends to under-represent actual stream mileage. Actual acres within RCAs would vary by watershed because of site characteristics used to define these areas (such as landform and site potential tree height). Since the project is broad scale it lacks this site-specific information to display precisely RCA acres. Values displayed in Chapter 4 are meant to provide a relative comparison among alternatives at the broad scale.

Comment: The EIS should explain how much harvestable timber will be off limits because of Riparian Management Objectives (RMOs), and it should adjust RMOs and RCAs to allow for appropriate timber management.

Narrative: *Many fear that RCAs will prohibit the harvest of a large percentage of harvestable timber and remove most productive lands from the shrinking timber base, hindering management objectives and hurting local economies.*

Response: The Socio-economic section in Chapter 4 describes the broad-scale effect of RCA delineation and management on timber harvest and related socio-economic consequences. The primary management emphasis of RCAs is conservation and restoration of aquatic and riparian-dependent resources. Under all alternatives, vegetation management may occur within RCAs if it is consistent with maintenance or restoration of riparian structure and function. Also, the intent is to avoid short-term impacts that reduce the riparian area's ability to achieve objectives over the long term. Under Alternatives S2 and S3, RCAs would not be included in the suitable timber base used to calculate allowable sale quantity during land use plan revision.

Comment: The EIS should not include uniform basin-wide standards for local features such as stream width, temperature, depth-width ratio, pool frequency, canopy closure, and downed woody debris.

Narrative: *Many feel that some standards are unattainable even in Category 1 watersheds. Some feel that local conditions make broad standards impossible or inappropriate. They find stream temperature standards (64 degrees Fahrenheit in some habitats and as low as 48 degrees F in others) particularly inappropriate because they believe these standards are derived from research documenting ideal conditions for particular cold water species, and do not reflect what the fish can tolerate and still be productive (*see also Water Quality and Quantity*). These respondents feel that many standards are neither realistic nor attainable under either natural or historical conditions in many eastside streams.*

Response: The riparian conservation area management direction in Chapter 3 of the Supplemental Draft EIS has been modified from the Draft EIS to better describe desired outcomes. In Alternatives S2 and S3, riparian management direction focuses on outcomes that maintain or restore natural riparian and wetland vegetation characteristics to achieve bank and shore stability, coarse woody debris for physical and biological complexity, thermal regulation, erosion rates, and habitat for riparian- and wetland-dependent species. New management activities would be conducted only if they achieve these outcomes. For management activities subject to valid existing rights, the Forest Service and BLM would use their existing authorities to mitigate and / or require design features that would contribute to or maintain outcomes.

Comment: The EIS should include a discussion of negative aquatic effects in Alternative 7.

Narrative: *Some respondents contest the statement regarding Riparian Management Objectives in paragraph 2 on page 4-143 (UCRB), which says "implementation of*

Alternative 7 could result in greater short-term benefits to aquatic resources than Alternatives 2, 3, 4, and 6." They believe that Alternative 7 RMOs are rarely achieved in project area streams even in completely natural circumstances, and that where these unrealistic RMOs are not achieved, management activities necessary for healthy ecosystems will be prohibited.

Response: A new effects analysis was not conducted for Alternatives 1 through 7 from the Draft EISs. Only Alternatives S1, S2, and S3 were analyzed for the Supplemental Draft EIS. Interim Riparian Conservation Area (RCA) criteria for Alternatives S2 and S3 are located in the aquatics section of the base level direction and in the aquatics section of Alternative S1.

Comment: The concept of feathering RCAs (in standard AQ-S6) should be clarified.

Response: The feathering concept was not brought forward to the Supplemental Draft EIS.

Comment: Standard AQ-S6 should be clarified to better protect RCAs.

Response: Riparian Conservation Area management direction in Alternative S2 and S3 has been modified from the Draft EISs to better describe management intent and objectives instead of promoting or prohibiting management activities. Management activities that would not maintain existing conditions or lead to improved conditions would be inconsistent with the management direction in Alternatives S2 and S3. Chapter 4 describes the effects of the alternatives on aquatic habitat capacity and aquatic species status and distribution.

Comment: The EIS should consider the potential of beaver in attaining riparian management objectives.

Narrative: *A few individuals say that the actions of beaver, such as damming streams and creating pools, would mimic restoration efforts. These people say the decline of beaver has had a negative impact on aquatic health.*

Response: Riparian Conservation Area management direction in Alternative S2 and S3 has been modified from the Draft EISs to better describe management intent and objectives instead of promoting or prohibiting management activities. Management activities that would maintain existing conditions or lead to improved conditions would be consistent with the management direction in Alternatives S2 and S3.

While beaver play an integral role in the ecosystem, they are only one component of a complex system. Beaver management to restore riparian and aquatic habitats are more appropriately evaluated at local levels, with consideration of local resource conditions and issues.

Management Actions in Riparian Areas

Comment: Effects of management activities (such as grazing, logging, mining) on riparian areas should be addressed more accurately in the EIS.

Narrative: *Many respondents feel that management activities are needed in riparian areas to maintain a healthy riparian ecosystem. Some feel that aquatic restoration activities for improving habitat can only be accomplished through riparian vegetation management practices, and that restoration and maintenance of riparian canopy closure should not be a standard under any circumstances. They believe that a lack of management will lead to an unhealthy build-up of flammable fuels, which will lead to catastrophic wildfire in these riparian areas.*

Some individuals feel riparian areas are capable of supporting resource extraction activities and that there is no information to support the assumption of AQ-S12, "timber management and management for aquatic resources are incompatible in all riparian areas." These respondents state that the damage which was caused from past management activities does not occur today because of improved equipment and technology. They want the alternatives to be evaluated on the basis of existing facts and our current understanding of watershed processes, not on what they feel are pre-conceived 'potential' effects of proposed activities.

*Some view grazing as an essential part of a healthy watershed ecosystem, while others feel livestock grazing caused damage to dispersed sites along streams, because domestic livestock tend to congregate in these areas. They feel that management activities and agriculture cause erosion and pollution. (*See also Rangeland Health.*)*

Response: The relationship between land management activities and aquatic resources is documented in Lee et al. 1997 and other scientific literature as cited within the *Assessment of Ecosystem Components.* These relationships were used in developing models to analyze the probable effects of the alternatives on aquatic habitat and aquatic species status and distribution. Probability of outcomes for aquatic habitat and aquatic species status and distribution were influenced by alternative management direction and landscape conditions. Broad-scale outcomes and and

causes of outcomes are discussed in the Aquatic-Riparian-Hydrologic Component section of Chapter 4.

Comment: Consider modifying the last sentence in guideline AQ-G52 which recommends Forest Service and BLM cooperation with state water quality agencies (Appendix 3-2, page 267), to begin with "Based on the problem assessment or ecosystem analysis...."

Response: This guideline was not modified because the Forest Service and BLM have an obligation to provide information from problem assessments or Ecosystem Analysis at the Watershed Scale and to provide water quality information collected at multiple scales that use a variety of analysis techniques.

Comment: Guideline TS-G126 which recommends that Forest Service and BLM consider treatment of uplands to mitigate risks to aquatic riparian ecosystems, should be revised to include a rationale for the need for additional riparian risk reduction measures if they can be demonstrated, or the guideline should be deleted.

Response: This guideline has been modified to become an objective in the Aquatic-Riparian-Hydrologic Restoration section of Chapter 3 of the Supplemental Draft EIS. This objective states that forest health treatments should occur in upland settings before riparian areas. Proposed treatments within RCAs need to be consistent with RCA objectives and standards designed to maintain or improve existing conditions. Specific restoration treatments in RCAs may be necessary in some instances to restore function and connectivity among streams, floodplains, and riparian areas. For example, in some forested landscapes, thinning and prescribed fire may be necessary to encourage development of large trees. Experience gained from treatment in upland settings can then be applied to RCAs where the primary emphasis is maintenance and restoration of riparian and aquatic functions. In these instances, risks and trade-offs need to be well understood prior to implementation of RCA treatments.

Comment: The intent of guideline TS-G128 should be clarified.

Narrative: *Some respondents want the EIS to explain the intent of the "useful active management approach" of guideline TS-G128 (which recommends that Forest Service and BLM conduct vegetation management practices in a manner that benefits native aquatic species), so that managers would be better equipped to implement it where appropriate.*

Response: Guideline TS-G128 was combined with guideline TS-G127 in the Aquatic-Riparian-Hydrologic Restoration section of Chapter 3 of the Supplemental Draft EIS. Historically, the pattern of productive fish habitats was created and maintained by natural disturbance processes. Disturbance patterns and processes have been altered by past activities within the project area, thus altering productive fish habitats. The intent of the modified guideline is, when designing projects, to consider the role of natural disturbances (type, frequency, extent, and severity) in creating and maintaining productive aquatic habitats. By considering the change in disturbance patterns and processes from historical to current time periods, project type, timing, size, and frequency can be designed to be consistent with or to restore natural disturbance processes or patterns important to the maintenance or restoration of productive fish habitats.

Comment: Riparian management in the EIS should consider catastrophic events such as floods.

Response: Floods are an ecosystem process that influence aquatic and riparian habitat. Objectives in the Landscape Dynamics Component and Landscape Restoration sections of Chapter 3 address the maintenance and restoration of hydrologic processes which include stream flow regimes. In addition, an identifying characteristic of Riparian Conservation Areas are the 100 year floodplain or floodprone width in all alternatives. Riparian Conservation Area management direction in Alternative S2 and S3 would require consideration of important functions provided by riparian areas during floods such as retention of flood water, sediment filtering, and dissipation of flood water energy.

Grazing Effects in Riparian Areas

Comment: The EIS should more adequately describe the effects of grazing in riparian areas and should discuss limits on livestock grazing and handling activities, such as yarding and transfer, where needed in riparian areas.

Narrative: *Numerous individuals consider livestock the prime culprit in damaging riparian health, and they feel that strong measures should be taken to eliminate livestock grazing in riparian areas and mitigate the damage from cattle, sheep, and horses. One individual is unhappy that none of the alternatives keep livestock away from riparian*

areas to allow them to recover and flourish. One respondent feels standards AQ-S11, AQ-S12 and AQ-S13 regarding grazing and riparian health should be written more clearly to better protect riparian areas.

Some demand an end to all high-impact livestock handling in RCAs; others say removing all such activities would be logistically impossible.

Very few people responding on this topic feel that Alternative 4 adequately addresses grazing in riparian areas. Many object to Alternative 4's proposed continuation of grazing, even if it is tightly controlled and monitored. Others feel the preferred alternative would eliminate grazing from Forest Service- and BLM- administered lands through stricter standards and closure of additional areas to grazing.

Response: Chapter 2 in the Draft EISs, which is a condensed version of what was provided by the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), discusses the historical effects of livestock grazing on rangelands. Chapter 2 of the Supplemental Draft EIS expands on past livestock grazing impacts, including impacts on riparian areas. Maintenance or improvement of healthy, diverse, riparian / aquatic ecosystems is a focus of the Supplemental Draft EIS. Base level direction addresses the outcomes that are needed to provide a healthy, diverse riparian ecosystem, including: coarse woody debris, summer and winter thermal regulation, proper functioning condition, and source habitats for riparian-dependent species. The Supplemental Draft EIS leaves prescriptive management solutions, such as number of Animal Unit Months, numbers of head of livestock, seasons of use, or whether grazing can occur in riparian areas, up to local administrative units who have the knowledge and local information and data to best meet the management objectives. However, the Supplemental Draft EIS makes it a priority to address livestock grazing management if it is found to be a factor in causing an area to function at risk.

Comment: The EIS should recognize that degradation of riparian areas has slowed or stopped.

Narrative: *Many assert that changing grazing practices have made this activity less damaging than the Draft EISs suggest.*

Response: While in some instances grazing practices have been modified to be less damaging to riparian areas (some of which are acknowledged in Chapter 2), overall at the broad scale, riparian degradation from a variety of sources is still an area of concern. As noted in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), livestock grazing is a major factor in the decline of riparian ecosystems. Base level direction in Chapter 3 in the Supplemental Draft EIS addresses the need to provide a healthy, diverse riparian ecosystem.

Minerals and Mining Impacts in Riparian Areas

Comment: Mining impacts on riparian health should be minimized.

Narrative: *Many respondents on this issue cite a long history of still-unresolved mining pollution in several watersheds. Several say that surface mining activities should be prohibited in RCAs.*

Response: Mining activities are authorized by the U.S. Mining Laws (Public Domain Lands) Act of May 10, 1872. It is beyond the authority of the decision makers for this EIS to prohibit surface mining in RCAs. Mining effects on riparian health is more of a fine-scale issue, which is more appropriately addressed during finer-scale environmental analyses.

Comment: Conflicts between Riparian Conservation Areas/Riparian Management Objectives and mining rights should be resolved.

Narrative: *Some individuals note the rights of claim holders under the 1872 Mining Law. Many mention the need for raw materials, the importance of mining to local economies and national interests, and that mining methods have improved from the more destructive practices historically.*

Response: Conflicts between mining rights and RCAs and RMOs is a fine-scale issue, which is more appropriately addressed during finer-scale environmental analyses using site-specific information and considering local resource conditions.

Recreation Impacts in Riparian Areas

Comment: Recreational impacts in riparian areas were not clearly addressed in any of the Draft EIS alternatives.

Narrative: *While many respondents to this issue feel that recreation is a low-impact and economically wise use of federal lands, some argue that the Draft EISs understate the impacts of recreation on aquatic health. They note impacts such as recreational livestock use, hunting, fishing, off-road vehicles, boat ramps (which, some say,*

could conflict with Riparian Management Objectives), hiking and backpacking.

Many people feel that the Draft EISs provide little direction for water-oriented recreation. One respondent feels that water-oriented recreational settings are a main attraction on federal lands, and if new policies will limit access to and development of new facilities along stream banks to keep up with citizen demand, then this impact needs to be addressed in the EIS. Some feel that the recreational analysis is unacceptable because they say it provides almost no information on impacts or spatial segregation of impacts, and no measurement of impacts by type. They want the recreation analysis to be completely redone to comply with NEPA.

Response: The Draft and Supplemental Draft EISs do not provide a detailed discussion of the effects of recreational activities in riparian areas because that is a fine-scale issue which is more appropriately addressed during finer-scale environmental analyses. Given the broad scale of the analysis, no changes in reacreation use across the basin were projected for the alternatives in the Supplemental Draft EIS; therefore, no change in recreation-related employment or effects on ecosystems were reported. This type of recreation analysis would be more appropriately done during mid- and fine-scale analyses (Subbasin Review, EAWS, land use plan amendment or revision, and/or site-specific NEPA analysis).

Comment: Standard AQ-S24 needs to be clarified to ensure that a recreation facility must be constructed or located outside of Riparian Conservation Areas if it will have adverse effects.

Narrative: *Some feel that Subbasin Review is used inappropriately in standard AQ-S24, and that AQ-S26 (recreation facilities inside RCAs) and AQ-S27 (interpretive facilities inside RCAs) could require relocation or closing of water use facilities. Rather than having a standard of adverse effects that 'cannot be avoided,' they believe it should say 'cannot be mitigated'.*

Response: Management direction for RCAs has been rewritten in the Supplemental Draft EIS to focus more on the objectives or outcomes desired, rather than promoting or prohibiting certain activities. Standards in the Aquatic-Riparian-Hydrologic section of the base level direction for Alternatives S2 and S3 state that new and existing land uses, including recreation facilities, within riparian conservation areas (RCAs) must meet RCA objectives. A standard in Alternative S1 (the no-action alternative) requires that recreation facilities in RCAs do not prevent the attainment of Riparian Management Objectives.

Fire and Fuels in Riparian Areas

Comment: The potential effects of fire and fuels management on riparian health—including standards for fire suppression in protected riparian zones—were not adequately described in the Draft EISs.

Narrative: *Some individuals note many possible conflicts between fire/fuels objectives and RMOs. Some say that downed woody debris and wide buffer zones would hinder fire/fuels management and lead to more destructive wildfires. Some individuals cite opposing studies regarding the desirability of timber harvest vs. fire in riparian areas. Some say that standards AQ-S29 and AQ-S30 place other priorities above the priority of watershed protection, except in Alternative 7 where standards are clear and concise, giving watersheds and fish the priority over fire management and fuel suppression actions.*

Some respondents feel that the Draft EISs do not consistently incorporate considerations of wildfire in discussion of aquatic conditions and effects of the alternative aquatic strategies. They note that the Draft EIS recognizes that control of aquatic problems throughout watersheds may not be possible if riparian areas are left untreated where fuel loads are hazardous, where trees are unnaturally dense, and/or where riparian trees are disease or insect-infested. They want the EIS to be revised to state that unnaturally intense wildfires have recently resulted in extreme effects on aquatic and riparian resources, and that if existing and/or future vegetation hazard is not reduced, adverse effects on aquatic resources will continue to occur (AQ-S29). Furthermore, they think the EIS should evaluate the relative risk to riparian areas and aquatic resources from wildfire impacts vs. management impacts for each alternative.

Other respondents feel that the Draft EISs lack standards for use of basic firefighting equipment and techniques (fireline construction, backfire operations, fire breaks, chemical retardants, and water pumping) in riparian areas. They suggest that the preferred alternative specify the use of an aquatics specialist on incident command and rehabilitation teams, questioning why this is required only for Alternative 7. One individual stated that prohibiting the delivery of retardant, foam, or additives to surface waters is going to limit the ability to combat wildfires.

Response: The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) contains a comprehensive discussion of the effects of wildfire on riparian areas and aquatic species. The assessment also discusses the risks and uncertainties associated with active forest management within riparian areas to address altered fire patterns and processes. To

evaluate the risk or relative risk to riparian areas and aquatic resources from wildfire vs. active management impacts would require watershed or site-specific level information because of the large variability of riparian area and aquatic habitat condition across the project area. The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) discusses the risks and uncertainties associated with this issue and provides broad-scale context; however, it is too fine scale to be addressed specifically in the EIS.

In addition, Riparian Conservation Area management direction in Alternatives S2 and S3 was modified to focus on desired outcomes instead of promoting or prohibiting activities. Riparian Conservation Areas are established with the primary management emphasis of conserving and restoring aquatic and riparian-dependent resources. The intent is to avoid short-term impacts that reduce the riparian area's ability to achieve management objectives over the long term. Activities may occur within RCAs if they are consistent with the primary emphasis and intent and comply with management direction. It is recognized that short-term impacts may occur as a result of implementing projects that are deemed desirable and consistent with objectives, but all short-term risks are not categorically acceptable. The decision to take short-term risks needs to made, to the extent possible, within the context of information generated through the step-down process.

Management direction related to fire suppression and RCAs are included for all alternatives. Fire suppression direction was modified from the Draft EISs to incorporate the use of minimum impact suppression techniques within RCAs unless safety to human life or property is an issue. In Alternatives S2 and S3, delivery of chemical retardant, foam, or additives into surface waters is prohibited unless overriding immediate safety concerns exist, or following a review and recommendation by a Resource Advisor when it is determined that the escaped fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.

Resource Advisors are typically part of the fire suppression organization and are usually local resource specialists familiar with the area. They interact with resource specialists and managers to identify local resource issues during fire suppression activities.

Comment: It is unclear why standard AQ-S34, prohibiting burnout or backfire operations in riparian habitat, is not applicable under the preferred alternative.

Response: Standard AQ-S34 was not brought forward to the Supplemental Draft EIS. In Alternatives S2 and S3, fire suppression within RCAs would follow minimum impact suppression techniques unless life or property are threatened. This approach requires minimal disturbance within RCAs during fire suppression. Burnout or backfire operations within RCAs are not specifically prohibited in the Supplemental Draft EIS because these suppression techniques maybe viable options to limit an uncharacteristic wildfire. If these operations were prohibited in RCAs it would not be possible to use burn out or backfire techniques anywhere.

Toxic Chemicals and Herbicides in Riparian Areas

Comment: The EIS should more clearly address present and potential effects of toxic chemicals and herbicides on riparian areas, including effects of noxious weed management activities involving herbicide use in riparian areas.

Narrative: *There is disagreement among respondents regarding the use of herbicides and pesticides as a management tool. Some respondents express concern about the duration of chemical persistence after spraying and the potential for pollution of ground and surface water. Most who address this issue feel the use of chemicals should be a last resort management technique. One individual is concerned that there is no standard prohibiting spraying of insecticides in riparian areas. Another states that control of insects by non-natural means has resulted in short-term problems with residual effects from the insecticide applications. This respondent feels that enhancing the development of native bird populations to remove insects has been the most reasonable approach to solving damaging insects, citing as evidence the Forest Service promotion of research to protect native bird populations.*

Response: The use of herbicides and pesticides is a site-specific management tool that could be used to meet the broad-scale management objectives described in Chapter 3 of the EIS. The use of herbicides and pesticides would be addressed through fine-scale analysis documents at the local administrative unit (national forest or BLM district.)

Under Alternatives S2 and S3, management in the project area focuses on preventing noxious weed spread into and within aquatic A1 and A2 subwatersheds and terrestrial T watersheds. Existing and future noxious weed inventory information obtained in these areas, along with "Susceptibility of Vegetation Cover Types" (see Chapter 2), would be

used to identify the best management practices in riparian areas.

Lands, Permits, Facilities in Riparian Areas

Comment: New and existing permits should be closely controlled, monitored, and considered for revocation if violations are found.

Narrative: *Some respondents feel that the aquatic standard in the preferred alternative (Alternative 4) regarding lands, permits, and facilities would not adequately or clearly ensure that aquatic and riparian resources are not harmed. They believe that the preferred alternative should prohibit issuance of new permits unless it can be shown that water conveyance facilities and other surface water developments do not retard or prevent attainment of RMOs and do not cause adverse impacts to aquatic and riparian resources and beneficial uses. Some think the preferred alternative should require all existing conveyances and diversions on federal land be catalogued; compliance with the mitigation measures be confirmed; cumulative impacts on aquatic and riparian resources be evaluated; and permits for conveyance be modified where detrimental impacts are found and revoked where conditions of the permit have been violated or where valid right to use of the water is not held.*

Response: A standard requiring modification, relocation, or discontinuation of existing land uses and management actions, if they prevent attainment of objectives for RCAs or aquatic A1 or A2 subwatersheds, is included in the management direction. A standard in the PACFISH/INFISH section of Alternative S1 requires leases and permits in riparian conservation areas to be issued and adjusted to avoid effects that would be inconsistent with or prevent the attainment of riparian management objectives.

Comment: Standard AQ-S43, limiting development, should be strengthened.

Response: Standard AQ-S43 has been replaced by new standards in the Riparian Conservation Area section in Chapter 3 of the Supplemental Draft EIS.

Comment: Dams in the project area should be removed to promote fishery health.

Response: The management of dams that occur off Forest Service- or BLM-administered lands is outside the jurisdiction of the Forest Service and the BLM. The Army Corps of Engineers and Bureau of Reclamation have federal hydropower authority. However, recognition and consideration were given in the EIS as to how the existence and management of dams affect aquatic health on Forest Service- or BLM-administered lands in the project area. Consideration of these effects and conditions played a role in evaluating the cumulative effects of the alternatives in Chapter 4.

Effects of Roads on Riparian Areas

Comment: The potential effects of roads on aquatic health were not adequately described in the Draft EISs.

Narrative: *Many respondents believe that roads, road use, and road construction and maintenance contribute to undesirable impacts on aquatic health. Others feel that this allegation is unproven. Some say road density is a less important factor in road health than the quality, design, and mitigation methods of the roads and road building.*

Response: The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) contains a comprehensive discussion of effects of past management activities (including roads) on aquatic health. Chapter 2 of the EIS summarizes this information.

The Riparian Conservation Area management direction in Chapter 3 of the Supplemental Draft EIS has been modified from the Draft EISs to better describe the desired outcomes. In Alternatives S2 and S3, the intent of riparian management direction is to maintain or restore natural riparian and wetland vegetation characteristics to achieve bank and shore stability, coarse woody debris for physical and biological complexity, thermal regulation, erosion rates, and habitat for riparian and wetland dependent species.

New management activities, including road construction and maintenance, would be conducted only if they achieve these outcomes. For management activities subject to valid existing rights, the Forest Service and BLM would use their existing authorities to mitigate and/or require design features that would contribute to or maintain outcomes.

Road management direction in the Supplemental Draft EIS is intended to reduce road-related adverse effects in the short term while determining long-term needs and locations in a way that has minimal environmental impact and maintains choices for the future.

Plants

Comment: Uniform and consistent criteria should be used in the EIS to define differences in the vegetative community.

Narrative: *One respondent asserts that determination and delineation of vegetative communities can be complicated by the terms used by various disciplines to describe plant ecology. This person claims that the Draft EISs are not consistent with scientific literature.*

Response: The Draft and Supplemental Draft EISs are consistent with the scientific literature. Several vegetation classifications were used for the sake of thoroughness since ecologists and wildlife biologists often do not use the same classification systems. Each classification system has strengths and weaknesses. For instance, 'potential vegetation types' stay consistent on a site through time, yet do not tell what vegetation occupies the site at a given time. This system is useful to ecologists. With 'terrestrial communities', classification is based on the current cover type and structural stage, but the cover type/structural stages can and do change over time. This system is useful to wildlife biologists.

Comment: The EIS should clarify whether the Climax or the State and Transition model is to be used in determining plant species health.

Response: The EIS Team did not attempt to determine plant species health because the EIS is a broad-scale analysis, focusing on ecosystem health and plant species viability from a broad perspective. Therefore, neither the climax nor the state and transition models are being used to determine plant species health. The models are discussed in Chapter 2 of the Supplemental Draft EIS (Factors of Influence) with regard to livestock grazing pressure and its relation to vegetative succession.

Special Status and Native Plant Species

Comment: The EIS should prioritize management of plant species of concern at local or small scales over watershed or landscape scales.

Narrative: *Because of the diverse nature of the project area, some feel there is a problem of specific standards being applied to different landscapes. They believe that management decisions regarding plant species of concern should be made on the local level (*see also Scale*).*

Response: Broad-scale management direction regarding conservation strategies and risks and opportunities in these plant communities are covered in the Supplemental Draft EIS. However, management of plant species of concern at local or fine scales is the responsibility of the local (national forest or BLM district) land manager. The objectives and standards in the Supplemental Draft EIS require certain conditions to meet rangeland health needs. "How you get there" is left to the local managers to determine.

Comment: The Draft EISs do not adequately address sensitive, rare, or threatened and endangered plants.

Narrative: *Many respondents are concerned that inventories are not sufficient to protect different plant communities within the project area. They assert that there would be little change in the overall outcomes for the majority of species under any of the alternatives. Many people believe that since the Draft EISs acknowledge locally endemic plants are difficult to analyze at the broad scale, these species are in danger of extinction. Some feel the Draft EISs fail to address the majority of rare plants that are in trouble because their habitats are disturbed. Others criticize the Draft EISs for not having a table of species considered vulnerable.*

Some assert that timber harvesting, grazing, and road building could have negative impacts on fungi and endangered plants, such as the tiger lily; they feel that the EIS should address those impacts.

Some feel the Draft EISs overemphasize the problems faced by native plants. They say that plants have gone extinct before the coming of humans and will continue to do so after humans are gone.

Response: The Supplemental Draft EIS requires maintenance or improvement of native plant communities. Base level management direction requires conservation strategies and risk and outcomes assessments for these plant communities in the step-down process. However, because of the broad-scale nature of the Supplemental Draft EIS, it does not address management of specific sensitive, rare, or threatened and endangered plants in the interior Columbia River Basin. Both the Forest Service and BLM require local administrative units to address protection and management of sensitive, rare, threatened, or endangered plants.

Comment: The Draft EISs do not adequately address microbiotic crusts and non-vascular plants.

Narrative: *Some comments address the need to institute long-term research on the effects of livestock grazing and trampling on microbiotic crusts. The general feeling among respondents is that the Draft EISs do not adequately address this issue, and that adequate research has not been completed.*

Some feel that non-vascular plants have been virtually ignored in all aspects of the Draft EISs, and that the Draft EIS analysis of effects is incomplete without a study of effects on non-vascular plants. A few note that known impacts of forest management on fungi are absent from the Draft EISs; they claim that the documents overlook negative effects on fungi from soil compaction caused by timber harvest, roads, and livestock grazing.

Response: The Supplemental Draft EIS expands on the information regarding microbiotic crusts, but the analysis of the impacts to biological crusts are at a broad scale only. While the science is not conclusive, the majority of evidence shows microbiotic (biological) crusts have an important role in rangeland health, especially for soil stability in some rangeland communities. Other roles include: nutrient cycling, native perennial species establishment, and hindering establishment of exotic undesirable species such as cheatgrass. However, biological crusts and their prevalence on the rangelands are heavily tied to soils. Site-specific soils information is not available for the project area. Therefore, biological crusts are better analyzed at the appropriate mid- or fine-scale where site specific information, such as soils, can be determined. Non-vascular plants, with the exception of biological crust were not emphasized in the *Assessment of Ecosystem Components* or the Draft EISs. These plants are discussed briefly in Chapter 2 of the Supplemental Draft EIS; effects of the alternatives on plants (including non-vascular) and biological crusts are discussed in Chapter 4.

Comment: Page 2-38, paragraph 7 of the Eastside Draft EIS, says that two plant species are endangered and two are threatened, which is inconsistent with Chapter 2, page 40, which lists three threatened and one endangered plant for the project area. It is also inconsistent with the Eastside summary which states that two endangered and three threatened plants occur in the project area.

Response: Threatened and endangered species lists have been updated and revised for the Supplemental Draft EIS.

Exotic Plants and Noxious Weeds

Comment: The Draft EISs do not adequately address the causes of noxious weeds.

Narrative: *Many respondents feel the predominance of noxious weeds is the result of disturbances associated with human activity, such as livestock grazing and mechanized logging, mining, and recreation. One individual criticizes the Draft EISs believing that they do not provide supporting evidence for the statement, "noxious weeds are spreading rapidly, in some cases exponentially, on rangelands in every range cluster," and for not providing specific locations or current acreage for noxious weed infestations. Some feel that the noxious weed issue on forested lands is not addressed.*

Many people feel none of the alternatives offer a solution to combat weed problems and that noxious weeds will only get worse under all the alternatives, since in their opinion none of the alternatives deal with weed vectors, such as roads, livestock, and the use of prescribed fire and thinning as management tools. Many respondents feel that weed prevention should be emphasized over weed control. Many others favor active management of weeds. Some believe that prescribed fire and grazing by goats and predators will reduce the spread of weeds. Some feel that reserves established for the purpose of site-specific analysis of noxious weed encroachment would offer an opportunity to keep weeds in check at a small scale.

Some people feel that if noxious weeds and past management will not allow natural processes on certain lands, the EIS should state this information, admit that rangelands are no longer viable, and let local decision makers use any and all tools to restore health. In the opinion of some, private rangelands are in better shape than federal rangelands, because private citizens will spray herbicides or do whatever else is necessary to keep their land free of weeds.

One person argues that weeds have long established themselves in undisturbed territory without the influence of humans. This person asserts that weed invasion is not new, and therefore a hands-off, passive approach to management would be counter-productive.

Response: Noxious weeds are addressed in Chapter 2 of the Draft EIS and the Supplemental Draft EIS based on information from the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997). Site-specific information on noxious weeds was not available from the Forest Service and BLM administrative units. The effects of noxious weeds under the

various alternatives are described in Chapter 4. The Supplemental Draft EIS addresses the recommended approach to noxious weed control which involves both prevention and active measures (see Chapter 3 and Appendix 11).

Success in noxious weed control is tied to effective education and prevention measures along with aggressive control efforts. The Supplemental Draft EIS has established the components for a strategy that incorporates the Forest Service and BLM approaches to noxious weed management. This is different than the integrated weed management program in the Draft EIS. The new strategy focuses on education, prevention, control, and rehabilitation (see Appendix 11).

The *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) and Draft EISs identified passive management as ineffective on noxious weeds.

Comment: The Draft EISs did not clearly define noxious weeds and their effects.

Narrative: *Many people have questions about what plant species are considered noxious weeds and to what extent they are harmful. Some want a clear definition of a noxious weed. Some complain the Draft EISs portray all non-native plants as bad, and disturbance and abuse by humans as the key factor in the spread of such plants. Some question the severity of the threat by noxious weeds to native flora. They suggest the EIS take another look to determine if noxious weeds can be used beneficially.*

Response: Noxious weeds are defined and described in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997), the Draft EISs and the Supplemental Draft EIS. Specific information on noxious weeds that are common or exist in a specific area can be found at the local county extension or Forest Service or BLM office. The effects of noxious weeds and the vegetation types that are susceptible to invasion are explained in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) and Draft EISs. The Supplemental Draft EIS focuses on the maintenance and improvement of the native plant and animal communities throughout the project area; no attempt has been made to address the beneficial use of noxious weeds.

Comment: The integrated weed management program in the Draft EISs is incomplete.

Narrative: *Some request development of native plant seed resources and alteration or elimination of management activities (grazing, logging) that cause introduction or spread of weeds. Respondents feel that these activities should not be allowed on lands that are at risk for weed invasion. Some people feel that the integrated approach to weed management on all lands has not been proven. They note that weed management is not consistent in areas where land ownership is intermingled.*

Response: The Supplemental Draft EIS has established the components for a strategy that incorporates the Forest Service and BLM approaches to noxious weed management. This is different than the integrated weed management program in the Draft EISs. The new strategy focuses on education, prevention, control, and rehabilitation. Noxious weed introductions or spread are caused by recreation, livestock grazing, logging, wildlife (birds and mammals), wind, water (rivers and creeks), mining, and other vectors. Noxious weeds have invaded most types of vegetation and land in the interior Columbia River Basin. The strategy proposed in the EIS would only be required on lands administred by the BLM and Forest Service, but it would be more effective if other landowners also participated.

Comment: It is misleading to say that "exotics are common components in most plant communities in this group" (Eastside Draft EIS, page 2-99), without also saying that in many of the communities, exotics make up a very small percentage of the composition.

Response: The comment noted is in reference to the discussion on the dry shrublands potential vegetation group (PVG) in the Draft EISs. The Landscape Ecology Assessment (Hann, Jones, Karl, et al. 1997; Table 3.40) documents that invasion and spread of exotic undesirable plants (including noxious weeds) has been a dominant change in the dry shrub PVG. Exotic undesirable plants were shown to be common within most cover types in this PVG.

Comment: Table 2-14 is inconsistent because it states in the footnote that cheatgrass and Kentucky bluegrass are "not legally declared noxious," but the table lists these two species as noxious weeds.

Response: "Noxious" is a legal classification and not an ecological term. Plants that can exert substantial negative environmental or economic impact can be designated as noxious by various governmental agencies. Noxious weeds are therefore a subset of 'exotic' plants. For brevity in the title of Table 2-14, "Noxious Weed" was used to refer to both legally declared noxious weeds and other exotic undesirable plants that have substantial negative ecological and economic impacts. Those plants that are treated as noxious plants but are not legally declared as such,

are labeled in the table, which is carried into the Supplemental Draft EIS, Chapter 2, Factors of Influence section; the title has been modified to address this concern.

Comment: *Table 4-33 should be clarified to indicate how "two percent of terrestrial communities are currently 'exotics'" was determined, and to change the wording to 'exotic weeds'.*

Response: Table 4-33 was developed from information provided by the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) and the *Evaluation of EIS Alternatives* (Quigley, Lee, and Arbelbide 1997). The word "exotics" can be confusing. The Supplemental Draft EIS clarifies the intent by differentiating between undesirable and desirable exotic species.

Comment: *Any plan for the treatment of noxious weeds in the EIS should start immediately, and how the plan will be funded should be explained.*

Narrative: Some respondents assert that any plan to control noxious weeds should be properly funded and implemented. They also believe that five years is too long to wait to begin any plan controlling weeds.

Response: The five-year requirement was not brought forward to the Supplemental Draft EIS. The current strategy requires education, prevention, control, and rehabilitation to be implemented immediately. However, noxious weed plans are already in place in most administrative units, and noxious weed control is ongoing. Administrative units should coordinate with other entities (state, county, tribal, and private), and be consistent in their approach for noxious weed control to be most effective. So far, uncoordinated efforts have been ineffective against noxious weeds. *(See also Implementation.)*

Wildlife

Management Effects on Wildlife

Comment: The EIS should address effects on wildlife from management activities such as grazing, timber harvest, mining, roads, and wild horse management. These effects include: interactions between domestic and wild animals, predation by wolves, effects on predator/prey relations, range management effects on bird populations and habitat, range management effects on amphibian and reptile populations, and management effects on migration routes for big game species.

Narrative: *Many respondents view management practices such as road building, off-road vehicle use, mining, logging, and grazing as harmful to wildlife habitat, and they feel that the Draft EISs do not consider the effects from these activities on wildlife. Others claim that some wildlife populations have flourished because of management activities, and they feel that wildlife can co-exist with operations that support all species, including humans. They dispute the notion that human impacts are necessarily detrimental to wildlife.*

Some individuals claim that Standard HA-S18 does not call for reducing road densities below thresholds recommended by the Interagency Grizzly Bear Committee. They assert that grizzly bears, wolverines, and American martens all require habitat with road densities below certain thresholds, and that failure to meet these requirements will adversely affect these species.

Some suggest there is a lack of discussion by the agencies on the effects of grazing on terrestrial wildlife habitat. They feel that riparian habitat is the most vulnerable to degradation from grazing and they insist on standards and guidelines to protect these areas from grazing practices. Some say domestic animals spread disease to wildlife.

Some feel that the ICBEMP direction will create problems for corrective wildlife and livestock conflict control efforts. They feel that ranchers, permittees, and private landowners should be involved in collaborative discussions with the Forest Service and BLM to minimize wildlife and livestock conflicts. Other respondents expressed concerns on specific species, such as declining populations for range-related species (Columbian sharp-tailed grouse and sage grouse) related to management conflicts.

*Some people contend that safe migration routes are essential for effective management, and that the relocation of grazing allotments out of prime corridor habitat is necessary to reduce elk and deer casualties when they travel through these areas. Some feel that proper conservation measures such as habitat corridors, wildlife reserves, and old-growth preservation are necessary for the long-term viability of wildlife species in light of increasing human use, extraction, and development. Some individuals request that the EIS adequately consider the needs of species displaced from their normal habitats because of management prescriptions. Some feel that adaptive management can be a beneficial tool for species recovery. (*See also Domestic/Bighorn Sheep Habitat Conflicts.*)*

Response: Habitat for terrestrial species (plants and animals) is one of the components of Alternatives S2 and S3 in the Supplemental Draft EIS. Positive and negative effects on wildlife habitat from various management activities are addressed in Chapter 4.

The revised terrestrial habitat strategy provides new or strengthened direction for widely distributed wildlife and plant species identified as being of concern at the broad scale, focusing on adequate habitat with appropriate structure and composition across administrative units. New objectives have been added requiring management activities such as logging, grazing, and mining to be done in a way that maintains and promotes healthy, productive, and diverse plant and animal communities, including considerations of habitat connections and fragmentation. Habitats for wide-ranging carnivores such as lynx and wolverine receive additional direction that focuses on identifying and mapping important wide-ranging carnivore areas, and minimizing or mitigating negative effects on wide-ranging carnivores and their prey.

Alternatives S2 and S3 in the Supplemental Draft EIS include direction to be consistent with conservation strategies and other relevant reports (such as the Interagency Grizzly Bear Committee guidelines). Protection of intact habitats for terrestrial wildlife species of concern at the broad scale which have had the greatest declines in source habitats (Terrestrial Families 1, 2, 4, 11, and 12) is the intent of management in terrestrial T watersheds. One intent of the management direction is to maintain or restore terrestrial source habitats.

Identification of specific sensitive areas is too fine-scale for the Supplemental Draft EIS; however, they will be addressed during Subbasin Review, Ecosystem Analysis at the Watershed Scale, and/or site-specific NEPA analysis, as appropriate. Alternatives S2 and S3 in the Supplemental Draft EIS include direction to develop travel plans that provide for needed public access while maintaining or achieving terrestrial, aquatic and riparian objectives.

Comment: The Draft EIS standards for habitat planning are too vague and broad.

Narrative: *Many individuals feel that the standards, objectives, and guidelines for habitats in the Draft EISs are inadequate for them to make accurate forecasts about the effectiveness of the alternatives on habitats. Some state that realistic assumptions should be made for the alternatives to meet the stated goals of the plan.*

Response: This EIS provides broad-scale direction with desired outcomes described. Effects can not be predicted as precisely as they could be at finer scales. Sections on management intent and rationale, which provide additional clarification of the objectives and standards, have been added to improve understanding of the direction. Additional information on terrestrial vertebrate habitats has been made available from the Science Advisory Group since the release of the Draft EISs. This information was used to develop direction presented in Alternatives S2 and S3 in the Supplemental Draft EIS, and has been incorporated into Chapter 2, as well.

Comment: The EIS should provide a scientific explanation based on ecosystem principles for why effects of human access on wildlife species were avoided in this project.

Narrative: *One respondent requests an explanation of bullet 4 on page Summary-27 of the Eastside Draft EIS, which claims that "human access and its direct and indirect effects on wildlife species are most appropriately addressed at finer scales."*

Response: The effects of human access on wildlife species are discussed in both Chapters 2 and 4 of the Draft EISs. The statement in the summary is correct in that the effects of human access are generally site-specific and can best be addressed with finer scale analyses such as Subbasin Review, EAWS and/or site-specific National Environmental Policy Act analysis.

Data and Analyses

Comment: Paragraph 1 on page 2-43 of the Eastside Draft EIS states that the assessment did not consider the fact that "much of the land surrounding some natural areas also contributes suitable habitat for vertebrate species," which appears to conflict with the statement in Chapter 1, Page 15, Col. 2, Bullet 4, which states that "contributions from private lands were considered as part of the assessment." The discrepancy should be corrected.

Response: The two statements are consistent in that they refer to different things. The statement on page 1-15 refers to the Science Integration Team's assessment in general, in which contributions from private lands were considered as part of the overall analysis. The statement on page 2-43 refers specifically to natural areas and an analysis of the size-class

distribution of natural areas. A decision was made not to include areas surrounding natural areas (buffers) in the size-class distribution analysis. In this case the intent is to show effects of natural areas, so the decision to exclude areas is appropriate. For clarification, a statement is also made in paragraph 1 on page 2-43 that it is recognized that the surrounding areas may contribute to a species habitat.

Comment: The number of vertebrate species in the project area listed in Table 2-12 (page 2-60, Eastside Draft EIS) conflicts with the number of vertebrates stated in Eastside Summary, Page 4, Paragraph 2, which states that 547 vertebrates are present in the project area. The discrepancy should be corrected.

Response: The 547 species includes 79 species of birds which are casual, or accidental visitors, to the project area and were considered in the analysis; they were not included in the Draft EIS Table. The table has been corrected to include these 79 species in the Supplemental Draft EIS (Chapter 2, Terrestrial Species Component).

Comment: Inadequate information about the Species Environmental Relationship Model is provided; a literature reference and explanation for the model should be provided.

Response: The Species Environmental Relationship Model is composed of databases which include base information on species ecology. The databases were used to cluster species into groups based on key ecological functions and key environmental correlates. The databases are discussed on pages 1527-1529 of *Assessment of Ecosystem Components* (Marcot et al. in Quigley and Arbelbide 1997). Different models are explained and cited in the Supplemental Draft EIS.

Comment: Objective HA-O2 regarding support of viable species populations, should be rewritten and EIS should define viability.

Narrative: *Some respondents believe that the objective regarding supporting viable populations, contributing to recovery of listed species and supporting productive and diverse plant and animal populations (HA-O2), is vague and overly inclusive. They want the EIS to revise the objective to deal with specific wildlife ecosystem health issues.*

Some want the EIS to remove the language from HA-O2 that says viability is measured by "recovery" goals set by the U. S. Fish and Wildlife Service or the National Marine Fisheries Service. These respondents believe that the National Forest Management Act and other regulations require an independent judgement of viability and not the simple reference to recovery plan standards that they consider to be inadequate.

Response: Alternatives S2 and S3 in the Supplemental Draft EIS give direction to provide habitat capable of supporting viable populations of plant and animal species. The definition of 'viable population' in HA-O2 has been corrected and is included in the glossary in the Supplemental Draft EIS to read, "A viable population is one that has the estimated numbers and distribution of reproductive individuals to ensure that its continued existence be well distributed in the planning area."

Comment: The EIS should reanalyze scientific data on wildlife habitat (including the correlation between bird populations and habitat needs) in support of revised standards for protecting habitats for all species, not just threatened or endangered species.

Narrative: *Some individuals question whether the standards and objectives in the Draft EISs are based on accurate science, because they claim that habitat provisions will adversely affect certain wildlife populations. Some think the upland sandpiper, Lewis' woodpecker, olive-sided flycatcher, and the veery should be listed as sensitive species. Another respondent states that recent scientific data indicate the northern goshawk prefers mature forests for foraging, while the scientific conclusions in the Draft EISs suggest mixed forests and openings as preferred goshawk habitat; this suggests to them that forest openings are not favorable for the goshawk and may favor competitors of the bird, so they feel that new effects analyses should be performed. Others state that neotropical migratory birds are not adequately considered in the alternatives.*

Some people feel that other species will eventually be listed as threatened or endangered, and they insist that standards should be revised with provisions to protect habitat for all viable populations. They warn that failure to address these issues now may lead to higher costs and complicated recovery in the future.

Response: Although restoration of sustainable ecosystems benefits many wildlife species, it may also adversely affect others. For example, some species populations may have increased because of increases in some vegetative types and patterns resulting from fire suppression. However, these habitat increases are not sustainable and eventual disturbances will reduce them, with corresponding adverse effects on the dependent species.

The terrestrial strategy presented in the Supplemental Draft EIS in Alternatives S2 or S3 addresses the needs of wide-ranging wildlife species identified as being of concern at the broad scale. The effects on terrestrial species were reevaluated by the Science Advisory Group based on the best science available and are disclosed in Chapter 4 of the Supplemental Draft EIS. The needs of neotropical migratory birds have been considered in alternative development; however, habitat issues in wintering areas, which are outside the project area, cannot be addressed.

An objective of this project is to reduce the potential for additional listing of species as threatened or endangered by providing direction to meet the broad-scale needs of various species. The listing of species as sensitive is addressed through updates to Forest Service and BLM sensitive species lists, which are outside the scope of this EIS.

Comment: The theme of Alternative 7 should be revised to correctly reflect what can be measured scientifically about species viability.

Narrative: *Some claim that the statement that Alternative 7 reduces risk to species viability was never adequately evaluated in the Draft EISs. They feel that, therefore, it cannot be concluded that the alternative ever achieves this goal. They want the theme of the alternative to be revised to correctly reflect what the Science Integration Team is capable of measuring with respect to species viability and what distinguishes it from other alternatives.*

Response: Alternative 7 was not revised for the Supplemental Draft EIS, although certain components were carried forward into Alternatives S2 and S3. The effects of the alternatives were evaluated using the best scientific information available. Risk to species viability under Alternatives S2 and S3 were evaluated by the Science Advisory Group and are presented in Chapter 4 of the Supplemental Draft EIS.

Comment: The legends on Eastside Draft EIS Map 2-7 and Table 2-7 are based on the total number of disjunct species, but the total number is not provided. The EIS should provide the total number for both the map and the table.

Response: Map 2-7 and Table 2-7 were not carried forward to the Supplemental Draft EIS.

Comment: The process used to determine species viability in the Draft EISs should be redone from an ecosystem management approach.

Narrative: *Some people feel that because only certain species were chosen for viability studies, long-term viability for all species in the interior Columbia River Basin will be jeopardized. These respondents state that the standards and objectives need to be developed from an ecosystem approach for all species, and not just a species-specific strategy. Some feel that the viability analyses of the Draft EISs are unproven and unclear, and they charge that the agencies will not be able to estimate the long-term capabilities of the ecosystem regarding wildlife habitat.*

Response: The process used to select species for evaluation and the process of evaluation and their limitations are described in the Draft EISs and in the *Evaluation of EIS Alternatives* (Lehmkuhl et al. in Quigley, Lee, and Arbelbide 1997). The expert panel process worked well for the diverse species selected. The process for selection of species to be evaluated and the process of evaluation were further refined between publication of the Draft EISs and preparation of the Supplemental Draft EIS. This refinement is presented in *Source Habitats for Terrestrial Vertebrates of Focus in the interior Columbia Basin* (Wisdom et al. in press), and was used to evaluate the alternatives in the Supplemental Draft EIS.

Comment: The guideline related to developing a species response matrix (HA-G20) should be revised to restrict the scope and use of literature searches for documenting species responses to management activities.

Narrative: *One respondent says that documented responses of species to management activities (HA-G20) should be specific to the inland Northwest. The respondent further believes that interim species response matrices based on literature searches should not be used for decision-making under guideline HA-G20 without validation. They want the EIS to remove this and other guidelines that suggest management actions without proper scientific validation.*

Response: Guideline HA-G20 was not brought forward into the Supplemental Draft EIS.

Comment: Guidelines HA-G21 (developing conservation strategies), HA-G23 (using information from multiple ecological scales), HA-G24 (conducting an analysis of connectivity), and HA-G28 (consider impacts to amphibians) are unclear.

Narrative: *Some respondents feel that the applicability of guideline HA-G21 to the appropriate Draft EIS alternative should be identified and a definition of 'conservation strategy guide' be provided. They believe that analysis of*

connectivity as specified under guideline HA-G24 cannot be performed reliably at the watershed scale; they want the guideline to be revised to clarify the procedures for connectivity analysis and also to ensure that the analysis is consistent across scales. Guideline HA-G28, which says to "consider wetland habitat features" is an example of what the respondent thinks is an ambiguous and cryptic guideline because of the word 'consider.'

Response: These four guidelines were not brought forward to the Supplemental Draft EIS. Guidelines are intended as suggestions for managers to consider in meeting objectives and goals. The term 'consider' is intended to reinforce the idea that guidelines are not mandatory. The Guidelines appendix in each of the Draft EISs has been dropped from the Supplemental Draft EIS, and instead guidelines that appear to be relevant and helpful are presented in Chapter 3 along with associated objectives and standards.

Wildlife Habitat and Viability

Comment: The EIS should compare viability of species among the alternatives.

Narrative: *Some believe there is little difference between objectives, standards, and guidelines among the alternatives in the Draft EISs with respect to species viability. They believe there is no way to evaluate whether the standards and objectives will achieve the intended differences.*

Response: A comparison of effects on viability of species among the alternatives is displayed in the Draft EISs; see the *Terrestrial Species* section of Chapter 4, and Appendix K (UCRB)/4-2 (Eastside). The evaluation of alternatives disclosed in the Draft EISs was based on assumptions described in the Draft EISs. In some cases, the rate of achievement was the biggest difference among alternatives. The viability determinations will be part of the Final EIS and Record of Decision.

Comment: The Desired Range of Future Conditions (DRFC) for Alternatives 3 through 7 should be revised to include provision of habitats to maintain viable populations of all species. The EIS should address how DRFCs for species viability will be achieved with current management strategies.

Narrative: *Some respondents feel it is inappropriate for the DRFC of Alternative 4 to state that "human activities [will be] at levels that allow most species to be adequately distributed in forest environments," because they feel such a statement is inconsistent with the objective of maintaining viable populations and restoring healthy, productive, diverse populations and communities. Furthermore, they note that one of the DRFCs for terrestrial species habitat with Alternatives 3 through 7 is for habitats to be "suitable to maintain viable populations of listed and sensitive species ," but that where habitats are inadequate to support viable populations of a species, the need to list the species will inevitably develop. Therefore, they believe this DRFC should be revised to include provision of habitats to maintain viable populations of all species.*

Response: The intent of the Desired Range of Future Conditions for forest wildlife habitat (in the Draft EISs) is to provide for the long-term sustainability of forest-dependent wildlife species. A desired population level or distribution and viable population level are not the same. Management for viable populations of species is a management minimum. In most cases the desired population level is well above this minimum. This concept has been clarified in the Supplemental Draft EIS; however, in the Supplemental Draft EIS, DRFCs are not described in a separate section, rather they have been incorporated into the objectives, management intents, and rationales.

Comment: The selected alternative should establish wildlife conservation areas to preserve wildlife habitat in reserves.

Narrative: *Many believe that the interior Columbia River Basin has some of the most healthy intact ecosystems left in the country, and they want these areas protected for wildlife habitat by creating wildlife conservation areas and reserves. They insist these areas are vital refugia for species, which they claim would face a crisis under the standards proposed in the Draft EISs. Many believe roadless areas would provide ideal habitat for these reserves because management actions are limited in those areas.*

Response: Several alternatives in the Draft EISs and Supplemental Draft EIS provide for areas with emphasis on conservation of wildlife habitat. The Supplemental Draft EIS provides specific management direction for watersheds identified as having intact source habitats for five Families of terrestrial species (for Terrestrial T watersheds).

The intent of terrestrial T watersheds in Alternatives S2 and S3 is to prevent loss of acres of source habitat and prevent decline in habitat condition in the short term (10 years), while facilitating a conservation emphasis with a long-term objective of increasing the source habitat for these areas to provide connectivity within the watershed where possible.

Comment: The selected alternative should include corridors and linkages necessary to maintain viable wildlife populations.

Narrative: *Many insist that habitat corridors and linkages be incorporated into the standards of the EIS to foster genetic interchange and long-term viability. Some believe that Alternative 7 is the most effective in protecting habitat, and many of these individuals express the need to have standards similar to those proposed for Alternative 7 incorporated into the selected alternative.*

Other individuals claim that many of the alternatives would not protect portions of habitat that would link terrestrial and aquatic areas. They want guidelines to be strengthened and adaptive management and monitoring be adopted to increase the likelihood of connectivity of habitat for wide-ranging species.

Response: Several alternatives in the Draft EISs and Supplemental Draft EIS provide direction related to maintaining corridors and linkages. For example, in Alternatives S2 and S3 in the Supplemental Draft EIS, the intent of terrestrial T watersheds in the short term (10 years), is a conservation emphasis with a long-term objective to increase the source habitat for these areas to provide connectivity within the watershed where possible.

The Supplemental Draft EIS contains direction that strengthens the consideration of fragmentation and connectivity in providing habitats adequate to support viable populations of plants and animals. The restoration emphasis in Alternatives S2 and S3 should, over time, improve connectivity and reduce fragmentation of habitats. Base level direction is provided for developing broad-scale habitat connectivity and linkages for wide-ranging carnivores and for identifying and mapping existing and potential dispersal corridors for wide-ranging carnivores.

Comment: Paragraph 2, page 2-6, of the Eastside Draft EIS should be rewritten to consider that increased fragmentation not only has caused a loss in connectivity between some habitats, but also has increased connectivity among other habitats.

Response: The statement in the Draft EIS is correct, since it doesn't state that all populations have been negatively affected. The intent is to manage vegetation so that it is more like historical conditions. However, this could mean that habitats are more or less connected, depending on the vegetation type, and that positive and negative benefits will vary among species. For example, increased connectivity of dense forest may be inhibiting bighorn sheep movement, causing their habitats to be less connected.

Comment: The standard regarding known habitat bottlenecks and habitat linkages (HA-S4), is too broad and would be too difficult to interpret and implement. Reference is made to a map of habitat bottlenecks, but the map is not provided. This and other standards that are too ambiguous for consideration should be removed.

Response: Standard HA-S4 called for managing identified bottlenecks to reduce the effects. Several objectives in Alternatives S2 and S3 in the Supplemental Draft EIS provide direction relative to habitat linkages and cover the content and intent in HA-S4. As noted in the rationale, the map in question was produced by the Science Integration Team for use in their assessment. It was not included in the Draft EISs and is not cited in the Supplemental Draft EIS.

Comment: The EIS should better explain the concept of 'key linkage areas' and state their criteria and assumptions.

Response: The discussion of habitat needs of carnivores has been refined and clarified in the Supplemental Draft EIS based on information documented in *Source Habitats for Terrestrial Vertebrates of Focus in the interior Columbia Basin* (Wisdom et al. in press).

Comment: The EIS should include basin-wide standards for terrestrial species habitat protection, especially wide-ranging species.

Narrative: *Some people believe that adequate wildlife habitat is vital to long-term viability of many species, and they suggest basin-wide management standards to better address wildlife needs. They say that wide-ranging species can benefit from these standards which would be applied throughout the project area. Some people feel there is a lack of information presented in the Draft EISs about species that are wide-ranging and lack a central habitat location. They assert that without this data it is difficult to determine if habitat requirements and desired future conditions will be met.*

Response: Several alternatives in the Draft EISs and Supplemental Draft EIS provide basin-wide standards for terrestrial species habitat protection. Alternatives S2 and S3 in the Supplemental Draft EIS include objectives that focus on contributing to health, productivity, and diversity of plant and animal communities through maintenance and protection of habitats. Management direction to protect habitat security for wide-ranging carnivores is also provided. Information documented in *Source Habitats for Terrestrial Vertebrates of Focus in the interior Columbia Basin* (Wisdom et al. in press) has been incorporated into

the Supplemental Draft EIS and provides additional insight into the needs of wide-ranging carnivores. In selecting an alternative to be implemented, the decision makers will consider many factors including overall effects on wildlife species.

Comment: The EIS should include a strategy to allow for site-specific analysis of wildlife habitat needs.

Narrative: *Some individuals claim that modification of standards should include analyses of species trade-offs in habitat management and should allow Forest Service and BLM administrative units to modify standards based on site-specific analyses for habitat. Some people assert that since habitats throughout the project area are variable, the management prescriptions for habitat management should be site-specific. They feel that blanket-scale approaches may not be suitable for some species and may prove to be detrimental to some populations.*

Response: Because this EIS provides broad-scale management direction, the desired outcomes, not specific activities or analyses, are described. It is up to the local land manager to determine the appropriate analyses and activities to meet the desired outcomes. In addition, the Supplemental Draft EIS describes a step-down process to link broad-scale direction and information to site specific projects. A process to modify objectives and standards will be described in the Record of Decision. National Environmental Policy Act requires site-specific analysis and disclosure of effects on affected resources prior to implementing a project.

Comment: The EIS should consider the importance of fringe habitats in viability analyses.

Narrative: *Some individuals say fringe populations of a species range are vital to maintaining genetic diversity and integrity. Others feel viability studies should be performed from the center of habitat ranges, declaring fringes as habitat areas which are subject to outside influence and have less importance to species viability. They feel that fringe areas contain habitat conditions that are different and may expose wildlife to increases in stress and other negative impacts.*

Some respondents would like a better understanding of the relative size of fringe environments. They ask that the EIS provide quantitative estimates for several species on the percent of the entire distributional range that is composed of fringe environment.

Response: The range of a species is considered in analysis of effects in the Draft EISs and Supplemental Draft EIS. The primary reason for this, from an ecological view, is that fringe areas may be important to genetic diversity and maintenance of populations in the event of unpredicted events and changing environmental conditions. Currently, it is not possible to provide quantitative estimates of the percent of the entire distributional range of a species which is composed of fringe environments.

Comment: Patch size in standard HA-S2 should be more clearly defined as referring to unharvested, unthinned habitats.

Narrative: *Some respondents are concerned about the non-specific nature of the direction to increase patch sizes in HA-S2. Some claim landscape connectivity can be affected by patch size, and that inner patch distances should be smaller because large patches are catalysts for high intensity wildfires. They believe that restorative treatments should be applied inside reserves to bring back natural patch sizes. Some recommend more clearly defined standards and guidelines regarding patch size.*

Response: The intent of HA-S2 was to provide for sustainable ecosystems. Defined patch sizes are not specified because patch sizes should vary considerably by vegetation type, which is best determined through finer scale analysis (such as Subbasin Review, Ecosystems Analysis at the Watershed Scale). HA-S2 was not carried forward to the Supplemental Draft EIS.

Comment: Delete the standard related to providing adequate distribution, occurrence, and connectivity of mature/old forest stands.

Narrative: *One respondent feels that HA-S6 is a one-size-fits-all standard for mature and old-growth connectivity which is inappropriately focused on static, steady-state management of forest structure, and would conflict with other structural management goals. Another feels that HA-S6 is an example of a non-sustainable standard, and that the habitat needs of dry forests need to be integrated with the Desired Seral Stages in Table 3-2.*

Response: Standard HA-S6 was not carried forward to the Supplemental Draft EIS. A base level objective in Alternatives S2 and S3, in the Terrestrial Source Habitat Component section, is to maintain old forest patch sizes consistent with the landform, climate, and biological and physical conditions of the ecosystem in the short term (10 years). The objective further requires active management to sustain this relatively scarce habitat in the long term, recognizing that the location of patches of old forest are not static and that areas move in and out of having old forest character-

istics, especially in cold and moist forest potential vegetation groups, where a high proportion of fire is stand-replacing. Therefore, active management, such as prescribed fire or stewardship thinning may be required to promote the long-term sustainability of old forest stands.

Comment: Delete standard HA-S7 (snag retention).

Narrative: *One respondent says HA-S7 is internally inconsistent because on one hand, it states that vegetation actions are to be delayed until administrative units "review existing or conduct new local snag analysis," while on the other hand, in the absence of analysis, default standards are to be used. They want this standard to be removed because they believe it causes unnecessary implementation delays and analysis.*

Response: Standard HA-S7 from the Draft EISs was not intended to require another level of analysis, but to include snags in site-specific NEPA analysis that occurs prior to vegetation management activity. Nonetheless, in the Supplemental Draft EIS, standards for snags have been refined and integrated with standards for coarse woody debris to clarify the management strategy to maintain or restore these vital ecosystem elements.

Special Status Species

Comment: The selected alternative should set standards that will protect threatened, endangered, and sensitive species habitat and ensure species viability in compliance with the Endangered Species Act.

Narrative: *Many commenting on this issue claim that the standards and objectives in the Draft EISs do not address adequately the needs of threatened, endangered, and sensitive species. They want management direction to be rewritten to ensure species viability.*

Some find that the Draft EISs do not adequately discuss population goals, habitat requirements, or other information important to the recovery of listed species. Some people feel the project should not adopt the same strategy for sensitive and rare species as for threatened and endangered ones. Some feel that regionally and locally protected species should also be included in the standards. Respondents mention grizzly bears, wolves, martens, lynx, wolverines, and fishers among the species they feel need special attention and are threatened by cumulative effects of management activities such as logging and road building.

Many feel that habitat planning in the Draft EISs for threatened, endangered and sensitive species does not comply with Endangered Species Act (ESA) because the documents disclose that several wildlife species may experience poor conditions for viability and there is a high probability that some species will become extirpated. Some contend that although the ESA requires the project staff to consult with other agencies with regard to species management, the Forest Service and BLM need not, and should not, incorporate ecosystem management principles in their management planning.

One individual suggests a programmatic way of dealing with ESA issues by involving two levels of consultations with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, one at the regional level, and another at the Forest or BLM District plan level. They believe that further consultation would be required only if project decisions digress from the selected alternative standards. Others believe that the agencies are wasting time and money on ineffective plans for certain species, when management decisions could take practical steps to reduce listings in the first place. They believe that without the certainty of an acceptable plan there will be more ESA listings and a continuing loss of flexibility.

Response: The Forest Service and BLM have legal responsibilities and policy requirements to provide habitat for threatened, endangered, proposed, candidate, and sensitive species, and species of special interest to tribes. Meeting these responsibilities includes restoration of degraded habitats and maintenance of high quality habitat necessary for the recovery of these species.

Management direction that addresses or affects wide-ranging species listed or proposed for listing under the Endangered Species Act (TEP species) is embedded within the integrated ecosystem management strategy described in the Draft EISs and Supplemental Draft EIS. Portions of the strategy are specific to these TEP species; other portions for forest, rangeland, aquatic, and riparian health contain direction not directly for the species, but which would enhance their protection. Specific management direction in the Supplemental Draft EIS would add to the foundation of existing law, regulation, and direction for threatened and endangered species.

Management direction relevant to TEP species includes Ecosystem Analysis at the Watershed Scale (EAWS) and subbasin review direction, landscape considerations, direction regarding snags, direction for aquatic and terrestrial habitats, specific direction for aquatic and terrestrial TEP areas, and direction

related to road management. In addition, there are often other documents (recovery plans or conservation strategies) that relate directly to recovery of threatened or endangered species. Direction related to these plans is included in some alternatives in the Draft and Supplemental Draft EISs. In other cases the species occur in very localized areas and it is more appropriate for them to be addressed at finer scales (such as subbasin review, Ecosystem Analysis at the Watershed Scale, and / or site-specific National Environmental Policy Act analysis).

It is Forest Service and BLM policy to manage habitat to prevent the listing of species. Regionally and locally rare species would be addressed at the scale most appropriate to their needs. Alternatives S2 and S3 in the Supplemental Draft EIS provide direction related to rare species.

Comment: The selected alternative should incorporate clear and detailed objectives and standards for threatened and endangered species to promote collaborative efforts with state and other federal agencies.

Narrative: *Individuals are concerned that the Draft EISs lack the specificity necessary to complete meaningful collaboration and Section 7 consultation under the Endangered Species Act.*

Response: Increased collaboration is addressed in several objectives and standards in alternatives in the Draft EISs and Supplemental Draft EIS. Currently a streamlined consultation process is in use by National Marine Fisheries Service, U.S. Fish and Wildlife Service, the Forest Service, and the BLM, as outlined in a Memorandum of Understanding. Changes to the consultation process are under the purview of the U.S. Fish and Wildlife Service or National Marine Fisheries Service as outlined in Section 7 of the Endangered Species Act.

Comment: The EIS should analyze and address protection of species of special interest to states and tribes, including the protection of big game species such as deer and elk.

Narrative: *Noting that not all species of concern to states and tribes are identified through the listing process under the Endangered Species Act, some respondents would like to see emphasis in the EIS for species of special interest to these entities, such as deer and elk. They feel this can be accomplished by incorporating additional standards for these species' protection. (*See also Relationship to Other Planning Processes.*)*

Response: Specific direction is provided in some alternatives in the Draft EISs and Supplemental Draft EIS for certain groups of species that have been identified as being of concern at the broad scale, including threatened, endangered, and proposed species; wide-ranging carnivores; and other widely distributed species. Emphasis is given to habitats rather than populations of these species, because only management of habitat is within the responsibility of the Forest Service and BLM.

Some species of interest to tribes and states were not included in the initial analysis because they are common and their habitat is not decreasing; therefore, no change in direction is needed. The Supplemental Draft EIS discloses the effects of the alternatives on the harvestability of wide-ranging aquatic and terrestrial species and riparian-dependent species to meet the needs of the American public in general, in addition to meeting federal trust responsibilities to American Indian tribes. These federal trust responsibilities include tribal access to traditionally harvested plants, deer, elk, grouse, and other game species. Some terrestrial plant and animal species have limited ranges and require site-specific information so only general effects are disclosed in this broad-scale EIS.

The Terrestrial and Aquatic Species section of Chapter 3 of the Supplemental Draft EIS contains management intent and direction on three specific areas for terrestrial and aquatic species habitats: (1) providing for conservation of basin-wide species of concern; (2) providing quality habitat to support harvestability, which is important to both tribes and states; and (3) providing for terrestrial and aquatic species habitats which are not addressed by source habitats or with other direction (such as species with special habitat needs).

Comment: Standards and objectives in the EIS should identify habitat recovery plan requirements.

Narrative: *While standard HA-S14 identifies the need to implement recovery plans, some respondents are confused about exactly what constitutes a recovery plan. They request that the EIS identify what a habitat recovery plan contains.*

Response: A 'recovery plan' is defined in the glossary of the Draft EISs and Supplemental Draft EIS as a plan that identifies, justifies, and schedules the research and management actions necessary to reverse the decline of a species and ensure its long-term survival. Direction in several alternatives in the Draft EISs and Supplemental Draft EIS tiers to recovery plans, conservation strategies, and similar documents. Alternative S2, the preferred alternative,

requires management actions to be consistent with approved recovery plans. Recovery plans are prepared by the U.S. Fish and Wildlife Service and National Marine Fisheries Service in accordance with the Endangered Species Act; they are individually designed to meet the needs of a particular listed species. Further details about recovery plans may be obtained from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

Standards brought forward from the Draft EIS have been refined, rewritten, and streamlined throughout Chapter 3 of the Supplemental Draft EIS to improve clarity and understanding.

Comment: The selected alternative should not encourage reintroduction of endangered species, because of the effects of reintroduction of grizzly bears and wolves on humans and other species.

Narrative: *A number of respondents perceive reintroduction programs to be an infringement on their ability to use their lands as they desire. In particular, they see the wolf reintroduction program as an example of a counter-productive effort that interferes with good resource management on both public and private lands. Some people contend that the agencies are placing grizzly bear needs over human needs in management decisions. Some respondents assert that the resource needs of humans and wildlife are incompatible. Their concern is that the direction they perceive in the Draft EISs will overemphasize the protection of certain wildlife species (such as wolves, grizzly bears, mountain lions and other predators) over human safety, making the lands unsafe for recreationists, workers, and livestock. They feel that the agencies should not promote these measures of reintroduction.*

Response: Reintroduction of species under the Endangered Species Act is under the authority and supervision of the U.S. Fish and Wildlife Service and National Marine Fisheries Service. Direction in the Draft EISs and Supplemental Draft EIS is intended to be consistent with recovery efforts as required by the law.

Comment: The range of certain threatened and endangered species should be corrected in the EIS.

Narrative: *Some people find it misleading for the Draft EISs to state that the project area is the southern portion of some larger carnivores' range, because they claim that grizzly bears, wolves, and lynx once ranged much farther south.*

Response: Some species, such as the grizzly bear and the gray wolf, were historically more widely distributed. For others, such as the lynx, the project area does represent the southern portion of its range. The Supplemental Draft EIS has been modified to clarify and simplify this discussion.

Birds

Comment: The selected alternative should provide adequate protection for bird species.

Narrative: *Some individuals feel that the Draft EIS standards and objectives will not provide adequate protection for bird habitat and foraging grounds. Some request that basin-wide standards be incorporated into the EIS. They feel that the agencies need to fully evaluate the impacts of the selected alternative on bird populations and habitat, stating that the BLM and Forest Service fail to incorporate many of their own scientific findings in the standards. Others conclude that site-specific analysis is a more proper way to address habitat management, because of changing and diverse land conditions in the interior Columbia River Basin.*

Response: Several alternatives in the Draft EISs and Supplemental Draft EIS provide basin-wide objectives and standards for protecting, restoring, and maintaining wildlife habitat. Additional direction is provided for special habitat features to be protected, including some used by birds. Effects of the alternatives on widely distributed species of concern at the broad-scale, including many bird species, are evaluated in the effects analysis in Chapter 4 of the Supplemental Draft EIS.

Comment: The EIS should address the presence of non-native bird species and their effects on resident bird populations.

Narrative: *One respondent is concerned about the introduction of certain game birds (such as partridges, quail, and pheasant) and their habitat. He believes the decline of certain resident species, such as sage grouse, can be correlated to the introduction of these game species. This respondent feels that the Draft EISs give a cursory discussion on this subject and he wishes to see a further analysis of this association in the EIS.*

Response: Management of game bird populations is beyond the authority of the decision makers for this EIS. It is the responsibility of the states' fish and wildlife departments. Many exotic game birds were introduced in the late 1800s and early 1900s. While most releases of exotic game birds have ended because of the associated costs, the effects they have had on native species is not well documented.

Comment: The EIS should clarify information about bird associations with riparian and wetland habitats.

Narrative: *Some respondents feel that red-wing blackbirds are associated with riparian and wetland habitat, more so than flycatchers. They note that the Draft EISs state that western meadowlark and Brewer's blackbird showed consistent long-term decline, but elsewhere they state, "population increases of birds that use riparian areas, such as MacGillivary's warbler, western meadowlark, and Brewer's blackbird have increased, indicating some recovery in riparian systems." They ask what the last sentence means, since they believe that western meadowlarks are very rarely associated with riparian areas in the project area and can't tell whether Brewer's blackbirds are increasing or declining.*

Response: The statement on page 2-80 of the UCRB Draft EIS should have indicated that the two species of flycatchers are more likely to be affected by Forest Service or BLM management activities because of where they occur rather than degree of riparian association. The error regarding western meadowlarks has been deleted. Based on breeding bird surveys, Brewer's blackbirds have experienced a long-term decline.

The statement on page 2-84 of the UCRB Draft EIS is based on a citation from Callopy and Smith (1995). Several of the species are listed incorrectly, and the statement adds more certainty to recovery of riparian areas than did Callopy and Smith who state the increase is recent and that they "may" indicate an improvement in shrubland riparian habitat. The terrestrial species section of Chapter 2 has been updated and rewritten for the Supplemental Draft EIS to fix the errors and update it based on new science information.

Domestic/Bighorn Sheep Habitat Conflicts

Comment: The EIS should clarify management prescriptions for bighorn and domestic sheep interactions.

Narrative: *Some individuals note potential habitat conflicts between domestic sheep and wild bighorns, and they are concerned about which species will win the right-of-way in management decisions. They believe the Draft EISs do not go far enough in describing management criteria for these interactions. Some assert that livestock should be removed from areas where bighorns are present. They believe that by lowering the exposure and risk of transferable diseases from domestic species, wild populations will benefit genetically and also in habitat conditions. Some feel that site-specific analysis should be implemented to better address potential consequences of these situations.*

Response: Wildlife and livestock conflicts and issues are more appropriately addressed at the mid- or fine-scale because the solutions are best served through collaborative efforts among local entities, including ranchers, state fish and game agencies, the general public, and local Forest Service and BLM managers. Because of its fine-scale nature, standard HA-S21 was not brought forward from the Draft EIS.

Collaboration is strongly emphasized throughout the EIS. In general, the domestic sheep and bighorn sheep issue is addressed by existing agency (Forest Service and BLM) policy that pursues minimizing the interaction of domestic and bighorn sheep on federal lands. Although the Supplemental Draft EIS addresses this issue in an objective under base level direction.

Big Game

Comment: The selected alternative should emphasize the protection of big game species, such as deer, elk, and moose.

Narrative: *Many individuals in the project area feel that big game population health and security are priorities. For these respondents, big game animals not only represent wildness and spiritual values, but these species are also vital to the social and economic considerations of people responding. Individuals have not been able to determine management directions for large ungulate species. They feel evaluations of habitat needs and management effects on species viability have not been performed.*

Some people feel the agencies need to address the issue of large numbers of deer and elk populations moving to private land. Others feel that road policies should be modified because they dictate habitat conditions for these species.

Response: Specific direction is provided in some alternatives in the Draft EISs and Supplemental Draft EIS for certain groups of species that have been identified as being of concern at the broad-scale. Emphasis is given to habitats rather than populations of these species, as management of habitat is within the responsibility of the Forest Service and BLM.

Addressing the effects of deer and elk on private lands and the management of animal population numbers is the responsibility of the states' fish and

wildlife departments, and not within the jurisdiction of the BLM or the Forest Service.

The Terrestrial and Aquatic Species section of Chapter 3 of the Supplemental Draft IES contains management intent and direction on three specific areas for terrestrial and aquatic species habitats: (1) providing for conservation of basin-wide species of concern; (2) providing quality habitat to support harvestability, which is important to both tribes and states; and (3) providing for terrestrial and aquatic species habitats which are not addressed by source habitats or with other direction (such as species with special habitat needs).

Comment: The EIS should correct the statement in the Eastside Draft EIS that refers to pronghorn antelope as a "lowland species," because the vast majority of pronghorns inhabit the high plains of the project area, that is, 3,000 feet elevation or higher.

Response: The statement "pronghorns as a species generally inhabit upland shrublands and upland herblands on flat or gently sloping terrain" would be more correct. However, the description in the Eastside Draft EIS is not technically incorrect in that in the interior Columbia River Basin, 3,000 feet is considered low elevation.

Grizzly Bears and Wolves

Comment: The selected alternative should provide adequate management direction for grizzly bears, wolves, and other predators.

Narrative: *Many are concerned with the management standards for predators, because they feel these species are important links in properly functioning ecosystem processes. They believe that lynx, martens, wolverines, and mountain lions all need proper management provisions to maintain viable populations and restore predator-prey balances.*

Some say that reintroduction of grizzly bears and wolves is vital for the long-term viability for species and proper management strategies are needed for the assurance of species health. They want more protection than the agencies are offering and request more restrictions of management to ensure species recovery, because they believe that parts of the project area are natural grizzly bear and wolf ecosystems. They claim that the preferred alternative will not be sufficient for grizzly bear viability and will not meet the expected desired range of future conditions. Many feel that a management plan where grizzly bears might experience extirpation is contrary to the provisions of the Endangered Species Act. Advocates of grizzly preservation assert that management activities such as road building and logging are detrimental to proper habitat and will lead to reduced numbers if habitat and management decisions are not improved.

Others state there is too much emphasis on grizzly management and believe that special management is not important if the project area will not be able to support a breeding population anyway.

Response: The reintroduction of species under the Endangered Species Act is under the authority and supervision of the U.S. Fish and Wildlife Service and National Marine Fisheries Service. Direction in the Draft EISs and Supplemental Draft EIS is intended to be consistent with recovery efforts as required by law.

The Draft EISs and Supplemental Draft EIS include direction to contribute to recovery of federally threatened, endangered, or proposed species, including grizzly bears and wolves, by restoring and maintaining habitat quality, quantity, and effectiveness. Alternatives S2 and S3 in the Supplemental Draft EIS include objectives to balance long-term restoration needs of listed and proposed species against short-term risks to them. Subbasins identified as containing the highest quality habitat for certain wide-ranging carnivores, including grizzlies, are covered by direction that emphasizes restoration of habitat.

Comment: Standard HA-S17 directs management activities to be consistent with access management recommendations in the Cabinet/Yaak and Selkirk Mountains Grizzly Bear Recovery Zone. Most or all of this area is outside the Eastside planning area. The EIS should indicate how this standard relates to the Eastside EIS planning area.

Response: HA-S17 was not carried forward to the Supplemental Draft EIS; however, the intent of HA-S17 is carried forward by base-level direction that calls for management activities to be consistent with recovery plans and conservation strategies for wide-ranging carnivores and to the Interagency Grizzly Bear Committee task report.

Other Mammals and Predators

Comment: The EIS should revisit assumptions, standards, and objectives for management of bat roosts and hibernacula.

Narrative: *One respondent is concerned about the need to protect bat roosts found in or on trees, caves, cliffs, old mines and the ground, not just those areas identified in HA-S12. The respondent perceives a disconnection between the assumption presented in the environmental consequences chapter on bat roosts and hibernacula and the management standards proposed in the Draft EISs. In particular, this individual thinks that protecting these areas while actively restoring the ecosystem as identified in Alternative 4 is contradictory and will result in adverse effects on bat populations because of the difficulty in accurately identifying these sites. Another individual questions the prudence of protecting habitat for a species perceived as a carrier of rabies as part of the ecosystem.*

Response: Several alternatives in the Draft EISs and Supplemental Draft EIS provide direction to maintain and restore special habitat features, including bat roosts and hibernacula, and to conduct management activities in a way that protects these features. The Supplemental Draft EIS discloses effects on bat species of concern in Chapter 4.

Comment: The EIS should incorporate accurate science in its management standards for small mammal species.

Narrative: *Some state that without full and complete knowledge of the distribution, occurrence, and population status of species, adequate protection of mammal species will not occur. For example, some believe there is a lack of data on pygmy rabbit habitat type, distribution, and numbers in the area. They claim that pygmy rabbits require dense sagebrush cover to live, and they believe that Alternatives 4 and 6 would control or eradicate sagebrush. This procedure is interpreted to be the opposite of what the science says. They feel that without proper evaluation of these and other species types, management decisions cannot be appropriate and will have no scientific merit. Some also dispute the science behind the Draft EISs' statement that some ground squirrel species have benefitted from loss of ground cover. These respondents claim that loss of shrub cover, such as big sagebrush, negatively affects ground squirrel populations and that declines in populations have occurred within the region.*

Response: Pygmy rabbits and several ground squirrels are identified as species of concern because of loss of native grassland and shrubland communities to agricultural conversion or noxious weed infestation. It is recognized that sagebrush and grassland communities are key to the long-term viability of many species. There is no intent in any alternative to eradicate sagebrush.

The major findings in the *Assessment of Ecosystem Components* in combination with public scoping and public comment on the Draft EIS, were used to develop management direction contained within Chapter 3 of this EIS. To ensure consistent application of scientific information, the EIS Team frequently interacted with members of the Science Integration Team and Science Advisory Group in development of the EIS. Project scientists periodically review the EIS to ensure that the EIS Team correctly interpreted and applied scientific concepts, information, and assumptions. Inconsistencies were either modified or explained.

Amphibians and Reptiles

Comment: The EIS should provide accurate and scientific data and information, and address range management effects on amphibian and reptile species.

Narrative: *For both amphibian and reptile management standards, some people cite a lack of clarity in the Draft EISs and request that they be rewritten to include accurate scientific data and more detailed standards. Some question where these species actually exist in the interior Columbia River Basin, since they perceive the maps and data to be incomplete and vague. For example, they note the title of Eastside Map 2-8, which implies that the data are for the Columbia Gorge only, yet the entire Eastside planning area is shown. The respondent cannot determine whether amphibians are missing from most of the planning area because the input data set covered only a portion of the planning area, or whether the amphibians truly are only present near the Columbia Gorge. They ask that the sources of data and the geographic areas which the data represent be included, and that the map be clarified in the EIS.*

Some people maintain that frog habitat will continue to decline unless the agencies correctly manage for wildlife needs instead of livestock interests. They believe that grazing practices alter pond hydrology and remove essential vegetation which amphibians need.

Some people claim that the discussion of management effects on reptile species in the Draft EISs is almost non-existent. They believe that serious habitat destruction has occurred from grazing practices and agricultural conversion. They also assert that loss of shrub cover has had a major impact on lizard habitat, and they request that the agencies deal with these issues.

Response: The discussion of effects on amphibians and reptiles in the Supplemental Draft EIS has been refined to focus on broad-scale effects. Range maps of species of broad-scale focus are available in *Source Habitats for Terrestrial Vertebrates of Focus in the interior*

Columbia Basin (Wisdom et al. 1998). Eastside Map 2-8 has not been carried forward to the Supplemental Draft EIS.

Invertebrates

Comment: The EIS should delete statements that describe relationships without any indication of significance or importance or that exaggerate vegetation changes on invertebrates.

Narrative: *One respondent notes that Eastside Draft EIS (page 2-74) states that habitat effectiveness for some soil invertebrates is reduced from increased compaction and soil displacement, but they state that no indication is provided regarding the relationship's importance to ecosystem function. They also feel that describing effects of vegetation changes on invertebrates is broadly overstated and speculative, and that the EIS should correct deficiencies of the assessment and eliminate speculation.*

Response: Key ecological functions of invertebrates are discussed on page 2-72 of the Eastside Draft EIS and in Chapter 2 of the Supplemental Draft EIS. Because of the broad-scale nature of the EIS, information is somewhat limited for invertebrates, but recent research indicates that their role is necessary and substantial in several areas including soil productivity and as food sources for many vertebrate species. The discussion of invertebrates in the Supplemental Draft EIS has been reviewed to assure it reflects the level of current scientific knowledge.

Fish

Comment: Historical information on salmonid occurrence should be verified in the EIS.

Narrative: *Many criticize what they see as a lack of verified information in the Draft EISs regarding historical ranges and baseline values for specific fish species. They feel that clarity is needed in the discussions of species richness and biotic integrity, which should be expanded to reflect the Draft EIS focus on basin-wide ecosystem conditions and to include comparisons to historical baseline values. Some people fear that native fish are vulnerable because of restricted distribution. Some assert that fragmented habitat and isolation have resulted in substantially different composition and status of native fish from historical levels. Some blame past management decisions for the decline in the bull trout population.*

Response: Estimates of historical ranges for the key salmonids within the project area are defined in Appendix 4D of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997). Estimates of historical ranges were based on known historical distributions in published literature, historical accounts, and speculative distributions as summarized in the Idaho, Montana, Oregon, and Washington River Information System databases, expanded to include any natural occurrences in the status survey that were not included in the historical distribution (Lee et al. 1997).

Comment: The selected alternative should provide better standards that provide long-term protection for native anadromous and inland fish populations and adequate plans for restoration of habitat for special status fish species.

Narrative: *Some respondents want better habitat protection for various fish species including bull trout, steelhead trout, chinook and other salmon, redband trout, and westslope cutthroat. They feel that none of the alternatives address habitat improvements in a manner conducive to change. These people want the alternatives to focus on the degradation caused by management activities. Some suggest establishing reserves and refuges throughout the basin to preserve habitat and spawning areas.*

Some people suggest that management decisions need to protect remaining high-quality watersheds and restore those that are below standards for fish habitat. Some contend that the agencies are not preventing basic practices, such as logging, which they perceive to be instrumental in the decline of original habitat conditions. They feel that certain baseline standards should be implemented to provide conditions where fish can survive and flourish.

Some fear that aggressive management will have a negative impact on fisheries. Some criticize the preferred alternative because they believe it allows an increase in total miles of roads and fails to provide adequate plans or funds to restore endangered salmon or declining trout and steelhead populations.

Response: Through the inclusion of the Biological Opinions in Alternatives S1, and identification of the aquatic A1 and A2 subwatersheds and an integrated restoration strategy in Alternatives S2 and S3, enhanced protection and restoration of aquatic health is intended. Specific standards and objectives for enhanced ecosystem health in these areas are included in the Supplemental Draft EIS.

Comment: Errors about redband trout should be corrected in the EIS.

Narrative: *Some respondents dispute the Draft EIS statement that "Residents and resident-interior redband trout...are classified as sensitive species by the Forest Service and BLM" (UCRB Draft EIS page 2-142). They believe this statement is correct for Region 1 and 6 of the Forest Service, but not for the Intermountain Region (Region 4). They note that Appendix E, Table E-2, does not list redband trout as a sensitive species within Region 4.*

Response: The statement in Chapter 2 of this EIS has been corrected to identify that Regions 1 and 6 of the Forest Service classify redband trout as a sensitive species.

Comment: The EIS should provide an analysis and discussion of how activities in Alternative 5 would affect the persistence and viability of bull trout in the core distribution areas, and should identify these areas. The Draft EIS conclusion that Alternative 5 would not conserve strong populations of bull trout is not defensible and should be corrected.

Narrative: *Some respondents take note of a sentence, "persistence and viability of bull trout throughout the core distribution area is expected in Alternatives 2, 3, 4, 6, and 7" (Draft EISs page-4-144). They feel that this implies that bull trout populations would suffer under Alternative 5, which they feel is not substantiated.*

Response: The statement actually reads, "Habitat for viable populations of bull trout throughout the core distribution would be expected under Alternatives 2, 3, 4, 6, and 7." The statement referred to in Chapter 4 of the Draft EIS is based upon the finding of the Science Integration Team in the *Evaluation of EIS Alternatives*, (Volume 1, page 477). A new effects analysis for Alternative 5 was not undertaken for the Supplemental Draft EIS.

Bull trout is listed under the Endangered Species Act and will be managed to comply with the Act in cooperation with the U.S. Fish and Wildlife Service.

Comment: The statement that "Alternatives 1, 2, and 5 would result in the continued decline in the overall status of steelhead and stream-type chinook salmon stocks because of a minimal emphasis on restoration and continued land disturbance in portions of the current range over the long-term" is not supported by discussion in the Draft EIS. The EIS should provide an evaluation of how continued land disturbance and management under each alternative's standards and objectives would affect fish, or it should state that the evaluations are inconclusive.

Response: Chapter 4 of the Supplemental Draft EIS discusses the environmental consequences of the alternatives on aquatic habitat and key salmonid status and distribution. Alternative evaluation accounted for the effect of soil disturbance and management standards and objectives on aquatic habitat capacity and key salmonid status and distribution.

Comment: Add redband and cutthroat trout from standard EM-S8 in Alternative 6 to Alternative 4.

Response: Standard EM-S8 which required Ecosystem Analysis at the Watershed Scale prior to certain activities in specific areas has been replaced by a modified standard in the Step Down section in Chapter 3 of the Supplemental Draft EIS.

Comment: The EIS should clarify the ramifications of classifying watersheds into Categories 1, 2, and 3.

Narrative: *Some respondents object to the classification of watersheds into Categories 1, 2, and 3. Some feel that the Draft EISs fail to disclose the impacts of this classification system on resource outputs, which they feel tilts the planning process toward protection of fisheries at the expense of human needs.*

Response: In the Supplemental Draft EIS, management direction is not tied to the subbasin categories. Subbasin category information is used to assist in identifying broad-scale aquatic and integrated restoration priorities, which are identified in Appendix 15 to this EIS.

Comment: The EIS should disclose the number of watersheds with anadromous fish species and the status of these populations under Alternative 7.

Narrative: *Some individuals request that the EIS include a reasonable and adequate analysis of the provisions of Alternative 7 regarding road construction and the spatial distribution of anadromous fish.*

Response: Alternatives S2 and S3 identify aquatic A1 and A2 subwatersheds that contain strong and important anadromous fish populations. No additional work was done on Alternative 7 for the Supplemental Draft EIS.

Comment: The EIS should include basin-wide standards to manage fish habitat and water quality objectives at a regional level.

Narrative: *Some are concerned that the agencies' proposed standards are variable for different watersheds. They feel there is no available scientific data demonstrating that biological requirements of fish can vary in different rivers. They claim that the Forest Service and BLM are adjusting fish habitat standards so the standards do not interfere with extractive industry aspirations.*

Response: The intent of many standards for Alternatives S1, S2, and S3 is to protect, enhance, and maintain native fish populations, habitat and water quality. Many of these standards are located in the base level direction which applies across the project area. Others are found in the restoration or aquatic A1 and A2 subwatershed direction which applies to specific areas. The specific effects of the aquatic management direction is discolsed in Chapter 4 of this EIS.

Comment: The agencies should clearly evaluate the Draft EISs preferred alternative's effects on anadromous fish populations.

Narrative: *Some individuals feel there are many contradictions and deficiencies in the standards of the Draft EISs with regard to anadromous fish populations. They also feel that the Draft EISs based the evaluation of Alternative 4's effects on invalid assumptions that "warp the analysis."*

Response: The evaluation of alternatives for the Draft EISs preferred alternative was based on the Science Integration Team's *Evaluation of EIS Alternatives* (Quigley, Lee, and Arbelbide 1997). The Science Integration Team also completed an evaluation of the three alternatives in the Supplemental Draft EIS, which was the basis for the effects analysis in Chapter 4 and is the basis for the selection of the preferred alternative for this EIS.

Comment: The EIS should describe federal goals with regard to fish, contrast them with state goals, and explain why the two are inconsistent.

Narrative: *A respondent notes that the Draft EISs state that "the goals of states' natural resource agencies are not specifically aimed to protect aquatic ecosystems and biodiversity, but to meet societal needs while disrupting ecological processes and conditions as little as possible" (Draft EISs, page 4-153). They want to know what these state goals are and how they conflict with federal goals.*

Response: State management statues, regulations, and goals are not necessarily the same as Forest Service or BLM goals. For example, Forest Service and BLM land management plans must meet state forest practices acts rules and regulations. Generally, federal land management plans exceed state requirements because of public issues and other legal requirements, such as species viability and the Endangered Species Act. The Federal Land Policy and Management Act and National Forest Management Act require federal land management agency plans to identify consistencies and inconsistencies with other federal, state, tribal, and local land use plans. Chapter 1 of this EIS contains the results of this consistency review. Additional consistency reviews will occur during the governors' reviews of the Final EIS.

Comment: The statement in the Draft EISs (E-4-154) that Alternative 5, outside of aquatic emphasis areas, would result in broad-scale fragmentation of aquatic and riparian environments is not scientifically supported in the Draft EISs. Justification for the statement should be provided or such statements should be removed from the EIS .

Response: Alternatives S2 and S3 in the Supplemental Draft EIS were developed in response to public comment on the Draft EISs and new scientific information. No new analysis has been done on Draft EIS Alternative 5.

Comment: Standard AQ-S50, to "manage livestock to prevent unauthorized disturbance to redds," should be a guideline.

Narrative: *Referring to standard AQ-S50, which includes direction to "manage livestock to prevent unauthorized disturbance to redds," some people think the EIS should allow discretion for incidental disturbances and leave the decisions and enforcement tactics to local land and fisheries managers.*

Response: This standard has not been brought forward to the Supplemental Draft EIS.

Comment: Standard AQ-S51, which states that "livestock access and human activities should be managed to minimize adverse impacts on redds and sensitive species," should be deleted.

Narrative: *Referring to standard AQ-S51, some people think the EIS should make a decision either to manage entire ecosystems or to manage single species. They feel that this standard is contrary to the basic idea of ecosystem management.*

Response: This standard has not been brought forward to the Supplemental Draft EIS.

Comment: The EIS should adequately address the effects of Forest Service and BLM management activities on fisheries resources.

Narrative: *A number of respondents are concerned about detrimental effects on the fishery resource from other management activities. Some other individuals feel that management activities have enhanced habitat for fish populations and that the Draft EISs do not discuss the benefits of management activities. Some felt that the effects of some but not all management activities were adequately displayed; they feel that the effects of grazing, mining, and logging should be better exhibited in the EIS. Some believe that fishery conditions will not improve unless measures are employed to limit or stop grazing practices. Some are concerned specifically about logging in the vicinity of fisheries. Some say that spawning habitat is ruined from sediment resulting from logging practices. Others, citing personal experience on the Kootenai National Forest with what they consider some of the best fisheries in the country, feel there is no connection between logging and degradated habitats. Some believe proper logging practices can enhance fish habitat by supplying nutrients and structure into fisheries.*

Others claim that toxic chemicals are another reason for habitat loss and should be considered in the EIS. Effects from forest fires are also of concern to many who feel that proper standards should be used to minimize negative effects on water quality and fish habitat.

Response: Chapter 4 of the Supplemental Draft EIS discusses the environmental consequences of the alternatives on aquatic habitat and key salmonid status and distribution. Alternative evaluation accounted for the effects of soil disturbance due to management activities and management standards and objectives on aquatic habitat capacity and key salmonid status and distribution.

Comment: The EIS should adequately address the effects of non-Forest Service and BLM management activities on fisheries resources.

Narrative: *A number of respondents are concerned about the effects on the fishery resource from other management activities outside of Forest Service or BLM jurisdiction. They feel that the long-term sustainability of the resource cannot be assured without addressing such management activities in the EIS. Concerns over the effects of hatcheries, dams, and hydroelectric power are among those felt to be inadequately discussed in the Draft EISs. Some feel the Draft EISs ignore detrimental impacts of oceanic events, such as heavy fishing and current changes, on river fish populations. Some individuals claim the EIS should address harvesting and the introduction of exotic species, sport fishing, and fisheries management, which they believe can cause significant declines in fish populations.*

Response: Management of hydropower, fish harvest, and hatcheries is not in the purview of the Forest Service and BLM. However, recognition and consideration are given in this EIS in Chapters 2 and 4 as to

how these activities and conditions affect fish resources on Forest Service- or BLM-administered lands. Consideration of these activities and conditions are included in the cumulative effects of the alternatives. Even though conditions or activities outside agency jurisdiction may contribute to ecosystem health problems, the agencies retain a responsibility to properly manage the lands they administer and avoid contributing further to the problems.

Comment: The EIS should adequately address effects of road management on fish populations. Emphasis should be placed on protecting unroaded areas.

Narrative: *Some individuals feel that the presence of roads will encourage more mining and logging, which will threaten fish populations. Others state that the Aquatic Assessment and the Draft EISs acknowledge the relationship between road densities and fish populations, but that the Draft EISs do not include direction to protect roadless areas and areas with low road densities. One individual states the opposite view, that what is being reported does not conform with what that person has seen and experienced through many years of fishing on the Kootenai National Forest.*

One respondent claims that road density is not a valid measure for evaluating impacts on fish because of human activities as discussed in Chapter 4 of the Draft EISs, and that the EIS must clearly state these facts.

Response: One purpose of the EIS is to provide broad-based direction relating to road management, among other things. The intent of the road management direction in Alternatives S2 and S3 is to reduce adverse effects of roads on aquatic and terrestrial species. Decisions on how to reduce effects will be done at the local level.

The effects of the road management direction is included in the aquatic habitat capacity analysis. The results of this analysis are discussed in Chapter 4.

Comment: The Draft EISs should have had a section that specifically mentioned the Wild and Scenic Rivers Act and requirements of the Act concerning protection of outstandingly remarkable fisheries value.

Response: The Draft and Supplemental Draft EISs recognize the significance of laws, directives, and regulations with which the Forest Service and BLM must be in compliance when preparing an environmental analysis document. Some laws are mentioned to bring clarity to the issue at hand (such as the Endangered Species Act). Other major laws, including the Wild and Scenic Rivers Act, are noted in Appendix 1. This EIS will not conflict with the Wild and Scenic Rivers Act, nor with protection of outstandingly remarkable fish values.

Social-Economic-Tribal Components of the Ecosystem

Economics

Community Resiliency

Comment: The economic analysis in the EIS should recognize that resource-dependent communities are not as resilient as the EISs suggest and cannot sustain economic changes resulting from implementation.

Narrative: *Many people voice opposition to the project based on a perception that the Draft EISs expect rural communities to switch their economic base from natural resources to tourism. They feel that changing their economies to tourism and recreation-based industries will consequently destroy their towns. Some suggest the Draft EISs make unproven generalizations by assuming that resource-dependent communities can rely on tourism for an economic base to attract tourists, especially communities without destination resort amenities, such as in Glacier or Yellowstone national parks. Others question how proposed road closures will affect the recreational opportunities on which the EIS expects communities to rely for income. Some feel that boom-and-bust cycles in smaller communities should be discussed in the EIS.*

Response: The Chapter 2 descriptions of the current situation state that isolated natural-resource-dependent communities are vulnerable to decreases in federal timber and other resource supplies. The chapter also discloses that some of the counties and communities with large recreation and tourism components are fast growing with diverse economies. The Draft EISs do not suggest rural communities switch their economic base from natural resources to tourism and recreation-based industries.

Boom-and-bust cycles in smaller communities are discussed in the Draft EISs. The discussion of the Forest Service even-flow timber policy in Chapter 2 specifically addresses this concern. Seasonal employment issues connected with special forest products gathering and recreation use are also recognized.

An objective in several alternatives of the Draft EISs specifically addresses the challenges faced by communities with few economic options. In the report, *Economic and Social Conditions of Communities* (ICBEMP 1998), isolation is identified as a key concern that limits the ability of communities to deal with changing economic conditions and to diversify their economic base. The issues of the isolated communities are addressed in the Socio-economic section in the Supplemental Draft EIS.

Community Dependency

Comment: The selected alternative should consider economic impacts on resource-dependent communities.

Narrative: *Some respondents believe the government should provide assistance to communities trying to diversify and stabilize their economies. They believe that without this help few towns can successfully make the transition to more diversified or amenity-based economies. They assert that public lands were set aside with the intent of relying on them for multiple use, and that timber dollars are a necessary ingredient in maintaining the vitality of many communities. They feel that the EIS should include a strategy for prioritizing activities when funding is limited, with resource-dependent communities high on the list of priority areas for continued management.*

Response: After release of the Draft EISs, a social and economic characterization of 543 communities in the project area was conducted (ICBEMP 1998), that identified communities within subbasins and their geographic isolation. Specialized industries in communities within the project area were profiled, and 16 categories were used to describe and compare communities with different attributes and industry specialization. The report then assessed possible impacts of implementing each of the Draft EIS alternatives on the categories of economically specialized communities and provided a discussion of cumulative impacts. It was not practicable or possible to assess specific impacts of each alternative on each individual community or location in the project area, because the Draft EIS alternatives themselves are not

location-specific and because the data are not available to make such specific predictions.

The Supplemental Draft EIS addresses an integral part of an overall socio-economic strategy for the interior Columbia River Basin which links land and resource management actions and strategies with the social and economic needs. The strategy contains three components: products and services from forest and range lands; organizational support for economic and social needs for communities and cultures; and support of economic adjustment initiatives.

The Social-Economic-Tribal component of the Supplemental Draft EIS provides objectives, standards, and guidelines intended to support the economic and social needs of people, cultures, and communities, and to provide sustainable levels of products and services within the capabilities of the ecosystem. The restoration strategy identifies high restoration priority subbasins partly on the basis of economic and social needs and values.

Comment: The Purpose and Need should not maintain economic subsidies for resource-dependent communities and industries that are not resilient to change.

Narrative: *Many respondents speak out against continued community dependence on resources and what they believe to be government subsidies in support of these communities. They suggest communities can supply timber without being timber-dependent, and logging will continue to contribute to the economy, but it must be done responsibly. Others feel that public lands are for public use, not commercial use, and commercial interests should not benefit from any taxpayer subsidies. Some believe the Draft EISs are too concerned with extractive industries such as mining, timber, and grazing.*

Response: In developing and implementing decisions, the Forest Service and BLM are guided by basic principles and priorities. Both the Forest Service and BLM are multiple-use agencies that promote the sustainability of ecosystems by ensuring their health, diversity, and productivity. Overall priorities for management will include:

- *Protecting Ecosystems.* The agencies will work to ensure the health and diversity of ecosystems while meeting people's needs. Special care for fragile or rare ecosystem components will be provided on lands administered by the Forest Service or BLM.
- *Restoring Deteriorated Ecosystems.* The Forest Service and BLM will improve deteriorated ecosystems on lands they administer, based on scientific understanding and emerging technologies.
- *Providing Multiple Benefits for People Within the Capabilities of Ecosystems.* Within the limitations of ecosystem integrity, health, and diversity, forests and rangelands also must meet people's needs for uses, values, products, and services.

Comment: The selected alternative should allow continued resource extraction in a manner that meets local economic and ecological needs and provides economic stability to rural communities.

Narrative: *Some respondents argue that resource extraction is a vital use for the land. They believe that without timber harvest, supply and demand levels will become unbalanced, both in the United States and worldwide. Some assert that all alternatives as described in the Draft EISs fundamentally disregard the needs of people in the basin. They claim that the alternatives consider mining, timber, and grazing only as by-products of maintaining ecosystem health, with future production levels uncertain.*

Some respondents note that although there is no specific legal mandate to provide economic stability to rural communities, legislative history provides numerous references to suggest such an obligation. They point to legislative direction that permits and encourages consideration of community economic stability when planning or implementing plans, such as: the Organic Act of 1897, White Pine Blister Rust Protection Act of 1940, Sustained Yield Forest Management Act of 1944, National Forest Management Act of 1976, Small Business Administration Act, and National Forest-Dependent Rural Communities Economic Diversification Act in the 1990 Farm Bill.

Response: The Supplemental Draft EIS includes a socio-economic strategy for the interior Columbia River Basin. This strategy links land and resource management actions and strategies with social and economic needs and strategies. The strategy contains three components: products and services from forests and rangelands; organizational support for economic and social needs for communities and cultures; and support economic adjustment initiatives. In the selection of an alternative, decision makers will consider social and economic effects. National and international supply and demand considerations for wood and range products and the balance of trade are outside the scope of the Draft EISs.

Comment: Correct or delete the graph on page 20 of the Socio-Economic Report.

Narrative: *Some feel that the graph on page 20 [of Economic and Social Conditions of Communities, February 1998] is wrong. They note that the specialization ratio is defined as percent jobs in the community divided by percent jobs in the region, but since all data are taken from communities with data, the specialization ratio of isolated plus non-isolated communities divided by the total must equal one.*

Response: The information presented in the report accurately portrays the industry specialization for the 423 communities in the project area. As noted on page 1 of the *Economic and Social Conditions of Communities* (ICBEMP 1998) report, the information collected for the 423 communities was used to characterize industry specialization for those communities.

Comment: The Socio-Economic Report is inadequate and does not meet the intent of Congress.

Narrative: *Many believe the* Economic and Social Conditions of Communities *(ICBEMP 1998) report, completed after Congress mandated further study, is inadequate, incomplete, does not meet its intended purpose, and fails to comply with the Department of the Interior and Related Agencies Appropriations Act of 1998. They state this report does not consider different methods of assessing recreation employment in the basin, or have tables displaying incomes associated with various jobs in the region or have a subbasin review. They feel that the report also does not address the impacts of each alternative at the community level. Many feel that it is no better than the socio-economic analysis in the Draft EISs and therefore they believe there should be no record of decision. Some people call for the development of a new supplemental EIS to address the economic impacts of the project at a community level. Some suggest a new report that leaves rural communities intact.*

Response: Part 323(b) of the 1998 Interior Appropriations Bill directed the project "to the extent practicable, [to] analyze the economic and social conditions, and culture and customs, of the communities at the subbasin level... and the impacts the alternatives in the Draft EISs will have on those communities." The report responds to this direction by including a social and economic characterization of 543 communities in the project area, with subbasins and geographically isolated communities identified. Specialized industries in project area towns are profiled, and 16 categories are used to describe and compare towns with different attributes and industry specializations. The report then assesses possible impacts of implementing each of the Draft EIS alternatives on the categories of economically specialized communities and provides a discussion of cumulative impacts. It is not practicable or possible to assess specific impacts of each alternative on each individual community or location in the project area, because the Draft EIS alternatives themselves are not location-specific and because the data are not available to make such specific predictions. The project thus complies with congressional direction by providing to the extent practicable an analysis of the economic and social conditions of the communities in the interior Columbia River Basin and the potential socio-economic impacts of each alternative on the types of communities in the project area.

Economic Analysis

Comment: The economic analysis in the EIS should address incomplete or inadequate information.

Narrative: *Most people responding to the economic analysis section of the Draft EISs find different aspects inadequate or incomplete. General comments include a perception that the analysis is based on unscientific terms and that the project is an unproven management theory that could have negative impacts on many communities. Some believe that the Draft EISs contain an anti-resource ethic evident in this perceived lack of scientific study. Others want the EIS to address the effects of development, recreational or otherwise, on agricultural lands. Many feel the analysis does not distinguish between rural and urban areas and is too broad to apply to communities within the entire project area. One suggests that analysis at a smaller scale such as subbasins would allow study of potential direct and indirect effects on local economies.*

Response: The Draft EISs are based on the most current scientific processes and knowledge as described in the assessment documents. The Council on Environmental Quality (CEQ) regulations for implementing procedural provisions of the National Environmental Policy Act (NEPA; 40 CFR 1502.22) require federal agencies to identify relevant information that may be incomplete or unavailable for an evaluation of reasonably foreseeable significant adverse effects in an EIS. If the information is essential to a reasoned choice among alternatives, it must be included or addressed in the EIS. While additional information may add precision to estimates or better specify relationships, new information is unlikely to significantly change the understanding of the relationships that form the basis of the evaluation of effects. Although new information is welcome, no missing information was deemed essential to making a

reasoned choice among the alternatives being considered at this scale and at this time.

The direction in the Supplemental Draft EIS is applicable only to lands administered by the Forest Service and BLM; however, the Supplemental EIS considers the effects of activities on all lands in the project area at the broad scale. This cumulative effects analysis is described in Chapter 4 of the EIS.

Differences in the effects of the alternatives on urban and rural areas is identified in the Draft EISs. A supplementary report, *Economic and Social Conditions of Communities* (ICBEMP 1998), also more completely addresses the social and economic effects of the alternatives at the community level. The Supplemental Draft EIS includes a process for Subbasin Review, which includes a socio-economic component.

Comment: The EIS should include a county-level or community-level, not just regional, economic analysis. The unique characteristics of small communities should be recognized and not lumped into larger economic units.

Narrative: *Some respondents suggest that the EIS needs to include a county-level or community-level economic analysis to address the potential impacts of reduced resource use. They feel that the Draft EISs and Economic and Social Conditions of Communities report (ICBEMP 1998) are too broad and do not provide enough information to enable communities to predict potential impacts under each alternative. They suggest the EIS address the county-level fiscal impacts resulting from the seven alternatives, especially where they predict mill closures, reductions in timber production, loss of road access, and reductions in recreational use will occur. They further suggest the EIS Team should develop location-specific alternatives and a community-specific economic analysis of each alternative.*

Many feel the EIS inaccurately lumps communities into one category, making it appear that small, rural communities have the same economic characteristics as larger cities. Others feel that by lumping communities the Draft EISs do not consider that money earned from economic activities is not equally spread among communities.

Response: The supplementary report, *Economic and Social Conditions of Communities* (ICBEMP 1998), was published to more completely addresses the social and economic effects of the alternatives at the community level. However, the broad-scale focus of the Draft EIS alternatives does not permit a location-specific estimate of management direction and data necessary to predict specific impacts to communities or counties. The effects will be assessed to the extent practicable in updates to national forest and BLM district land use plans, and other finer-scale planning documents.

The Supplemental Draft EIS identifies a social/economic strategy for the interior Columbia River Basin. This strategy links land and resource management actions and strategies with the social and economic needs and strategies. The strategy contains three components: products and services from forest and range lands; organizational support for economic and social needs for communities and cultures; and support economic adjustment initiatives. Alternatives S2 and S3 in the Supplemental Draft EIS provide location-specific direction.

Comment: Changes should be made to the summary document, Considering All Things: on page 12, add "regulation of downstream water flows and soil stability" to the ecosystem services box. On page 33, reword Issue 5 to define"disturbance processes" and add "and impacts" after "interactions."

Response: The wording of the issues in *Considering All Things* reflects the exact wording of the issues as described in Chapter 1 of the EIS. *Considering All Things* was published specifically to summarize the Draft EISs and will not be revised or reprinted.

Comment: The cost analysis displayed in the Eastside Draft EIS (Chapter 4, page 215) avoids discussion of economic losses due to catastrophic events under each alternative. The cost analysis should be revised to incorporate measures of potential losses because of catastrophic events.

Response: The cost analysis displays only the estimated costs and outputs of management activities under the three alternatives. Catastrophic events are not management activities and by their nature are unpredictable.

Comment: The justification for varying cost assumptions by alternative should be provided, or the cost assumptions should be treated equally among alternatives.

Response: The unit and activity cost assumptions are generally treated equally across the alternatives. The differences in alternative costs reflect different levels of activity and different management objectives identified in the alternatives. The revised cost analysis for the Supplemental Draft EIS provides

probable estimates of funding level allocations and associated outputs that would result from the management direction at various comparable and reasonable funding levels. Methods of developing the budget costs and outputs summary are provided in Chapter 4.

Comment: The objectives of the Draft EISs should be considered 'standards' because in the absence of the authority imposed by a standard the objectives will never be attained and will be overridden by the standards that implement the other resource objectives.

Response: The objectives are meant to be indicators for measuring progress toward attainment of goals and desired conditions. Standards are provided where needed. The objectives and standards are intended to complement and not "override" each other. The EIS Team has revised many of the objectives and standards to resolve potential conflicts among them and to clarify their intent.

Employment

Commodity-Based Employment

Comment: The analysis conclusion that four percent of the population in the project area is dependent on commodity extractive industries is inaccurate and/or misleading and should be re-evaluated.

Narrative: *The statement by one respondent, "I will lose my job and community," captures the sentiments of many toward the perceived effects of the proposed action. These people want the project to note that they depend on use of natural resources to make a living, whether in timber, mining, or ranching. They feel they are misrepresented by the Draft EISs, in particular, by assessments that assert four percent of regional employment is in extractive industries. In their estimation, this under-valuation of their towns and counties does not consider indirect employment and/or to address the relative importance of resource extraction in their communities.*

Response: The estimated percent of jobs in mining, ranching, and lumber and wood products is based on published state employment statistics. The basin-wide percent of total jobs in these categories was four percent. The Draft EISs also recognize that this basin-wide estimate may mask different statistics at the county or community level. For this reason, key differences among counties are recognized in the Draft EISs in Chapter 2 and at the community level in the supplementary report, *Economic and Social Conditions of Communities* (ICBEMP 1998).

Comment: The criteria for deciding whether a community is resource-dependent is flawed; the EIS should reflect the true nature of these dependent towns.

Narrative: *Many claimed that Saint Maries, Idaho is a timber-dependent town, and other towns such as Libby and Troy, Montana, were also used as examples of towns that were incorrectly labeled. These respondents disagree with the Draft EISs not considering them as timber-dependent, and they cite examples of many who rely on the income from local mills. Others cite the mineral dependency of counties in Idaho, such as Caribou and Custer, which is not discussed in the Draft EISs.*

Response: In 1987, the Forest Service identified communities thought to be dependent on the national forests. The criteria used for that process included forest products employment that was at least 10 percent in a community and that local wood processing firms used at least 50 percent national forest timber. Recognizing the 1987 list did not account for population size, population growth, or geographic isolation, the Science Integration Team reassessed the 1987 list using these additional criteria. The rationale was that communities judged to be most at risk to changes in federal forest timber supply were those with small populations, located in counties with low population densities, and judged to be relatively isolated. The communities meeting these criteria were identified as timber dependent communities in the Draft EISs. The purpose of this analysis was to identify the communities most at risk from changing federal timber supplies. It does not imply other communities and businesses or individuals in these communities are not tied to federal timber supplies.

The supplementary report, *Economic and Social Conditions of Communities* (ICBEMP 1998), expanded this concept of timber dependency with the identification of communities that are specialized in timber products employment. This report identifies 137 communities as timber specialized. The report also identifies the communities that are small in population, isolated, and that have specialization in other industries tied to federal lands and resources. This report identified the community of Challis in Custer

County, Idaho as highly specialized in minerals. There was no detailed data for Bancroft in Caribou County, Idaho.

Comment: The selected alternative should set a balance between ecological health and extractive industries as the best means of preserving community integrity.

Narrative: *Some respondents say they value the lands administered by the Forest Service and BLM, but they point out that people "need to use (but not abuse) these resources" through diligent oversight to provide a sustained yield of commodities for future generations.*

Some feel that considering employment in new sectors, such as restoration, is a step in the right direction. They note few restoration jobs created by the project will provide enough employment opportunities to replace those lost in the extractive industries. However, many feel those jobs that are generated should be incorporated into the economic analysis.

In contrast, others feel that a decrease in opportunities for extractive industries will not adversely affect the communities. They argue that the trend toward less extractive industry representation in local economies is inevitable, and they assert that economic strength can be maintained by sustainable extractive practices that consider ecological integrity.

Response: The Forest Service and BLM are managed under applicable laws to provide for the multiple use of natural resources. This EIS intends to balance resource opportunities among timber, grazing, and mining industries; recreation and tourism; and maintenance and restoration of the ecosystems. Alternatives S2 and S3 provide a prioritization for restoration of these activities in certain areas.

One intent of alternatives is to provide a mix of goods and services that maximize net public benefit and promote community stability in an environmentally sound manner. Alternatives S2 and S3 address local participation of the workforce in management activities by giving higher priority to areas that are economically specialized in industries tied to goods and services.

Comment: The economic analysis in the EIS should focus on effects on commodity-based employment particularly timber-based jobs and salaries in individual communities.

Narrative: *Many responses from the residents of the interior Columbia River Basin indicate deep concerns about lost jobs, less money for school and road funds, and declining community economic stability. Opinions are split on how and to what extent implementation of the Record of Decision will affect regional and small town economies. Some feel the project has little or no potential for negative effects on communities, citing evidence they believe supports the conclusion that employment sources are shifting from extractive to recreational activities. Others strongly assert that any plan that further limits their access to extractive commodities from federal lands will "sound the death knell" for many communities within the project area.*

Respondents state that many local communities depend on timber sales for their economies. They assert the EIS, and in particular Alternative 4, should specify a specific volume of timber to be cut in the future. These people believe that the assurance of small tree and thinning harvest described in some alternatives will not be sufficient to sustain local economies, because small timber harvest may not contribute enough volume for mills, and therefore employee salaries, to survive. They ask how businesses can plan around unpredictability.

Response: One of the purposes of the Supplemental Draft EIS is to support the economic and social needs of people and provide sustainable, predictable levels of products and services from Forest Service- and BLM-administered lands. The intent is to sustain a flow of economic benefits to local communities within the capability of the ecosystem in the project area. Alternatives S2 and S3 address local participation of the workforce in management activities by giving higher priority to areas that are economically specialized in industries tied to goods and services from Forest Service- and BLM-administered land. This EIS intentionally does not identify specific timber volume because of the broad-scale focus of this project. Volume of timber harvested will be addressed at the local level with local knowledge and information.

Comment: The statement on page 4-167 of the Eastside Draft EIS, "The economic value of ecological outcomes cannot be reliably estimated, although if successfully produced they provide valuable human benefits," conflicts with the last sentence, "...restoration activities also make an important human contribution through generating employment and economic activity."

Response: The statements are not conflicting but complimentary. Both recognize that ecological outcomes and restoration activities can provide both ecological and socio-economic values if successfully implemented.

Timber

Comment: The economic analysis in the EIS should address the ability of Forest Service- and BLM-administered lands to produce a sustained-yield of timber.

Narrative: *A few respondents suggested that the EIS should contain an analysis on the ability of the two agencies to produce a sustained-yield of timber from Forest Service- and BLM-administered lands. Through this additional analysis it would provide the opportunity for a predictable level of timber products, which would allow the public to predict the effects on their community economies.*

One individual notes that the Draft EISs claim to "broaden the meaning of sustainability to include all parts of the ecosystem and to account for the role of disturbance patterns and processes in shaping how ecosystem changes over time;" the respondent feels that such a disclaimer is a weak excuse for not completing a sustained-yield analysis. Another respondents wants a "sustained-yield minus 10 percent concept;" this respondent feels that such an approach will allow for a "conservative cushion" for timber outputs in the future.

Response: The broad-scale focus of the Draft EIS alternatives does not permit a location-specific estimate of management direction and data necessary to calculate a sustained-yield timber estimate for each Forest Service and BLM administrative unit. This information will be assessed to the extent practicable in amendments and/or revisions of Forest Service and BLM land use plans.

Comment: The EIS should disclose the environmental and economic effects of decreasing timber harvests with the associated increase in imports on foreign and domestic markets.

Narrative: *Many respondents are concerned about imports of wood fiber. They believe we need to manage our own lands at a sustainable level to prevent the need for imports. Some feel that by importing lumber, the country is exporting jobs. They feel that consumption of goods is never discussed in the Draft EISs, however a reduction in harvest is discussed.*

Others fear displacement of environmental effects if the source of regional wood fiber shifts overseas. They note that the United States has strict environmental regulations, but other counties such as Mexico and those of Central and South America do not. They feel that the United States has a scientific base to protect threatened, endangered, and sensitive species and by encouraging imports from countries that do not, the nation is condoning extinction on other continents.

Response: This broad-scale document considers the effects on lands administered by the Forest Service and BLM in the interior Columbia River Basin. The effects of changing federal land management policies on international trade and international environmental effects is not within the scope of this EIS.

Comment: It is not clear how timber jobs resulting from forest restoration activities were calculated in Evaluation of Alternatives (page 742). Jobs generated as a result of restoration should be incorporated into the economic analysis.

Response: A discussion on the calculation of restoration jobs is included in the Supplemental Draft EIS. The Supplemental Draft EIS incorporates restoration employment effects in the economic analysis. The Draft EISs in Chapter 4 identified restoration employment as a key effect of the alternatives and summarize the amount of restoration jobs by alternative.

Comment: The economic analysis should consider the source needed to supply timber to the country.

Narrative: *Some believe the EIS should reflect that timber jobs are increasing in the private industry, and that dependency on public land to supply timber for mills and loggers is decreasing. Others assert that some areas, such as southern Idaho, have little private land and their timber supply comes from Forest Service- and BLM-administered land.*

Response: Forest Service- and BLM-administered land provides a wide array of uses to the public which includes timber products. While the amount of timber harvest from federal lands has decreased over the last ten years, it still plays an important role in rural communities in the interior Columbia River Basin, and provides benefits for other resources (such as wildlife). The Supplemental Draft EIS provides a more in-depth discussion of the socio-economic needs and values of the communities in the interior Columbia River Basin.

Livestock Grazing

Comment: The selected alternative should maintain grazing rates to protect local agricultural economies.

Narrative: *Some warn that the Record of Decision will drastically limit existing grazing rights, with a resulting*

negative effect on local economies. One suggests government compensation; the respondent feels that if the project expects rural areas to withstand economic losses from livestock grazing, then it should provide income for agriculture to maintain their livelihood.

Response: An important element of the need for developing an ecosystem-based management strategy is to support the economic and/or social needs of people, cultures, and communities, through sustainable and predictable levels of products and services from Forest Service- and BLM-administered lands. The selection of an alternative for implementation will be based, in part, upon which alternative best meets this need. However, the focus of this EIS is not to prescribe fine-scale decisions, such as grazing rates, but to protect and restore rangeland plant communities. Where grazing and livestock management activities can be conducted to achieve project goals and objectives, they are allowed. Specific rates and locations are local decisions to be made by managers based on local conditions and needs.

Comment: The value of the timber and forage importance index is not clear. The EIS should include a rationale for the timber and forage importance index and for differences in the indices when comparing outputs between the mid 1980s and the mid 1990s.

Response: The timber and forage importance index was not carried forward into the Supplemental Draft EIS. The discussion of dependency on grazing and timber in Chapter 2 has been clarified.

Comment: The Draft EISs do not adequately address effects on ranchers from management restrictions for threatened and endangered species.

Narrative: *Some respondents feel that the Draft EISs do not acknowledge that designation of threatened or endangered species, including steelhead trout and bull trout, already restrict ranching activities.*

Response: The Supplemental Draft EIS has more specific information on the impacts of management direction on the various industries within the interior Columbia River Basin than the Draft EISs do. However, impacts from Endangered Species Act consultation on individual projects are too fine scale to be addressed in this EIS. Management restrictions as a result of formal consultation involving a threatened or endangered species would vary depending on the issues, species, habitat, and livestock grazing operation. It would be difficult to depict the impacts at the basin scale of the various management restrictions that could exist from a finer-scale consultation process.

Furthermore, impacts on the ranching industry would vary according to individual ranch conditions. Some ranchers have the flexibility to adjust their operations to meet management restrictions (such as altering seasons of use in riparian areas). Other ranchers do not have flexibility in their operations and therefore cannot adjust to a season of use change. This variability precludes any meaningful attempt to predict specific impacts to ranchers at the broad scale.

Comment: The Draft EIS underestimates the importance of federal grazing land to the overall grazing industry.

Narrative: *A few people take issue with document statistics regarding the importance of federal lands for forage. One respondent states that overall, cattle figures used in the Draft EIS are inflated by the number of cattle in feed lots, calling into question a point in the Draft EISs that says only 1.4 percent of total forage in eastern Washington comes from federal range.*

Response: The Draft EIS stated that total dependency figures for federal Animal Unit Months (AUMs) may not reflect the rancher dependency on federal forage (see Eastside Draft EIS, Chapter 2, pages 180 and 181), or the importance of seasonal forage that is provided by the federal range in areas such as eastern Washington. Dependency and overall importance of federal grazing lands to the grazing industry depends on the county or area where the information is collected and the scale of the data. In general, the larger the area analyzed such as the interior Columbia Basin, the less important federal grazing land is to the grazing industry. Counties or communities with little federal land do not, in general, rely heavily on federal grazing lands. However, communities in counties that are dominated by federal land rely heavily on those lands for their grazing industry and livelihood. The Livestock Grazing subsection in the Social-Economic-Tribal section has been rewritten in the Supplemental Draft EIS to improve the clarity.

Comment: The Draft EISs do not adequately address the costs of livestock grazing (economic and environmental) compared to grazing fees collected.

Narrative: *The majority of statements related to this issue focus on comparing revenue generated from grazing fees and resource damage caused by livestock grazing. Several*

people take issue with what they see as taxpayer-subsidized below-cost Animal Unit Months.

Response: Grazing fees are set annually according to a formula established by the Congress. It is outside the scope of the ICBEMP to change the grazing fees.

Comment: The economic impact of grazing on the economy of the Northwest is understated in project documents.

Response: The economic impact of grazing on the economy of the Northwest is based on published state and federal agriculture and business statistics. The importance of federal grazing to area ranchers is determined by comparing forage consumption on federal lands to total feed requirements. Chapter 2 of the Draft EISs states that the sales of cattle raised on Forest Service- and BLM-administered land, at least in part, account for an average of two percent of total agricultural sales in the project area, but this average varies widely by subregion. Chapter 2 in the Supplemental Draft EIS has been updated and revised to improve its clarity. *(See also Restoring Rangeland Health)*

Mining

Comment: The EIS should include a more extensive analysis of the effects on mining.

Narrative: *In the opinion of some people, the Draft EISs do not provide adequate treatment of the role of mining in the ecosystem. They want to know how mining will be affected by the selected alternative compared to other alternatives, because they feel the economic consequences of decreasing mining is not adequately discussed. They feel the Draft EISs do not disclose hidden impacts on mining in the form of increased costs, decreased access, and other limitations. They are concerned that any cut in U.S. mineral production will negatively affect the world supply and demand. Some assert that mining levels cannot be sustained if the companies are required to conduct EAWS.*

In contrast, many others would like management direction in the EIS to prohibit mining activities on Forest Service- and BLM-administered land in the future. A few specifically request that the EIS consider underground mining as a viable option for continued ore extraction outside riparian areas. Some respondents ask that costs associated with cleanup be addressed in the EIS. Both sides feel the EIS must answer the question of who can mine, how much, and where. Many want to see strict regulations enforced on mining companies.

Response: The potential effects on mining are described in the Draft EISs in Chapter 4 and in the supplementary report, *Economic and Social Conditions of Communities* (ICBEMP 1998). The administration of locatable, leasable, and salable minerals on federally administered land is governed by law and regulation. Nothing in the alternative strategies presented in this EIS would change those laws or regulations. A decision for the project would not rescind any valid existing rights to extract minerals from federally administered lands. New leasable and salable mineral extraction activities could face restrictions within riparian conservation areas in order to maintain or achieve RCA objectives. Specific effects on mining are too fine scale for this broad-scale EIS; therefore, those discussions are more appropriate to be disclosed during finer-scale environmental analyses with consideration of site-specific information.

Comment: Compliance with the 1872 Mining Act should be addressed in any analysis and decision concerning mining rights.

Narrative: *Legal aspects of mining, in particular the 1872 Mining Act, are of particular concern for respondents on the issue of the future role of mining in the region. Echoing an ongoing national debate over the past decade, some consider the laws antiquated and irrelevant, while others assert their continued viability and importance.*

Response: Actions taken to implement the Record of Decision will conform to the 1872 Mining Act and implementing regulations (43 CFR 3809). The estimation of effects of implementing one of the alternative management strategies (Chapter 4 of the Draft EISs and Supplemental Draft EIS) was made assuming this conformance. Specific effects of specific mining actions are evaluated through the NEPA process at the time such actions are proposed at the local level. It is beyond the scope of this EIS to change existing law or regulation pertaining to hardrock (locatable) mineral exploration and development.

Comment: The minerals and energy section in Chapter 2 of the Draft EISs should be amplified.

Narrative: *Some respondents suggest that the Minerals and Energy section of the EIS should better explain the federal policy in the 1970 Minerals and Mining Policy Act, the Forest Services Minerals Program Policy statement, and the BLM equivalent on mineral exploration and mining proposals.*

Some note that the Eastside EIS (p. 2-177) states that "...it is difficult for the Forest Service or the BLM to prohibit

mining of locatable minerals on the public lands if the deposit can be profitably produced. Thus, the focus of agency efforts...is to prevent unnecessary and undue degradation...." They believe that this statement is misleading and could be interpreted as indication that the Forest Service and BLM would, if the authority existed, prohibit mining on public lands. These respondents feel that for clarity and to keep a proper perspective on possible intentions of the project, it would be helpful to state that prohibiting mining would be, at least in the general sense, a violation of the 1970 Mineral and Mining Policy Act.

Response: The Bureau of Land Management and Forest Service aim to manage public lands and resources in compliance with existing laws and regulations. There is no intention to "prohibit mining of locatable minerals." The limits of Forest Service and BLM authority to regulate mining are explained better in the Social-Economics-Tribal Section of Chapter 2 of the EIS, under Land Ownership and Major Uses. Mining activities are authorized by the U.S. Mining Laws (Public Domain Lands) Act of May 10, 1872. The Supplemental Draft EIS focuses on issues to be addressed at the broad scale. Because of this refined focus, the minerals and energy section has not been expanded.

Comment: Delete road reclamation from standard AQ-S19.

Narrative: *Some respondents think standard AQ-S19 is superfluous because they believe requirements for reclamation and revegetation of mining disturbance, including roads, are provided in other federal and state regulations. Therefore, they feel that road reclamation should be deleted from this standard.*

Response: Standard AQ-S19 has not been brought forward from the Draft EISs.

Comment: Revise standard AQ-S20.

Narrative: *Some respondents feel that the last bullet of standard AQ-S20 would be more useful if it required reclamation plans and drop bonds, and if the following statement were added: "Require that reclamation bonds be established that are adequate to ensure that the reclamation plans are implemented completely."*

Response: Federal regulation provides that no mining operations which is conducted under a notice or a plan of operations shall be initiated until the operator or mining claimant provides a certification that a financial guarantee exists to ensure performance of reclamation. The financial guarantee must be sufficient to cover 100 percent of the costs of reclamation.

Comment: Revise the heading in Minerals section of Chapter 4.

Narrative: *One respondent noted that on pages 4-175 to 4-178, Effects on Permitted Mineral and Energy Operations, the main heading (Locatable Regulations) seems to indicate the Forest Service and BLM can approve operations when, in fact, they can not permit them. This should be corrected.*

Response: Permitted activities on Forest Service- and BLM-administered land include the exploration and development of minerals and energy resources. These activities are analyzed and approved through the appropriate National Environmental Policy Act analysis document. Annual operations are approved by the local unit through the approval and acceptance of Annual Operating Plans. For clarity the heading has been changed in Chapter 4 of the Supplemental Draft EIS.

Fossil Fuels

Comment: The EIS should consider the environmental and economic effects of alternative sources of energy.

Narrative: *Some state that alternatives to fossil fuels, such as wind and solar power, are numerous and should be considered prior to oil and gas development. They want the EIS to include analysis of potential offsets of impacts from alternative energy development in any assessment of effects of the selected alternative on decreasing opportunities for oil and gas development.*

Response: An analysis of effects from alternative energy development is outside the scope of this EIS. As noted in the Draft EISs, these types of activities, in general, are initiated by private entities, not by the land management agencies (Eastside Draft EIS, Chapter 4, page 175). When proposed, the local administrative unit can consider these types of issues if identified by the public response to a fine-scale proposal.

Comment: Oil and gas drilling have negative effects on the environment and should not be allowed in the selected alternative.

Narrative: *A majority of comments addressing oil and gas exploration expressed opposition to it in specific locations, including: Yellowstone and Glacier national parks, the Bob Marshall Wilderness Complex, and the Rocky Mountain Front in Montana. These respondents argue that such areas are more important ecologically than as sources of fuel.*

Response: The EIS does not propose to change existing land allocations or permits. Where appropriate on Forest Service- or BLM-administered lands, oil and gas exploration are not precluded by any of the alternatives proposed in the Draft or Supplemental Draft EISs. Most of the areas mentioned, including Yellowstone and Glacier National Parks, are not in the project area, nor under the jurisdiction of the Forest Service or BLM.

Comment: The EIS should reconsider the need to balance utility corridors with environmental protection.

Narrative: *A few respondents mention that utility corridors for transmission of energy or transport of fuels can and should be conducted in manner that balances utility needs with protection of the environment and maintenance of ecological integrity.*

Response: The effects of utility corridor maintenance and protection of the environment are issues better addressed in site-specific analysis. The transmission of fossil fuels and electric energy would need to be considered, when proposed, at the mid- to fine-scale in an appropriate National Environmental Policy Act analysis document.

Amenity-Based Employment

Comment: The selected alternative should emphasize protection of amenity-based economies, not just commodities.

Narrative: *Some believe that more emphasis should be placed on non-commodity economic values, such as clean water, clean air, flood control, natural insect predation, and climate regulation. A few think that the Draft EISs do not do a sufficient job of assigning values to non-commodities. Others believe a dollar value cannot be placed on non-commodities, but that wilderness and roadless areas are more valuable spiritually and historically. Some assert that it is this beauty that draws other businesses into the Northwest.*

Comparing employment in recreation to that in extractive industries, many respondents assert that more jobs are found in recreation. They believe the EIS, especially Alternative 4, should focus on this information and not emphasize future employment opportunities in extractive industries. They believe that recreation will offer more economic stability in the long-run.

Response: The Supplemental Draft EIS addresses an integral part of an overall social-economic-tribal strategy for the interior Columbia River Basin which links land and resource management actions and strategies with social and economic needs. The strategy contains three components: products and services from forest and range lands; organizational support for economic and social need for communities and cultures; and support economic adjustment initiatives.

The Draft EISs attempted to place a measurement on amenity values (Eastside Draft EIS, Chapter 4 pages 187-189) within the context of "Quality of Life." As noted in the narrative, placing a quantifiable number to uses that intrinsically have a different value to each person is difficult. The Supplemental Draft EIS has revised the estimates for recreation and jobs associated with recreation values. The Supplemental Draft addresses the values of unroaded lands relative to certain aquatic and terrestrial values, thus addressing a subset of ecological and social values.

Comment: The EIS should reanalyze the economic values of recreational opportunities in the project area.

Narrative: *While some respondents feel that the values of recreational opportunities were reasonable, others perceived that they are highly inflated. The latter's perception is that jobs in extractive industries are high-paying, year-round, stable positions, which pay significantly better than jobs in recreation and have higher multipliers. They believe that jobs in the recreation sector are seasonal, low-wage positions. One respondent feels that Alward's recreation response coefficients probably overstate recreation jobs, and that the impact analysis should be redone using a methodological approach that is more accurate and reliable.*

Some feel that classifying any business as strictly recreation-oriented ignores the fact that many of the business's customers may be timber-dependent, thus making the 'recreation' business timber-dependent as well. Others are concerned that the proposed National Roads Policy will block many projects that could help areas move to a recreation-based economy. While comparing recreation-based jobs to extractive industry-based jobs, some feel that

the Draft EISs do not consider extractive-industry benefits such as health and retirement, which are said not to be offered by the recreation industry. Some assert that a shift to a recreation-based job market basin-wide will not benefit or support small eastside towns where there is no recreation available.

Response: Based on further review and analysis in response to comments, the estimates of recreation value and of jobs associated with recreation activities have been revised, and are presented in the Supplemental Draft EIS.

Receipts to Local Government

Comment: The EIS should address potential impacts of decreases in Payments in Lieu of Taxes (PILT) and 25 percent funds and how these will be offset.

Narrative: *Some respondents note that many small communities in the interior Columbia River Basin rely in part on payment in lieu of taxes (PILT) or the 25 percent fund to help finance school budgets and road projects. Some observe that these payments have been historically tied to timber outputs; they believe that if the selected alternative decreases extractive activities, communities will lose vital funding.*

Others suggest that the project should identify alternative funding resources for the PILT and 25 percent fund in the event that commodity extraction on federal lands decreases. One person believes this funding at a minimum should be separated from forest and rangeland management.

With regard to recreation use as a potential alternative source of school and road funding, some do not believe recreation can offer a viable alternative to timber receipts unless very high fees are charged for recreational use on Forest Service- and BLM-administered lands. Others fear that higher taxes will be imposed to cover the decrease in funds, and that some retired people will be unable to maintain their standard of living.

Response: The issue of PILT payments and the 25 percent fund is currently under discussion within the Administration and Congress. The final outcome will be determined through congressional action and presidential approval of any final bill addressing these payments.

Social Systems

Quality of Life

Comment: The EIS should address how project direction will mitigate adverse effects of the selected alternative on the quality of life and cultural integrity of resource-dependent communities.

Narrative: *Responses regarding social systems reveal a variety of issues concerning quality of life. Some individuals feel the project threatens the cultural integrity of their resource-dependent communities with its perceived potential to decimate the culture and traditional family values developed over several generations. These individuals feel they will lose not only jobs, but also the heritage and culture that defines their sense of identity and community. Some respondents say that the culture of their communities developed around resources, such as timber and mining, over a century ago, and that locking away these resources will destroy their way of life and prevent their children from partaking in their culture.*

Response: The Supplemental Draft EIS attempts to address an integral part of these concerns with an overall social-economic-tribal strategy for the interior Colombia River Basin. This broad-scale strategy links land and resource management actions and strategies with the social and economic needs. The strategy contains three components: products and services from forest and range lands; organizational support for economic and social needs for communities and cultures; and support economic adjustment initiatives. Finer-scale effects will be analyzed and disclosed during finer-scale environmental analyses.

Comment: The selected alternative should protect areas that provide spiritual values which are important to the public.

Narrative: *Some respondents want natural areas preserved for their spiritual integrity. Other respondents suggest that spiritual needs are an aspect of each individual's quality of life and that the environment is essential to fulfill these needs, not only on an individual level, but also on family and national levels. They see natural areas as offering people a sense of identity in relation to the world and a connection with other species. One person offers the opinion that natural areas even influence those who cannot physically appreciate their*

beauty, but who dream of one day visiting these areas. Most respondents to this issue say that monetary values cannot measure or compare to spiritual values. Many respondents say that the social assessment does not adequately evaluate the effects on local communities with regard to spiritual values and other social effects.

Response: Many sites in the basin have special significance for historical, cultural, symbolic, or other reasons. Before ecosystem management actions are taken in areas containing such sites, the Supplemental Draft EIS provides direction for efforts to be taken to ensure that groups with attachments to these sites are informed and involved in decisions regarding mitigation efforts to maintain the integrity of these sites.

The Social-Economics-Tribal Component of the management direction is designed to support the economic and social needs of people, cultures, and communities of the interior Columbia River Basin. One of the major areas of focus is a process for collaborating with stakeholders, recognizing that success in achieving the social and ecological goals of ecosystem management depends on effective collaboration.

Comment: The EIS should do a better job of incorporating the social element and disclosing the social impacts of the alternatives.

Narrative: *Some respondents disagree with the Draft EISs' reliance on social desires and values to guide management in the project area, citing ambiguous and confusing passages and the unscientific basis of changeable values and desires, and management practices.*

One group suggests that the project does not successfully incorporate the social element of the project. Their suggestions include establishing social characteristics guidelines in the document that will be monitored; they believe that if management actions do not meet these guidelines in a particular area, those actions should be adapted. Some believe that social, not economic, policy should be the driving force behind the project.

Some people feel the documents do not provide enough information regarding the social effects of implementing the EIS, including specific questions on how the selected alternative will be implemented, what economic impacts will result, and the economic and financial feasibility.

Response: The relationship of social and economic systems to management of Forest Service- and BLM-administered lands is documented in the *Scientific Assessment* (Quigley and Arbelbide 1997) and discussed in Chapter 2 of the Supplemental Draft EIS. The Social-Economic-Tribal Component of the direction—which is designed to support the social and economic needs of people, cultures, and communities—is only one of four major components to the ICBEMP alternatives, equal to and integrated with landscape, terrestrial species, and aquatics components. The social impacts of the alternatives are disclosed in Chapter 4, based on the findings of the Science Advisory Group with additional analysis and interpretation provided by the EIS Team.

Recognizing that social and economic effects will occur upon implementation of a decision, we have attempted to clarify the implementation process, showing where collaboration and public involvement will take place. Given the scale of the alternatives, it is not possible to predict specific social or economic impacts on specific individuals or groups of people. The understanding of these effects will be disclosed through the local NEPA analysis processes for implementing actions at the local level.

Recreation

Comment: The EIS should address the effects of road closures on access for recreational opportunities.

Narrative: *A substantial number of people express concern that road closures will affect their ability to access public lands for recreation and traditional activities, such as collecting berries or firewood, hunting, fishing, hiking, mountain biking, and motorized vehicle use. Others indicate that as access becomes limited, user concentrations will increase in areas that permit motorized recreation, thereby diminishing their enjoyment of outdoor recreation.*

Some allege that the EIS did not fairly analyze the benefits that motorized use offers to both users and local economies. They feel the preferred alternative unfairly stresses wilderness recreation over motorized recreation, which they feel leads to road closures and limited access. Others feel that the project does not adequately disclose the detrimental impacts of motorized recreation on the land.

Response: Specific decisions on which roads to close and how to close them will be made by local decision makers during finer-scale environmental analyses. The reasons to close or open roads are varied, including needs for managing wildlife habitat, fire protection, recreation access, permittee access, road maintenance, and short-term needs like timber hauling. It is not the project's intent to make site-specific decisions on changes in road use in this EIS. Rather, we have identified the need for some road closures, in particular to improve aquatic habitat and water quality. Where these needs occur, road management concerns

would be addressed in site-specific analysis. The intent of management direction regarding roads is described in Chapter 3.

Effects of the alternatives on recreation are presented in Chapter 4. Changes in roads—including conditions, locations, and access—were not modeled at the broad scale due to data limitations, so their specific effects on recreation supply and use patterns cannot be demonstrated. Changes in recreation supply and expected use will be estimated and the effects evaluated at finer scales during the step-down process.

Comment: The EIS should account for the contradictions regarding recreation jobs, future receipts, and road closures.

Narrative: *Some state that roads are vital for recreation and management of public forest and rangelands. Some people note that recreation jobs would be lower under Alternatives 1 and 5 because of more road construction, yet as the population ages, lower road densities may decrease recreation activity. Others point out that the economic analysis indicates that in the next 50 years the three most highly valued uses will be motor viewing, day use, and trail use, all of which require roads. They see this as a contradiction to the projections for developed recreational needs.*

Some assert that this kind of access is vital for maintenance of local economies through a transition from extractive to recreation-based employment. They hold that a decrease in the number of roads can serve only to limit recreational opportunities, an amenity they believe is integral to development of a recreation-based economy.

Response: The issue of roads is complex. The overarching intent for roads management within the project area is to progress, in a staged approach, toward a smaller transportation system that can be effectively and efficiently maintained into the future with minimal environmental impact. The challenge is to design and maintain a road system that provides the benefits of access (including jobs related to recreation) but minimizes adverse road-related effects on other resources, such as water quality, fish, and wildlife. Step-down processes are provided for in the EIS (roads analysis, Subbasin Review, EAWS) to guide local managers in making decisions about which roads to close, improve, or build.

Effects of the alternatives on recreation are presented in Chapter 4. Changes in roads—including conditions, locations, and access—were not modeled at the broad scale due to data limitations, so their specific effects on recreation supply and use patterns cannot be demonstrated. Changes in recreation supply and expected use will be estimated and the effects evaluated at finer scales during the step-down process.

Comment: The EIS should better analyze the positive and negative effects on recreation from other management activities.

Narrative: *Some people note that decisions made about other land management activities, such as timber harvest, grazing, mining, and noxious weed control, will affect recreation. They want to see recreation management based on impacts from other activities.*

One person, however, suggests that tourism and timber harvest do not adversely affect each other in the Flathead Valley, and that both activities are valuable to the Flathead Valley and can co-exist. Some point out that forest management provides the necessary recreational resources for tourists to enjoy.

Some respondents feel that the Draft EISs do not provide enough details regarding the recreational impacts of each alternative. They feel that the EIS should conduct the recreational analysis at a regional, not a site-specific, level. Other people assert that the Draft EISs do not accurately portray the various economic values of recreation or effectively address multiple recreational use. One person pointed out that the Draft EISs do not distinguish between winter and summer recreational activities, which they say have different environmental impacts.

Response: Desired outcomes, not specific management activities, are described in the objectives and standards presented in the Supplemental Draft EIS. Providing a balance, and addressing conflicts, among a variety of uses is more appropriately addressed through analysis at the mid- and fine-scale for projects at the local administrative unit. Effects of the alternatives at a broad scale are provided in Chapter 4.

Comment: The EIS should use a different methodology than the 'willingness to pay' concept to determine the value of recreation.

Narrative: *Some believe that determining the value of recreation using the 'willingness to pay' idea is not effective. They assert that asking people how much they are willing to pay is not representative of how much they will actually pay, evidenced by a decrease in visitation at national parks. Others wonder why the Draft EISs never ask what people are willing to pay for a board of wood or the wood house in which they live.*

Response: Unlike developed camping and downhill skiing, much of the recreation activity occurring on

federal lands is not traded in the market place. Therefore, other methods are needed to identify its relative economic value. The willingness-to-pay methodology is one of the most tested and scientifically accepted approaches used to assign economic value to non-marketed outputs and uses. A willingness-to-pay approach is not necessary for wood or wood houses since their value is established by the actual exchange of dollars in markets.

Comment: The EIS should fully disclose effects of closing recreation facilities located next to water, including losses to water-based recreation.

Response: The Supplemental Draft EIS does not propose the closing of recreation facilities located next to water. The Supplemental Draft EIS describes desired outcomes in objectives and standards which may require a change in uses or areas where use occurs; however, these changes would be addressed specifically during mid- and fine-scale analysis.

Human Population

Comment: The EIS should analyze the potential effects of increasing human populations on resources and their management.

Narrative: *Some people commented on human population and environmental stability and the threat of rising population growth on resource demand and use. A few respondents suggest that the Draft EISs do not adequately address the population problem or the amount of resources the future populations will require. They argue that until population growth is controlled, management plans cannot effectively sustain resources.*

Response: Managing population growth is beyond the scope of this EIS. However, population characterization, trends, and implications for urban-rural-wildland interface management issues are discussed in Chapter 2. The Supplemental Draft EIS in Chapter 4 provides a discussion of the effects on resources based on the alternatives being considered. The social-economics-tribal section provides a discussion of human uses on land administered by the Forest Service and BLM in the project area, using the best science available.

Wilderness and Unroaded Areas

Reserves

Comment: Opinions diverge on whether the selected alternative should include reserves or not.

Narrative: *Many people suggest creating biological reserves in the project area to conserve biological diversity and to maintain or restore ecological health. They argue that old-growth forests, riparian values, roadless areas, and fish and wildlife must have protection to meet the project's stated purpose and need and to protect remnants of disappearing ecosystems for future generations. Some respondents feel that the selected alternative should delineate a greatly expanded and representative reserve system. They believe that land allocations should include terrestrial reserves, watershed reserves, riparian reserves, multiple-use buffers around reserves, and matrix areas where sustainable resource production is emphasized. Some feel that wilderness areas and areas of critical environmental (a BLM designation) should be considered together rather than separately to create a comprehensive and integrated strategy.*

A few people do not want reserves because they believe that reserves would preclude proper management for wildfires, wildlife, noxious weeds, and a predictable flow of commodities.

Response: Alternative 7 in the Draft EISs described and analyzed an extensive reserve system across the project area. Designated wilderness areas throughout the project area provide for a foundation of a "reserve" concept. Changing any existing congressionally designated wilderness areas is beyond the scope and intent of this EIS.

Comment: Opinions diverge on whether reserves should be actively or passively managed.

Narrative: *Some people disagree about how to manage reserves. Some prefer a 'hands-off' wilderness management approach as opposed to ecosystem management, because many believe that ecosystem management would require*

considerations of economic and social values in management decisions. Others feel that active restoration, such as removing roads and prescribed burning, is necessary to first return potential reserve areas to ecological integrity. Many of these respondents do not want any type of timber harvesting, mining, or grazing in these areas, and they ask non-native species be controlled to ensure that reserves function as intact natural ecosystems.

Response: A system of reserves with passive management was identified and analyzed in Alternative 7 in the Draft EISs. The Supplemental Draft EIS took a different approach. Aquatic A1 subwatersheds are identified, which allow management to occur so long as they provide low risk to the aquatic and riparian resources and they meet the intent of the management objectives in the subwatershed. Aquatic A2 subwatersheds and terrestrial T watersheds allow for more restorative activities so long as they, too, meet the intent and objectives of the area. Although these areas are not reserves, they are special areas that have been identified as being important to fish or wildlife.

Comment: Reserves should be delineated to conserve biological diversity; opinions diverge on the size and location of these reserves.

Narrative: *Some feel that reserves listed in Alternative 7 are not large enough to maintain ecological integrity and are too fragmented from each other. Other areas were suggested for reserves because of their high degree of biological diversity. Some feel that reserves should be created adjacent to existing wildernesses and national parks to provide core habitat for such species as the grizzly, wolf, and salmon.*

Response: A system of reserves was identified and analyzed in Alternative 7 in the Draft EISs. The Supplemental Draft EIS took a different approach. It identified certain areas that are important to fish or wildlife, and those areas must remain in their current condition or be improved to a better functioning condition. Other areas have been identified as being high priority for restoration. This integrated approach of conserving some areas while restoring others is intended to promote basin-wide health and biodiversity while recognizing the dynamic nature of the lands in the basin.

The Draft EISs and Supplemental Draft EIS include direction to contribute to recovery of federally listed or proposed species, including grizzly bears and wolves, by restoring and maintaining habitat quality, quantity, and effectiveness. *(See also Special Status Species.)*

Comment: Standards EM-S8 and EM-S12 in Alternative 4 assert that land management can proceed outside of Category 1 subbasins in the absence of Ecosystem Analysis at the Watershed Scale. Such analysis is critical to understand environmental consequences of potential land management activities in Category 1, 2, and 3 subbasins. These standards should be modified.

Response: The standards requiring Ecosystem Analysis at the Watershed Scale (EAWS) have been simplified and clarified in response to comments. In Alternative S2, EAWS is required prior to planning and designing management activities where they have the potential to negatively affect threatened, endangered, or proposed aquatic species or their habitats, or the source habitats within terrestrial T watersheds that have declined substantially in geographic extent from the historical period. Alternative S3 has no EAWS "triggers" but relies upon Subbasin Review to identify priorities and schedules for conducting necessary EAWS. (See the Step Down section of the base level management direction in Chapter 3 of the Supplemental Draft EIS.)

Wilderness Management

Comment: Comments diverge on how wilderness and unroaded areas should be managed in the selected alternative. Some feel that remaining unroaded areas should be kept off-limits to resource development and others believe that remaining unroaded areas should not be given wilderness protection.

Narrative: *A large portion of respondents on this topic appeared to use the terms 'wilderness' and 'roadless area' interchangeably, not differentiating between designated wilderness and other undeveloped lands. Many people write of the importance of living in a region with extensive wilderness opportunities and unbroken landscapes, outings in the back country, the intrinsic value of wild areas, and the importance of maintaining these places for future generations. Ensuring that such areas are adequately protected is a major concern for many respondents. Many of these people perceive wilderness as a finite resource and they aren't sure the Draft EISs do enough to protect these areas from extractive industries and pollution. Some believe that all wilderness study areas should be put off-limits to logging and mining activities. Others express strongly held beliefs that once wilderness areas are developed they can never be fully restored. Some wonder why the BLM's wilderness study areas are not mentioned in the Draft EISs.*

Many people feel that unroaded areas provide the highest quality wildlife habitat and fisheries, and that protection of these areas should be part of the selected alternative. They feel that the agencies should review the roadless lands issue and protect them through a firm standard that accurately reflects the findings of the Assessment of Ecosystem Components *(Quigley and Arbelbide 1997). They believe that the alternatives do not protect remaining unroaded areas, despite numerous references throughout both documents to the fact that unroaded areas have critical ecological importance.*

Some would like to see a rangeland wilderness created. Another proposes creating a fish-wildlife-plant-habitat sanctuary on Forest Service- and BLM-administered lands. Others believe severe wildfires in wilderness areas could create ecosystems that are out of balance.

In contrast, some respondents feel the project is an attempt to create one huge wilderness area at taxpayer expense. Others assert there is little or no land left in the West that qualifies for roadless or wilderness designation. Some respondents feel that there might be an over-abundance of wilderness acreage and that some of these lands could be healthier if they were given a Restore or Produce emphasis in Forest Service or BLM land use plans. One respondent recommends that a task force be assigned to evaluate data relating to wilderness resources and whether they contribute to overall ecological integrity and socio-economic resiliency. Some assert that decisions about these lands should be made on a site-by-site basis.

Response: The Draft EISs do not propose to change or adjust any existing wilderness or roadless areas and do not recommend to designate new "wilderness areas." The agencies may decide to consider the suitability of any area for preservation as wilderness during subsequent Forest Service or BLM land use planning revision processes.

The Supplemental Draft EIS includes road direction which includes the following: "New roads into watersheds that are currently unroaded or have very few roads will be rare. New roads into such areas could occur following analysis that demonstrates that access is needed to prevent or address imminent environmental damage or provide for valid existing rights."

Aquatic A1 and A2 subwatersheds and terrestrial T watersheds as outlined in the Supplemental Draft EIS have a management intent that is focused on minimizing risks to aquatic and riparian systems (A1 and A2 subwatersheds) and terrestrial source habitats (T watersheds). Current roadless, wilderness, and wilderness study areas may be mapped as part of the A1/A2 network or T watersheds if they support strong fish populations, terrestrial source habitats, and high native diversity and integrity. For specific information on subwatersheds and watersheds identified as A1, A2 subwatersheds, or T watersheds see the Objectives, Standards, and Guidelines section of the Supplemental Draft EIS.

Comment: The selected alternative should not limit inholder access to wilderness areas.

Narrative: *A few respondents express concern that the project could limit access to private inholdings in wilderness areas, particularly within the Frank Church–River of No Return Wilderness.*

Response: The Draft EISs and the Supplemental Draft EIS do not propose site-specific changes to road use or access. The detail needed to assess access to specific private in-holdings requires fine-scale analysis and is not considered in these broad-scale documents.

Roadless Area Management

Comment: The EIS should revisit the protection of unroaded areas 1,000 acres or larger as proposed in Alternative 7.

Narrative: *The subject of unroaded areas is of acute interest to a large number of respondents. Asserting there are already enough roads, many people would like to see roadless areas of 1,000 acres or more put off-limits to all road building and resource extraction activity. They cite the protection of biologically diverse regions, old-growth forests, riparian areas, wildlife habitat, and fisheries as reasons for putting these places off-limits. One respondent feels that conserving remaining old-forest stands and unroaded areas larger than 1,000 acres is vague and could mean almost any management activity.*

Many other people feel that roadless areas should not be locked up but need to be opened up to allow recreation, logging, and other economic uses. They argue that there are enough roadless areas already provided on BLM- and Forest Service-administered lands. Thus, by building additional roads it will provide access for many users who cannot access these areas by foot, such as the elderly, who need to be considered in public land management policies.

Response: The Supplemental Draft EIS does not call for the protection of unroaded areas 1,000 acres or larger, because the findings in the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997) did not support such protection.

The intent of the roads management direction is to reduce new road construction from past levels. New road building could rarely occur in watersheds that are currently unroaded or have very few roads, and can only occur following roads analysis and/or National Environmental Policy Act (NEPA) analysis that considers the larger watershed context. These analyses should weigh relative habitat values and effects on species, such as anadromous fish and wide-ranging carnivores, that are potentially affected by roads against the need to address large-scale environmental damage or public safety.

The Forest Service is currently studying its national policy with regard to unroaded areas. The project's Record of Decision will require management actions to be consistent with the finalized roads policy.

Comment: The EIS should clarify what is meant by "natural area designation or category" (page E-2-42).

Narrative: *Some respondents note that Chapter 2, page 42, of the Eastside Draft EIS states that within the project area, about 28 percent of the land administered by the Forest Service and BLM is within "some type of natural area designation or category." They are dissatisfied that these "designations or categories" are not explained, and that no information is provided concerning whether the designations can easily be changed. They want the EIS to provide information on whether lands that are within a natural area category are formal designations or simply areas that have not yet been subject to alteration such as roading and logging.*

Response: Natural areas are defined in Chapter 2 of the Draft EIS and in the glossary of both the Draft EISs and Supplemental Draft EIS as "areas managed by various landowners that are mainly in a natural state and being managed to maintain or restore a degree of naturalness for research, monitoring, inventory, habitat protection, education, or social needs." The discussion of natural areas has not been brought forward into the Supplemental Draft EIS, because of the refined focus of the project. (See Chapter 1 for more information.)

Comment: Standard RM-S16 in Alternative 7 is arbitrary in that unroaded areas: (1) may not be correlated with existing high integrity habitat, and (2) unroaded areas may not contribute to other stated goals of the alternative. This and other standards that are not based on sound ecosystem management principles should be removed.

Response: Alternative 7 has not been revised or rewritten for the Supplemental Draft EIS. However, some of the concepts in Alternative 7 have been brought forward to the aquatics A1 and A2 areas and the terrestrial T areas in Alternatives S2 and S3.

Comment: The EIS should document the methodological limitations of using non-specific survey results with regard to existence values of unroaded areas.

Narrative: *One respondent notes that the existence values of unroaded areas were presented, yet the Draft EISs do not reveal whether any detailed survey was used to develop this information. The respondent believes that it is well documented that the results of one survey do not transfer to other studies with any reliable level of validity. They recommend that the EIS document the methodical limitation in using non-specific survey results in the analysis.*

Response: The methods used by the Science Integration Team are documented in *An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins*, Volume IV, Chapter 6, page 1821. They indicated that there are no estimates of the willingness-to-pay for the existence value of unroaded areas in the project area. They inferred a value from Walsh and others (1984a) and Pope and Jones (1990) which is described in Chapter 6 of the *Assessment of Ecosystem Components* (Quigley and Arbelbide 1997).

Comment: The selected alternative should not affect the status of inventoried roadless areas.

Response: The Draft EISs and the Supplemental Draft EIS do not make any specific proposals that would affect roadless areas and/or the status of these areas. This would be appropriately addressed at the land use plan level through the appropriate National Forest Management Act, Federal Land Policy and Management Act, and National Environmental Policy Act planning process (such as a forest plan or resource management plan amendment or revision).

Road Management

Adverse Effects

Comment: The selected alternative should emphasize managing roads in a manner that protects the environment, but not adopt road closure as a blanket policy.

Narrative: *The wishes of many who address road management are captured by the statement, "close and stop building roads." They feel that roads negatively affect the environment by causing erosion and providing access for timber harvest. Comments request decommissioning, obliteration, and revegetation of perceived unneeded or environmentally damaging roads. Some people, citing environmental concerns and what they see as the already enormous Forest Service road system, specifically ask that non-system roads be targeted for obliteration before any others, or that no more roads be built at all. Some respondents feel the EIS should also consider environmental impacts from roads on non-federal lands, with specific time lines to mitigate these effects.*

Some say that protecting the environment is important, but that the Draft EISs only look at the worst conditions. They feel that the project should look at areas that run clean of heavy sediment with roads and maintenance in the area (such as the Yaak River). They say that these roads are used for forest protection and should be an example that road closures and obliteration are not necessarily the answer when proper management would suffice to protect the environment. Some believe a reduction in roads should occur only where adverse effects have been proven to be caused by roads.

Many people request that no roads at all be closed or obliterated. They believe that closing more roads would limit access for recreation, restrict Forest Service and BLM management options, or cause more environmental damage than leaving the roads to revert naturally to a wild state. A few believe that road closures have been done illegally and outside the planning process.

Response: The standards in the Supplemental Draft EIS focus on reducing the negative impacts of roads. Closing roads may be one way of reducing negative effects. Better maintenance might be another way. The biggest change to the existing road system is expected in areas that are highly roaded and have high road-related risks to resource values, where action has not already been taken to address the problem. This EIS does not require closure of specific roads. Those decisions would be made at the local level with local input by local decision makers.

The overarching intent of ICBEMP roads management direction is to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. The direction intends for the use of a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. *(See also Management Access.)*

Comment: Scientific evidence in support of road management is flawed and should be reanalyzed.

Narrative: *Some respondents question definitions and scientific evidence they feel are not clear in the Draft EISs. Comments primarily focus on the Draft EISs treatment of adverse effects of roads, road construction and maintenance, road density and definitions, and road access for management. A few believe that the scientific data used by the project concerning adverse effects of roads are flawed and do not support the policies brought forward in the Draft EISs aimed at limiting construction or mitigating the impact of roads.*

Response: The road system on federally administered lands is extensive and diverse. New science information, particularly that generated by the Science Integration Team, indicates that roads are a significant modifier of landscapes and ecological processes. Roads are needed for public access as well as for accomplishment of many federal management objectives. The challenge is to design and maintain a road system that provides the benefits of access but minimizes adverse road-related effects on other resources, such as water quality, fish, and wildlife.

The Science Integration Team prepared a section on the influence of roads on aquatic resources in *An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins*, Volume III, page 1102. Numerous studies are cited as reference.

Comment: The EIS should ensure that discussion of road-related adverse effects is based on actual, not extrapolated, road inventory data.

Narrative: *Some respondents note that standard RM-S1 states that road quality is measured at the subbasin scale; however, they believe it is well known that very little road density inventory data are available that have not been extrapolated from subsample data.*

Response: This standard was rewritten to clarify the intent. Roads analysis is to be incorporated into or conducted concurrently with planned Ecosystem Analysis at the Watershed Scale and/or site-specific project analysis.

Field level inventory is expected prior to implementing road restoration or other road-related activities. In some cases, finer-scale information may be desirable to address road risk and complete data gaps identified through EAWS.

Comment: The EIS should evaluate and disclose all direct and indirect effects of broad-scale decisions with respect to road management, including impacts of changes to roads.

Narrative: *A respondent points out that the first paragraph under the Roads Standards subhead (p. 3-78, Eastside Draft EIS) states that "reducing these effects of roads through standards may cause additional effects that would be considered at the watershed or project scales." The respondent believes that the EIS should disclose these effects.*

Some respondents feel that the statements (page 3-78 and 3-79, Eastside Draft EIS) that impacts of changes in roads will be addressed at the site-specific level are contrary to the intent of the National Environmental Policy Act (NEPA). They feel this section should be revised to indicate that impacts of changes in the road system should be addressed in this document, and the impact analysis should do so.

Response: The Supplemental Draft EIS standards and objectives describe desired outcomes, and focus on the broad-scale management of lands administered by the Forest Service and BLM in the project area, not on specific levels and locations of management activities. Predicting effects of these fine-scale impacts is better addressed through NEPA analysis of specific proposals on local administrative units.

Road Construction and Maintenance

Comment: The selected alternative should state where funding for road maintenance, obliteration, and closures will come from.

Narrative: *The cost of maintaining, closing, and obliterating roads is a concern to some people. They suggest that logging companies be made responsible for reclamation of access roads after they are finished using them. Others suggest imposing user fees and letting the people who are using roads pay for the upkeep. Because of the shift away from extractive industries to recreation, some people ask that the EIS clearly state who will be responsible for costs associated with road construction and maintenance.*

Response: The Supplemental Draft EIS identifies the program costs for management activities, including such actions as road maintenance, obliteration, and closures that may result as from the management direction. Additional costs are identified as general program costs and increases to accomplish program activities. Program costs, including road maintenance, obliteration, or closures, are evaluated by the Congress in the normal course of the appropriations process.

Implementation of the Supplemental Draft EIS restoration actions and activities will come from three types of funding sources: redirecting existing capability from current budgets (which will require Congressional approval), new funding requested and approved by the Congress, and developing partnerships with state, private and other federal agencies within the basin.

Comment: The EIS should remove standard RM-S9 and other standards that cause unnecessary analysis, implementation delays, and management uncertainty.

Narrative: *A respondent notes that standard RM-S9 requires more intergovernmental coordination for specified road construction, but does not provide a process. They believe the process is already part of National Environmental Policy Act procedures, and that a separate coordination effort for road construction would cause unnecessary analysis leading to implementation delay and management uncertainty.*

Response: The Supplemental Draft EIS calls for a roads analysis to be incorporated into or conducted concurrently with planned Subbasin Review, Ecosystem Analysis at the Watershed Scale and/or site-specific NEPA analysis. Roads analysis is the tool to assist land managers in balancing road system objectives and provides the context and information needed for assessing tradeoffs and risk prior to decision making.

In the development or revision of Access and Travel Management Plans, the intent is for the public, including state, county, and tribal entities to be involved in the process.

Comment: Roads standards RM-S9 and RM-S8 should be clarified and revised.

Narrative: *Some people feel that Standard RM-S9 is inconsistent because it states that existing transportation networks will be used, then states "if new roads are proposed...." They think this standard also is inconsistent with objective RM-O3 and standard RM-S8, which call for reduction in road miles. They want standard RM-S9 to include a provision to close an equal length of old roads when new roads are constructed, to assure no net increase and support the accomplishment of this objective.*

Response: Road direction in the Supplemental Draft EIS has been modified to eliminate conflicts and

clarify the intent. The overarching intent of the roads management is to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. The direction intends for the use of a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. New road building should rarely occur in watersheds that are currently unroaded or have very few roads and can only occur following roads analysis and/or NEPA analysis that considers the larger watershed context. These analyses weigh relative habitat values and species potentially affected by roads against the need to address large-scale environmental damage or public safety.

Comment: Add "new" to clarify the intent of standard RM-S10 regarding the construction of roads and landings.

Response: This standard was revised and rewritten to improve clarity and intent in the Supplemental Draft EIS. Standards and objectives addressing new roads and transportation are found in the Road Management section of Base Level Direction in Chapter 3.

Comment: Road maintenance for the 100-year flood is not economically feasible.

Narrative: *Many believe that replacing culverts and bridges to withstand a 100-year flood cannot be done economically. They note that many of the accommodations were put in with an expected road life of 20 to 50 years.*

Response: The standard (RM-S7) has been rewritten with an emphasis on improving or redesigning existing structures that pose substantial risk to riparian conditions. Priority for upgrading would be based on risks and the ecological value of the resources affected as determined from future roads analysis.

Comment: Standard RM-S12 should be clarified.

Narrative: *Some respondents question whether Standard RM-S12 pertaining to road construction, reconstruction, and stream crossings would apply to every waterway that historically supported native fish in the planning area. It is unclear to them whether this standard requires all existing road crossings to be reconstructed to restore the stated biophysical conditions. They want the intended physical extent of this standard to be clarified.*

Response: The standard (RM-S12) has been rewritten to clarify its intent. The standard is meant to pertain to new construction or reconstruction at the time those actions are being considered during site-specific analysis and implementation.

Comment: Standard RM-S13 should recognize that preventing sediment delivery is not possible. The EIS should replace "prevent" with "minimize."

Response: This standard has been rewritten to be an objective with an emphasis on "avoiding" unstable or potentially unstable lands.

Road Density and Definitions

Comment: The road density criteria should be clarified in the EIS and the EIS should clearly define what a road is and reinventory the project area using this definition.

Narrative: *Many people assert that road density standards are misguided. These respondents are shocked that roads do not have to be counted if they are blocked from entrance by a gate or water-bar. According to them the science used to determine road density standards is lacking in credibility with no consideration of local wants or needs.*

Some express doubt that any policy regarding density standards or road management in general can be completed without a clear and unambiguous definition of "road." They say that in the absence of such a definition, a road can be anything from a deer trail to an Interstate highway. Several respondents cite the official definitions in the Forest Service Manual and say the Draft EISs do not even mention these definitions.

One respondent feels that the Draft EISs do not mention forest roads or forest development roads. Some specifically request a new inventory of all roads in the region, not just Forest Service and BLM roads, because they feel that no differences exist between federal and other roads.

Some believe that the allotted 2–3 weeks to complete the systematic Road Condition/Risk Assessment is not long enough.

Response: The project developed a predicted road density GIS layer because a continuous roads layer was not available across the basin. The predicted road density classes were derived using a statistical ruleset based on several data sources such as: management area classes, ownership, wilderness areas, a

mid-scale subsample of roads, and United Parcel Service (UPS) roads. This data layer was developed for use at the broad scale and is not intended to be a substitute for actual roads data.

Specific decisions on which roads to close and how to close them is being left to local decision makers. It is not the intent to make site-specific decisions on changes in road use in this EIS. Roads analysis will be incorporated into or conducted concurrently with planned Subbasin Review, EAWS, and / or site-specific project analysis.

The road definitions have been revised for the Supplemental Draft EIS Glossary.

Comment: The EIS should identify road densities throughout the region.

Response: The Supplemental Draft EIS does not identify road densities in specific areas across the interior Columbia River Basin. The intent of the road management direction is to reduce new road construction from past levels. The direction intends for the use of a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. The biggest change to the existing road system is expected in areas that are highly roaded and have high road-related risks to resource values, where action has not already been taken to address the problem. New road building should rarely occur in watersheds that are currently unroaded or have very few roads.

Comment: Chapter 2 of the Supplemental Draft EIS should better specify the range of road densities in watersheds and discuss in greater detail the implications of high road densities which occur in many watersheds within the project area.

Response: Implications of roads and road densities are discussed throughout Chapter 2 in individual sections as appropriate, and discussed in detail in the Factors Influencing Ecosystem Health Section.

Comment: The footnote on page 211 of Chapter 3 of the Eastside Draft EIS is inadequate. It should refer to the page where the Road Density Class definition is spelled out.

Response: It is not feasible to provide cross references to specific page numbers in a large document such as the EIS because page numbers are not finalized until the entire document is ready for printing. Referrals to other sections in the EIS have been improved to include chapter and section.

Comment: Road density standards and objectives should be replaced with direction to use local planning processes and decisions.

Narrative: *Some people note that extensive road closures are proposed with the preferred alternative; they feel this decision is counter to the rationale for road management (Eastside Draft EIS, p.3-167). They want road density objectives and standards to be removed and the local planning process for Access and Travel Management be used as outlined in RM-S4.*

Some people feel that Standards RM-S8, RM-S9, and RM-S15 (which state that no new roads can be constructed in areas with less than 0.7 miles of road per square mile of land to areas with more than 1.7 mi./sq. mi.) are examples of site-specific, micro-management that allows for input only as to which roads to close, not if they should be closed. They think these site-specific standards should be made into guidelines that local land managers can use to make local management decisions in consultation with local constituents.

Response: Road density objectives and standards have been replaced by objectives and standards for conducting roads analysis (to systematically and objectively evaluate road condition and risk) and for developing and / or revising access and travel management plans (to address risks identified during roads analysis). Specific decisions on which roads to close, improve, or build would be left to local managers.

Comment: A percent increase should be used in standard RM-S15 rather than the artificial road density classes.

Response: Standards and objectives specific to road density levels were not brought forward to the Supplemental Draft EIS.

Comment: The EISs should be consistent with the Forest Service's National Roads Policy.

Narrative: *Some respondents feel that the implementation of the project should coincide with the ending of the national 18-month moratorium on road-building in unroaded areas. Others believe at least one of the alternatives should include the proposed road moratorium. They want to know how the EIS will implement restoration with the land "locked up" by the moratorium.*

Response: The National Roads Policy draws directly from science that has been used by the Forest Service and BLM to develop the management direction in the Supplemental Draft EIS, and complements the ideas and intent of the Supplemental Draft EIS. The project's Record of Decision will require management actions to be consistent with the finalized roads policy.

Comment: The addition of the words 'when feasible' make standard RM-S9 meaningless as a required action.

Response: This standard was not brought directly forward from the Draft EIS. In the Supplemental Draft EIS, use and maintenance of existing transportation networks is addressed through objectives and standards in the Roads Analysis section of Base Level direction of Chapter 3.

Management Access

Comment: The selected alternative should not limit management access by road closures.

Narrative: *Roads are vital for the management of the forests, many assert. They do not want road closures. Without roads, they feel, the forest is at risk from fire, insects and disease. Some suggest keeping roads, but limiting access especially during the muddy season. Others feel that management activities should be limited to areas with existing roads.*

Response: The EIS does not specifically require closure of any roads. Those decisions will be made at the local level with local input. The standards in the Supplemental Draft EIS focus on reducing the negative impacts from roads. Closing roads may be one way of reducing negative effects. Better maintenance might be another way. The biggest change to the existing road system is expected in areas that are highly roaded and have high road-related risks to resource values, where action has not already been taken to address the problem.

The overarching intent of the roads management is to progress toward a smaller transportation system that can be maintained into the future with minimal environmental impact. The direction intends for the use of a staged approach that concentrates short-term efforts on reducing road-related adverse effects, while determining the long-term road system needs and locations in a manner that maintains choices for future generations. (*See also Adverse Effects.)*

Comment: Standard RM-S8, to reduce roads in areas of high and extreme density, should be rewritten or deleted.

Narrative: *Some respondents believe that standard RM-S8 cannot be achieved because of the low levels of vegetative management proposed under most alternatives and lack of appropriate funding. Some believe that standard RM-S8 inappropriately moves away from road-related effects as the measurement. They feel that potential conflicts in collaboration could arise if local decisions to leave important roads open prevent federal managers from meeting density requirements. Some note that standard RM-S8 aims to reduce road miles through permanent closures, but they feel that no standard is really in place to make this happen and a permanent closure is not defined.*

Response: This standard was not brought forward from the Draft EIS. The Supplemental Draft EIS does not specifically address road density. Several standards and objectives in the Road Management Section of Base Level direction in Chapter 3 are intended to maintain a road system that provides access but minimizes adverse road-related effects on resources such as water quality, fish, and wildlife.

Comment: Standard AQ-S44 should be revised because it is not achievable.

Narrative: *Some people note that standard AQ-S44 requires adjustments or elimination of leases, permits, rights-of-way, and easements that are inconsistent with or prevent attainment of RMOs. They feel this would result in relocation or closing of state highways and special use roads, which they believe is not achievable.*

Response: The standard has been modified to reflect the limited authority the land management agencies have in achieving RCA objectives where valid existing rights are present. In some cases, however, the agencies do have the authority to require reasonable conditions to minimize the impacts of certain uses. Those specific requirements would be determined at the local level by local decision makers.

Cultural Resources

Inventory and Protection

Comment: The selected alternative should provide better objectives and standards for survey and analysis of cultural resources, including improved coordination with the region's tribal governments, and a regional or landscape-scale perspective.

Narrative: *Those who responded to the cultural resource sections of the Draft EISs are interested in continued preservation of known cultural sites and actions to locate and preserve new sites. These respondents object to what they see as a wealth of information on cultural resource management, and they ask for more analysis and information regarding appropriate management of the remnants of our past.*

Some people hope the selected alternative will provide more opportunities for tribal management of artifacts from Native American cultures, because they believe that better cooperation between federal and tribal governments will play an increasingly vital role in preserving the history of humans in the basin. In particular, they state that 'cultural resources' include traditional cultural properties and settings currently in use, not just the remains of past activities.

A few respondents believe that the paradigm underlying cultural resources sections of the Draft EISs are too antiquated and narrow in geographic scope, because human activity in the past encompassed landscapes across the entire region. They feel that the EIS should not only include protection of traditional cultural resources sites and historical trails and travel routes, but should also address the importance of these sites at a regional scale. They argue that the current emphasis on protecting sites, although in compliance with relevant laws, insufficiently captures their scientific value. They believe that quality assessments of past interactions of humans and the environment will emerge only from a regional perspective.

Response: The EIS provides broad-scale management direction to address resource management and protection, which includes cultural resources, at the landscape level across the project area. Objectives and standards are intended to be responsive to many tribal issues, such as requiring collaboration and consultation with tribal and local governments and communities in the development of Forest Service or BLM management activity. This should result in the identification and protection of cultural resources. Additionally, the Social-Economics-Tribal management direction targets tribal communities for employment and contract opportunities, as well as cooperative management opportunities; the management of cultural resources might be one of these opportunities.

Comment: The EIS should better analyze the effects of recreation and extractive activities on cultural resources.

Narrative: *Several respondents ask that the EIS not restrict analysis of cultural resources to impacts from traditional resource extraction (such as timber harvest), but extend the analysis to the impacts of other activities, such recreational use and livestock grazing. These respondents feel that although many of these activities currently require analysis under cultural resource laws, agency response has inadequately accounted for negative impacts. One person asserts that livestock grazing on prehistoric sites has destroyed cultural resources directly by trampling or indirectly through soil disruption and resulting erosion. This person argues that management for rangeland health can further harm artifacts and archaeological sites. Water developments, altering fencing patterns, dishing and seeding are a few of the activities they say are resulting in ground disturbance and destruction of cultural resources.*

Response: Numerous laws, policies, and regulations already provide direction and/or guidance to federal land managers on the importance of protecting cultural resources. The direction in this Supplemental Draft EIS relative to tribes references cultural and heritage resource laws, as well as emphasizes and directs tribal consultation in agency planning and decision-making processes. Further, direction reflects federal legal responsibilities to both tribes and American Indian people as expressed through treaty language, federal laws, executive orders, or federal court judgements. Objectives and standards require a government-to-government relationship and consultation and collaboration with American Indian tribes and require agencies to incorporate into federal land management how places on the landscape are valued by American Indians. More specific effects on cultural resources, such as effects from recreation and grazing, are more appropriately determined through the step-down processes (Subbasin Review, EAWS, programmatic planning processes, and site-specific NEPA analysis).

Tribal Rights and Interests

Treaty Rights and Federal Trust Responsibilities

Comment: The EIS should recognize and ensure protection of tribal rights and interests such as hunting, gathering, and fishing.

Narrative: *Many respondents, especially those representing tribal governments, note that rights guaranteed under treaties with American Indians protect tribal rights or interests and traditional uses such as hunting, gathering, religious, or cultural practices. They want to ensure that the EIS adequately addresses environmental concerns in light of these rights, and that it mitigates potential conflicts. Many of these respondents feel the Draft EISs do not do this, citing what they view as not fully considering the importance of maintaining tribal rights and interests. They ask for clear, accessible evidence of collaboration and consideration of their concerns. Some question why there are differences in levels of consultations with tribal governments by alternative. They assert that tribes are not always informed of projects in a timely manner, and that federal agencies should contact tribes more often.*

Response: One of the primary issues common to nearly all 22 potentially affected tribal governments is harvestability of important aquatic and terrestrial species, such as salmon, mule deer, and camas. These species, besides being associated with a number of the tribes' off-reservation reserved treaty rights and traditional uses, are integral to the culture of many of the tribes within the project area.

One of the five goals developed for the Draft and Supplemental Draft EISs, is to "Manage natural resources consistent with treaty and trust responsibilities to American Indian tribes". One of the objectives in Chapter 3 requires the agencies to establish and/or maintain a government-to-government relationship with federally recognized tribes and to consult and collaborate with affected tribes when developing and/or implementing land management decisions, actions, and/or policies that may affect treaty rights and tribal culture and practices. Consultation is intended to reflect the governmental status of the tribe and consideration of their treaty. One standard requires development of a protocol for government-to-government consultation to ensure opportunities for effective tribal participation in decision making. Another standard requires the agencies to be aware of tribal management efforts and work cooperatively with them and states where tribes regulate hunting, fishing, and gathering activities of tribal members.

Social-economic direction recognizes and provides for consideration of subsistence and treaty uses; and emphasizes tribal communities as economically specialized and isolated communities. Additionally, high restoration priority subbasins were selected based, in part, on tribal restoration priorities which emphasize proximity to reservations and opportunities to address resources important to tribal rights and interests.

Comment: The EIS should reflect extensive collaboration and coordination with tribes and describe how federal trust responsibilities will be met.

Narrative: *Some people feel the project has made considerable progress in explaining the extent to which the trust responsibilities of the U.S. government are carried out by federal natural resource agencies. They believe that successful implementation of ecosystem-based management must protect the values and needs of American Indians. These respondents perceive their concerns as the most critical ones in the project, and they believe that federal agencies should make a commitment at the highest level to resolving tribal issues. One respondent wrote, "The Indian Nations can identify their cultural values and needs. These can be considered in the collaborative planning process for implementing ecosystem management." The respondent notes that the project team has made an effort to reach out to tribes and improve government-to-government consultations.*

Others suggest that to ensure collaboration the EIS should develop more detailed objectives and standards guiding tribal involvement in land management planning. They feel that the EIS should specify the process for developing the protocol and deadlines for completing the process. They also want the EIS to incorporate stronger measures for contributing to recovering terrestrial, aquatic, and plant species important to American Indian tribes.

Response: Objectives and standards are found throughout this EIS that are responsive to the breadth of tribal issues. While this project does not attempt to define the legal obligations of the Forest Service and BLM under the federal trust responsibility, the direction in this EIS relative to tribal governments reflects a commitment, whether as a legal obligation or a matter of policy, to address as fully as possible tribal concerns and interests.

Direction includes requirements for the Forest Service and BLM to consult and collaborate with affected American Indian tribes when developing and implementing land management decisions, actions, and policies that may affect the rights and interests of tribes, and the socio-economic well-being of tribal people. Direction requires the agencies to use tribal tradition-based knowledge and expertise when collaborating with affected tribes during planning and decision-making processes; to work with tribes to develop a protocol for government-to-government consultation; and to initiate a Memorandum Of Understanding (MOU) with appropriate state, county, and tribal elected officials regarding offering advice and recommendations to Forest Service and BLM decision makers. Based upon tribal comments, substantive consultation is defined in the EIS, which includes conflict resolution. Direction further stipulates the intent to maintain and restore aquatic and terrestrial habitat quality and quantity to support harvestable plants, fisheries, and aquatic and terrestrial species.

Comment: The EIS should include an economic analysis of potential impacts on affected tribes.

Narrative: *The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) feel that the Draft EIS economic analysis dismisses the economic impacts on affected tribes, focusing instead on non-Indian communities. They allege that the CTUIR requested that the EIS Team conduct an economic analysis of their interests but were told that the team could not complete such an analysis, only to release an analysis of non-Indian communities.*

Response: The Science Integration Team attempted a prototype economic analysis in partnership with the CTUIR community during the main phase of the *Scientific Assessment*. Although that particular analysis did not reach conclusion because of concerns raised by the tribes and deadlines for submission of data into project findings, it was determined such analyses are appropriate and should be conducted at the mid- or fine-scale level of analysis.

The development of the *Economic and Social Conditions of Communities* (ICBEMP 1998) was directed by the Congress in Section 323 of the Department of the Interior and Related Agencies Appropriations Act of 1998 (Public Law 105-83). The study attempted to recognize the economic importance of federal lands to American Indians by analyzing industry specialization for communities on or near reservations. Because this sort of economic analysis poses limits relative to effects on individual communities, and because tribes and American Indian people depend on public lands for myriad uses not covered under an industry specialization analysis, management direction also focuses on other areas important to tribes. Subbasins on or near reservation lands, that include restoration opportunities for resources and values important to the rights and interests of tribes directly influenced the selection of high restoration priority subbasins. Management direction emphasizes the participation of tribal communities and businesses in employment, contracting, and other activities associated with restoration work on federal lands. Additional standards reference consideration of subsistence and treaty uses; cooperative work with Tribal Employment Rights Ordinance (TERO) offices; emphasis on cooperative activities and increased use of authorities allowing for tribal, Indian-owned, or minority business preference; and greater opportunities to participate in the economic benefits of commodity offerings.

Comment: Map 2-43 is titled "Federally Recognized Tribes"; however, it shows reservation boundaries with the name of the reservation being displayed rather than the tribes that were relegated to a particular reservation. The map title and the map itself should be consistent.

Response: This map is now Map 2-34. Its title has been changed to American Indian Reservations.

Comment: The Human Uses and Values section of Table 3-5 shows no costs for Alternatives 1 and 2 for tribal consultation, survey, and nomination of cultural sites. This is not correct. During the past 5 to 7 years, the agencies have conducted tribal consultation on a wide variety of issues.

Response: It is true that the agencies, and particularly the ICBEMP, have increasingly consulted with tribes on a wide range of issues and interests, and that implementation costs for tribal consultation were not reflected for Alternatives 1 and 2 in the Draft EISs. Such costs have been calculated and are included in the Implementation Cost Analysis Table, Chapter 4, ICBEMP Supplemental Draft EIS.

Comment: The EIS should recognize the individuality of the affected tribes and the reality that all tribal interests frequently do not correspond to one another.

Response: The recognition that all tribes or tribal interests may not correspond to one another is evi-

denced in this EIS by the fact that the project has committed to consult with the 22 potentially affected tribal governments individually on a government-to-government basis during development and implementation of this EIS. Further, direction specifically discusses the individuality and unique rights and interests of each tribe, and Appendix 8 displays distinct information on each of the 22 tribes.

Comment: Instead of putting more lands into preserves or reserves, the land base of tribes should be increased so they can manage the lands.

Response: Determining the size of tribal lands is not within the jurisdiction of either the Forest Service or the Bureau of Land Management and is more appropriately addressed at the executive and congressional level.

Cultural Resources and Religious Freedom

Comment: The selected alternative should ensure protection of tribal cultural resources and religious freedom.

Narrative: *Some respondents are concerned about protection of what some tribes consider to be cultural resources, including animal species, vision quest sites, burial and food production sites, and other sacred sites. According to some, protection and management of these resources is particularly difficult in some regions because of extensive population growth and checkerboard land ownership. Some feel that the Draft EISs do not adequately preserve Native American values and non-renewable resources and that all cultural resources and sacred sites need permanent protection, not just "buffer zones."*

These respondents want the EIS to address continued access to federal land to harvest fish from the rivers of the interior basin, or for cultural and religious practices. Respondents focus on treaty rights, protection of cultural and spiritual resources, and concern over maintenance of habitat vital to support traditional gathering and hunting.

Response: In addition to an objective which requires consultation and collaboration on a government-to-government basis, there are standards which require tribal consultation when conducting Subbasin Review, Ecosystem Analysis at the Watershed Scale, and site-specific NEPA analyses on activities that have a potential to affect tribal cultural resources. The agencies are required to initiate agreements with affected tribes on procedures to conform with laws such as Native American Graves Protection and Repatriation Act, the National Historic Preservation Act, and the Archaeological Resource Protection Act. A standard requires the Forest Service and BLM to consult with affected American Indian tribes on land ownership adjustments. An objective requires the agencies to better understand and incorporate into federal land management how places on the landscape are valued by American Indians. Harvestability is addressed with the intent to provide sufficient habitat to support harvestable resources; and to ensure identification, analysis, protection, and/or restoration of resources associated with tribal uses. Direction includes tribal consultation requirements on road and travel management in consideration of tribal rights and interests as well as in monitoring and adaptive management.

Restoration of Resources Important to Tribal Rights and Interests

Comment: The selected alternative should guide land management agencies to restore fish and wildlife habitat and harvestable populations to meet tribal treaty obligations.

Narrative: *Several respondents believe that there is not enough attention given to federal agency responsibilities for habitat restoration in support of treaty guaranteed rights. Some feel that the request of Indian tribes to have grazing and logging suspended in riparian areas until those areas can recover from damage is reasonable. They also feel their efforts to restore salmon populations—on which, they point out, that tribes have expended considerable amounts of time, money, and manpower—will have only limited*

success until there is extensive collaboration with federal agencies. They assert that there is not enough current collaboration for habitat restoration.

Response: Requirements for collaboration and consultation between the federal government and affected American Indian tribes are found throughout the EIS. Management direction is provided to maintain and restore aquatic and terrestrial habitat quality and quantity to support harvestable plants, fisheries, and aquatic and terrestrial species to collaborate with affected federally recognized tribes and solicit tribally identified restoration opportunities. Management direction specifically emphasizes (a) the economic participation of tribes and tribal communities in restoration actions, and (b) coordination and collaboration with tribes, states, other federal entities on restoration, and other planning and decision-making processes. Selection of basin-wide high restoration priority subbasins was directly influenced by an emphasis on tribal communities and resource considerations generally important to many tribes. These subbasins will receive restoration activities, which are intended to benefit the rights and interests of respective tribes.

Comment: The EIS should ensure that the Forest Service and BLM meet tribal rights just as they must meet other federal laws.

Narrative: *Some respondents feel that current government actions are inconsistent with federal laws when it comes to implementing Endangered Species Act conservation measures on tribal lands. Some people feel that even though many tribes have scaled back some of their treaty-guaranteed resource extractive activities, such as salmon fishing, over the past few years because of resource depletion and habitat destruction, they bear a disproportionate burden for the conservation of listed species. Another person says that because tribes "enjoy dependent sovereignty," they are "subject to the federal Threatened and Endangered Species Act the same as non-Indian persons."*

Response: The EIS incorporates the Joint Secretarial Order #3206, *American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act.* Section 1 states in part: "...acknowledges the trust responsibility and treaty obligations of the United States toward Indian tribes and...its government-to-government relationship in dealing with tribes...and that strives to ensure that Indian tribes do not bear a disproportionate burden for the conservation of listed species...."

The EIS requires the BLM and Forest Service to consult with and seek the participation of the affected Indian tribes to the maximum extent practicable whenever their actions may affect tribal trust resources, the exercise of tribal rights, or Indian land. The Joint Secretarial Order #3206 seeks to harmonize Endangered Species Act compliance with the federal government's trust responsibility and treaty obligations to federally recognized American Indian tribes.