Table 3-5. Objectives and Standards

Implementing Ecosystem Management

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
EM-O1. Objective: Not applicable.	**EM-O1. Objective:** Not applicable.	**EM-O1. Objective:** Implement Interior Columbia Basin Ecosystem Management Project (ICBEMP) plan objectives, standards, and guidelines for tribal rights and interests and terrestrial, riparian, aquatic, social, and economic systems using multi-scaled, hierarchical (in time and space) analysis methods as appropriate. ***Rationale:*** *ICBEMP broad-scale direction is most appropriately implemented at finer scales using hierarchical ecosystem analysis. Ecosystem analysis is not a decision-making process; it is a context-setting process for management. The ICBEMP EISs generally provide broad- and mid-scale ecosystem information and management direction. Scale is characterized by both resolution of detail and geographic extent; the finer the detail, the finer the scale. Detail influences the geographic extent of scale. Broad-scale includes the entire ICBEMP area, or the Eastside or Upper Columbia River Basin planning areas. Mid-scale includes Ecological Reporting Units (ERUs), or clusters (groups of 4th-field HUCs, not always contiguous) and sometimes sub-basins (4th-field HUCs.) Scales are approximate and dynamic. Ideally the scale receiving analysis would be nested into the context of at least one larger and one smaller scale.*				
EM-O2. Objective: Not applicable.	**EM-O2. Objective:** Not applicable.	**EM-O2. Objective:** Implement the ICBEMP plans using a collaborative intergovernmental approach. ***Rationale:*** *The intent of this objective is to create an avenue for resolving issues that, while of concern at this broad scale, are better resolved at the local level. The process is not greatly different than the current approach, except that additional emphasis is placed on managers and interdisciplinary team leaders to: notify affected agencies as early as possible of issues needing resolution; provide opportunities for participation; and set reasonable deadlines. Forest Service and/or BLM Line officers still retain final decision-making authority. It is believed that land management decisions that include collaborative involvement from other federal, state, local, and tribal organizations are more likely to withstand legal challenge and thereby provide greater assurance of sustainable activity levels.*				

Sub-Basin Reviews

EM-O3. Objective: Not applicable.	**EM-O3. Objective:** Not applicable.	**EM-O3. Objective:** Conduct sub-basin reviews at the sub-basin (4th-field HUC, approximately 800,000 - 1,000,000 acres) or basin (contiguous groups of 4th-field HUCs) scale as an initial step of Eastside plan implementation. Sub-basin review is intended to be a brief two- to three-week validation process in which broad-scale information from the *Scientific Assessment* and existing finer-scale data from BLM District and National Forest offices are tiered to ICBEMP goals, objectives, and standards. ***Rationale:*** *The purpose of sub-basin review is to identify opportunities and establish priorities for vegetation, prescribed fire, aquatic, riparian, terrestrial, recreation, and watershed management at the sub-basin or basin scale. Just as the* Scientific Assessment *provides the context for sub-basin review, results from the sub-basin review will provide the context for ecosystem analysis at the finer watershed (5th-field HUC) and subwatershed (6th-field HUC) scale.*					

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IMPLEMENTING ECOSYSTEM MANAGEMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
EM-S1. Standard: Not applicable.	**EM-S1. Standard:** Not applicable.	**EM-S1. Standard:** Sub-basin reviews shall be conducted on all Forest Service- and BLM-administered lands in the project area in the first three years after the ROD is signed, accomplishing 1/3 in the first year, 1/3 in the second year, and 1/3 in the third year. These reviews shall be a brief validation and shall meet the intent of Objective EM-O3. Management activities can proceed only in areas where sub-basin review is completed or where sub-basin review is not scheduled for completion in the current year. Existing information from all appropriate sources, including tribes, counties, states, etc. shall be used.			**EM-S1. Standard:** Sub-basin reviews shall be conducted on all Forest Service- and BLM-administered lands in the project area in the first year after the ROD is signed. These reviews shall be a brief validation and shall meet the intent of Objective EM-O3. During the one-year transition period, projects can proceed without sub-basin review. Existing information from all appropriate sources, including tribes, counties, states, etc. shall be used.	**EM-S1. Standard:** ***Inside reserves:*** Sub-basin review shall be conducted prior to initiating management activities. Existing information from all appropriate sources, including tribes, counties, states, etc. shall be used. ***Outside reserves:*** Same as Alternative 3.

Rationale: *Sub-basin review is intended to be brief (two to three weeks) and make use of existing information. It is not a decision process nor an analysis process. The purpose is to:*

- *Review information provided in the* Scientific Assessment *and from the spatial prioritization process and validate with existing local information.*
- *Provide an initial step in the hierarchical decision process from broad to fine scale.*
- *Prioritize opportunities for ecosystem analysis within the sub-basin.*
- *Identify potential project level opportunities for implementing ecosystem management that can be determined at this scale.*
- *Identify data gaps.*
- *Identify opportunities for pooling interagency (federal agencies), tribal, and intergovernmental (states, counties, cities) resources for completing analyses and project-level work.*

EM-S2. Standard: Not applicable.	**EM-S2. Standard:** Not applicable.	**EM-S2. Standard:** When conducting sub-basin review and subsequent finer-scaled analyses, tribal, socio-economic, and biophysical resources (watershed, terrestrial, and aquatic) information and processes shall be considered, as appropriate to the scale, management objectives, and intergovernmental prioritization schedule described in Standard EM-S3. Examples to consider in the sub-basin review can be found in the Implementation Appendix (Appendix 3-4).

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EM-S3. Standard: Not applicable.	**EM-S3. Standard:** Not applicable.	**EM-S3. Standard:** As part of the collaborative intergovernmental sub-basin review, a prioritization schedule for completion of Ecosystem Analysis at the Watershed (5th- or 6th-field HUCs) Scale shall be developed with input or participation from affected federal, tribal, state, and local governments. (See also Standard EM-S12.)
EM-S4. Standard: Not applicable.	**EM-S4. Standard:** Not applicable.	**EM-S4. Standard:** Information from sub-basin reviews, when available, shall be used to provide context for subsequent 5th- or 6th-field HUC ecosystem analysis and for Forest Service and BLM land use plan revisions. ***Rationale:*** *It is intended that ecosystem analysis should be tailored to the issue/situation (it should not be seen as an identical magnitude or process for every situation). Ecosystem analysis considers the type of interactions, processes, and conditions on the landscape being affected, thereby determining the scale of the analysis. Conditions to be considered include known values such as cultural and economic values. On rangelands (for instance where water is scarce and topography is relatively flat) it is appropriate to use a meaningful and efficient boundary as long as the logic and processes of ecosystem analysis are followed and the product provides context and information for decisions.*

Ecosystem Analysis at the Watershed Scale

EM-O4. Objective: Varies. See: NW-O4 NW-G11	**EM-O4. Objective:** Same as Alternative 1, plus: A2/TE-S1 A2/TE-S2	**EM-O4. Objective:** Conduct Ecosystem Analysis at the Watershed Scale (5th- or 6th-field HUCs, approximately 10,000 to 100,000 acres) to provide context and focus for fine-scale project planning, design, and implementation within the project area. To do so, use the following items: - broad-level analysis provided by the Scientific Assessment, - spatial prioritization provided in the ICBEMP Final EISs, and - results of the sub-basin review. ***Rationale:*** *The watershed scale is a key layer in ecosystem analysis and planning. Where management actions could have a watershed-scale effect, Ecosystem Analysis at the Watershed Scale should be used to assure potential actions are evaluated with an overall understanding of the capabilities and limitations of specific watersheds. Information gained through analysis at this fine scale will be vital to adaptive management of broad physiographic regions, and can support land management plan revisions and development of ecologically sustainable programs and projects.* *Situations likely to have watershed-scale effects could include, but are not limited to, the following:* - *a major road crossing with probable downstream effects,* - *multiple large openings with probable downstream effects,* - *single openings affecting a small but significant area, with no downstream effect,* - *changes in habitat patterns or corridors, and* - *changes in risks of natural disturbance such as fire, insects, or disease.*
Not Applicable.	See Standards A2/AQ-S1, A2/AQ-S3, and A2/AQ-S4 which require Ecosystem Analysis under Alternative 2.	***Ecosystem Analysis at the Watershed Scale Summary:*** Ecosystem Analysis at the Watershed Scale must be completed prior to conducting activities in areas covered by standards EM-S7 (Category 1 sub-basins), EM-S8 (habitat for listed and some other species), EM-S9 (areas with low road densities), or EM-S10 (large blocks of native rangelands). EM-S7 applies to Alternatives 3 through 7. EM-S8 has three variations: Alternative 3; Alternatives 4, 5 (outside timber and livestock priority areas), and 7; and Alternative 6. EM-S9 applies to Alternatives 6 and 7. EM-S10 applies to Alternative 6. In areas not covered by those standards, activities can occur without Ecosystem Analysis during a 4-year transition period for Alternative 6, or during the life of the plan for Alternatives 3, 4, 5, and 7. After the transition period for Alternative 6, Ecosystem Analysis must be conducted everywhere in the project area prior to initiating activities. (Activities are defined here as management activities that normally require an environmental assessment or environmental impact statement.) Standards AQ-S6, AQ-S35, and AQ-S37 also require Ecosystem Analysis under Alternative 7.

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
EM-S5. Standard: Not applicable.	**EM-S5. Standard:** Not applicable.	**EM-S5. Standard:** *Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis*, version 2.2 and Forest Service/BLM policy implementation guides (and successors) shall be used when conducting Ecosystem Analysis. Version 2.2 of the *Federal Guide* provides the process for conducting Ecosystem Analysis. The degree and extent should vary by the complexity, risks, and objectives within subwatersheds. Existing information from all appropriate sources should be used to meet or augment needs described in the *Federal Guide.*				
EM-S6. Standard: Not applicable.	**EM-S6. Standard:** Not applicable.	**EM-S6. Standard:** Line officers shall set the scope of Ecosystem Analysis based on issues, objectives, and availability of personnel, time, and funds.				
EM-S7. Standard: Varies. See: NW-S8	**EM-S7. Standard:** Same as Alternative 1, plus: A2/TE-S1	**EM-S7. Standard:** In Category 1 sub-basins, Ecosystem Analysis at the Watershed Scale shall be completed prior to any activity that requires an environmental assessment or environmental impact statement. (See also EM-O4 and AQ-O3.) The requirement for Ecosystem Analysis in Category 1 sub-basins applies only to activities outside congressionally designated wilderness areas and human-ignited prescribed fires within wilderness areas. (See also Standard EM-S11.)				
EM-S8. Standard: Varies. See: NW-S8	**EM-S8. Standard:** Same as Alternative 1, plus: A2/TE-S1 A2/TE-S2	**EM-S8. Standard:** Ecosystem Analysis at the Watershed Scale shall be performed prior to any activity that requires an environmental assessment or environmental impact statement in the following areas: - stronghold subwatersheds, - bull trout fringe subwatersheds, - subwatersheds containing wild populations of steelhead or ocean- or stream-type chinook salmon, or - Snake River salmon or bull trout High Priority Watersheds. See EM-S11, EM-S12, and EM-S13 for further direction.	**EM-S8. Standard:** Ecosystem Analysis at the Watershed Scale shall be completed prior to any activity that requires an environmental assessment or environmental impact statement in subwatersheds that would affect: - federally listed and proposed species or their habitats, or - recently occupied (within the past 20 years) or currently accessible habitat of federally listed and proposed fish species, or - populations of steelhead or ocean- or stream-type chinook salmon. (See also EM-S11.)	**EM-S8. Standard:** ***Inside timber and livestock priority areas:*** Not applicable. ***Outside timber and livestock priority areas:*** Same as Alternative 4.	**EM-S8. Standard:** Ecosystem Analysis at the Watershed Scale shall be completed prior to any activity that requires an environmental assessment or environmental impact statement in subwatersheds that would affect: - federally listed, proposed, or candidate species or their habitats, - recently occupied (within the past 20 years) or currently accessible habitat of federally listed, proposed, or candidate fish species, or - strongholds and fringe populations of redband trout, westslope cutthroat, or Yellowstone cutthroat trout. (See also EM-S11.)	**EM-S8. Standard:** Same as Alternative 4.

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		EM-S8. ***Rationale:*** *The distribution or presence of threatened, endangered, candidate, or proposed species and their habitats does not automatically require Ecosystem Analysis at the Watershed Scale. Rather, it is the effects of proposed activities on these species and their habitats that determine the need for Ecosystem Analysis. Proposed activities in subwatersheds that would not affect a threatened, endangered, candidate, or proposed species or its habitat would not require Ecosystem Analysis. Proposed activities with either positive or adverse effects would require Ecosystem Analysis. The process for determining effects would likely be similar to that used for a "may affect" determination under the Endangered Species Act consultation process.*		
EM-S9. Standard: Varies. See: NW-S7 NW-G13	**EM-S9. Standard:** Same as Alternative 1.	**EM-S9. Standard:** Not applicable. (See also RM-S15.)	**EM-S9. Standard:** To maintain high quality habitats, no net increase in road density shall occur in subwatersheds with road densities less than 0.7 miles/square mile unless Ecosystem Analysis at the Watershed Scale is completed and NEPA analysis demonstrates that aquatic, terrestrial, and other relevant objectives will be met given full consideration of cumulative effects. (See also EM-S11.) ***Rationale:*** *The Science Integration Team found a relationship between low road density and high quality habitats. Roads can increase disturbance, displacement, and direct and indirect mortality to fish and wildlife. Road networks can alter watershed integrity, hydrologic function, sediment regimes, and human use patterns which can not be entirely mitigated.*	
EM-S10. Standard: Varies. See: NW-S8	**EM-S10. Standard:** Same as Alternative 1.	**EM-S10. Standard:** Not applicable.	**EM-S10. Standard:** Ecosystem Analysis at the Watershed Scale shall be completed prior to activities that require an environmental assessment or environmental impact statement and that significantly modify large blocks of existing native rangeland plant communities that are mostly intact and have ecological processes functioning at or near their natural potential. (See also EM-S11.)	**EM-S10. Standard:** Not applicable.

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					EM-S10. *Rationale:* *The intent of this standard is to maintain intact native rangeland plant communities at multiple scales. Native rangeland communities that are mostly intact generally include the following: 1) areas with average annual rainfall of greater than 12 inches, 2) have a predominance of native vegetation recognizing that some non-native and exotic species may be present, 3) contain a diverse variety of native plant forms, and 4) whose ecological processes (including hydrologic cycle, nutrient cycle, and energy flow) are functioning properly and are capable of supporting healthy biotic communities.*	
EM-S11. Standard: Not applicable.	**EM-S11. Standard:** Not applicable.	**EM-S11. Standard:** Use the screening process to be developed by the Interior Columbia Basin (ICB) intergovernmental team to determine which land management activities that require an environmental assessment or environmental impact statement are exempt from Ecosystem Analysis at the Watershed Scale. (See also EM-S7, EM-S8, EM-S9, and EM-S10.) ***Rationale:*** *There are land management activities that have little impact on resource issues and therefore require no information support from Ecosystem Analysis at the Watershed Scale. The intent of this standard is to develop and use a process to screen these types of activities and exempt them from the Ecosystem Analysis process.*				

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EM-S12. Standard: Varies. See: NW-G11	**EM-S12. Standard:** Same as Alternative 1.	**EM-S12. Standard:** Ecosystem Analysis at the Watershed Scale is not required in Category 2 and 3 sub-basins prior to conducting activities unless otherwise required by EM-S8. (See also EM-S13 and the introduction to Table 3-5.) **EM-S12. *Rationale:*** *It is the BLM's and Forest Service's intent to complete Ecosystem Analysis within three years for Alternative 3. Recognizing uncertainty with budgets and personnel, an intergovernmental team would assist in setting priorities for Ecosystem Analysis and restoration as described in EM-S3 that would ensure that ICBEMP objectives are met within appropriated budget levels.*	**EM-S12. Standard:** In Category 2 and 3 sub-basins, activities that require an environmental assessment or environmental impact statement shall have a four-year transition period before Ecosystem Analysis at the Watershed Scale is required, unless such analysis is otherwise required by EM-S8, EM-S9, or EM-S10. ***During the transition period,*** information from sub-basin review, when available, shall be used to support design and implementation of those activities that do not require Ecosystem Analysis at the Watershed Scale. ***After the transition period,*** Ecosystem Analysis at the Watershed Scale shall be completed on all lands administered by the Forest Service or BLM prior to any activity that requires an environmental assessment or environmental impact statement unless exempted under EM-S11. (See also EM-S13.)	**EM-S12. Standard:** Ecosystem Analysis at the Watershed Scale is not required in Category 2 and 3 sub-basins prior to conducting activities unless otherwise required by EM-S8 or EM-S9. (See also EM-S13 and the introduction to Table 3-5.)

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ALTERNATIVE 1

EM-S13. Standard: Not applicable.

ALTERNATIVE 2

EM-S13. Standard: Not applicable.

ALTERNATIVE 3

ALTERNATIVE 4

EM-S13. Standard: ICBEMP standards (including RMO values and RCA boundaries in Appendix 3-4) can be changed only after conducting Ecosystem Analysis at the Watershed Scale. That is, they cannot be changed through site-specific NEPA analysis unless Ecosystem Analysis at the Watershed Scale has been completed first. (See also introduction to Table 3-5 and EM-S12.) In all cases, rationale for using or modifying RMO values or RCA boundaries shall be documented in the appropriate NEPA document (categorical exclusion, environmental assessment, or environmental impact statement).

Rationale: *Ecosystem Analysis provides the context or "perspective" for site-specific NEPA analysis. Ecosystem Analysis can aid in defining the capabilities and limitations of the watershed, which can then support adjustment to ICBEMP standards, to more appropriately and accurately meet the intent of restoring or maintaining ecosystem function. For example, information from Ecosystem Analysis can support adjustments to RMOs and RCAs.*

ALTERNATIVE 5

EM-S13. Standard: ***Inside timber and livestock priority areas:*** Site-specific NEPA analysis and sub-basin review, where available, can be used to adjust ICBEMP standards (including RMO values and RCA boundaries) in areas where Ecosystem Analysis at the Watershed Scale is not required, so long as the following conditions are met:
(1) modifications to ICBEMP standards shall provide equal or greater achievement of associated objectives;
(2) full consideration of cumulative effects shall be made;
(3) the rationale for adjustment is documented in environmental assessments or environmental impact statements; and
(4) an opportunity for intergovernmental participation is provided.

Outside timber and livestock priority areas: Same as Alternative 3.

ALTERNATIVE 6

EM-S13. Standard: ***During the four-year transition period,*** site-specific NEPA analysis and sub-basin review, where available, can be used to adjust ICBEMP standards (including RMO values and RCA boundaries) in areas where Ecosystem Analysis at the Watershed Scale is not required, so long as the following conditions are met:
(1) modifications to ICBEMP standards shall provide equal or greater achievement of associated objectives;
(2) full consideration of cumulative effects shall be made;
(3) the rationale for adjustment is documented in environmental assessments or environmental impact statements; and
(4) an opportunity for intergovernmental participation is provided.
After the four-year transition period, modifications to ICBEMP standards can be made only after conducting Ecosystem Analysis at the Watershed Scale. (See also introduction to Table 3-5 and EM-S12.)

ALTERNATIVE 7

EM-S13. Standard: Same as Alternative 3.

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		RM-S13. Standard (cont): ***During and after the four-year transition period,*** rationale for using or modifying RMO values or RCA boundaries shall be documented in the appropriate NEPA document (categorical exclusion, environmental assessment, or environmental impact statement).
EM-S14. Standard: Varies. See: NW-G12	**EM-S14. Standard:** Same as Alternative 1, plus: A2/AQ-S3	**EM-S14. Standard:** After Ecosystem Analysis has been completed at the watershed scale, the information shall be used to provide context and support for land management activities. (See also Rationale for EM-O4.)

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PHYSICAL ENVIRONMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Soil Productivity

PE-O1. Objective: Varies. See: A1/PE-O1 A1/PE-O2 A1/PE-O3 NW-O18	**PE-O1. Objective:** Same as Alternative 1.	**PE-O1. Objective:** Maintain soil productivity by minimizing soil loss, protecting hydrologic function of slopes, controlling activities that compact surface soils, and managing soil organic matter to maintain the physical, chemical, and biological properties of a soil that make it productive.
PE-O2. Objective: Varies. See: A1/PE-O3 A1/PE-O4 A1/PE-O5 A1/AQ-O3 A1/AQ-O4 A1/AQ-O5 NW-O1 NW-O2 NW-O18	**PE-O2. Objective:** Same as Alternative 1.	**PE-O2. Objective:** Maintain riparian vegetation, soils, and soil processes to ensure high quality water. Focus efforts on restoring and maintaining floodplain and riparian wetland soils and its ability to immobilize and transform pollutants, nutrients, and sediments; and on restoring and maintaining riparian canopy closure and vegetative structure. (See also RM-S10, RM-S14, AQ-S12, and AQ-S6.) ***Rationale:*** *Floodplain and wetland soils function as sponges which soak up water in addition to pollutants and nutrients, and thereby, provide a mechanism for chemically transforming and immobilizing pollutants, nutrients, and sediments. Water stored in the bank, and the base stream flows such storage provides, sustain riparian vegetation by creating a moist environment year-round.*
PE-O3. Objective: Varies. See: A1/PE-O1 A1/PE-O4	**PE-O3. Objective:** Same as Alternative 1.	**PE-O3. Objective:** Develop soil productivity protection and restoration programs. Use the protocol from the National Long-term Soil Productivity monitoring program (cooperative program between Forest Service research and National Forest System) and Soil Quality monitoring handbook.
Varies. See: A1/PE-O3 NW-O15	**PE-O4. Objective:** Same as Alternative 1.	**PE-O4. Objective:** Restore and maintain nutrient cycling and decomposition processes and soil productivity to provide for sustainable nutrient supply in forest and rangeland ecosystems by providing for levels of vegetation composition, density, size class, and distribution, both in standing and downed biomass comparable to that with which soils evolved. Provide for recruitment of biomass over time. ***Rationale:*** *There is evidence and documentation showing that changes in soils have occurred because of changes in vegetation types and amounts different from those under which soil types developed and evolved. In order to restore and maintain soil productivity and nutrient cycling, and have sustainable vegetation growth and vigor, soils need to continue to develop under conditions similar to those with which they originated.*

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PE-S1. Standard: Varies. See: A1/TE-S15 NW-S28

PE-S1. Standard: Same as Alternative 1, plus: A1/TE-S15 A2/TE-S9

PE-S1. Standard: Recommendations for managing coarse woody debris (downed material greater than three inches in diameter) for soil productivity should be developed which are ecologically appropriate for the local geoclimatic setting and vegetation type. In the absence of local data, the interim levels in Table B shall be used. Coarse woody debris requirements for both soil productivity and plant and animal species needs shall be coordinated. (See also HA-S7 and HA-S8.)

PE-S1. Standard: Recommendations for managing coarse woody debris (downed material greater than three inches in diameter) for soil productivity should be developed which are ecologically appropriate for the local geoclimatic setting and vegetation type. In the absence of local data, the interim levels in Table A shall be used. Coarse woody debris requirements for both soil productivity and plant and animal species needs shall be coordinated. (See also HA-S7 and HA-S8.)

PE-S1. Standard: Same as Alternative 3.

PE-S1. Standard: Same as Alternative 4.

PE-S1. Standard:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.

Rationale: *Retention, recruitment, and replacement of coarse woody debris and soil organic matter is needed to restore the soil productivity where it has declined or been lost. Levels of downed wood need to be higher for restoration than for maintenance of soil productivity. Additionally, where levels of downed wood of finer sizes present a high risk of consumption by wildfire, use of prescribed fire can reduce this risk and aid in the maintenance of soil productivity.*

PE-S1. Table A. Coarse woody debris minimum interim standards for Alternatives 4 and 6.

	Total tons/acre[2]		Min. pieces		Min. Diameter	Min. length
	distr.[1]	undistr.	distr.	undistr.	(inches)	(feet)
Dry Forest						
Ponderosa pine	8-16	5-8	12	6	12	12
Douglas-fir/grand fir	10-16	5-9	14	8	12	12
Lodgepole pine	8-16	4-8	30	15	8	12
Moist Forest						
Mixed conifer	15-25	10-20	25	20	12	12
Cedar/hemlock	25-35	20-30	35	30	20	20
Cold Forest						
Spruce/fir	8-12	6-10	20	15	10	12
Whitebark pine	10-20	5-15	20	15	10	12

[1]Disturbed sites. Refers to sites where management activities have reduced coarse woody debris or organic matter, compacted soils, or caused soil loss or erosion.
[2]Source for total tons/acre, both disturbed and undisturbed: (Graham et al. 1994, Harvey et al. 1991).

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PE-S1. Table B. Coarse woody debris minimum interim standards for Alternatives 3, 5, and 7 (outside reserves).

	Total tons/acre[2] distr.[1]	undistr.[2]	Min. pieces distr.	undistr.	Min. Diameter (inches)	Min. length (feet)
Dry Forest						
Ponderosa pine	4-8	2-4	10	5	12	12
Douglas-fir/grand fir	5-9	3-7	8	5	12	12
Lodgepole pine	4-8	3-8	20	18	8	12
Moist Forest						
Mixed conifer	10-20	8-14	20	18	12	12
Cedar/hemlock	25-35	20-30	20	18	24	20
Cold Forest						
Spruce/fir	8-12	6-10	20	15	10	12
Whitebark pine	5-15	4-8	12	10	10	12

[1]Disturbed sites. Refers to sites where management activities have reduced coarse woody debris or organic matter, compacted soils, or caused soil loss or erosion.
[2]Source for total tons/acre, undisturbed only (Fischer 1981, Maxwell and Ward 1980).

PE-S2. Standard: Varies. See:
A1/TE-S15
NW-S28

PE-S2. Standard: Same as Alternative 1, plus:
A2/TE-S4
A2/TE-S9

PE-S2. Standard: When salvage harvesting after a wildfire, recommendations for amounts of coarse woody debris retention should be developed for local geoclimatic and vegetation types. In the absence of local data, the following minimum amounts of coarse woody debris shall be provided for, where available. Coarse woody debris requirements for both soil productivity and plant and animal species needs shall be coordinated when developing local guidance. (See also HA-S7 and HA-S8.)

PE-S2. Standard: Not applicable.

PE-S2. Standard: Not applicable.

PE-S2. Standard: Same as Alternative 3.

PE-S2. Standard:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.
PE-S3. Standard:

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PE-S2. Standard (cont):
Low intensity burn sites: 10 to 15 tons per acre
Moderate intensity sites: 15 to 20 tons per acre
High intensity burn sites: 20 to 30 tons per acre

Varies. See:
A1/TE-S14
NW-S29
NW-S30
NW-S31
NW-S32
PE-S3. Standard:

Same as Alternative 1.
PE-S3. Standard:

Recommendations for amounts and sizes of large diameter standing live and / or dead wood (>12 inches diameter at breast height [dbh]) should be developed for local geoclimatic and vegetation types. In the absence of local data, the following interim amounts of large diameter standing wood shall be retained on site. Coarse woody debris requirements for both soil productivity and plant and animal species needs shall be coordinated when developing local guidance. (See also HA-S7 and HA-S8.)

Dry Forest:	2 trees / acre >21inch dbh and 8 trees / acre >12 inch dbh
Moist Forest:	6 trees / acre >21 inch dbh and 12 trees / acre >12 inch dbh
Cold Forest:	18 trees / acre >12 inch dbh

Rationale: *Large trees are a component of vegetation structure that is lacking in many areas across the project area. This condition has been identified by the Landscape, Terrestrial, and Aquatic staffs of the Science Integration Team. The lack of large trees is particularly pervasive in riparian areas. Large trees are necessary to provide for sustainable carbon and nutrient stores, to provide habitat for terrestrial and aquatic species, for long-term site productivity, for slope-water interactions, and for habitat for soil microbes essential for the decomposition process.*

PE-O5. Objective: Varies. See:

Air Quality

A1/PE-O6
PE-O5. Objective:
Same as Alternative 1.

PE-O5. Objective:
To protect air quality, comply with federal, state, and local pollution requirements relating to the Clean Air Act. This includes, but is not limited to, state implementation plans, maintaining air quality related values, and conforming to provisions of the Clean Air Act.

Rationale: *Federal land managers must adhere to direction provided in the Clean Air Act in cooperation with the appropriate State Implementation Plans. Current air quality in the project area is relatively good and desirable for human health. This clean air in combination with outstanding scenery is an asset for desired lifestyles of the project area residents and visitors. Historical air quality likely included periods of adverse air quality and related values due to smoke from extensive wildfires, a natural disturbanc*

PE-S4. Standard: Varies. See:

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PHYSICAL ENVIRONMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
A1/PE-S1 A1/PE-G1 A1/PE-S2 A1/PE-G2 **PE-S4. Standard:** Same as Alternative 1.	**PE-S4. Standard:** Environmental	analysis for the use of prescribed fire shall address the following key points: (See Objectives EM-O1 and EM-O3.) - Assess the need for burning compared to alternative fuel reduction, site preparation methods, or leaving materials on site. - Quantify the amount and type of material, and acreage to be burned. - Describe the type of burn proposed (for example broadcast, pile, understory). - Quantify emissions of air pollutants. - Describe mitigation measures to reduce emissions. - Describe applicable regulatory, permit, and smoke management requirements. - Describe and quantify air quality impacts on downwind communities and discuss visibility impacts in Class I areas (see Map 2-4). This analysis should include modeling, where appropriate models exist. - Describe the existing monitoring network. If needed, develop a plan to revise or expand monitoring to ensure that the impacts of prescribed burning on air quality are measured.				

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TERRESTRIAL STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-O1. Objective: Varies. See: A1/TE-O6 A1/TE-O3	**TS-O1. Objective:** Same as Alternative 1.	**TS-O1. Objective:** Maintain and promote healthy, productive and diverse native plant communities as appropriate to soil type, climate, and landform.				
TS-S1. Standard: Varies. See: A1/TE-G7 A1/TE-G9	**TS-S1. Standard:** Same as Alternative 1.	**TS-S1. Standard:** Native plant communities shall be maintained or improved to ensure the proper functioning of ecological processes, and continued productivity and diversity of native plant species. Where native plant communities exist, the conversion to exotic communities after disturbance shall be minimized.				

Fire Disturbance Processes

TS-O2. Objective: Varies. See: A1/TE-G2	**TS-O2. Objective:** Same as Alternative 1.	**TS-O2. Objective:** Restore fire as a natural disturbance process by developing and implementing prescribed fire plans on a landscape scale. ***Rationale:*** *The* Landscape Dynamics *(Hann et al. 1996)* chapter of the Assessment of Ecosystem Components *identified the change in fire frequency and severity on forest and rangelands as a large contributing factor in the departure of vegetation species composition and structure within the project area.*				
TS-O3. Objective: Varies. See: A1/PE-O4 A1/PE-O5 A1/TE-G9	**TS-O3. Objective:** Same as Alternative 1.	**TS-O3. Objective:** Rehabilitate disturbed areas to restore native species, maintain productivity, and prevent undue soil loss.				
TS-S2. Standard: Varies. See: A1/TE-G10	**TS-S2. Standard:** Same as Alternative 1.	**TS-S2. Standard:** Rehabilitate and / or revegetate disturbed areas with ecologically appropriate species tailored to fire regimes characteristic of sites, wherever it is determined that the density, structure, and composition of the vegetation will not resemble or move towards desired range of future conditions. Applies also to Objectives TS-O6, TS-O8, TS-O10, and TS-O15. ***Rationale****: Extensive areas of burned or harvested areas may require treatment because the vegetation that is established following disturbance is incompatible with historical fire regimes. Rehabilitation or reforestation that is compatible with characteristic fire regimes can increase the resilience of such areas. In forest systems, it is economical to thin young trees in areas with denser stands than desired. Plantations that do not require thinning to be resilient to fire are most likely to progress to maturity. In rangeland systems, there are some areas where natural revegetation of a burned area has been altered by exotic species and / or noxious weed invasion. These areas should be seeded with desirable perennial species that are able to outcompete exotic species so the area can be returned to its desired fire regime.*				

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-S3. Standard: Varies. See: A1/TE-G9 A1/TE-G10	**TS-S3. Standard:** Same as Alternative 1.	**TS-S3. Standard:** Native species should be used in seedings, except where little chance of success is predicted for establishing native species and introduced species must be used to meet ICBEMP objectives. ***Rationale:*** *For example, in cheatgrass ranges or in some areas with <=10" precipitation, introduced species may be used to meet ICBEMP objectives.*				
TS-S4. Standard: Varies. See: A1/TE-G11	**TS-S4. Standard:** Same as Alternative 1.	**TS-S4. Standard:** Areas burned by wildfire or prescribed fire shall be rested from livestock grazing until monitoring data indicate that desired vegetation and litter have recovered to levels that are adequate to maintain soil productivity.				

Noxious Weeds

TS-O4. Objective: Varies. See: A1/TE-O2 A1/HU-03	**TS-O4. Objective:** Same as Alternative 1.	**TS-O4. Objective:** Restore or maintain biodiversity and productivity of native plant communities by working with federal, tribal, state, county, and city officials to develop and implement one strategy across jurisdictional and political boundaries to manage noxious weeds efficiently and consistently within five years of signing the Record of Decision. ***Rationale:*** *The rapid expansion of noxious weeds in the project area is one of the greatest threats to healthy and less than healthy native plant communities. Noxious weeds are reducing the value of these plant communities in several ways, including decline in quality of wetland and other habitat for wildlife, reduction of forage for grazing animals, potential increase in soil erosion, and potential decline in water quality, reduction in biological diversity, and increase in the economic burden of maintaining the quality of recreation and wilderness areas. Uncoordinated individual efforts by various entities (private, county, state, tribal, and federal) throughout the project area have been ineffective against noxious weeds.*				
TS-S5. Standard: Varies. See: A1/TE-S3	**TS-S5. Standard:** Same as Alternative 1.	**TS-S5. Standard:** The integrated weed management (IWM) strategy for noxious weeds shall be implemented unless the intent of Objective TS-O4 can be achieved with an alternative strategy. Below are the seven basic steps, in order of priority, of the IWM strategy. The steps are the same for Alternatives 3 through 7; the difference among alternatives is which steps are emphasized. See Appendix 2-2 for a more complete discussion of the seven steps. 1. Inventorying and mapping of noxious weed presence, distribution, and density. 2. Preventing weed encroachment. 3. Detecting and eradicating new introductions of noxious weeds. 4. Containing large-scale infestations of noxious weeds. 5. Controlling-suppressing large-scale infestations of noxious weeds. 6. Revegetating sites that are characterized by existing noxious weed infestations and a lack of understory of native species or exotic perennial seeded species. 7. Implementing proper management practices during the management phase after noxious weed control. ***Rationale****: Integrated weed management as proposed by Sheley (1994) is a recognized strategy that establishes basic steps that are recognized by noxious weed experts as being the key to noxious weed control success. Although there are or can be many versions of this strategy, the basic steps and intent are thought to be consistent with most integrated noxious weed efforts in the country. The intent here is to have all the private, tribal, and government entities come up with one strategy to combat noxious weeds on all lands. The IWM strategy is adopted as a fall-back or a template for a noxious weed control strategy.*				

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TS-S6. Standard: Varies. See: A1/TE-S3	**TS-S6. Standard:** Same as Alternative 1.	**TS-S6. Standard:** On forestlands, steps 1 through 4 of the IWM Strategy shall be used unless a more effective strategy for noxious weed control is developed. (See also TS-S5.)	**TS-S6. Standard:** On forestlands, all seven steps of the IWM Strategy shall be used unless a more effective strategy for noxious weed control is developed. (See TS-S5.)	**TS-S6. Standard:** Same as Alternative 3.	**TS-S6. Standard:** Same as Alternative 4.	**TS-S6. Standard:** Same as Alternative 3.
TS-O5. Objective: Varies. See: A1/TE-O2	**TS-O5. Objective:** Same as Alternative 1.	**TS-O5. Objective:** Implement an integrated weed management strategy to improve biodiversity and productivity of rangelands by using different management emphases in each range cluster as follows (see Map 2-48 or range clusters):				
		A priority for Range Cluster 2 is to conserve biodiversity and productivity of native rangeland plant communities. A priority for Range Cluster 3 is to conserve and restore biodiversity and productivity of native rangeland plant communities. A priority for Range Cluster 5 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species. A priority for Range Clusters 1, 4, and 6 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species, while providing forage for livestock production.	A priority for Range Cluster 2 is to conserve and restore biodiversity and productivity of native rangeland plant communities. A priority for Range Clusters 1, 3, 4, 5, and 6 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species.	A priority for Range Clusters 2 and 4 is to conserve biodiversity and productivity of native rangeland plant communities. A priority for Range Cluster 3 is to conserve and restore biodiversity and productivity of native rangeland plant communities. A priority for Range Clusters 1 and 6 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species, while providing forage for livestock production. While providing forage for livestock production, a priority for Range Cluster 5 is to conserve biodiversity and productivity of native rangeland plant communities.	A priority for Range Clusters 2, 3, and 5 is to conserve and restore biodiversity and productivity of native rangeland plant communities. A priority for Range Clusters 1, 4, and 6 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species.	***Inside reserves:*** Not applicable. ***Outside reserves:*** A priority for Range Clusters 1, 4, and 6 is to restore biodiversity and productivity of native rangeland plant communities, primarily through the use of native plant species, while providing forage for livestock production.

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-S7. Standard: Varies. See: A1/TE-S3	**TS-S7. Standard:** Same as Alternative 1.	**TS-S7. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 4 of IWM shall be implemented. Implement the steps on high disturbance areas and rangeland plant communities that are not infested currently with noxious weeds and are of high susceptibility to invasion by noxious weeds. The priority area for this standard is Range Cluster 2.	**TS-S7. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 4 of IWM shall be implemented on high disturbance areas and rangeland plant communities that are not infested currently with noxious weeds and are of high or moderate susceptibility to invasion by noxious weeds; implement Steps 1 to 7 of IWM, and especially Steps 5 to 7, on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high or moderate susceptibility to invasion by noxious weeds. The priority area for this standard is Range Cluster 2.	**TS-S7. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 4 of IWM shall be implemented. Implement these steps on high disturbance areas and rangeland plant communities that are not infested currently with noxious weeds and are of high susceptibility to invasion by noxious weeds. The priority areas for this standard are Range Clusters 2 and 4.	**TS-S7. Standard:** Same as Alternative 4, except the priority areas for this standard are Range Clusters 2, 3, and 5.	**TS-S7. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves***: Same as Alternative 3.

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TS-S8. Standard: Varies. See: A1/TE-S3	**TS-S8. Standard:** Same as Alternative 1.	**TS-S8. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 4 of IWM shall be implemented on high disturbance areas and rangeland plant communities that are not infested currently with noxious weeds and are of high susceptibility to invasion by noxious weeds; Steps 1 to 7 of IWM, and especially Steps 5 to 7, should be implemented on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high susceptibility to invasion by noxious weeds. The priority area for this standard is Range Cluster 3.	**TS-S8. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 7 of IWM, and especially Steps 5 to 7, shall be implemented. Implement these steps on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high or moderate susceptibility to invasion by noxious weeds. The prioity areas for this standard are Range Clusters 1, 3, 4, 5, and 6.	**TS-S8. Standard:** Same as Alternative 3.	**TS-S8. Standard:** Not applicable.	**TS-S8. Standard:** Not applicable.

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-S9. Standard: Varies. See: A1/TE-S3	**TS-S9. Standard:** Same as Alternative 1.	**TS-S9. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 7 of IWM, and especially Steps 5 to 7, shall be implemented. Implement these steps on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high susceptibility to invasion by noxious weeds. The priority area for this objective is Range Cluster 5.	**TS-S9. Standard:** Not applicable.	**TS-S9. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 7 of IWM, and especially Steps 5 to 7, shall be implemented on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high susceptibility to invasion by noxious weeds; implement Steps 1 to 4 of IWM on high disturbance areas and rangeland plant communities that are not infested currently with noxious weeds and are of high susceptibility to invasion by noxious weeds. The priority area for this standard is Range Cluster 5.	**TS-S9. Standard:** Not applicable.	**TS-S9. Standard:** Not applicable.

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TS-S10. Standard: Varies. See: A1/TE-S3	**TS-S10. Standard:** Same as Alternative 1.	**TS-S10. Standard:** Unless the intent of Objective TS-O5 can be achieved with an alternative weed control strategy, Steps 1 to 7 of IWM, and especially Steps 5 to 7, shall be implemented. Implement these steps on high disturbance areas and rangeland plant communities that contain noxious weeds and are of high susceptibility to invasion by noxious weeds. Priority areas for this standard are Range Clusters 1, 4, and 6.	**TS-S10. Standard:** Not applicable.	**TS-S10. Standard:** Same as Alternative 3, except the priority areas for this standard are Range Clusters 1 and 6.	**TS-S10. Standard:** See TS-S8 for Alternative 4 for direction.	**TS-S10. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

Rationale: *The amount of noxious weed control varies by alternative and by cluster or clusters. This is based on the intent of the alternative and the integrity and emphasis of the cluster. Some clusters that are of high overall integrity may not need as much noxious weed control efforts as a cluster with low integrity with areas highly susceptible to certain noxious weeds. Prevention and identification or inventory of noxious weeds is a major component of any noxious weed effort and is common to all alternatives and clusters. Differences among alternatives are generally in the amount of efforts in actual control of existing infestations and the rehabilitation of those sites.*

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TERRESTRIAL STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Forestlands

Dry Forest

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-O6. Objective: Varies. See: A1/TE-O3 A1/TE-O7	**TS-O6. Objective:** Same as Alternative 1.	**TS-O6. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, pattern, and fuel loading and distribution so ecosystems are resilient to endemic levels of fire, insects, and disease. Priority areas for restoration are Forest Clusters 2, 3, 5, 6. Timber production is a byproduct of restoration activities.	**TS-O6. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, pattern, and fuel loading and distribution so ecosystems are resilient to endemic levels of fire, insects, and disease. Restoration is the emphasis and priority for the mid- and late-seral, dense multi-layer communities in currently roaded portions of Forest Clusters 2, 3, 5, and 6. Timber production is a byproduct of restoration activities.	**TS-O6. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, pattern, and fuel loading and distribution so ecosystems are resilient to endemic levels of fire, insects, and disease. Priority areas for restoration are in Forest Clusters 2, 3, 5, and 6, while emphasizing timber production in Forest Cluster 4.	**TS-O6. Objective:** Same as Alternative 4.	**TS-O6. Objective:** ***Inside reserves:*** Natural disturbance processes drive restoration of ecosystem processes. ***Outside reserves:*** Same as Alternative 3.

Rationale: *The* Landscape Dynamics *(Hann et al. 1996)* chapter of the Assessment of Ecosystem Components *described dry forest departure (difference) from historical conditions. These changes include loss of scattered overstory ponderosa pine, western larch, and Douglas-fir; a loss of single-layer late-seral structural stages; increase in mid-seral multi-layer structural stages; a general trend toward increased tree densities; a shift of species from shade-intolerant to shade-tolerant; and a shift from a dominance of low intensity/high frequency fire regimes toward higher intensity/lower frequency regimes. These changes have predisposed forest landscapes to larger-scale disturbances than would have naturally occurred with endemic fire, insect and disease disturbances. Wildlife habitat characterized by relatively large fire tolerant trees and single-layer late-seral structural stages has declined.*

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TS-S11. Standard: Varies. See: A1/TE-S5 A1/TE-S6	**TS-S11. Standard:** Same as Alternative 1.	**TS-S11. Standard:** In dry forests, dominance of ponderosa pine and western larch in mature and old single-layer forests and mature and old multi-layer forests shall be increased. Decrease the amount of grand fir and white fir in all structural stages. Decrease the amount of Douglas-fir in all structural stages where not historically maintained by the dominant fire regime.	**TS-S11. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.
TS-S12. Standard: Varies. See: A1/TE-S5	**TS-S12. Standard:** Same as Alternative 1.	**TS-S12. Standard:** Not applicable.	**TS-S12. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Do not harvest dominant or co-dominant ponderosa pine from any dry forest stand unless necessary for stand stocking level control and health.
TS-S13. Standard: Varies. See: A1/TE-S5 A1/TE-S13 A1/TE-G4 NW-S20	**TS-S13. Standard:** Same as Alternative 1, plus: A2/TE-S4 A2/TE-G1 A2/TE-S5 A2/TE-S8	**TS-S13. Standard:** Not applicable.	**TS-S13. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** In dry forests, mature and old forests shall not be entered for silvicultural treatments, and trees of any species older than 150 years or with a diameter at breast height of 20 inches or greater shall not be cut, except where it can be demonstrated that treatment is necessary to maintain the stand's ecological integrity.

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TERRESTRIAL STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-S14. Standard: Varies. See: A1/TE-S21 A1/TE-S5 NW-S19 NW-S20 NW-S24 NW-S25 NW-S26	**TS-S14. Standard:** Same as Alternative 1.	**TS-S14. Standard:** Not applicable.				**TS-S14. Standard:** ***Inside reserves:*** There shall be no scheduled timber harvest from dry forests in reserves. Limited silvicultural activities should be allowed to enhance viable populations of plants and animals. Applies also to Objectives TS-O9 and TS-O11. ***Outside reserves:*** Not applicable.
TS-O7. Objective: Varies. See: A1/TE-O4 A1/HU-O5 A1/HU-O8 A1/HU-O9 A1/HU-S5 A1/HU-S6 NW-O14	**TS-O7. Objective:** Same as Alternative 1.	**TS-O7. Objective:** Manage production activities and their levels on available and suitable lands to produce commodities in areas that are within the ICBEMP Desired Range of Future Conditions. At the same time, maintain ecosystem processes, including disturbance intensities and frequencies, within the desired range of variability. ***Rationale:*** *Production of commodities can be consistent with ecological objectives on suitable forest lands. Desired range of variability refers to the bounds within which the ecosystem conditions and processes must fluctuate in order to obtain or maintain the desired range of future conditions. The desired range of variability may be different from historical range of variability.*			**TS-O7. Objective:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

Moist Forest

TS-O8. Objective: Varies. See: A1/TE-O3 A1/TE-O7	**TS-O8. Objective:** Same as Alternative 1.	**TS-O8. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, patch distribution, and fuel loading and distribution so the ecosystem is resilient to fire, insects, and disease. Priority areas for restoration are in Forest Clusters 2, 3, 4, and 6. Timber production is emphasized as a byproduct of restoration activities.	**TS-O8. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, patch distribution, and fuel loading and distribution so the ecosystem is resilient to fire, insects, and disease. Restoration is the emphasis for activity, and priority areas for restoration are the mid- and late-seral, dense multi-layer communities in currently	**TS-O8. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, patch distribution, and fuel loading and distribution so the ecosystem is resilient to fire, insects, and disease. Priority areas for restoration are in Forest Clusters 2, 3, 5, and 6, while emphasizing timber production in Forest Clusters 4 and 6.	**TS-O8. Objective:** Same as Alternative 4.	**TS-O8. Objective:** ***Inside reserves:*** Natural disturbance processes drive restoration of ecosystem processes. ***Outside reserves:*** Same as Alternative 3.

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		roaded portions of Forest Clusters 2, 3, 4, and 6. Timber production is a byproduct of restoration activities.	
TS-S15. Standard: Not applicable.	**TS-S15. Standard:** Not applicable.	**TS-S15. Standard:** In moist forests, management activities shall be conducted to maintain viability of and/or attain an increase of western white pine in areas where it is adapted.	
TS-S16. Standard: Not applicable.	**TS-S16. Standard:** Not applicable.	**TS-S16. Standard:** In moist forests, plant blister-rust- resistant stock, and reduce competition to increase the abundance, diversity, and distribution of western white pine where it occurred naturally. ***Rationale:*** *There has been extensive loss and poor regeneration of western white pine in the moist forest potential vegetation group as a result of blister rust infestations (Hann et al. 1996).*	
TS-S17. Standard: Varies. See: A1/TE-S5 A1/TE-S6	**TS-S17. Standard:** Same as Alternative 1.	**TS-S17. Standard:** In moist forests, the dominance of early successional shade-intolerant species shall be increased, and the presence of late successional, shade-tolerant species shall be decreased where mixed severity fire regimes are characteristic. ***Rationale****: The* Landscape Dynamics *(Hann et al. 1996)* chapter of the Assessment of Ecosystem Components *identified moist forest as exhibiting significant change from historical times, although less than in dry forest. Much the same as dry forest, these changes include a loss of scattered overstory ponderosa pine, western larch and western white pine, loss of single-layer ponderosa pine and co-dominant seral species, an increase in multi-layer structural stages and a general trend toward overstocking and change of species from shade-intolerant to shade-tolerant. These changes, together with the introduction of white pine blister rust have predisposed forest landscapes to larger-scale and more severe disturbances than would have naturally occurred from fire, insects, and disease. Late- and early-seral structures have significantly declined, with compensating increases in mid-seral structure across most sub-basins. Consequently, forest structure is more homogeneous than it was historically. One result has been a reduction of wildlife habitat, especially large trees and old/mature single-layer structural stages.*	**TS-S17. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.
TS-S18. Standard: Varies. See: A1/TE-S5	**TS-S18. Standard:** Same as Alternative 1.	**TS-S18. Standard:** Not applicable.	**TS-S18. Standard:** ***Inside reserves****:* Not applicable. ***Outside reserves:*** Dominant or co-dominant ponderosa pine shall not be harvested from any moist forest stand unless necessary for stand stocking level control and health.

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-S19. Standard: Varies. See: A1/TE-S5 A1/TE-S13 A1/TE-G4 NW-S20	**TS-S19. Standard:** Same as Alternative 1, plus: A2/TE-S4 A2/TE-G1 A2/TE-S5 A2/TE-S8	**TS-S19. Standard:** Not applicable.				**TS-S19. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** In moist forests, mature/old forests shall not be entered for silvicultural treatments, and trees of any species older than 150 years or with a diameter at breast height of 20 inches or greater shall not be cut, except where it can be demonstrated that treatment is necessary to maintain the stand's ecological integrity.
TS-S20. Standard: Varies. See: A1/TE-S21 NW-S19 NW-S20 NW-S24 NW-S25 NW-S26	**TS-S20. Standard:** Same as Alternative 1.	**TS-S20. Standard:** Not applicable.				**TS-S20. Standard:** ***Inside reserves:*** In moist forests, there shall be no scheduled timber harvest in reserves. Limited silvicultural activities shall be allowed to enhance viable populations. Applies to Objectives TS-O7, TS-O9, and TS-O11. ***Outside reserves:*** Not applicable.

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TS-O9. Objective: Varies. See: A1/TE-O3 A1/HU-O5 A1/HU-O8 A1/HU-O9 A1/HU-S5 A1/HU-S6 NW-O14	**TS-O9. Objective:** Same as Alternative 1.	**TS-O9. Objective:** Manage production activities and their levels on available and suitable lands to produce commodities in areas that are within the ICBEMP Desired Range of Future Conditions. At the same time, maintain ecosystem processes, including disturbance intensities and frequencies, within the desired range of variability. ***Rationale****: Production of commodities can be consistent with ecological objectives on suitable forest lands. Desired range of variability refers to the bounds within which the ecosystem conditions and processes must fluctuate in order to obtain or maintain the desired range of future conditions. The desired range of variability may be different from historical range of variability.*			**TS-O9. Objective:** ***Inside reserves****:* Not applicable. ***Outside reserves****:* Same as Alternative 3.

Cold Forest

TS-O10. Objective: Varies. See: A1/TE-O3 A1/TE-O7	**TS-O10. Objective:** Same as Alternative 1.	**TS-O10. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, patch distribution, and fuel loading and distribution so the ecosystem is resilient to fire, insects, and disease.	**TS-O10. Objective:** Restore ecosystem processes by managing vegetation structure, stand density, species composition, patch size, patch distribution, and fuel loading and distribution so the ecosystem is resilient to fire, insects, and disease. Restoration is the emphasis for activity. Timber production is a byproduct of restoration activities.	**TS-O10. Objective:** Same as Alternative 3.	**TS-O10. Objective:** Same as Alternative 4.	**TS-O10. Objective:** ***Inside reserves****:* Natural disturbance processes drive restoration of ecosystem processes. ***Outside reserves***: Same as Alternative 3.
		Rationale: *The cold forest potential vegetation group exhibits the least amount of departure from historical conditions within the project area, although it does exhibit significant changes in forest structure and composition in some forest clusters. Because of the naturally longer time intervals between fire disturbance events, this potential vegetation group has not been affected as much by fire exclusion as dry and moist potential vegetation groups. Primary concern at this time is the loss of whitebark pine and subalpine larch across the cold forest landscape. Cold forests of most sub-basins are only modestly productive.*				
TS-S21. Standard: Not applicable.	**TS-S21. Standard:** Not applicable.	**TS-S21. Standard:** In cold forests where they are adapted, the viability of whitebark pine and subalpine larch shall be maintained, and the abundance, diversity and distribution shall be increased. Blister-rust-resistant stock shall be planted, rust-promoting stand conditions of whitebark pine reduced, completetition reduced, natural regeneration promoted, and other methods used. ***Rationale:*** *The* Landscape Dynamics *(Hann et al. 1996)* chapter of the Assessment of Ecosystem Components *found that the primary concern at this time in the cold forest potential vegetation group is the loss of whitebark pine and subalpine larch landscape-wide due to the introductions of white pine blister rust.*				

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-O11. Objective: Varies. See: A1/TE-O3 A1/HU-O5 A1/HU-O8 A1/HU-O9 A1/HU-S5 A1/HU-S6 NW-O14	**TS-O11. Objective:** Same as Alternative 1.	**TS-O11. Objective:** Manage production activities and their levels on available and suitable lands to produce commodities in areas that are within the ICBEMP Desired Range of Future Conditions. At the same time, maintain ecosystem processes, including disturbance intensities and frequencies, within the desired range of variability. ***Rationale**: Production of commodities can be consistent with ecological objectives on suitable forest lands. Desired range of variability refers to the bounds within which the ecosystem conditions and processes must fluctuate in order to obtain or maintain the desired range of future conditions. The desired range of variability may be different from historical range of variability.*				**TS-O11. Objective:** ***Inside reserves**:* Not applicable. ***Outside reserves**:* Same as Alternative 3.

Rangelands

TS-O12. Objective: Varies. See: A1/TE-O5 A1/PE-O3 NW-O1 NW-O2	**TS-O12. Objective:** Same as Alternative 1.	**TS-O12. Objective:** Restore or maintain rangeland health.				
TS-S22. Standard: Varies. See: A1/TE-G7 A1/TE-S12 A1/TE-G8 A1/TE-G9 A1/TE-G10 A1/TE-G11 A1/TE-S16 A1/TE-S17 A1/TE-S19 A1/TE-S10 A1/AQ-S1 A1/AQ-S3 NW-S1 NW-S2 NW-S3 NW-S4 NW-S5 NW-S6	**TS-S22. Standard:** Same as Alternative 1.	**TS-S22. Standard:** Rangeland management strategies shall be implemented to achieve the maintenance or restoration of watershed function; nutrient cycling and energy flow; water quality; habitat for endangered, threatened, proposed, candidate, or special status species; and habitat quality for populations and communities of native biota. ***Rationale:** Healthy ecosystem functions are essential to rangeland health especially in the dry shrublands and during drought years. Effective management for these functions permits: soil to retain and release water for longer periods during the year which prolong the vegetative growing season; protection of soil from erosion as a result of cover from litter and residual vegetation; and plans to restore and or maintain vigor or plant health through photosynthesis and the building of a strong root system. Effective management strategies include proper timing of grazing use and the leaving of residual vegetation and litter so that vegetative and soil functions are enhanced. Maintenance or restoration of ecosystem functions is important for maintaining or improving habitat quality for native species including endangered, threatened, proposed, candidate or special status species.*				

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TS-S23. Standard: Varies. See: A1/TE-G8 A1/TE-G11 A1/PE-O3	**TS-S23. Standard:** Same as Alternative 1.	**TS-S23. Standard:** On dry shrublands, livestock grazing shall be managed to maintain soil and vegetative health and productivity during and directly after drought years (approximately 75% of normal precipitation and below). Applies also to Objective TS-O1, TS-O2, and TS-O5. ***Rationale:*** *The Scientific Assessment identified improper livestock grazing during and after drought years as being one of the major impacts to the health of the rangelands. See rationale for Standard TS-S22.*				**TS-S23. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.
TS-O13. Objective: Varies. See: A1/TE-O5 A1/PE-O3	**TS-O13. Objective:** Same as Alternative 1.	**TS-O13. Objective:** Produce livestock forage, while restoring ground cover and productivity of perennial vegetation communities that have converted to annual grass-dominated communities within Range Clusters 1 and 6.	**TS-O13. Objective:** Restore ground cover and productivity of perennial vegetation communities that have converted to annual grass-dominated communities within Range Clusters 1, 5, and 6, which have equal priority for treatment.	**TS-O13. Objective:** Same as Alternative 3.	**TS-O13. Objective:** Restore ground cover and productivity of perennial vegetation communities that have converted to annual grass-dominated communities within Range Clusters 1 and 5, which are the highest priority for treatment.	**TS-O13. Objective:** Not applicable.
		Rationale: *Altered sagebrush steppe or annual grass-dominated communities, such as cheatgrass ranges, are lacking in biodiversity, consistent productivity, and soil protection, which affects the natural disturbances and processes that are a part of a healthy rangeland system. These areas are poor habitat for many wildlife species; they tend to burn frequently, which perpetuates annual grass domination of these areas and encroachment onto adjacent areas; and they are susceptible to accelerated erosion especially during drought years when there is little to no vegetative cover. In addition, these areas are susceptible to invasion from noxious weeds such as yellow starthistle, which has no basic livestock or wildlife value. Reestablishment of perennial vegetation would provide for protection of the soil, more consistent forage production for livestock and wildlife, and greater biodiversity.*				
TS-O14. Objective: Varies. See: A1/TE-O5 A1/PE-O3	**TS-O14. Objective:** Same as Alternative 1.	**TS-O14. Objective:** In areas where encroachment of or densities of juniper, conifers and sagebrush are reducing rangeland productivity and biodiversity, restore rangeland productivity and native biodiversity by implementing management strategies that reduce the densities of these species on dry and cool shrublands, dry grasslands, riparian and wetland areas. Priority areas are cool shrublands in Range Cluster 1 for the Eastside EIS. (See also AQ-O10.) ***Rationale:*** *Late-seral structural stages of juniper, conifers, and sagebrush were typically limited on a historical basis due to fire. Higher density juniper woodlands tended to be limited to areas with high surface rock shallow soils and steep broken terrain where fire spread did not occur uniformly. Mosaic patterns of sagebrush communities which occurred historically have in some areas been limited due to fire suppression or lack of fine fuels. The lack of fire in grassland communities has allowed conifers to encroach upon and affect the production and diversity of grassland communities. Restoration of biodiversity, production, and/or livestock forage is compatible with this fire regime.*				**TS-O14. Objective:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

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TERRESTRIAL STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TS-O15. Objective: Varies. See: A1/TE-O5 A1/PE-O3	**TS-O15. Objective:** Same as Alternative 1.	**TS-O15. Objective:** Restore dry grasslands, dry shrublands, and cool shrublands in Range Clusters 1, 5, and 6, while producing livestock forage in Range Clusters 1 and 6. Priority areas for restoration are Range Clusters 1 and 5.	**TS-O15. Objective:** Restore dry grasslands, dry shrublands, and cool shrublands in Range Clusters 1, 5, and 6.	**TS-O15. Objective:** Restore dry grasslands, dry shrublands, and cool shrublands in Range Clusters 1 and 6, while producing forage for livestock production.	**TS-O15. Objective:** Restore dry grasslands, dry shrublands, and cool shrublands in Range Clusters 1, 5, and 6. Dry shrublands are the highest priority for initial treatment and establishment of experimental studies.	**TS-O15. Objective:** ***Inside reserves:*** Conserve or restore dry grasslands, dry shrublands, and cool shrublands in Range Clusters 1, 5, and 6 by primarily emphasizing natural disturbance processes. ***Outside reserves:*** Same as Alternative 3.

Rationale: *Dry grasslands, dry shrublands, and cool shrublands are highly departed in frequency and composition from historical levels and conditions. Consequently associated species of native flora and fauna have declined or been locally extirpated, which has caused major concern. Range Clusters 1, 5, and 6 have the most acres of the major rangeland potential vegetation groups (PVGs) and most of the rangeland problems or concerns which include cheatgrass and other annual plant infestations, noxious weeds, juniper encroachment, and sagebrush density. Of the three PVGs, dry shrublands are the most susceptible to degradation and are not as resilient as the other PVGs. Restoration activities, especially in these clusters and the dry shrubland PVG, are consistent with treatment of the rangeland areas identified in the* Scientific Assessment *as having the most problems. Clusters 1 and 6 have a high priority for emphasizing livestock forage production because of their proximity to ranching operations, minimal amount of resource conflicts (recreation vs. grazing for example), topography, and the availability of existing range improvements.*

TS-S24. Standard: Varies. See: A1/TE-S22	**TS-S24. Standard:** Same as Alternative 1.	**TS-S24. Standard:** Not applicable.				**TS-S24. Standard:** ***Inside reserves:*** Livestock grazing shall not be allowed in reserves unless livestock grazing use is needed to achieve the intent of the reserve, such as controlling noxious weeds or reducing fine fuels in altered sagebrush steppe. ***Outside reserves:*** Not applicable.

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TS-S25. Standard: Not Applicable.	**TS-S25. Standard:** Not Applicable.	**TS-S25. Standard:** Not applicable.				**TS-S25. Standard:** ***Inside reserves:*** Range improvement projects, such as juniper and conifer control, or seeding with introduced or native species, shall not be allowed in reserves unless they are needed to achieve the intent of the reserve. ***Outside reserves:*** Not applicable. ***Rationale:*** Since some of the reserves have been altered significantly by human effects it is logical to allow some human intervention to solve some of the human induced problems such as noxious weeds, which may not be solved in a reasonable timeframe by natural means, as long as the action meets the intent of the reserve.
TS-O16. Objective: Not Applicable.	**TS-O16. Objective:** Not applicable.	**TS-O16. Objective:** Not applicable.	**TS-O16. Objective:** Not applicable.	**TS-O16. Objective:** Conserve cool shrublands, dry shrublands and dry grasslands while producing livestock forage in Range Cluster 5. ***Rationale:*** *In Alternative 5, Range Cluster 5 is a livestock forage production priority area with moderate ecological integrity. Therefore, to produce forage while conserving the resource is consistent with the intent of this alternative and the basic rangeland health of the cluster.*	**TS-O16. Objective:** Not applicable.	**TS-O16. Objective:** Not applicable.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

AQ-O1. Objective:
Varies. See:
A1/AQ-O1
A1/AQ-O3
A1/AQ-O4
NW-O1
NW-O2
NW-O5

AQ-O1. Objective:
Same as Alternative 1, plus:
A2/AQ-O1
A2/AQ-O2
A2/AQ-O3
A2/AQ-O4

AQ-O1. Objective: Manage riparian and aquatic areas primarily to emphasize the restoration and maintenance of riparian and aquatic processes and functions. (See also EM-O3, RM-S1, RM-S4, RM-S7, RM-S10, RM-S14, and RM-S9.].

Rationale: *Riparian and aquatic areas are generally productive, complex areas that, through a variety of processes and functions, provide unique, limited habitats for many aquatic- and riparian-associated species.*

AQ-O2. Objective:
Varies. See:
A1/AQ-O1
A1/AQ-O2
NW-O1
NW-O2
NW-O3

AQ-O2. Objective:
Same as Alternative 1, plus:
A2/AQ-O1
A2/AQ-O2
A2/AQ-O3
A2/AQ-O4

AQ-O2. Objective: Maintain high quality and restorable aquatic and riparian areas to achieve conditions that support aquatic- and riparian-associated species.

Rationale: *Restorable areas are those degraded habitats that have historically supported self-sustaining native plant and animal populations or currently support such populations; have the potential to reasonably support re-established or increased future population levels and/or provide increased migration corridors, with proper management actions; and are considered to be important for contribution to the conservation of imperiled species and/or recovery of listed species.*

AQ-O3. Objective:
Varies. See:
A1/AQ-O2
NW-O1
NW-O2
NW-O3

AQ-O3. Objective:
Same as Alternative 1, plus:
A2/AQ-O1
A2/AQ-O2
A2/AQ-O3
A2/AQ-O4

AQ-O3. Objective: Protect high quality waters and identify and maintain habitats to meet aquatic, riparian, and terrestrial species, and social needs.

Rationale: *For the purposes of this document, high quality waters include waters whose quality is necessary to support threatened, endangered, candidate, and sensitive species restoration, conservation, or recovery; waters/watersheds used as sources of public drinking water; waters/watersheds where groundwater recharges to Sole Source Aquifers designated under the Safe Drinking Water Act; and waters whose quality is necessary to support all designated beneficial uses.*

AQ-O4. Objective:
Varies. See:
A1/AQ-O2
NW-O3

AQ-O4. Objective:
Same as Alternative 1, plus:
A2/AQ-O2

AQ-O4. Objective: In Category 1 sub-basins, maintain watershed health, aquatic health, aquatic habitat integrity and connectivity, and water quality. (See Map 2-35; See also EM-S7.)

Rationale: *Category 1 sub-basins provide the best opportunity to maintain large blocks of fully functioning aquatic/riparian ecosystems and associated connectivity. Conservation of these watersheds provides the best opportunity for long-term persistence of native aquatic assemblages and may be an important source of individuals repopulating other areas.*

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AQ-O5. Objective: Varies. See: A1/AQ-O1 A1/AQ-O3 A1/AQ-O4 NW-O1 NW-O2 NW-O3 NW-O5	**AQ-O5. Objective:** Same as Alternative 1, plus: A2/AQ-O4	**AQ-O5. Objective:** Restore watersheds and aquatic and riparian areas where natural watershed processes, functions, and conditions have been degraded.			
AQ-O6. Objective: Varies See: A1/AQ-O1 A1/AQ-O3 A1/AQ-O4 NW-O5	**AQ-O6. Objective:** Same as Alternative 1, plus: A2/AQ-O4	**AQ-O6. Objective:** Implement watershed restoration activities based on priorities established from Ecosystem Analysis at the Watershed Scale, where available, using "*A Framework for Analyzing the Hydrologic Condition of Watersheds*, version 2.2 (December 1996) or successors. ***Rationale:*** A Framework for Analyzing the Hydrologic Condition of Watersheds *was designed to provide a consistent approach for hydrologists and watershed specialists to follow when preparing information about hydrologic condition or function for interaction with interdisciplinary teams. The process parallels that of the federal guide and facilitates the development of ecosystem analysis.*			
AQ-O7. Objective: Varies. See: A1/AQ-O1 A1/AQ-O2 A1/AQ-O3 A1/AQ-O4 NW-O1 NW-O2 NW-O3 NW-O5	**AQ-O7. Objective:** Same as Alternative 1, plus: A2/AQ-O3	**AQ-O7. Objective:** In Category 2 sub-basins, maintain native aquatic species strongholds and high quality habitat and water, restore degraded habitat, and restore connectivity within and between watersheds where populations of native aquatic species are presently fragmented because of habitat loss or disruption. Improve watershed health and integrity and water quality in areas where natural watershed function and condition have been degraded. ***Rationale:*** *Category 2 sub-basins support important aquatic resources often with component watersheds classified as strongholds for one or multiple fish species. The integrity of the fish assemblage is generally high. This category may have watersheds where native aquatic species have been extirpated or are at risk for a variety of reasons. Connectivity among watersheds should still exist through the mainstream river system, or have a good chance of being restored, such that maintenance or restoration of life-history patterns and dispersal of individuals among watersheds is possible.*		**AQ-O7. Objective:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.
AQ-O8. Objective: Varies. See: A1/AQ-O2 NW-O1 NW-O2 NW-O3 NW-O5	**AQ-O8. Objective:** Same as Alternative 1, plus: A2/AQ-O1 A2/AQ-O3	**AQ-O8. Objective:** See AQ-O4, AQ-O7, AQ-O9.	**AQ-O8. Objective:** ***Inside timber and livestock priority areas:*** Conserve remaining native aquatic species strongholds and high quality habitat and water for federally listed threatened, endangered, and candidate riparian-associated and aquatic species while maximizing production activities. (See also AQ-O4.)	**AQ-O8. Objective:** Same as Alternative 3.	**AQ-O8. Objective:** Same as Alternative 3.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
				AQ-O8. Objective (cont): ***Outside timber and livestock priority areas:*** Same as Alternative 3.		
AQ-O9. Objective: Both: A1/AQ-O1 A1/AQ-O2 A1/AQ-O3 A1/AQ-O4 NW-O1 NW-O2 NW-O3 NW-O5	**AQ-O9. Objective:** Same as Alternative 1, plus: A2/AQ-O1	**AQ-O9. Objective:** In Category 3 sub-basins, maintain native aquatic species strongholds and high quality habitat and water. Maintain or improve water quality to sustain designated beneficial uses. ***Rationale:*** *Category 3 sub-basins are highly fragmented; however, some component watersheds support federally listed or other rare and sensitive fish. The opportunity for restoring mainstream connectivity is limited; however, opportunities may be present within or between component watersheds and mainstream rivers.*				**AQ-O9. Objective:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

Watershed & Riparian Restoration

AQ-O10. Objective: Varies. See: A1/AQ-O3 A1/AQ-O4 NW-O2	**AQ-O10. Objective:** Same as Alternative 1, plus: A2/AQ-O4	**AQ-O10. Objective:** Manage riparian vegetation to restore or maintain structure, age, and composition consistent with site potential.				
AQ-S1. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/AQ-G1 A1/AQ-G2	**AQ-S1. Standard:** Same as Alternative 1, plus: A2/AQ-S28	**AQ-S1. Standard:** Watershed restoration projects shall be designed and implemented to promote the long-term ecological integrity of ecosystems, conserve the genetic integrity of native species, promote the recovery of listed species, and contribute to attainment of RMOs.				**AQ-S1. Standard:** Areas that are in obvious need of watershed restoration shall be identified. Priorities shall be based on existing and potential risks to and effects on listed aquatic- or riparian-dependent species and their habitat, as well as on the likely effectiveness of the restoration effort.

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AQ-S2. Standard: Varies. See: A1/AQ-O4 A1/TE-G8 NW-S1 NW-S3 NW-G1 - G6	**AQ-S2. Standard:** Same as Alternative 1, plus: A2/AQ-S29	**AQ-S2. Standard:** Management activities shall be implemented to attain proper functioning condition (BLM Technical Report 1737-9 [1993] and 1737-11 [1994]) as a first step to move habitat conditions of streams, riparian areas, or lakes and ponds toward achieving terrestrial and aquatic objectives. ***Rationale:*** *Management practices such as grazing, recreation, fuels management and other forms of vegetative management are expected to be designed to provide for the health, form, and function of riparian systems. Determining Proper Functioning Condition (PFC) is an interdisciplinary process done in conjunction with ecosystem analysis at the landscape level. Riparian Management Objectives (RMOs) are generally instream and riparian attributes expressed as a single or range of values. These attributes will generally fall between PFC and biological potential. Attainment of PFC assures that stream and riparian areas function well and are on an improving trend. Riparian Management Objectives then become specific measures designed to support overall aquatic/riparian functions. Until PFC is attained, management priorities and options focus on reaching this threshold over time. The desired range of future conditions generally lie between the PFC and biological potential supported by RMOs. Management prescriptions will focus on attainment of this desired condition, not just the attainment of PFC.*	
AQ-S3. Standard: Varies. See: A1/AQ-O1 A1/AQ-S3 A1/TE-S19 NW-S3	**AQ-S3. Standard:** Same as Alternative 1, plus: A2/AQ-S28	**AQ-S3. Standard:** Not applicable.	**AQ-S3. Standard:** Watershed restoration plans shall be developed to put instream structures and road obliteration/reconstruction projects into context of all other planned watershed restoration. Plans shall address causes of degradation and should use the limiting factor analysis, currently under development by National Marine Fisheries Service. The plan also should include the following: - Site-specific NEPA analysis. - A biological evaluation/assessment for all "may affect" projects (as defined by the Endangered Species Act). - Certification by both a hydrologist and fishery biologist.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S4. Standard: Varies. See: A1/AQ-O1 A1/PE-O4 A1/AQ-S1	**AQ-S4. Standard:** Same as Alternative 1.	**AQ-S4. Standard:** Not applicable.				**AQ-S4. Standard:** If fine sediment RMOs **are met** and: If estimated sediment delivery is <20% over natural rates,then new activities with potential to produce sediment shall be compensated for through active restoration to abate an equivalent amount of sediment. If estimated sediment delivery is >20% over natural rates,then sediment delivery shall be reduced through passive and active restoration until compensated for with sediment abatement measures resulting in a net reduction in sediment delivery. If fine sediment RMOs are **not met** and: If estimated sediment delivery is <20% over natural rates,then sediment delivery shall be reduced through passive restoration until fine sediment RMOs are met or there is an improving trend for at least five years. Implement active restoration as needed to reduce sediment delivery.

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		AQ-S4. Standard (cont): If estimated sediment delivery is >20% over natural rates, then sediment delivery shall be reduced through passive restoration until it is less than 20% over natural rates and fine sediment RMOs are met or there is an improving trend for at least five years. Implement active restoration as needed to reduce sediment delivery. (See also Appendix 3-4)
AQ-S5. Standard: Varies. See: A1/AQ-S1 NW-S3	**AQ-S5. Standard:** Same as Alternative 1, plus: A2/AQ-S29	**AQ-S5. Standard:** Fish and wildlife habitat restoration and enhancement actions shall be designed and implemented to contribute to attainment of RMOs.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Aquatic Standards - Timber Management

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S6. Standard: Varies. See: A1/AQ-G2 NW-S1 NW-S2 NW-S3 NW-G1-G6	**AQ-S6. Standard:** Same as Alternative 1, plus: A2/AQ-S1	**AQ-S6. Standard:** Prohibit timber harvest, including fuelwood cutting, in RCAs except as described below: - Where catastrophic events such as fire, flooding, volcanic, wind, or insect damage result in degraded riparian conditions, allow salvage and fuel cutting in RCAs only where present and future woody debris needs are met, where cutting would not retard or prevent attainment of other RMOs and where adverse effects can be avoided to aquatic resources.	**AQ-S6. Standard: Zones 1, 2a, and 2b (RCA):** The primary purpose of RCAs shall be maintenance and restoration of riparian and instream processes and functions. Vegetation management actions in RCAs shall result in minimal ground disturbance and shall not result in degradation of aquatic and riparian resources. Vegetation management in Zones 1 and 2a shall be conducted only to restore or maintain riparian and instream processes and functions. (See also AQ-S7, AQ-S8.) For vegetation management within Zone 2b see Standard AQ-S10. Timely opportunities shall be provided to intergovernmental partners for agreement on vegetation management actions in RCAs. See Appendix 3-4 for discussions of processes, functions, and intents.	**AQ-S6. Standard: *Inside timber and livestock priority areas:*** There shall be no timber harvest within 20 feet of fish-bearing streams. Selective timber harvesting is permitted between 20 and 100 feet of fish-bearing streams and subject to the following conditions: - In riparian areas adjacent to perennial and intermittent streams, the maximum area that shall be considered for shade and temperature control is 75 feet from the active channel margin. Trees not required for present or future shade and temperature considerations may be selectively harvested.	**AQ-S6. Standard: Zones 1, 2a, and 2b (RCA):** Same as Alternative 4.	**AQ-S6. Standard: RCAs:** Prohibit timber harvest, including fuelwood cutting in RCAs and aquatic reserves, except as described below: - Allow timber extraction, including fuelwood cutting, from RCAs only when RMOs are attained and management standards can be met. Timber harvest shall result in neutral or beneficial effects to water quality, fish and other riparian-dependent resources. Ecosystem Analysis shall be completed prior to timber harvest and should show compelling scientific and logical reasons to assure timber harvest in RCAs would not degrade RMOs or result in adverse effects to clean water, fish, or other aquatic resources. (See objective EM-O4 and EM-S5 to EM-S14.)

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	AQ-S6. Standard (cont.): - Apply silvicultural practices for RCAs to acquire desired vegetation characteristics where needed to attain RMOs. Apply silvicultural practices in a manner that does not retard attainment of RMOs and that avoids adverse effects on aquatic resources.	**AQ-S6. Standard (cont.):** - In riparian areas adjacent to perennial and intermittent streams, the maximum area that should be considered for large woody debris recruitment is one effective tree height around all active channel migration zones. Trees not required for large woody debris recruitment may be selectively harvested. - To maintain nutrient cycles in riparian areas adjacent to perennial and intermittent streams, there shall be no burning, piling of slash, or soil disturbance within 100 feet of active channel margins. - To minimize sediment introduction into aquatic systems, there shall be no ground-skidding equipment within 50 feet of active channel margins in areas adjacent to perennial and intermittent streams. See also RM-S2.	**AQ-S6. Standard (cont.):** - When conducting silvicultural practices in RCAs as specified above, apply silvicultural practices only to control stocking, reestablish and culture stands, and acquire desired vegetative conditions necessary to improve RMOs. - When conducting silvicultural practices in RCAs as specified above, do not cut or harvest any tree species older than 150 years or with a diameter at breast height greater than 20 inches. Hazard trees that fit this description may be cut, but should be left on-site. - Where appropriate, apply silvicultural treatments to reduce the risk of severe wildfires in riparian areas that have fuel loading levels greater than expected for the biophysical setting.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
				AQ-S6. Standard (cont.): ***Outside timber and livestock priority areas*: Zones 1, 2a, and 2b (RCA):** Same as Alternative 4.		

AQ-S6. *Rationale:* *For Alternatives 4, 5 (outside timber and livestock priority areas) and 6, a Riparian Conservation Area (RCA) is comprised of Zones 1, 2a, and 2b. The purpose of Zone 1 is to maintain instream and riparian processes and functions. Zone 2a is a buffer area for Zone 1 against outside disturbances and supports additional riparian area processes and functions (see Appendix 3-4). Zone 2b is a slope-based buffer to further prevent delivery of sediment from surface erosion to the stream. Riparian Conservation Areas should not be abrupt and isolated zones due to management activities, but should grade gradually into upland areas as appropriate for the land and valley type. This is called* feathering. *Feathering RCAs refers to reducing the degree to which management activities end abruptly at the RCA boundary, thus making transitions between zones less distinct. Feathering is done to reduce edge effects, enhance stand stability, avoid abrupt transitions from one cover type to another, and restore vegetation and stand structure appropriate to the potential vegetation group. Feathering is important because the spatial arrangement and blending of these RCAs determine the function of a landscape as an ecological system.*

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AQ-S7. Standard: Varies. See: A1/AQ-G1 NW-S1 NW-S2 NW-S3 NW-G1 - G2	**AQ-S7. Standard:** Same as Alternative 1, plus: A2/AQ-S1	**AQ-S7. Standard:** Not applicable.	**AQ-S7. Standard:** **Zone 1:** Vegetation management shall be conducted to achieve or maintain conditions characteristic of stream and valley types. Large trees shall be retained regardless of species where necessary to meet aquatic and riparian objectives. Activities to restore and maintain aquatic and riparian processes and functions should consider important disturbance regimes including flooding, sediment and wood transport, volcanic activity, fire, insects, and disease. Commercial timber harvest in Zone 1 shall not occur unless agreed to through interagency consultation and unless timber harvest benefits riparian management objectives.	**AQ-S7. Standard:** ***Inside timber and livestock priority areas***: Not applicable. ***Outside timber and livestock priority areas:*** **Zone 1:** Same as Alternative 4.	**AQ-S7. Standard:** **Zone 1:** Same as Alternative 4.	**Q-S7. Standard:** Not applicable.

AQ-S7. *Rationale:* *The purpose of Zone 1 is maintenance of riparian and stream functions and processes. Large trees that are living, dying, or dead (standing and downed) are important in supporting aquatic and riparian functions and processes and have high ecological value in riparian areas. Large trees are lacking in many riparian areas across the ICBEMP area. Retention of large riparian trees of any species where they are in short supply is especially important for aquatic, riparian and soil functions. Since Zone 1 is not included in the suitable timber base, there will be no emphasis for commercial production from Zone 1. If forest products are removed and sold, activities need to meet the purpose of Zone 1.*

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1

AQ-S8. Standard:
Varies. See:
A1/AQ-G1
A1/TE-S13
NW-S1
NW-S2
NW-S3
NW-G1-G2

ALTERNATIVE 2

AQ-S8. Standard:
Same as Alternative 1, plus:
A2/AQ-S1

ALTERNATIVE 3

AQ-S8. Standard:
Not applicable.

ALTERNATIVE 4

AQ-S8. Standard:
Zone 2a: The primary purposes of Zone 2a are to provide a buffer to Zone 1 and to support additional riparian process and function. Vegetation management shall be conducted to:

- move stands toward mature and old forest conditions adapted to natural disturbance regimes as described for Zone 1 (see Tables 1 and 2 in Appendix 3-4);
- restore and maintain riparian processes and functions;
- provide for riparian and terrestrial community needs; and
- provide a vegetative transition for Zone 1 to reduce the risks from upslope disturbance.

ALTERNATIVE 5

AQ-S8. Standard:
Inside timber and livestock priority areas: Not applicable.

Outside timber and livestock priority areas: **Zone 2a:** Same as Alternative 4.

ALTERNATIVE 6

AQ-S8. Standard:
Zone 2a: Same as Alternative 4.

ALTERNATIVE 7

AQ-S8. Standard:
Not applicable.

AQ-S8. *Rationale:* *Many effects of riparian vegetation on aquatic systems decline with increasing distance from stream banks. However, riparian processes and functions such as microclimate, and protection and regulation of water quality and habitat for riparian and terrestrial species extend beyond Zone 1. Zone 2 also acts as a vegetative transition and buffer to upslope disturbances for Zone 1, for example, by providing vegetation structure that can dampen the effects of upslope fire, insects, and disease on riparian areas.*

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AQ-S9. Standard Varies. See: A1/AQ-G2	**AQ-S9. Standard:** Same as Alternative 1, plus: A2/AQ-S1	**AQ-S9. Standard:** Riparian Conservation Areas (RCAs) shall not be included in the suitable timber base, which is used to calculate the allowable sale quantity (ASQ).	**AQ-S9. Standard:** **Zones 1 and 2a:** Zones 1 and 2a shall not be included in the suitable timber base, which is used to calculate the allowable sale quantity. Zone 2b for perennial and intermittent streams may be included in the suitable timber base with vegetation management prescriptions consistent with riparian area management.	**AQ-S9. Standard:** ***Inside timber and livestock priority areas***: RCAs can be included in the suitable timber base, which is used to calculate the allowable sale quantity. ***Outside timber and livestock priority areas***: **Zones 1 and 2a:** Same as Alternative 4.	**AQ-S9. Standard:** **Zones 1 and 2a:** Same as Alternative 4.	**AQ-S9. Standard:** Same as Alternative 2. Also applies to unroaded areas >1,000 acres allocated for the production of clean water, and aquatic- and riparian-dependent species.
			AQ-S9. *Rationale:* *Zones 1 and 2a are managed for aquatic and riparian resources, and therefore are excluded from the suitable timber base, will have no scheduled timber harvest, and will not contribute toward the calculation of current ASQ.*			
AQ-S10. Standard: **Zone 2b:** Both: Varies. See: A1/AQ-G2 NW-S1 NW-S2 NW-S3 NW-G1-G2	**AQ-S10. Standard:** **Zone 2b:** Same as Alternative 1, plus: A2/AQ-S1	**AQ-S10. Standard:** Not applicable.	**AQ-S10. Standard:** **Zone 2b:** The primary purpose of Zone 2b is to provide an additional buffer to Zones 1 and 2a. When conducting vegetation management, it shall be conducted to: - limit sediment entry and overland flow of water into Zone 2a; - provide for riparian and terrestrial community needs; - move stands toward conditions adapted to natural disturbance regimes; and - provide a vegetative transition for Zone 2a to reduce the risks from upslope disturbance.	**AQ-S10. Standard:** ***Inside timber and livestock priority areas:*** Not applicable. ***Outside timber and livestock priority areas:*** **Zone 2b:** Same as Alternative 4.	**AQ-S10. Standard:** **Zone 2b:** Same as Alternative 4.	**AQ-S10. Standard:** Not applicable.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

AQ-S10. *Rationale:* *Valley slopes adjacent to Riparian Conservation Areas (RCAs) influence the quality and condition of riparian areas. These areas, if steep and erosive, can contribute sediment to riparian areas and can also function as buffers to erosion and land use disturbances. Many variables influence the effectiveness of slopes, including steepness, erosiveness, amount of ground cover, and number and kind of obstructions. Generally steeper slopes and more erosive soils have a greater potential to contribute sediment to riparian areas.*

Aquatic Standards - Grazing Management

AQ-S11. Standard:
Varies. See:
A1/AQ-G2
A1/TE-S10
A1/TE-S12
A1/TE-G8
A1/TE-G6
NW-S3
NW-G3
NW-G4
NW-G5
NW-G6

AQ-S11. Standard:
Same as Alternative 1, plus:
A2/AQ-S7

AQ-S11. Standard: The priorities for allotment management plan and grazing permit revisions shall be based on the sub-basin reviews where available (see EM-S1). The primary purpose of RCAs shall be protection, maintenance, and restoration of riparian and instream processes and functions. Vegetation management in RCAs shall be conducted to restore or maintain riparian and instream processes and functions, and to meet the intent of RCAs.

Rationale: *In rangelands, an RCA is comprised of the flood-prone width, which approximates the 100-year flood plain. (See Appendix 3-4.)*

AQ-S12. Standard:
Varies. See:
A1/TE-S12
A1/TE-G8
A1/TE-G11
A1/AQ-G2
A1/AQ-O4
NW-S3
NW-G3
NW-G4
NW-G5
NW-G6

AQ-S12. Standard:
Same as Alternative 1, plus:
A2/AQ-S7

AQ-S12. Standard: Grazing management shall achieve the aquatic, riparian, and terrestrial objectives by the following actions:
- If Proper Functioning Condition (PFC) is attained and Riparian Management Objectives (RMOs) have either been attained or there is measurable upward trend towards RMO attainment, then grazing prescriptions that allow measurable upward trend towards attainment or maintenance of RMOs and lentic functions and values shall continue to be used.
- If PFC or RMOs have not been attained and there is not measureable progressions toward their attainment, then grazing prescriptions that will result in substantial progress toward the recovery of stream and riparian areas shall be applied. Grazing practices should be reviewed as appropriate to assure that PFC and RMOs are attained.

AQ-S12. Standard:
Inside timber and livestock priority areas: See AQ-S2.

Outside timber and livestock priority areas: Same as Alternative 4.

AQ-S12. Standard:
Same as Alternative 4.

AQ-S12. Standard:
Suspend grazing in RCAs adjacent to streams that do not meet RMOs if grazing is shown to be a contributing factor to the diminishment of RMOs or is a factor that limits the rate of habitat recovery. (See also TS-S24, RM-S12, RM-S14.)

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AQ-S12. *Rationale:* *The intent of this standard is to ensure that grazing prescriptions facilitate the recovery of riparian and aquatic systems. In riparian areas the purpose is to reach Proper Functioning Condition and then continue improving to meet RMOs.*

AQ-S13. Standard: Varies. See: A1/AQ-G2 A1/TE-G8 A1/TE-G11 A1/TE-S12	**AQ-S13. Standard:** Same as Alternative 1, plus: A2/AQ-S9	**AQ-S13. Standard:** Livestock trailing, bedding, watering, loading, salting, and other handling efforts shall be limited to those areas and times that would not prevent attainment of RMOs or adversely affect aquatic resources. Livestock is limited to cattle, domestic horses, and domestic sheep that are not used for recreational purposes such as riding or packing.	
AQ-S14. Standard: Varies. See: A1/AQ-G2 A1/TE-S12 NW-G6	**AQ-S14. Standard:** Same as Alternative 1, plus: A2/AQ-S8	**AQ-S14. Standard:** New livestock handling and/or management facilities shall be located outside of RCAs. For existing livestock handling facilities inside RCAs, assure that facilities do not prevent attainment of RMOs. Facilities where RMOs cannot be met shall be relocated or closed.	
AQ-S15. Standard: Varies. See: A1/TE-S12 NW-S3 NW-G3 NW-G4 NW-G5 NW-G6	**AQ-S15. Standard:** Same as Alternative 1, plus: A2/AQ-S7	**AQ-S15. Standard:** Not applicable.	**AQ-S15. Standard:** Livestock grazing shall not occur in RCAs in or adjacent to designated critical habitat that contain perennially saturated meadows. (See also HA-O2, TS-S24, HA-S6, HA-S10.)
AQ-S16. Standard: Varies. See: A1/TE-S12 NW-S3 NW-G3	**AQ-S16. Standard:** Same as Alternative 1, plus: A2/AQ-S7	**AQ-S16. Standard:** Not applicable.	**AQ-S16. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Livestock grazing shall be suspended where riparian protection measures cannot be implemented because of: terrain; needed improvements (such as off-stream watering holes, or fencing) that are not being constructed; or lack of administration, funding, monitoring, or permittee cooperation. (See also TS-S24, RM-S12.)

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S17. Standard: Varies. See: A1/TE-G6 A1/TE-S12	**AQ-S17. Standard:** Same as Alternative 1, plus: A2/AQ-S10	**AQ-S17. Standard:** Wild horse management shall be adjusted to avoid impacts that prevent attainment of RMOs or adversely affect aquatic resources.				

Aquatic Standards - Minerals Management

AQ-S18. Standard: Varies. See: A1/HU-S7 A1/HU-S8 A1/HU-S9 A1/AQ-O1 A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/AQ-O5 NW-S2 NW-S3 NW-S9	**AQ-S18. Standard:** Same as Alternative 1, plus: A2/AQ-S11	**AQ-S18. Standard:** Adverse impacts to aquatic resources from locatable mineral operations should be avoided where practicable and shall be minimized in all cases. All locatable mineral operations shall comply with all pertinent federal and state laws. If a Notice of Intent indicates a mineral operation would be located in an Riparian Conservation Area (RCA) or an area that may affect an RCA, the effects of the activity on aquatic resources shall be considered in the determination of significant surface disturbance pursuant to 36 CFR 228.4 for the Forest Service and 43 CFR 3809.2-2 for the BLM. For operations in an RCA, operators shall take all practicable measures to restore and maintain fish and wildlife habitat which may be affected by the operations. Prior to beginning operations located in an RCA, under an approved plan of operations, submission of certification of compliance with laws and regulations related to mining, or other approval from other federal and state agencies, shall be required. When bonding is required, the cost of stabilizing, rehabilitating, and reclaiming the area of operations shall be considered in the estimation of bond amount.		**AQ-S18. Standard:** All new mining operations (ore body, waste rock, spent ore, tailing, roads, milling, chemical storage, housing, sand, gravel, etc.) must be located outside reserves and RCAs and must comply with all other ICBEMP standards.
AQ-S19. Standard: Varies. See: A1/HU-S7 A1/HU-S8 A1/HU-S9 A1/AQ-O1 A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/AQ-O5 NW-S2	**AQ-S19. Standard:** Same as Alternative 1, plus: A2/AQ-S12	**AQ-S19. Standard:** Structures, support facilities, and roads shall be located outside RCAs. Where no practicable alternative to siting facilities in RCAs exists, the facilities shall be located and constructed to minimize unavoidable impacts to RCAs and streams and minimize adverse effects on aquatic resources. Where no practicable alternative to road construction exists, roads shall be kept to the minimum necessary for the approved mineral activity. Those roads no longer required for current or foreseeable mineral or land management activities shall be closed, recontoured, and revegetated.		**AQ-S19. Standard:** If ongoing mining operations are located in a watershed that does not meet RMOs and if mining is shown to be a contributing factor to the diminishment of RMOs or is a factor that limits the rate of habitat recovery, then suspend special use permits to mining operations, as necessary, until problems are corrected.

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AQ-S20. Standard: Varies. See: A1/HU-S8 A1/HU-S9 A1/AQ-O1 A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/AQ-O5 NW-S2	**AQ-S20. Standard:** Same as Alternative 1, plus: A2/AQ-S13	**AQ-S20. Standard:** Where no practicable alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RCAs exists, these facilities should be located, designed, and managed in a manner that minimizes unavoidable adverse impacts to aquatic resources created by such mining operations, as described below. - Analyze waste material using the best conventional sampling methods and analytical techniques to determine its chemical and physical stability characteristics. - Locate and design waste facilities using the best conventional technology to ensure mass stability and prevent the release of acid or toxic materials except as in compliance with applicable pollution control or other statutes, regulations, plans and permits. Locate solid and sanitary waste facilities outside RCAs. - Monitor waste and waste facilities to confirm predictions of chemical and physical stability, and make adjustments to operations as needed to minimize unavoidable adverse impacts to aquatic resources and to attain RMOs. - Reclaim and monitor waste facilities to assure chemical and physical stability and revegetation to minimize unavoidable adverse impacts to aquatic resources, and to attain the RMOs. - Require reclamation bonds adequate to and restore, maintain, and protect fish and wildlife habitat, including measures to maintain long-term chemical and physical stability and successful revegetation, where practicable, of mine waste facilities.	**AQ-S20. Standard:** Transport and storage of toxic chemicals in watersheds occupied by federally listed threatened or endangered aquatic species shall be prohibited. In watersheds not occupied by federally listed threatened or endangered aquatic species, toxic chemical storage and transfer locations shall be in properly lined areas and shall be able to hold at least 1.5 times its storage capacity. All areas shall have proper leak detection equipment and alarms.
AQ-S21. Standard: Varies. See: A1/HU-S10 A1/HU-S11 A1/HU-S12 A1/HU-S13 A1/HU-S14 A1/HU-S15 A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 NW-S2	**AQ-S21. Standard:** Same as Alternative 1, plus: A2/AQ-S14	**AQ-S21. Standard:** For leasable minerals (oil, gas, and geothermal), surface occupancy shall be prohibited within RCAs, unless there are no practicable alternatives for location of surface facilities, RMOs can be attained, and unavoidable adverse impacts to aquatic resources can be minimized. Where feasible, adjust the operating plans of existing leases should be adjusted to (1) minimize unavoidable impacts that prevent attainment of Riparian Management Objectives and (2) minimize unavoidable adverse impacts to aquatic resources.	**AQ-S21. Standard:** New mines that have the potential to produce acid rock drainage (either in the ore body, pregnant ore storage area, waste rock storage area, or mine tailings storage area) should not be permitted. On-going mines that have the potential to produce acid rock drainage should change their operations to avoid this problem. Otherwise these mines should have their special use permits revoked.

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AQ-S22. Standard: Varies, See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/HU-S8 NW-S2	**AQ-S22. Standard:** Same as Alternative 1, plus: A2/AQ-S15	**AQ-S22. Standard:** Sand and gravel mining within RCAs should be permitted only if no practicable alternative exists, if the actions(s) will not retard or prevent attainment of RMOs, and if adverse effects to native aquatic species can be avoided.				**AQ-S22. Standard:** All mining operations shall have a completed restoration plan and be bonded sufficient to finance restoration such that affected aquatic habitats may be reestablished.
AQ-S23. Standard: Varies. See: A1/HU-S13 A1/IA-S1	**AQ-S23. Standard:** Same as Alternative 1, plus: A2/AQ-S16	**AQ-S23. Standard:** Inspection, monitoring, and reporting requirements for mineral activities shall be developed. Results of inspection and monitoring shall be evaluated and applied to modify mineral plans and permits as needed to minimize impacts that prevent attainment of RMOs and minimize unavoidable adverse effects on aquatic resources.				

Aquatic Standards - Recreation Management

AQ-S24. Standard: Varies. See: A1/HU-S2 A1/HU-S3 A1/AQ-S3 NW-S2	**AQ-S24. Standard:** Same as Alternative 1, plus: A2/AQ-S32	**AQ-S24. Standard:** Adverse effects from recreation facilities shall be prevented or minimized to ensure attainment of aquatic, terrestrial, and riparian objectives. Recreation facilities should be located outside of Riparian Conservation Areas. Recreation facilities may be located in RCAs only after all other practicable alternatives have been eliminated and Ecosystem Analysis at the Watershed Scale has been completed. For construction of minor recreation facilities that would create only transient effects and are in watersheds that do not require Ecosystem Analysis at the Watershed Scale, sub-basin review shall be used, where available, along with site-specific NEPA analysis. Also applies to RM-O2.	**AQ-S24. Standard:** ***Inside recreation priority areas:*** Adverse effects from recreation facilities shall be prevented or minimized to ensure attainment of aquatic, terrestrial, and riparian objectives. ***Outside recreation priority areas:*** Same as Alternative 3.	**AQ-S24. Standard:** Same as Alternative 3.	**AQ-S24. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

AQ-S24. ***Rationale:*** *The primary purpose of RCAs is the restoration and maintainence of riparian and instream processes and functions. It is, therefore, expected that recreation facilities will be located outside RCAs. Information from Ecosystem Analysis at the Watershed Scale, as appropriate, may identify exceptions. An intergovernmental collaborative process would help to ensure that exceptions do not compromise the purpose and function of the RCA.*

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AQ-S25. Standard: Varies. See: A1/HU-S2 A1/HU-S3 A1/AQ-S3 NW-S2	**AQ-S25. Standard:** Same as Alternative 1, plus: A2/AQ-S31	**AQ-S25. Standard:** Recreation facilities (including trails) and dispersed sites, shall be designed, constructed, and operated in a manner that does not retard or prevent attainment of RMOs and avoids effects on aquatic resources.	**AQ-S25. Standard:** ***Inside recreation priority areas:*** Recreation facilities (including trails) and dispersed sites, shall be designed, constructed, and operated in a manner that is consistent with attainment of RMOs. ***Outside recreation priority areas:*** Same as Alternative 3.	**AQ-S25. Standard:** Same as Alternative 3.	**AQ-S25. Standard:** Same as Alternative 3.
AQ-S26. Standard: Varies. See: A1/HU-S2 A1/HU-S3 A1/AQ-S3 NW-S2	**AQ-S26. Standard:** Same as Alternative 1, plus: A2/AQ-S33	**AQ-S26. Standard:** For existing recreation facilities inside RCAs, assure that facilities or use of facilities shall not prevent attainment of RMOs or adversely affect native aquatic species. Where RMOs cannot be met or adverse effects on aquatic resources cannot be avoided, recreation facilities shall be relocated or closed.	**AQ-S26. Standard:** ***Inside recreation priority areas:*** Existence or use of facilities inside RCAs shall be consistent with attainment of RMOs. ***Outside recreation priority areas:*** Same as Alternative 3.	**AQ-S26. Standard:** Same as Alternative 3.	**AQ-S26. Standard:** Same as Alternative 3.
AQ-S27. Standard: Varies. See: A1/HU-S2 A1/HU-S3 A1/AQ-S3 NW-S2	**AQ-S27. Standard:** Same as Alternative 1, plus: A2/AQ-S30	**AQ-S27. Standard:** Fish and wildlife interpretive and other user-enhancement facilities shall be designed, constructed, and operated in a manner that does not retard or prevent attainment of RMOs or adversely affect aquatic resources. For existing fish and wildlife interpretive and other user-enhanced facilities inside RCAs, assure that RMOs are met and adverse effects on aquatic resources are avoided. Where RMOs cannot be met or adverse effects on aquatic resources avoided, such facilities shall be relocated or closed.	**AQ-S27. Standard:** ***Inside recreation priority areas:*** New and existing fish and wildlife interpretive and other user-enhancement facilities within RCAs shall be designed, constructed, and operated in a manner that is consistent with attainment of RMOs. ***Outside recreation priority areas:*** Same as Alternative 3.	**AQ-S27. Standard:** Same as Alternative 3.	**AQ-S27. Standard:** Same as Alternative 3.

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Aquatic Standards - Fire Suppression/Fuels Management

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S28. Standard: Varies. See: A1/HU-S2 A1/HU-S3 A1/AQ-S3 NW-S2	**AQ-S28. Standard:** Same as Alternative 1, plus: A2/AQ-S34	**AQ-S28. Standard:** Dispersed and developed recreation practices that retard or prevent attainment of RMOs or adversely affect aquatic resources shall be adjusted. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting RMOs and avoiding adverse effects on aquatic resources, the practice or occupancy shall be eliminated.		**AQ-S28. Standard:** ***Inside recreation priority areas:*** Dispersed and developed recreation practices shall be consistent with attainment of RMOs. ***Outside recreation priority areas:*** Same as Alternative 3.	**AQ-S28. Standard:** Same as Alternative 3.	**AQ-S28. Standard:** Same as Alternative 3.
AQ-S29. Standard: Varies. See: A1/AQ-S1 A1/AQ-S3 A1/TE-G1 A1/TE-G3 NW-S2 NW-S3 NW-G2	**AQ-S29. Standard:** Same as Alternative 1, plus: A2/AQ-S17	**AQ-S29. Standard:** Fuel treatment and fire suppression strategies, practices, and actions shall be designed so as to not prevent attainment of RMOs, and to minimize disturbances of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could perpetuate or be damaging to long-term ecosystem function or aquatic resources.				**AQ-S29. Standard:** Impacts from suppression techniques and fire suppression personnel shall be minimized or avoided in areas where there is potential to adversely affect listed salmon, other riparian-dependent species, and their habitats. Every effort should be made to minimize or avoid stream channel and stream course disturbances, sedimentation, and actions that will result in increased water temperature.

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AQ-S30. Standard: Varies. See: A1/AQ-O5 A1/TE-S20 A1/TE-S21 A1/TE-S22 NW-S2	**AQ-S30. Standard:** Same as Alternative 1.	**AQ-S30. Standard:** Not applicable.	**AQ-S30. Standard:** The following shall apply to fire suppression activities: - Heavy equipment shall not be used within RCAs, except for the protection of life and property. - Other than hazard trees, trees shall not be felled within RCAs. - When constructing fire lines and transportation routes, avoid reopening revegetated roads within RCAs.
AQ-S31. Standard: Varies. See: A1/AQ-S1 A1/AQ-S3 A1/AQ-G1 A1/TE-G1 NW-S2	**AQ-S31. Standard:** Same as Alternative 1, plus: A2/AQ-S18	**AQ-S31. Standard:** Incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of RCAs. If the only suitable location for such activities is within the RCAs, an exemption may be granted following a review and recommendation by a resource advisor. The advisor would prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to aquatic resources a primary goal. An interdisciplinary team shall be used to predetermine incident base and helibase locations during pre-suppression planning	**AQ-S31. Standard:** An aquatics specialist shall be involved in the development of the Fire Situation Analysis (FSA) and the Escaped Fire Situation Analysis (EFSA), serving with or as the resource advisor. Locations for fire camps, staging areas, and fire base heliports shall be located outside RCAs wherever possible. An aquatics specialist shall be readily available to the Incident Commander and shall review shift plans to assess the potential effects of planned actions on aquatic species and habitat.

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Aquatic/Riparian Strategies

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
AQ-S32. Standard: Varies. See: A1/AQ-S1 A1/AQ-S3 A1/TE-G1 NW-S2	**AQ-S32. Standard:** Same as Alternative 1, plus: A2/AQ-S19	**AQ-S32. Standard:** Delivery of chemical retardant, foam, or additives to surface waters shall be prohibited. An exception may be warranted in situations where overriding immediate safety imperatives exist, or, following a review and recommendation by a resource advisor, when the action agency determines an escaped fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.				**AQ-S32. Standard:** Use of fire retardant chemicals and fuels shall be prohibited when potential for stream or wetland contamination exists.
AQ-S33. Standard: Varies. See: A1/AQ-S1 A1/AQ-S3 A1/TE-G2 NW-S2	**AQ-S33. Standard:** Same as Alternative 1, plus: A2/AQ-S20	**AQ-S33. Standard:** Prescribed burn projects and prescriptions shall be consistent with attainment of RMOs.				
AQ-S34. Standard: Varies. See: A1/TE-G2 A1/AQ-S1 A1/AQ-S2 A1/TE-S22 A1/TE-G12 NW-S2	**AQ-S34. Standard:** Same as Alternative 1, plus: A2/AQ-S1 A2/AQ-S20	**AQ-S34. Standard:** Not applicable.				**AQ-S34. Standard:** Burnout or backfire operations that increase fire intensities shall be prohibited within riparian habitat.
AQ-S35. Standard: Varies. See: A1/AQ-S3 A1/TE-S1 A1/TE-S2 A1/AQ-S3 NW-S2	**AQ-S35. Standard:** Same as Alternative 1, plus: A2/AQ-S21	**AQ-S35. Standard:** A team shall be established to develop a rehabilitation treatment plan to attain RMOs and avoid adverse effects on aquatic resources whenever RCAs are significantly damaged by a wildfire or a prescribed fire burning out of prescription.				**AQ-S35. Standard:** A rehabilitation team shall be assigned to all fires affecting aquatic resources. An aquatics specialist shall be assigned to emergency and non-emergency rehabilitation teams.

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AQ-S35. Standard (cont): Fire lines shall be water barred, seeded (preferably with native species), and otherwise treated to reduce erosion as they are completed.

An aquatics specialist shall review suppression and rehabilitation efforts to determine whether requirements and tactics identified in the FSA or EFSA were successfully implemented, and if the revegetation and rehabilitation of the burned area were successful.

When large fires affect more than ten percent of a subwatershed, a group of scientific experts shall be convened to prepare or update a peer-reviewed ecosystem analysis describing the short- and long-term effects from wildfire, fire suppression directions and actions, and area revegetation and rehabilitation. The team shall be composed of scientists from federal land management and regulatory agencies. Following the analysis the group should recommend additional appropriate actions for the burned or unburned areas within the watershed.

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Aquatic Standards - Lands/Permits/Facilities

AQ-S36. Standard:
Varies. See:
A1/AQ-S1
NW-S2

AQ-S36. Standard:
Same as Alternative 1, plus:
A2/AQ-S22

AQ-S36. Standard: For hydroelectric and other surface water development proposals, instream flows and habitat conditions that provide for maintenance of recreation opportunities, and restore or maintain riparian resources, favorable conditions of flow, and fish passage, reproduction, and growth shall be required. These flows shall be determined by analysis of the resources at the appropriate ecosystem scale. When flows are being determined for hydroelectric proposals, this analysis shall be coordinated with state and federal agencies that have authorities under Section 10 of the Federal Power Act. During licensing or relicensing of hydroelectric projects, stipulations (in Section 4[e] of the Federal Power Act) that achieve aquatic and riparian management objectives shall be submitted to the Federal Energy Regulatory Commission.

AQ-S36. Standard:
Issuance of additional water conveyance permits shall be prohibited in watersheds that support fish spawning/rearing habitat until instream flows are documented and shown to be adequate to accommodate both the needs of aquatic and riparian-dependent species and the amount of water being conveyed. The needs of fish are defined as those instream flows necessary to optimize all RMOs and essential features of habitat.

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AQ-S37. Standard: Varies. See: A1/AQ-S3 NW-S8 NW-G11 NW-G12	**AQ-S37. Standard:** Same as Alternative 1, plus: A2/AQ-S22	**AQ-S37. Standard:** Not applicable.	**AQ-S37. Standard:** Peer-reviewed ecosystem analysis shall be completed prior to issuing water conveyance permits. The ecosystem analysis and peer-review results shall agree that the water conveyance and its effects will not prevent attainment of RMOs or the maintenance or recovery of aquatic and riparian-dependent species. Where instream flows are inadequate to accommodate both the needs of aquatic and riparian-dependent species and RMOs and the amount of water being conveyed, new conveyance permits shall not be issued, and those conveyance permits already issued shall be revoked.
AQ-S38. Standard: Varies. See: A1/AQ-S3 NW-S2	**AQ-S38. Standard:** Same as Alternative 1, plus: A2/AQ-S22	**AQ-S38. Standard:** Not applicable.	**AQ-S38. Standard:** Instream flow requirements to meet the needs of aquatic and riparian-dependent species, shall be determined and established.
AQ-S39. Standard: Varies. See: A1/AQ-S2	**AQ-S39. Standard:** Same as Alternative 1, plus: A2/AQ-S22	**AQ-S39. Standard:** Not applicable.	**AQ-S39. Standard:** All water conveyances across federal land shall be catalogued and compared against state-granted water rights. Those without state water rights shall have their conveyance permits revoked.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S40. Standard: Varies. See: A1/IA-S1 A1/AQ-S3 NW-S2	**AQ-S40. Standard:** Same as Alternative 1, plus: A2/AQ-S24	**AQ-S40. Standard:** Not applicable.				**AQ-S40. Standard:** All water conveyance intakes shall meet established standards, or conveyance permits shall be revoked.
AQ-S41. Standard: Varies. See: A1/AQ-S2 NW-S2	**AQ-S41.** Standard: Same as Alternative 1, plus: A2/AQ-S22	**AQ-S41.** Standard: Not applicable.				**AQ-S41. Standard:** All water conveyance permits shall require the permittee to use the best methodology to conserve water during conveyance.
AQ-S42. Standard: Varies. See: A1/AQ-S2 NW-S2	**AQ-S42. Standard:** Same as Alternative 1, plus: A2/AQ-S22	**AQ-S42. Standard:** During licensing of hydroelectric projects, stipulations shall be submitted to the Federal Energy Regulatory Commission (FERC; as required under Section 4[e] of the Federal Power Act) requiring that existing ancillary facilities shall not prevent attainment of RMOs. Where this stipulation cannot be met, such facilities shall be relocated. ***Rationale:*** *Ancillary facilities are those features of a hydroelectric or other project that are not integral to its functioning. Such facilities include parking and staging areas, switchyards, interpretive facilities, etc. Diversion structures, pipelines or penstocks and powerhouses are generally not considered to be ancillary facilities.*				
AQ-S43. Standard: Varies. See: A1/AQ-S3 NW-S2	**AQ-S43. Standard:** Same as Alternative 1, plus: A2/AQ-S23	**AQ-S43. Standard:** Developments of new facilities that may adversely affect RCAs should not be permitted. New development proposals that address public needs or provide significant public benefits, such as power lines, pipelines, reservoirs, recreation sites, or other public works, shall be reviewed on a case-by-case basis. They may be approved when adverse effects can be minimized and mitigated, and when they are consistent with existing laws and regulations. These shall be planned to have the fewest possible impacts on RCAs. Developments shall be located to avoid degradation of habitat and adverse affects on RCAs. Existing developments in RCAs such as campgrounds, recreation residences, ski areas, utility corridors, and electronic sites, are considered existing uses with respect to RCA objectives and values, and may remain, subject to being consistent with other ICBEMP standards and objectives, as long as their purpose, use, and safety requirements are met. ***Rationale:*** *Many existing facilities are and have been located within RCAs for many years. These facilities are the result of choices and investments associated with local or site-specific decisions, development plans, permits, or other conveyances. This EIS is generally aimed at addressing landscape and watershed level issues, not site-specific facilities. As these facilities are operated, they shall comply with existing laws, regulations and policies.*				

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AQ-S44. Standard: Varies. See: A1/AQ-S3 NW-S2	**AQ-S44. Standard:** Same as Alternative 1, plus: A2/AQ-S24	**AQ-S44. Standard:** Leases, permits, rights-of-way, and easements shall be issued to avoid effects that would be inconsistent with or prevent attainment of the RMOs and to avoid adverse effects on aquatic resources. Where the authority to do so was retained, existing leases, permits, rights-of-way, and easements should be adjusted to eliminate effects that would retard or prevent attainment of the RMOs or adversely affect aquatic resources. If adjustments are not effective, the activity shall be eliminated. Where the authority to adjust was not retained, changes in existing leases, permits, rights-of-way, and easements shall be negotiated to eliminate effects that would prevent attainment of the RMOs or adversely affect aquatic resources. Priority for modifying existing leases, permits, rights-of-way, and easements would be based on the current and potential adverse effects on aquatic resources and the ecological value of the riparian resources affected.	**AQ-S44. Standard:** Not applicable.

Aquatic Standards - Additional Riparian Area Management

AQ-S45. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 NW-S2	**AQ-S45. Standard:** Same as Alternative 1, plus: A2/AQ-S26	**AQ-S45. Standard:** Not applicable.	**AQ-S45. Standard:** Transport of toxic chemicals along aquatic and riparian-dependent species migration, rearing, and spawning streams and their tributary streams should be either eliminated or the risk of a toxic spill reduced to an insignificant level.

AQ-S46. Standard: Each land management unit shall develop a contingency plan identifying procedures to be initiated should a chemical spill or contamination occur, and a plan and schedule for principal personnel to receive chemical spill training in initiating and completing the contingency plan.

AQ-S47. Standard: Varies. See: A1/AQ-S3 NW-S2	**AQ-S47. Standard:** Same as Alternative 1, plus: A2/AQ-S25	**AQ-S47. Standard:** Herbicides, pesticides, and other toxicants and chemicals shall be applied in a manner that does not retard or prevent attainment of RMOs and avoids adverse effects on aquatic resources.

AQ-S48. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 NW-S2	**AQ-S48. Standard:** Same as Alternative 1, plus: A2/AQ-S26	**AQ-S48. Standard:** Storage of fuels and other toxicants shall be prohibited within RCAs. Refueling shall be prohibited within RCAs unless there are no other alternatives. Refueling sites within RCAs and spill containment plans shall be approved.

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S49. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 NW-S2	**AQ-S49. Standard:** Same as Alternative 1, plus: A2/AQ-S27	**AQ-S49. Standard:** Water drafting sites shall be located to avoid adverse effects on aquatic resources and instream flows, and in a manner that does not retard or prevent attainment of RMOs.				
AQ-O11. Objective: Varies. See: A1/AQ-O3 A1/AQ-O5 A1/TE-G8 NW-O1 NW-O2	**AQ-O11. Objective:** Same as Alternative 1, plus: A2/AQ-O4	**AQ-O11. Objective:** Manage grazing in wetland areas to minimize soil compaction, maintain vegetative cover, and maintain native and desired non-native species composition in order to prevent impairment of wetland functions and values.				
AQ-O12. Objective: Varies. See: A1/TE-G8 A1/AQ-O2 NW-O1 NW-O2	**AQ-O12. Objective:** Same as Alternative 1, plus: A2/AQ-O1	**AQ-O12. Objective:** Manage grazing and human activities to minimize disturbance of redds for candidate and sensitive species.				
AQ-S50. Standard: Varies. See: A1/TE-G8 A1/TE-G11 A1/AQ-S3 A1/AQ-G1 NW-S2 NW-G3	**AQ-S50. Standard:** Same as Alternative 1, plus: A2/AQ-S7	**AQ-S50. Standard:** Livestock access shall be managed to prevent unauthorized (under the Endangered Species Act) physical disturbance to redds for threatened, endangered, and proposed species of fish. Incidental disturbance to threatened or endangered species in some cases may be authorized through the consultation or conferencing process.				

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AQ-S51. Standard: Varies. See: A1/TE-G8 A1/TE-G11 A1/AQ-S3 A1/AQ-G1 NW-S2 NW-G3	**AQ-S51. Standard:** Same as Alternative 1, plus: A2/AQ-S7	**AQ-S51. Standard:** Livestock access and human activities shall be managed to take all reasonable measures to minimize adverse impacts on redds for candidate and sensitive species. ***Rationale:*** *Redds for candidate and sensitive species (redband trout, westslope cutthroat, and Yellowstone cutthroat trout) are susceptible to disturbance by livestock and human activities. Occurrence of these species should alert managers to adjust management actions accordingly to minimize impacts.*

Water Quality

AQ-O13. Objective: Varies. See: A1/AQ-O1 A1/AQ-S1 A1/HU-O6 A1/HU-O7 NW-O1 NW-O5	**AQ-O13.** Objective: Same as Alternative 1.	**AQ-O13.** Objective: Maintain water quality where it presently meets EPA-approved state and, as applicable, EPA-approved tribal water quality standards (that is, designated instream uses and the level of water quality necessary to protect the uses). Improve water quality where it does not meet EPA-approved state and, as applicable, EPA-approved tribal water quality standards due to management on Forest Service- or BLM-administered lands. ***Rationale:*** *Mandates of the Clean Water Act establish the EPA as administrator and states as implementors of the Act. The states designated the Forest Service and BLM to manage the requirements of the Clean Water Act on lands they administer, but primacy in implementing the Clean Water Act is retained by the states. The EPA has final approval of state water quality standard and responsibility of other Clean Water Act mandates. The Clean Water Act authorizes the EPA to treat an Indian tribe as a state for purposes of carrying out requirements of the Act, including establishment of water quality standards on tribal lands. Once approved by EPA, the standards become the applicable standards for tribal waters.*

AQ-S52. Standard: Where Outstanding Resource Waters are designated by a state or tribe, existing water quality shall be maintained.

Rationale: *This standard requires the Forest Service and BLM to continue to comply with existing state law. Few waters are currently designated as Outstanding Resource Waters (one water body in Oregon is proposed for designation and none in Washington are currently designated as such). Under Oregon Administrative Rules, the Department of Environmental Quality developed draft guidance for Outstanding Resource Waters. This guidance states that waters* nominated *for designation by the Environmental Quality Commission would receive interim protection until they are legally designated and management plans are developed. Water bodies that are* designated *would be managed for no degradation of existing water quality. No special management is required for* proposed *water bodies.*

AQ-S53. Standard: Where waters exceed applicable water quality standards, state or tribal anti-degradation requirements shall be met.

AQ-S54. Standard: Within watersheds with Water Quality Limited Segments (as defined by Section 303(d) of the Clean Water Act) management activities shall be implemented in compliance with state-developed or, when applicable, EPA-developed total maximum daily loads (TMDLs) with the intent to restore water quality to meet state or tribal water quality standards. Provide an early opportunity for intergovernmental collaboration in the development of TMDLs.

AQ-S55. Standard: Not applicable.	**AQ-S55. Standard:** Not applicable.	**AQ-S55. Standard:** The state Priority Lists for Water Quality Limited Segments shall be incorporated into the intergovernmental prioritization process at the sub-basin and watershed scales. (See also EM-S3, EM-S1.)

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AQUATIC/RIPARIAN STRATEGIES

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
AQ-S56. Standard: Varies. See: A1/AQ-S2 A1/AQ-S3 A1/AQ-G2 NW-S2	**AQ-S56. Standard:** Same as Alternative 1.	**AQ-S56. Standard:** Where EPA-approved state and, as applicable, EPA-approved tribal water quality standards are not being met due to management on Forest Service- or BLM-administered lands, management activities shall be adjusted as necessary to meet water quality standards. Adjustments shall be documented and coordinated with the appropriate state agencies and/or tribal governments. ***Rationale:*** *Tribes and states are both considered by the EPA to be implementors of the Clean Water Act under Section 518. Tribal water quality standards would be developed for waters on lands in a Reservation, not for waters outside Reservations, and would be sent to EPA for approval. Court decisions indicate that landowners upstream of Reservations with approved water quality standards would have to abide by those standards. There are currently three EPA-approved Tribal water quality standards in the project area, all in Washington. Other Tribes are in the process of developing standards. Proposed standards or changes to standards by states or tribes require public review and must be scientifically based as part of the approval process.*				
AQ-O14. Objective: Varies. See: A1/AQ-O1 NW-O1 NW-O5	**AQ-O14. Objective:** Same as Alternative 1.	**AQ-O14. Objective:** Restore Water Quality Limited Segments by developing recommended management actions that are supported by ecosystem analysis at an appropriate scale, to assist states in: 1) listing and delisting Water Quality Limited Segments 2) establishment of phased total maximum daily loads for validated Water Quality Limited Segment waterbodies. ***Rationale:*** *Ecosystem analysis establishes a consistent context for water quality conditions and protection of beneficial uses. Ecosystem Analysis at the Watershed Scale provides the hydrologic characterization, identification of pollutant sources, and restoration capabilities in the watershed which is a fundamental step in accurate development of TMDLs. Recommendations from Ecosystem Analysis will be incorporated into the management actions to restore or mitigate contributing sources of water pollution from lands administered by the Forest Service or BLM. In the absence of Ecosystem Analysis, develop recommendations from site-specific NEPA analysis before finalizing EA/EISs using the following tools:* A Framework for Analyzing the Hydrologic Condition of Watersheds; Water Quality Modules *(draft document for developing the hydrologic portion of the Ecosystem Analysis); supplements to the* Federal Guide for Ecosystem Analysis at the Watershed Scale; *and available water quality data.*				

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Terrestrial and Aquatic Species and Habitats

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
HA-O1. Objective: Varies. See: A1/HU-O6 NW-O2 NW-O3 NW-O5 NW-O6 NW-O8 NW-O9 NW-O10 NW-O11 NW-O12	**HA-O1. Objective:** Same as Alternative 1 plus: A2/AQ-O1 A2/AQ-O2 A2/AQ-O3 A2/AQ-O4	**HA-O1. Objective:** Restore and/or maintain habitat conditions at or above a level capable of supporting healthy, sustainable, and usable species and resources to meet the federal government's responsibility. (See also HA-O2) ***Rationale:*** *A primary concern of Indian tribes is how the federal government will fulfill its trust responsibilities assumed when treaties, executive orders, and agreements were signed. At issue is the availability of trust resources in sufficient quantities to allow harvests in accordance with those agreements. This includes ceremonial, subsistence, social, and commercial needs of tribes. In light of federal trust responsibilities, managing habitat for resources to which tribes have a reserved right to access becomes more important. American Indians continue to practice cultural traditions on federal lands to maintain their community socioeconomic well-being and cultural survival. (See Appendix 1-2)*					

Viable Populations

HA-O2. Objective: Varies. See: A1/TE-O6 A1/AQ-O2 NW-O2 NW-O3 NW-O5 NW-O6 NW-O8 NW-O9 NW-O10 NW-O11 NW-O19 NW-O20	**HA-O2. Objective:** Same as Alternative 1 plus: A2/AQ-O1 A2/TE-O2 A2/TE-O3 A2/TE-O4 A2/TE-O5 A2/TE-O6 A2/TE-O7	**HA-O2. Objective:** Provide habitat capable of (1) supporting viable populations of plant and animal species, (2) contributing to recovery of listed species, and (3) supporting productive and diverse plant and animal populations and communities to meet social needs. Management, including restoration, of habitat should include consideration of riparian areas, lentic wetlands, and upland forest, shrub and grassland habitats. Amount, quality, and distribution of these habitats should be considered including their fragmentation, juxtaposition to other habitats, and connectedness; the influence of roads; and the ecosystem processes that shape habitat. For scarce habitats, management should focus on restoration of degraded areas capable of becoming high quality and areas that are currently of high quality. In all habitat management activities, recognize the importance of species functions, native species assemblages, centers of biodiversity, endemic plants and animals, rare plants and animals, disjunct vertebrates, and species that occur at the edge of their ranges. ***Rationale:*** *A viable population has the estimated numbers and distribution of reproductive individuals (both current and projected) to provide for a self-sustaining population with a sufficiently high likelihood of continued existence at a high enough level that listing of the species under the Endangered Species Act does not become warranted. A "recovered" listed species is considered to be viable when it is removed from the Endangered Species list. (See Appendix 4-2.)* *Habitat restoration could focus on aspen communities, planting and regeneration of cottonwood and willow, and regeneration of shrub species, as appropriate to the biophysical environment. Attention should be given to maintaining species, species assemblages, and ecosystems at the edge of their ranges in the project area. Such peripheral areas often provide locations important for genetic diversity and evolution.* *A population that meets social needs is one whose current and projected distribution and numbers allow human uses while sustaining and / or increasing plant and animal population levels. See Chapter 2 for further discussion. (Note: Further refinement of terrestrial species needs will likely occur prior to releasing the Final EIS.)*

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TERRESTRIAL AND AQUATIC SPECIES AND HABITATS

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
HA-S1. Standard: Varies. See: A1/TE-S19 NW-S7 NW-S9 NW-S10 NW-S11 NW-G15 NW-S12 NW-S13 NW-S14 NW-S15 NW-S20 NW-S24 NW-S25 NW-S26 NW-S37 NW-S38	**HA-S1. Standard:** Same as Alternative 1 plus: A2/AQ-S11 A2/TE-S6 A2/TE-S7	**HA-S1. Standard:** Habitats shall be managed to foster long-term viable populations, in full recognition of the ecological importance of assemblages of species with known viability concerns. Special management emphasis shall be on the edges of these species ranges where the highest levels of species variation and adaption occurs.				
HA-S2. Standard: Varies. See: A1/TE-S13 A1/TE-S16 A1/TE-S17 AQ-TE-G8 NW-S1 NW-S3 NW-S9 NW-S10 NW-S30	**HA-S2. Standard:** Same as Alternative 1. plus: A2/TE-S6 A2-TE-S7	**HA-S2. Standard:** Management activities shall: 1) foster restoration of vegetation structure and composition, 2) foster restoration of linkage zones, and 3) increase patch size within and between similar habitats, to reduce fragmentation and to provide for viable populations of terrestrial species. Fragmentation shall be reduced within dry shrub, cool shrub, dry grass, and late/old forest where special status species occur.	**HA-S2. Standard:** ***Inside wildlife priority areas:*** Same as Alternative 3. ***Outside wildlife priority areas:*** Not applicable	**HA-S2. Standard:** Same as Alternative 3.	**HA-S2. Standard:** Same as Alternative 3.	

Rationale: *These plant communities are highly departed in frequency, connectivity, and composition from historical levels and conditions. Consequently associated species of native flora and fauna have declined or been locally extirpated. Several of these species are of major management concern.*

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HA-S3. Standard: NW-S30	**HA-S3. Standard:** Same as Alternative 1, plus: A2/TE-S6 A2-TE-S7	**HA-S3. Standard:** Terrestrial species habitats shall be restored or maintained so that terrestrial species can move freely within and between blocks of habitats for the purpose of genetic interchange, emigration, and immigration.	**HA-S3. Standard:** ***Inside wildlife priority areas:*** Same as Alternative 3. ***Outside wildlife priority areas:*** Not applicable	**HA-S3. Standard:** Same as Alternative 3.	**HA-S3. Standard:** ***Inside reserves:*** Same as Alternative 3. ***Outside reserves:*** Not applicable.
		Rationale: *The frequency, connectivity, and composition of forestlands and rangelands are vastly different from historical levels and conditions. This is especially true in multi- and single-layer late/old forest and native rangelands. Restoration of late/old forest and native rangelands is needed to improve their frequency and connectivity and to allow wildlife species to move freely between blocks of these habitat types.*			
HA-S4. Standard: NW-S30	**HA-S4. Standard:** Same as Alternative 1, plus: A2/TE-S6 A2/TE-S7	**HA-S4. Standard:** At known habitat bottlenecks, manage to improve/restore linkages between and within blocks of federal land ownership. Land exchanges should be used to mitigate "bottleneck" problems.	**HA-S4. Standard:** ***Inside wildlife priority areas*** Same as Alternative 3. ***Outside wildlife priority areas:*** Not applicable.	**HA-S4. Standard:** Same as Alternative 3.	**HA-S4. Standard:** Same as Alternative 3.
		Rationale: *The Terrestrial Staff of the Science Integration Team analyzed the project area and developed a map of habitat "bottlenecks" considering all potential vegetation groups. These bottlenecks tend to occur where major interstate freeways or state highways cross large mountain ranges (for example, Snoqualmie Pass and Lolo Pass). Federal ownership decreases along the transportation corridors where they cross the mountains. The change in ownership from federal to private lands results in significant changes in vegetation patterns in those areas, as well as major barriers to natural movements of wildlife species. One method of addressing the change in land use pattern is conducting mutually acceptable land exchanges in areas with known bottlenecks.*			
HA-S5. Standard: Varies. See: A1/TE-S13 NW-S24 NW-S25 NW-S26 NW-S29 NW-G29 NW-S30 NW-S31 NW-G20 NW-S32 NW-S28	**HA-S5. Standard:** Same as Alternative 1. plus: A2/TE-S2	**HA-S5. Standard:** Forest Service Regional and BLM State offices shall develop mature / old forest structural definitions and criteria for all potential vegetation types, taking into account local site conditions, using ranges for the following attributes, at a minimum: - number of large trees (including those necessary for future snag recruitment), - number of snags, - amount of downed woody material, - amount and size of gaps / openings, - number of canopy layers, - native shrub / herb components.			

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TERRESTRIAL AND AQUATIC SPECIES AND HABITATS

ALTERNATIVE 1

HA-S6. Standard:
Varies. See:
A1/TE-S13
NW-S28
NW-S29
NW-S30
NW-S31
NW-S17
NW-G20
NW-S32
NW-S24
NW-S25
NW-S26

ALTERNATIVE 2

HA-S6. Standard:
Same as Alternative 1.
plus:
A2/TE-S1
A2/TE-S2
A2/TE-S3
A2/TE-S4
A2/TE-S5
A2/TE-S6
A2/TE-S7
A2/TE-S8

ALTERNATIVE 3

HA-S6. Standard: Administrative units (Forest/ BLM District level or higher) should conduct analyses and produce strategies to provide for adequate distribution, occurrence, and connectivity of mature/old structure stands. Analysis should be part of ecosystem analysis (see EM-O1 and EM-O3). In the absence of this analysis, the following apply: Retain large remnant trees in mature and old, single- and multi-layer stands 100 acres or larger consistent with the desired range of future conditions (Tables 3-1 and 3-2). Ensure that mature/old stands are connected within the watersheds and similar stands in adjacent watersheds. This connectivity should be in a contiguous network pattern in two or more directions. Ensure that mature/old structures are connected by stands in which medium diameter or larger trees are common and canopy closures are within the top 1/3 of site potential. Stand widths should be at least 400' at their narrowest point. The only exception to stand width is when it is unlikely to meet 400 feet with current vegetative structure and these narrower stands are the only connections available. In the case of lodgepole pine, consider medium to large trees as appropriate diameters to this stand type.

ALTERNATIVE 4

ALTERNATIVE 5

HA-S6. Standard:
Inside wildlife priority areas:
Same as Alternative 3.

Outside wildlife priority areas: Administrative units should conduct analyses and produce strategies to provide for adequate distribution, occurrence, and connectivity of mature/old structure stands. Analysis should be part of ecosystem analysis. (See also EM-O1 and EM-O3.)

ALTERNATIVE 6

HA-S6. Standard:
Same as Alternative 5 outside wildlife priority areas.

ALTERNATIVE 7

HA-S6. Standard:
Inside reserves: See TS-S14 and TS-S20 for direction.

Outside reserves: Same as Alternative 3.

Rationale: *The* Landscape Dynamics *(Hann et al. 1996)* chapter of the AEC *found that in most cases the current amount of late-seral forest ecosystems is below the historic range of variability. As a whole, the project area appears to be more fragmented than the historical landscape, with indices for large patches and mean patch size decreasing.*

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HA-S7. Standard:
Varies. See:
A1/TE-S14
NW-S17
NW-S19
NW-S21
NW-S22
NW-S24
NW-S25
NW-S26
NW-S27
NW-S28
NW-S29
NW-G29
NW-S30
NW-S31
NW-G20
NW-S32
NW-S37
NW-S38

HA-S7. Standard:
Same as Alternative 1, plus:
A2/TE-S4
A2/TE-S9

HA-S7. Standard: Prior to conducting vegetation management actions that have potential effect on existing snag levels and recruitment, administrative units (Forest/ BLM District level or higher) shall review existing or conduct new local snag analysis to develop standards appropriate for local conditions using current information from the literature, to ensure snag determinations meet species needs. This analysis shall address snag numbers, diameter, height, decay class, species, and distribution. Snags should be well distributed throughout the landscape and, where possible, left as patches. It is desirable to leave green replacement trees in the same patches. Snag determinations shall be patterned after historical conditions for vegetation communities and include consideration of wildlife species needs and current conditions. Locally developed standards shall specify how snags are to be treated under all types of management actions (for example, harvest, thinning, salvage, and prescribed fire). In the absence of this analysis, the following shall be provided (applies to lands where forest management activities occur). In areas where these numbers are not attainable, provide amounts as close as possible, substitute other species where possible to meet numbers listed, and document why conditions cannot be met. (See also PE-S1 and PE-S3.)

Dry Forest	
Ponderosa pine with >30% canopy closure	4 snags acre > 10" dbh, 25+% of these > 20" dbh
Ponderosa pine with <30% canopy closure because of dry sites	2 snags/acre > 10" dbh, 25+% of these > 20" dbh
Grand fir/Douglas fir On pine sites	4 snags/acre > 10" dbh, 25+% of these > 20" dbh
Moist Forest	
Mixed conifer	6 snags/acre > 10" dbh, 25+% of these > 20" dbh
Cold Forest	
Lodgepole pine	6 snags/acre > 10" dbh
Spruce/Fir	6 snags/acre > 10" dbh, 25+% of these > 20" dbh

HA-S7. Standard: ***Inside timber and livestock priority areas:*** Develop snag standards appropriate for local conditions and management priority.

Outside timber and livestock priority areas: Same as Alternative 3.

HA-S7. Standard:
Same as Alternative 3.

HA-S7. Standard:
Same as Alternative 3.

HA-S7. Rationale: *This standard is not intended to require another level of analysis, but, rather to include snags in site-specific NEPA analysis that normally occurs prior to vegetation management. Emphasis is on retainment of snags, default snag numbers are listed as a starting point, with the acknowledgement that administrative units could and should develop more appropriate numbers with local data or analysis.*

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TERRESTRIAL AND AQUATIC SPECIES AND HABITATS

ALTERNATIVE 1

HA-S8. Standard:
Varies. See:
A1/TE-S15
NW-S27
NW-S28

ALTERNATIVE 2

HA-S8. Standard:
Same as Alternative 1. plus:
A2/TE-S9
A2/TE-S4

ALTERNATIVE 3

HA-S8. Standard: Prior to conducting vegetation management actions that have potential effect on existing downed wood levels, administrative units (Forest/ BLM District level or higher) shall review existing or conduct local analysis to develop standards appropriate for local conditions using current information from the literature, to ensure downed wood determinations meet species needs. This analysis shall address average not minimum downed wood amounts and size (diameter and length) of pieces by potential vegetation group, distribution, species, and replacement through time. Downed wood determinations shall be patterned after historic conditions for vegetation communities and include consideration of wildlife species' needs, soil productivity, and current conditions. Locally developed standards shall also specify how downed wood is to be treated under various management actions (for example, harvest, thinning, salvage, and prescribed fire). In the absence of this analysis, the following shall be provided (applies to lands where forest management activities occur). In areas where these numbers are not attainable, provide amounts as close as possible to those listed, substitute other species where possible to meet numbers listed and document why conditions cannot be met. See PE-S1, S3.

Dry Forest
Ponderosa pine — 6 logs/acre > 10" average diameter, 25+% of these >20" ave. diameter

Moist Forest
Mixed conifer — 33 logs/acre > 15"average diameter with an average length of 35 feet. Of these, 40% should be > 20".

Cold Forest
Lodgepole pine — 20 logs/acre > 10"average diameter with an average length of 30 feet. Largest logs available should be left.

In addition to the above, hollow logs have particular importance for native plants and animals and should be well distributed across habitats where they occur.

ALTERNATIVE 4

ALTERNATIVE 5

HA-S8. Standard:
Inside timber and livestock priority areas: Develop downed wood standards appropriate for local conditions and management priority.

Outside timber and livestock priority areas: Same as Alternative 3.

ALTERNATIVE 6

HA-S8. Standard:
Same as Alternative 3.

ALTERNATIVE 7

HA-S8. Standard:
Same as Alternative 3.

HA-S8. Rationale: *Coarse woody debris is not only important to a wide variety of wildlife species, it is essential for soil productivity, and supplies food and habitat to a large number of invertebrates and microorganisms including mychorrizae. It influences the carbon cycle, hydrologic cycle, fire cycle, nutrient cycle, food web, and other important processes. Coarse woody debris will not be evenly distributed in size or amount across the landscape or across the project area. It will vary with topographical features, climate, slope, aspect, habitat type, successional stage, management practices and many other factors. To reduce redundancy and oversimplification of standards, HA-S8 will be integrated with PE-S1 before the final EIS is released.*

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HA-S9. Standard: Varies. See: A1/TE-S14 A1/TE-S15 NW-S29 NW-G29 NW-S31 NW-G20 NW-S32	**HA-S9. Standard:** Same as Alternative 1, plus: A2/TE-S9	**HA-S9. Standard:** Firewood programs shall be managed to be consistent with snag and downed wood standards (HA-S7, HA-S8, PE-S1, PE-S3, and PE-S2). This standard shall also be consistent with AQ-O1.			
HA-S10. Standard: Varies. See: A1/TE-S10 A1/TE-G8	**HA-S10. Standard:** Same as Alternative 1.	**HA-S10. Standard:** Restore frequency of distribution and ecological integrity of native stands of mountain mahogany, bitterbrush, and quaking aspen. Also applies to TS-O2 and TS-O6. ***Rationale***: *Improper livestock grazing and changes in fire cycles are only two of the known causes in changes in frequency, productivity, and vigor in these plant species. A wide variety of wildlife species are dependent on these native stands for food and cover.*	**HA-S10. Standard:** ***Inside wildlife priority areas:*** Same as Alternative 3. ***Outside wildlife priority areas:*** Not applicable.	**HA-S10. Standard:** Same as Alternative 3.	**HA-S10. Standard:** ***Inside reserves:*** Not applicable. See TS-O6 for direction. ***Outside reserves:*** Same as Alternative 3.
HA-S11. Standard: Varies. See: A1/TE-G8 A1/TE-G9 A1/TE-G11 A1/TE-S16 A1/TE-S17	**HA-S11. Standard:** Same as Alternative 1.	**HA-S11. Standard:** Restore native plant community composition, vigor, productivity and ecological integrity of important wild ungulate winter ranges. Applies also to TS-O2 and TS-O6. ***Rationale***: *Native plant abundance, frequency of occurrence, and vigor in deer and elk winter ranges have had dramatic changes since historical times. Winter ranges are typically in lower elevation areas which are normally dominated by the dry shrub potential vegetation group. The remaining dry shrubland areas are in need of restoration if they are to provide habitat for wintering wildlife.*	**HA-S11. Standard:** ***Inside wildlife priority areas:*** Same as Alternative 3. ***Outside wildlife priority areas:*** Not applicable.	**HA-S11. Standard:** Same as Alternative 3.	**HA-S11. Standard:** ***Inside reserves:*** Not applicable. See TS-O6 for direction. ***Outside reserves***: Same as Alternative 3.
HA-S12. Standard: Varies. See: A1/TE-S18 NW-S33 NW-S34	**HA-S12. Standard:** Same as Alternative 1.	**HA-S12. Standard:** Bat roost sites and hibernacula in occupied caves, cliffs, and old mines shall be protected.			

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TERRESTRIAL AND AQUATIC SPECIES AND HABITATS

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Protection/Restoration of Listed Species Habitats

HA-O3. Objective: Varies. See: A1/TE-O6 A1/AQ-O2 NW-O1 NW-O2 NW-O3 NW-O5 NW-O8 NW-O9 NW-O10 NW-O11 NW-O17 NW-O19 NW-O20	**HA-O3. Objective:** Same as Alternative 1, plus: A2/AQ-O1 A2/AQ-O2 A2/AQ-O3 A2/TE-O7	**HA-O3. Objective:** Restore or protect habitat for listed species. Manage habitat to prevent listing of species. (See also HA-O2.) ***Rationale:*** *The Forest Service and Bureau of Land Management have legal responsibilities and policy requirements to provide habitat for threatened, endangered, proposed, candidate, and sensitive species, and species of special interest to the tribes. Meeting these responsibilities requires restoration of degraded habitat and maintenance of high quality habitat necessary for the recovery of these species. It is BLM and Forest Service policy to manage habitat to prevent the listing of candidate and sensitive or special status species.*

HA-S13. Standard: Habitats shall be managed to recover special status species and prevent the listing of these species as candidate, threatened, or endangered.

Rationale: *BLM Manual 6840 and Forest Service Manual 2600.*

HA-O4. Objective: Varies. See: A1/TE-O5 A1/TE-O6 NW-O2 NW-O5	**HA-O4. Objective:** Same as Alternative 1 plus: A2/AQ-O4	**HA-O4. Objective:** Manage rangelands to provide for habitat requirements (including breeding, feeding, protection, dispersal, and travel) of threatened, endangered, proposed, candidate, and sensitive species closely associated with or dependent on native rangeland upland and riparian areas. ***Rationale:*** *Species closely tied to native bunch grass, native shrub/steppe, and native forb communities are declining due to fragmentation and a decline in the occurrence of native rangeland communities. These species' habitat needs include breeding, feeding, protection, dispersal and travel. Of special importance is protection during nesting and rearing of young. (Note: Further refinement of rangeland vegetation and terrestrial species needs will likely occur prior to releasing the Final EIS.)*

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HA-O5. Objective: Varies. See: A1/TE-O5 A1/TE-O6 NW-O1 NW-O2 NW-O3 NW-O5 NW-O8 NW-O9 NW-O10 NW-O11 NW-O17 NW-O19 NW-O20	**HA-O5. Objective:** Same as Alternative 1, plus: A2/AQ-O4 A2/TE-O7	**HA-O5. Objective:** Provide for the continued existence and / or long-term conservation of species, species assemblages, and unique ecosystems found in the Upper Klamath Basin, Owyhee Uplands, and Northern Great Basin. (See also Maps 2-6, 2-7, and 2-8). ***Rationale**: National Forest Management Act, viability, biodiversity.*

Recovery of Federally Listed Terrestrial and Aquatic Species

HA-O6. Objective: Contribute to the recovery of federally listed or proposed species (or subspecies or populations) across their range by restoring and maintaining and habitat quality, quantity, and effectiveness. (See also HA-O3 and HA-O2.)

***Rationale**: Section 7 of the 1973 Endangered Species Act, as amended, requires the Forest Service and BLM to manage consistent with and in consultation with listing agencies. Range-wide recovery requires a higher level of management (for example collaboration and cooperation among federal, tribal, state, and local agencies) than strictly being in compliance with recovery plans. The Forest Service and BLM recognize special status species and have management strategies in place to prevent further listing.*

HA-S14. Standard: Both: Varies. See: A1/TE-S19	**HA-S14. Standard:** Same as Alternative 1 plus: A2/AQ-S11	**HA-S14. Standard:** Implement recovery plans where recovery tasks apply to lands managed by the Forest Service and BLM. Departure from approved recovery plans and conservation strategies shall be documented in appropriate NEPA analysis and decision notices and records of decision. Develop annual reports on progress and achievements.
HA-S15. Standard: In the context of Standard HA-S14 for raptor species, subspecies, and populations that are significantly recovering within the project area, apply standards and guidelines from finalized agency documents that have been contributing to recovery.		**HA-S15. Standard:** In the context of Standard HA-S14 for raptor species, subspecies, and populations that are significantly recovering within the project area, apply standards and guidelines from finalized agency documents that have been contributing to recovery, and incorporate new scientific information into adaptive management strategies.

***Rationale**: The bald eagle and peregrine falcon are near recovery goals identified in recovery plans. Agencies should continue efforts that have been contributing to recovery until species are delisted.*

HA-S16. Standard: Management activities shall be consistent with uniform planning and management procedures by adopting the resource management guidelines and grizzly bear management situations as established in the Interagency Grizzly Bear Management (IGBC) Guidelines (1986), or its successor.

***Rationale**: Guidelines need to be uniformly applied for consistency of anticipated effects.*

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HA-S17. Standard: Management activities shall be consistent with access management recommendations developed by the Interagency Grizzly Bear Committee Managers Subcommittee for the Cabinet / Yaak and Selkirk Mountains Grizzly Bear Recovery Zones, following NEPA procedures at appropriate scales.

***Rationale**: Access provided by roads increases the vulnerability of grizzly bears to mortality. Proposals for development and use of roads need to be evaluated in the context of the effect on vulnerability of bears to mortality.*

HA-S18. Standard:
Both: Varies. See:
A1/TE-S19

HA-S18. Standard:
Same as Alternative 1.

HA-S18. Standard: In any recovery area where road densities are higher than thresholds in the IGBC task force report, NEPA analysis for additional proposed land-modifying activities should include complete habitat mapping and cumulative effects analysis.

***Rationale**: There is a need to understand the relationship of how habitat modification in roaded areas affects the suitability of the range wide habitat.*

HA-S18. Standard:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.

HA-S19. Standard:
Both: Varies. See:
A1/TE-S19

HA-S19. Standard:
Same as Alternative 1.

HA-S19. Standard: NEPA analysis for proposed land-disturbing activities in the Selkirk and Cabinet / Yaak Grizzly Bear ecosystems should evaluate the IGBC strategy for reducing grizzly bear mortalities.

***Rationale**: Proposed actions need to be consistent with established and agreed-upon strategies, such as the IGBC strategies, unless local information warrants departure from such strategies, and departures are approved by the IGB Committee.*

HA-S19. Standard:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.

Wildlife and Livestock Conflicts

HA-O7. Objective:
Both: Varies. See:
A1/TE-O6

HA-O7. Objective:
Same as Alternative 1.

HA-O7. Objective: Implement management practices that reduce the potential conflicts of livestock (domestic sheep, cattle, and horses) with carnivores and domestic sheep with wild sheep.

***Rationale**: There is a high level of potential conflict between livestock and large forest carnivores and between domestic sheep and wild sheep. Encounters can result in conflicts that have negative consequences for both wildlife and livestock.*

HA-O7. Objective:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.

HA-S20. Standard:
Both: Varies. See:
A1/TE-S16
A1/TE-S17

HA-S20. Standard:
Same as Alternative 1.

HA-S20. Standard: Minimize conflicts between carnivores and livestock management practices.

HA-S20. Standard:
Inside livestock priority areas: Same as Alternative 3.

Outside livestock priority areas: Not applicable.

HA-S20. Standard:
Same as Alternative 3.

HA-S20. Standard:
Inside reserves: Not applicable.

Outside reserves: Same as Alternative 3.

***Rationale**: Livestock management practices on public land, including calving or lambing, can create situations where carnivores come in conflict with livestock and their owners.*

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HA-S21. Standard: Varies. See: A1/TE-S16 A1/TE-S17	**HA-S21. Standard:** Same as Alternative 1.	**HA-S21. Standard:** Reduce the potential for disease transmission between domestic sheep and bighorn sheep.	**HA-S21. Standard:** ***Inside livestock priority areas:*** Work collaboratively with livestock operators to develop methods to minimize disease transmission between domestic and bighorn sheep. ***Outside livestock priority areas:*** Same as Alternative 3.	**HA-S21. Standard:** Same as Alternative 3.	**HA-S21. Standard:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.

Rationale*: Numerous research studies and monitoring of actual bighorn "die-offs" has indicated a high correlation between die-offs and contact between domestic sheep and bighorn sheep in the transmission of diseases fatal to bighorn sheep.*

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Collaboration

HU-O1. Objective: Varies. See: A1/HU-O3 A1/HU-O4 A1/HU-O2	**HU-O1. Objective:** Same as Alternative 1.	**HU-O1. Objective:** Foster support of decisions by promoting collaboration through increased levels and types of involvement opportunities for a broad range of stakeholders. ***Rationale:*** *Social scientists, federal agencies, and members of the public agree that ecosystem management requires new approaches to public participation. Collaborative efforts that build bridges among scientists and public land stakeholders result in public land management that is better understood, more widely accepted, and more implementable. Many people have described the lack of institutional arrangements for fully discussing and reaching consensus on public land issues as a major barrier to ecosystem management. The intent of this objective is to create a better interaction between federal agencies and the public, creating a forum where science, local knowledge, and other information can be described, understood by everyone involved, and translated into implementable management action.*
HU-O2. Objective: Varies. See: A1/HU-O3 A1/HU-O7	**HU-O2. Objective:** Same as Alternative 1.	**HU-O2. Objective:** Foster support of decisions by promoting collaboration through increased intergovernmental coordination with federal, state, county, and tribal governments, and Resource Advisory Councils in planning, implementation, and monitoring efforts.
HU-S1. Standard: Not Applicable.	**HU-S1. Standard:** Not Applicable.	**HU-S1. Standard:** Within two years, each National Forest and BLM District shall initiate a memorandum of understanding or equivalent document with appropriate state, county, and tribal elected officials to offer advice and recommendations to federal land managers in decision-making. Applies also to Objective HU-O6.

Economic Activity

HU-O3. Objective: Varies. See: A1/HU-O5	**HU-O3. Objective:** Same as Alternative 1.	**HU-O3. Objective:** Derive social and economic benefits, promote commercial activity, and foster demand for labor and capital formation through producing a mix of goods and services. ***Rationale****: Goods and services, both market (priced) and non-market (not priced), can be used to generate economic activity and fulfill other social and cultural needs. It is a widely held social goal that the type, amount, and distribution of goods and services should provide society the most benefits at the least cost. This describes a social preference for economic efficiency.*
HU-O4. Objective: Varies. See: A1/HU-O5	**HU-O4. Objective:** Same as Alternative 1.	**HU-O4. Objective:** Provide the most benefits to society with funds expended by efficiently delivering goods and services.

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HU-O5. Objective: Varies. See: A1/HU-O5	**HU-O5. Objective:** Same as Alternative 1.	**HU-O5. Objective:** Minimize large annual shifts in commercial activity that cause rapid changes in demand for labor (gain or loss) and capital, including the offering of timber and forage.			
HU-O6. Objective: Varies. See: A1/HU-O5	**HU-O6. Objective:** Same as Alternative 1.	**HU-O6. Objective:** Emphasize customary economic uses in rural communities or geographic areas that are less economically diverse and more dependent on outputs of goods and services from Forest Service- and BLM-administered lands. These places, referred to in this EIS as "Areas of Economic Vulnerability" would be areas (1) where these uses generate a substantial percent of local employment; (2) that are geographically isolated; (3) that are not gaining substantial employment opportunities in other industries; and would include, as a minimum, those areas identified as "isolated timber-dependent communities" in the Economics (Haynes and Horne 1996) chapter of the *Assessment of Ecosystem Components*. (See Chapter 2 in this EIS for more discussion.) ***Rationale**: The intent of this objective is to help sustain an area through the transition to a less dependent condition. The intent is not to maintain Areas of Economic Vulnerability in a priority status or to necessarily favor specific industries. The objective stems from the recognition that few economic options are available in these areas, that BLM and Forest Service actions have a reasonable chance to contribute to community vitality, and that the continued existence and vitality of these areas is in the public interest.*	**HU-O6. Objective:** Not applicable.	**HU-O6. Objective:** Same as Alternative 3.	**HU-O6. Objective:** ***Inside reserves:*** Not applicable. ***Outside reserves:*** Same as Alternative 3.
HU-O7. Objective: Varies. See: A1/HU-O5	**HU-O7. Objective:** Same as Alternative 1.	**HU-O7. Objective:** Contribute to economic diversity consistent with local economic development goals. Economic diversity is recognized as a factor important to community resiliency.			
HU-O8. Objective: Varies. See: A1/HU-O3 A1/HU-O4 A1/HU-O7	**HU-O8. Objective:** Same as Alternative 1.	**HU-O8. Objective:** Foster compatibility of land uses and management strategies to local economic development goals through collaboration with local entities. ***Rationale:** Many communities have already begun the process of collectively identifying their strengths, weaknesses, visions of what they want to be in the future, and challenges they expect to face -- essentially a strategic planning process. Ecosystem management provides an avenue for federal agencies to assist with these ongoing processes, upon request by interested communities and based on local interests and needs. The emphasis is on collaboration rather than providing direction, so there is no prescriptive design for the form or extent of this assistance.*			
HU-O9. Objective: Varies. See: A1/HU-O3 A1/TE-O1	**HU-O9. Objective:** Same as Alternative 1.	**HU-O9. Objective:** Reduce life and property loss due to wildfire and decrease future wildfire suppression costs by actively managing fuels and fire risk on areas of Forest Service- and BLM-administered lands within or adjacent to wildland-urban interface areas. Protection of life and property shall be a high priority in these areas. See Standard HU-S2. ***Rationale:** Fire suppression within the urban interface zone has become increasingly costly both in monetary terms and risk to human life. As fire intensity and frequency have increased, the amount of protection required on the interface boundary has increased. Structural protection equipment is more costly than forest and rangeland firefighting equipment. Firefighting personnel are placed in positions of higher risk, to hold lines that for other wildfires might be moved to a more strategic position. Values at risk are higher, and occur on ownerships adjacent to the forest and range boundaries. There is high public interest in protection of homes and possessions.*			

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HUMAN USES AND VALUES

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HU-S2. Standard: Varies. See: A1/HU-G2 A1/TE-S2	**HU-S2. Standard:** Same as Alternative 1.	**HU-S2. Standard:** Involve local governments plus other landowners' organizations as appropriate to develop coordinated fuel management plans.				

Recreation Opportunities

HU-O10. Objective: Supply recreation opportunities for the public consistent with public policies and the ability of BLM- and Forest Service-administered lands to provide those opportunities.	**HU-O10. Objective:** Same as Alternatives 1 and 2 plus identify emerging recreation opportunities that result from restoration strategies and changing land uses.	**HU-O10. Objective:** ***Inside recreation priority areas:*** Invest in the development, maintenance, and operation of recreation assets and services most used by the public. ***Outside recreation priority areas:*** Same as Alternative 3.	**HU-O10. Objective:** Same as Alternative 3.	**HU-O10. Objective:** Same as Alternative 3.

HU-S3. Standard: The recreation opportunity spectrum (ROS) or other appropriate agency direction shall be used to guide inventory and management to meet goals for recreation settings and experiences.

HU-O11. Objective: See: A1/HU-O1, A1/HU-O10.	**HU-O11. Objective:** Identify opportunities to provide public access for recreation purposes consistent with maintaining or achieving desired terrestrial, aquatic, and riparian conditions.	**HU-O11. Objective:** ***Inside recreation priority areas:*** Provide public access for recreation consistent with RM-O2, RM-S1, RM-S8, RM-S9, RM-O4, and RM-S15. ***Outside recreation priority areas:*** Same as Alternative 3.	**HU-O11. Objective:** Same as Alternative 3.	**HU-O11. Objective:** Same as Alternative 3.

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HU-O12. Objective: Varies. See: A1/HU-O3 A1/HU-O4 A1/HU-O5	**HU-O12. Objective:** Same as Alternative 1. plus: A2/AQ-S2	**HU-O12. Objective:** Foster and strengthen partnerships between public and private sectors to effectively and efficiently manage recreation and tourism facilities and services.
HU-O13. Objective: Varies. See: A1-HU-O2	**HU-O13. Objective:** Same as Alternative 1.	**HU-O13. Objective:** Meet established visual quality objectives based on management principles and techniques from the applicable agency visual landscape management system.
HU-O14. Objective: Varies. See: A1/HU-O2	**HU-O14. Objective:** Same as Alternative 1.	**HU-O14. Objective:** Maintain or enhance scenic integrity through management of forest and rangeland vegetation and road densities.

Cultural Resources

HU-S4. Standard: Varies. See: A1/HU-S3	**HU-S4. Standard:** Same as Alternative 1.	**HU-S4. Standard:** A strategy shall be developed to survey and evaluate the significance of Forest Service- and BLM-administered lands for cultural resources. (See TI-O1.) ***Rationale:*** *Current heritage program strategies, which identify and evaluate cultural resources, typically focus efforts on individual sites. Such strategies often miss the bull breadth of cultural resource information (such as ethnography, oral/written history, ethno-habitats, and natural and heritage resource distribution patterns), which may help reveal a traditional cultural property. Program strategies should prescribe watershed-scale cultural resource surveys and assessments that are accomplished prior to signing decisions on activities, so a more complete recognition of integrated cultural resource patterns can be considered.*
HU-S5. Standard: Varies. See: A1/HU-S3	**HU-S5. Standard:** Same as Alternative 1.	**HU-S5. Standard:** Sites and areas shall be evaluated and nominated as appropriate to the National Register of Historic Places. ***Rationale:*** *Archeological Resource Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), National Historic Preservation Act (NHPA), and executive orders to protect tribal sacred sites not only recognize federal trust responsibilities, but also serve to meet that obligation. See Bulletin 38 issued by the Department of the Interior.*
HU-S6. Standard: Varies. See: A1/HU-S3 A1/HU-O7	**HU-S6. Standard:** Same as Alternative 1.	**HU-S6. Standard:** Site-specific projects shall be assessed for potential effects on cultural resources. Assessments shall address traditional cultural properties and plant species considered sensitive by tribes. Consultation shall take place with affected tribes to address tribal interests, evaluate those interests, account for those interests in a decision, and implement the decisions. Mutually acceptable procedures between tribes and agencies should be employed. The ability for the project to proceed shall be directly tied to the ability to adequately survey the site, consult on Tribal interests, and accomplish a necessary mitigation. (See also HU-S4 and HU-S5.)

Transportation and Utility Cooridors

HU-O15. Objective: Varies. See: A1/HU-O10	**HU-O15. Objective:** Same as Alternative 1.	**HU-O15. Objective:** Ensure that reliable and buildable utility corridors are available to serve existing and future regional and local energy, communication, and transportation needs.

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
HU-S7. Standard: Not Applicable.	**HU-S7. Standard:** Not Applicable.	**HU-S7. Standard:** Use the 1993 Western Regional Utility Corridor Study, or its successors, as a reference document when considering land use decisions that may affect existing and/or proposed major utility corridors.				
HU-O16. Objective: Varies. See: A1/HU-O10	**HU-O16. Objective:** Same as Alternative 1.	**HU-O16. Objective:** Ensure that access essential for corridor infrastructure repairs and maintenance is available.				
HU-S8. Standard: Varies. See: A1/HU-S15	**HU-S8. Standard:** Same as Alternative 1.	**HU-S8. Standard:** Continue to provide access to and maintenance of existing utility rights-of-way for infrastructure repairs and vegetation maintenance activities in accordance with special use permits, land use grant instruments, and easement agreements.				
HU-O17. Objective: Not Applicable.	**HU-O17. Objective:** A2/AQ-S24	**HU-O17. Objective:** Encourage integrated right-of-way vegetation management which minimizes impacts and maintenance needs while enhancing ecosystem values.				

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FEDERAL TRUST RESPONSIBILITY AND TRIBAL RIGHTS AND INTERESTS

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Government-To-Government Cooperation and Relations

TI-O1. Objective: Varies. See: A1/HU-O7	**TI-O1. Objective:** Same as Alternative 1.	**TI-O1. Objective:** Maintain a government-to-government relationship with affected federally recognized tribes. Develop meaningful relationships to understand and incorporate tribal cultural resources, needs, interests, and expectations in federal land management, and allow cooperative activities where there are shared goals. ***Rationale:*** *Federal law requires the BLM and Forest Service to consider tribal interests when conducting actions that may affect natural resources on or off tribal lands, and / or the socioeconomic well-being of its people. See the section on, Current Federal Agency Relations in Chapter 2.*
TI-S1. Standard: Varies. See: A1/HU-O7	**TI-S1. Standard:** Same as Alternative 1.	**TI-S1. Standard:** Agencies shall employ a consistent approach to government-to-government consultation that includes effective Tribal participation in decision-making and assures rights are protected. Agencies and Tribes shall develop a mutually acceptable protocol for consultation, which includes provisions for a dispute resolution process in cases of conflicts between agency and Tribal positions.
TI-S2. Standard: Varies. See: A1/HU-O7	**TI-S2. Standard:** Same as Alternative 1.	**TI-S2. Standard:** Agreements shall be developed with tribal governments specifying repatriation procedures in conformance with Native American Graves Protection and Repatriation Act (NAGPRA) and consultation procedures regarding federal compliance with NAGPRA, National Historic Preservation Act, and Archaeological Resource Protection Act.
TI-S3. Standard: Varies. See: A1/HU-O7	**TI-S3. Standard:** Same as Alternative 1.	**TI-S3. Standard:** Where Tribes regulate hunting, fishing, gathering and grazing activities of Tribal members, USFS / BLM shall recognize Tribal management efforts and work cooperatively with Tribes and states. ***Rationale:*** *Tribes with Treaties that retained rights to access for hunting, fishing, gathering, and livestock grazing regulate tribal use of those resources. These tribes recognize the need to regulate use when the resources present cannot meet all their needs. These tribes regulate the use by tribal members on the reservations and off the reservations on ceeded lands. This standard is provided to assure that these tribal programs are recognized and incorporated as the Forest Service and BLM develop planning decisions.*
TI-S4 Standard: Varies. See: A1/HU-O7 A1/TE-S19	**TI-S4 Standard:** Same as Alternative 1.	**TI-S4 Standard:** Federal land managers shall cooperate with Tribal efforts regarding research and restoration of treaty / trust resources (for example, re-establishment of salmon in Columbia River tributaries, mule deer in the Klamath Basin, and antelope in eastern Idaho).
TI-O2. Objective: Varies. See: A1/HU-O6	**TI-O2. Objective:** Same as Alternative 1.	**TI-O2. Objective:** Assess sense of place to better understand and incorporate into federal land management how places on the landscape are valued by American Indians. (See Chapter 2 discussion of Sense of Place.) ***Rationale:*** *There are general place attachment distinctions recognized by traditional American Indian communities / tribes and the American public. These differences in place attachments are in part based on: (1) the greater length of time native cultures have spent in the project area; (2) the greater degree place attachments have been integrated into their culture systems of religion, economy, politics, and social / kinship; and (3) cultural values, histories, and relationships to landscapes, which vary from mainstem American culture and are typically not understood by the public. Therefore, there is a need to develop separate sections in place assessments for American Indian groups and the public. Also, most Indian tribes and communities consider cultural place information inappropriate for public dissemination, making it difficult to conduct and document a single place assessment. However, there will likely be place attachments discovered that represent common place meaning shared by Indian communities and the general public.*

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ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
TI-S5. Standard: Not Applicable.	**TI-S5. Standard:** Not Applicable.	**TI-S5. Standard:** Agencies should complete an assessment of identified places of value to American Indians as a part of ecosystem analysis and within the consultation process with affected tribes and American Indian communities. See Objectives EM-O3, HU-O2, and Standard A-S1. ***Rationale:*** *This standard uses "should" primarily to allow for the possibility that tribes will prefer to participate at different levels.*				

Habitat Conditions

TI-O3. Objective: Varies. See: A1/HU-O6	**TI-O3. Objective:** Same as Alternative 1.	**TI-O3. Objective:** Recognize native plant communities as traditional resources that are important to Tribes and as an essential component to treaty-reserved gathering rights.
TI-S6. Standard: Not Applicable.	**TI-S6. Standard:** Not Applicable.	**TI-S6. Standard:** Programs for restoration and maintenance of native plant communities for Tribes' gathering activities shall be established in cooperation with tribes.
TI-S7. Standard: Varies. See: A1/TE-S19 A1-AQ-S1	**TI-S7. Standard:** Same as Alternative 1.	**TI-S7. Standard:** The Forest Service and BLM shall provide fish and wildlife habitat conditions capable of supporting harvestable resources. (Also applies to HA-O2.)
TI-S8. Standard: Varies. See: A1/HU-O6	**TI-S8. Standard:** Same as Alternative 1.	**TI-S8. Standard:** Land allocations in each Tribe's ceded lands shall be specifically considered for protection and restoration of treaty resources.
TI-S9. Standard: Not Applicable.	**TI-S9. Standard:** Not Applicable.	**TI-S9. Standard:** Habitat conditions shall be assessed where a habitat has an identified social and / or traditional importance to an affected tribe or American Indian community, such as places for hunting, fishing, gathering, and grazing. This assessment shall occur prior to implementation of activities.
TI-S10. Standard: Varies. NW-O1	**TI-S10. Standard:** Same as Alternative 1.	**TI-S10. Standard:** An aquatic conservation strategy that meets Endangered Species Act, Clean Water Act, and trust responsibility obligations shall be adopted.
TI-S11. Standard: Not Applicable.	**TI-S11. Standard:** Not Applicable.	**TI-S11. Standard:** Where it becomes necessary to implement Conservation Measures in the Endangered Species Act, restrictions on Tribal activities shall be the least restrictive possible, and implemented only when restrictions on non-Indian activities are insufficient to ensure Conservation.

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ROAD MANAGEMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
RM-O1. Objective: Same as Alternative 1. A1/HU-O4	**RM-O1. Objective:** Same as Alternative 2. A2/AQ-S2	**RM-O1. Objective:** Cooperate with federal, tribal, state, and county agencies, and other cost-share partners, to achieve [illegible]				

Road-Related Adverse Effects

RM-O2. Objective: Varies. See: A1/HU-O10, A1/HU-O1, A1/HU-O6, A1/AQ-O2, A1/TE-O6, A1/TE-O1, A1/PE-O1, A1/AQ-O5, NW-O1, NW-O2, NW-O3, NW-O5	**RM-O2. Objective:** Same as Alternative 1.	**RM-O2. Objective:** Progressively reduce road-related adverse effects and potential effects on watershed integrity, soil productivity, and aquatic/riparian and terrestrial species and their habitat. This includes reducing direct and indirect mortality of species and decreasing avoidance behavior of terrestrial species. Provide for resource management activities and human access needs, such as tribal and recreation activities. Make decisions on individual roads at the local level, based on appropriate analysis and collaboration. ***Rationale:*** *Road access is needed for resource management, meeting tribal needs, and public use. There are also legal rights of property owners with lands surrounded by federal lands, of tribes, and others to have road access to and through agency-administered lands. However, the* Scientific Assessment *(Quigley and Arbelbide 1996) identified roads as a major impact on a multitude of physical and biological processes. Roadways are prone to erosion and can cause increased sedimentation adversely affecting hydrologic or sediment regimes and aquatic habitat. Road access increases human wildlife conflicts and roads fragment terrestrial habitat. Permanent road closures would apply primarily, but not exclusively, to native surface roads. Also applies to PE-O3.*
RM-S1. Standard: Varies. See: A1/AQ-S1, A1/AQ-S3, NW-S2, NW-S4, NW-S5, NW-G7, NW-G8, NW-G9, NW-S6, NW-S7, NW-G13, NW-S9	**RM-S1. Standard:** Same as Alternative 1 plus: A2/AQ-S2, A2/AQ-S3, A2/AQ-S4, A2/AQ-S5	**RM-S1. Standard:** Road-related adverse effects shall be progressively reduced to achieve aquatic, terrestrial habitat, and other relevant objectives. At the scale in which Ecosystem Analysis at the watershed scale is conducted (5th- or 6th-field HUC), quality and quantity road indicators and road-related use shall be used to assess adverse effects on aquatic/riparian and terrestrial species and their habitat. The primary indicators for road *quality* are road condition, surface type, and location. The primary indicators for road-related use are amount, type, and season of use. The primary indicator for road *quantity* is federal roadway miles per square mile measured at the sub-basin scale and reported at the BLM District/National Forest level. Reduction of road-related adverse effects shall be accomplished by, but are not limited to, the following: obliteration; permanent closures; seasonal closure; and road improvements (upgrade culverts, grade, surfacing). ***Rationale:*** *The intent of this standard is that restoration activities will be prioritized based on risks and budgets; therefore, the most significant effects can be reduced first. The intent is not that all road-related effects should be reduced, realizing there are benefits and trade-offs associated with roads.*

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ROAD MANAGEMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
RM-S2. Standard: Not Applicable.	**RM-S2. Standard:** Not Applicable.	**RM-S2. Standard:** Not applicable.	**RM-S2. Standard:** Not applicable.	**RM-S2. Standard: Inside timber and livestock priority areas:** Management actions (such as livestock grazing, ground-disturbing activities, road building or maintenance) shall not increase the incidence of bank erosion, mass movements, or sediment introduction into stream systems. ***Outside timber and livestock priority areas:*** Not applicable.	**RM-S2. Standard:** Not applicable.	**RM-S2. Standard:** Not applicable.
RM-S3. Standard: Not Applicable.	**RM-S3. Standard:** A2/AQ-S3	**RM-S3. Standard:** National Forests and BLM Districts shall conduct a systematic Road Condition/Risk Assessment across the project area using standardized processes at appropriate scales. This assessment shall be a component of sub-basin review, Ecosystem Analysis at the Watershed Scale, development and revision of access and travel management plans, and/or project design, as appropriate. ***Rationale:*** *A detailed field-level road inventory would not be necessary for sub-basin review or Ecosystem Analysis at the Watershed Scale. Broad-scale road information and sub-basin characteristics would be needed during sub-basin review to validate data in the* Assessment of Ecosystem Components *(Quigley et al. 1996b) and to prioritize further analyses. Sub-basin or finer resolution information would be needed during Ecosystem Analysis at the Watershed Scale to characterize existing conditions and identify site-specific opportunities at this scale.*				

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RM-S4. Standard: Not Applicable.	**RM-S4. Standard:** A2/AQ-S4	**RM-S4. Standard:** National Forests and BLM Districts shall develop or revise Access and Travel Management plans or other transportation plans, to address risks identified in the Road Condition/Risk Inventory (RM-S3) to achieve ICBEMP goals and objectives. Where completed, the results of sub-basin review and Ecosystem Analysis at the watershed scale shall be used in the development, review, and revision of access and travel management plans or other transportation plans. These plans shall identify long-term transportation needs and road maintenance practices. These plans shall also be used to identify and prioritize roads for rehabilitation, closure, or obliteration to reduce road-related effects to watershed integrity, soil productivity, and aquatic/riparian and terrestrial species and their habitats. The plans shall address the following items: - road design criteria, elements, and standards that govern construction and reconstruction; - road management objectives for each road; - criteria that govern road operation, maintenance, and management; - requirements for pre-, during-, and post-storm inspections and maintenance; - regulation of traffic during wet periods to minimize erosion and sediment delivery and accomplish other objectives; - implementation and effectiveness of monitoring plans for road stability, drainage, and erosion control; - mitigation plans for road failures; and - road-related effects to terrestrial species and their habitats including amount, type, and season of use.	**RM-S4. Standard:** Same as Alternative 3; plus road design, plans, and density shall be modified to efficiently carry out applicable uses in priority areas (shown on Maps 3-14 and 3-15), consistent with RM-O2, RM-S1, RM-S8, RM-S9, RM-O4, and RM-S15.	**RM-S4. Standard:** Same as Alternative 3.	**RM-S4. Standard:** Same as Alternative 3.

Rationale: *The intent of this standard is that decisions on management of roads should be made at the local level with involvement from interested and affected parties through the local access and travel management plan processes. Overall direction from this DEIS sets the course for reducing adverse effects. Decisions on how to accomplish this will be made at the local level.*

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Road Management

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7

RM-S5. Standard:
Varies. See:
NW-S8
NW-G11
NW-G12

RM-S5. Standard:
Same as Alternative 1 plus:
A2/AQ-S3
A2/AQ-S4

RM-S5. Standard: The influence of roads on aquatic and terrestrial objectives shall be determined during Ecosystem Analysis at the watershed scale and Road/Risk Inventories (RM-S3). Adverse effects on aquatic/riparian and terrestrial species and their habitats shall be reduced by:

- Reconstructing road and drainage features that do not meet design criteria or operation and maintenance standards, have been shown to be less effective for controlling sediment delivery, slow down attainment of Riparian Management Objectives, or do not protect watersheds from increased sedimentation and peak flows.
- Prioritizing reconstruction based on current and potential damage to aquatic resources and their watersheds, ecological value of the riparian resources affected, and feasibility of options such as helicopter logging and road relocation out of Riparian Conservation Areas.
- Closing and stabilizing or obliterating and stabilizing roads not needed for future management activities. These actions shall be prioritized based on current and potential damage to aquatic resources in watersheds and ecological value of the riparian resources affected.

RM-S6. Standard:
Varies. See:
A1/TE-S19
NW-S9
NW-S11
NW-S14

RM-S6. Standard:
Same as Alternative 1 plus:
A2/AQ-S3
A2/AQ-S4

RM-S6. Standard: Determine habitat effectiveness ratings necessary to reduce the risk of displacement and mortality of species caused by human access. Emphasis shall be in areas with large forest carnivores/omnivores. Use effectiveness rating in determining road management decisions including locations and timing of seasonal and permanent closures.

***Rationale**: One of the major causes of mortality of forest carnivores and omnivores is related directly to human access. Stresses caused by access to wintering areas has also been demonstrated to cause problems for a number of species.*

RM-S7. Standard:
Varies. See:
A1/AQ-S1
A1/AQ-S2
A1/AQ-S3
NW-S6

RM-S7. Standard:
Same as Alternative 1 plus:
A2/AQ-S5

RM-S7. Standard: Design new and improve existing culverts, bridges, and other stream crossings to accommodate a 100-year flood, including associated bedload and debris where those existing structures pose a substantial risk to riparian conditions. "Substantial risk" is defined as those that do not meet design and operation maintenance criteria, or that have been shown to be less effective for controlling erosion, or that retard attainment of RMOs. Base priority for upgrading on risks and the ecological value of the riparian resources affected. Construct and maintain crossings to prevent diversion of streamflow out of the channel.

Road Density

RM-O3. Objective:
Varies. See:
A1/TE-O6
A1/AQ-O1
A1/AQ-O2
A1/AQ-O5
A1/PE-O5
NW-O5

RM-O3. Objective:
Same as Alternative 1 plus:
A2/AQ-O4

RM-O3. Objective: Restore aquatic and terrestrial habitats that have a high potential for improvement by reducing road density in areas where roads have been demonstrated to have an adverse effect. Restore and maintain a network of existing high quality habitat to provide a foundation for watershed and habitat recovery.

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RM-S8. Standard: Varies. See: NW-S4 NW-G13	**RM-S8. Standard:** Same as Alternative 1 plus: A2/AQ-S3	**RM-S8. Standard:** To meet the intent of RM-O3, which is to reduce the adverse effects of roads, road miles shall be progressively decreased through permanent closure or obliteration in subwatersheds with high (1.7 - 4.7 miles/square mile) and extreme (>4.7 miles/square mile) road densities; and a downward trend in road miles shall be demonstrated over the life of this EIS. Priorities shall be established as referenced in the road priority tables, which follow the road management objectives and standards. These tables illustrate, by alternative and by forest or range cluster, the priority for road reductions. ***Rationale:*** *This standard is not intended to mandate a desired road density, but rather to emphasize reducing roads in areas of high and extreme road density (see RM-O3), where habitat restoration can be achieved and adverse effects reduced, while maintaining suitable access. Decisions would be made locally and supported by appropriate analysis.*

RM-S8. Forest Cluster Road Density Reduction Priority Table -- applies to forested potential vegetation groups

Cluster	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
1	L	L	L	L	L	L	L
2	L	L	M	M	L	M	M
3	L	L	M	M	M	H	H
4	L	L	M	M	L	M	M
5	L	M	H	H	M	M	H
6	L	L	L	M	L	L	L

RM-S8. Range Cluster Road Density Reduction Priority Table -- applies to rangeland potential vegetation groups

Cluster	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
1	L	L	L	H	M	M	M
2	L	L	L	L	L	L	L
3	L	L	L	M	L	L	M
4	L	L	M	M	L	M	M
5	L	L	L	L	L	L	L
6	L	L	L	M	L	M	M

L = Low priority
M = Moderate priority
H = High priority

RM-S9. Standard: Not Applicable.	**RM-S9. Standard:** A2/AQ-S2 A2/AQ-S3	**RM-S9. Standard:** Existing transportation networks shall be used for conducting management activities in subwatersheds with high (1.7 - 4.7 miles/square mile) and extreme (>4.7 miles/square mile) road densities when feasible. If new roads are proposed for construction through areas of high quality habitat in high to extreme road density subwatersheds, an opportunity for intergovernmental coordination shall be provided early in the planning stage by the Forest Service or BLM.

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ROAD MANAGEMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7

Road Construction

RM-O4. Objective: Varies. See: A1/AQ-O1 A1/AQ-O2 A1/TE-O6 A1/PE-O1 NW-O5 NW-O3	**RM-O4. Objective:** Same as Alternative 1 plus: A2/AQ-O4	**RM-O4. Objective:** Design new road construction to prevent or minimize adverse effects on aquatic/riparian and terrestrial species and their habitat.				
RM-S10. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/AQ-G1 A1/AQ-O3 NW-S4 NW-S5 NW-G7 NW-G8 NW-G9 NW-S6 NW-S7 NW-G13	**RM-S10. Standard:** Same as Alternative 1 plus: A2/AQ-S3 A2/AQ-S4	**RM-S10. Standard:** Adverse effects from road and landing construction shall be prevented or minimized to ensure attainment of aquatic, terrestrial, and riparian objectives. Roads and landings should be located outside of Riparian Conservation Areas. (See definition of RCAs in Appendix 3-4). Roads and land-ings may be located in RCAs only after all other practicable alternatives have been eliminated and Ecosystem Analysis at the watershed scale has been completed. For new construction of minor stream crossings that would create only transient effects and are in watersheds that do not require Ecosystem Analysis at the watershed scale, sub-basin review shall be used, where available, along with site-specific NEPA analysis. Also applies to RM-O2.	**RM-S10. Standard:** ***Inside timber and livestock priority areas:*** Not applicable. ***Outside timber and livestock priority areas:*** Same as Alternative 3.	**RM-S10. Standard:** Same as Alternative 3.	**RM-S10. Standard:** Same as Alternative 3.

RM-S10. Rationale: *The primary purpose of RCAs is the restoration and maintenance of riparian and instream processes and functions. It is, therefore, expected that roads and landings will be located outside RCAs. Information from Ecosystem Analysis at the Watershed Scale, as appropriate, may identify exceptions. An intergovernmental collaborative process would help to ensure that exceptions do not compromise the purpose and function of the RCA.*

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RM-S11. Standard: Not Applicable.	**RM-S11. Standard:** Not Applicable.	**RM-S11. Standard:** Not applicable.	**RM-S11. Standard:** Not applicable.	**RM-S11. Standard:** ***Inside timber and livestock priority areas:*** To minimize sediment introduction to perennial and intermittent streams, there should be no roads constructed within 150 feet of active channel margins. For existing and necessary new roads within 150 feet of active channel margins, management actions should be taken to mitigate erosion, stabilize fills, maintain culverts and drainage systems, and minimize subsoil disturbance. ***Outside timber and livestock priority areas:*** Not applicable.	**RM-S11. Standard:** Not applicable.	**RM-S11. Standard:** Not applicable.
RM-S12. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 NW-G9 NW-S6	**RM-S12. Standard:** Same as Alternative 1 plus: A2/AQ-S5	**RM-S12. Standard:** Construction of all new and reconstruction of existing road crossings of streams and rivers that currently or historically supported native fish species shall maintain or restore fish passage, fish spawning, channel stability, and genetic integrity.				
RM-S13. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3 A1/PE-O1 NW-S5	**RM-S13. Standard:** Same as Alternative 1 plus: A2/AQ-S3	**RM-S13. Standard:** Road construction and reconstruction shall be designed and conducted to avoid landscapes with high hazard for disruption of hydrologic flow paths and processes. Road construction and reconstruction, maintenance and snow plowing shall be conducted to prevent sediment delivery from the road to streams and Riparian Conservation Areas.				

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ROAD MANAGEMENT

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
RM-S14. Standard: Varies. See: A1/AQ-S1 A1/AQ-S2 A1/AQ-S3	**RM-S14. Standard:** Same as Alternative 1, plus: A2/AQ-S3	**RM-S14. Standard:** Side casting of road materials is prohibited on road segments within or abutting Riparian Conservation Areas. Also applies to RM-O2.				
RM-S15. Standard: Not Applicable.	**RM-S15. Standard:** Not Applicable.	**RM-S15. Standard:** To maintain high quality habitats in subwatersheds with road density classes of none (0 - 0.02 miles/square mile), very low (0.02 - 0.1), or low (0.1 - 0.7), road density shall not increase by more than one road density class or exceed a threshold of 0.7 miles/square mile over the ten-year planning period following signing of the Record(s) of Decision for this EIS. (See also RM-O3.)		**RM-S15. Standard:** ***Inside timber priority areas:*** Not applicable. ***Outside timber priority areas:*** Same as Alternative 3.	**RM-S15. Standard:** See EM-S9 for direction.	**RM-S15. Standard:** See EM-S9 for direction.
		Rationale: *The Science Integration Team found a relationship between low road density and high quality habitats. Roads can increase disturbance, displacement, and direct and indirect mortality to fish and wildlife. Road networks can alter watershed integrity, hydrologic function, sediment regimes, and human use patterns which cannot be entirely mitigated.*				
		Rationale: Alts 3 & 4 Only: *The intent of this standard is to allow restoration and other management without first requiring Ecosystem Analysis in these areas (except as otherwise required by EM-S7, EM-S8, EM-S9, or EM-S10). The intent was not to prohibit road construction in unroaded or low road density areas, but for management to proceed more cautiously due to the correlation with high quality habitat.*				
RM-S16. Standard: Not Applicable.	**RM-S16. Standard:** Not Applicable.	**RM-S16. Standard:** Not applicable.				**RM-S16. Standard:** There shall be no road construction in reserves or unroaded areas larger than 1,000 acreas.

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ADAPTIVE MANAGEMENT/MONITORING

ALTERNATIVE 1 | ALTERNATIVE 2 | ALTERNATIVE 3 | ALTERNATIVE 4 | ALTERNATIVE 5 | ALTERNATIVE 6 | ALTERNATIVE 7

Adaptive Management

AM-O1. Objective: Make appropriate adjustments in management strategies as new information, technology, and social desires are identified.

***Rationale**: Adaptive management is a continuing process of action-based planning, monitoring, researching, evaluating and adjusting standards and techniques to improve achievement of the ICBEMP goals and objectives. These standards and techniques are based on scientific knowledge. Ecosystem management uses an adaptive approach and calls for applying the latest scientific information and professional judgement to develop management plans that will most likely meet desired future conditions. To be successful, it must have the flexibility to adapt and respond to new information. Under the concept of adaptive management, new information will be evaluated and decisions made whether to make adjustments or changes as experience is gained from implementing plans. The adaptive management approach will enable resource managers to determine how well management actions meet their objectives and what steps are needed to modify activities to increase success or improve results. See Appendix 3-1. Applies also to PE-O4.*

AM-S1. Standard: Varies. See: A1/IA-S1	**AM-S1. Standard:** Same as Alternative 1.	**AM-S1. Standard:** Adaptive management principles and processes shall be used to adjust management practices to meet ICBEMP goals and objectives. Adaptive management shall include all four parts of the process -- planning, implementation, monitoring, and evaluation as defined in the Implementation appendix (Appendix 3-1). Resources shall be allocated and priorities established so that all parts of adaptive management are completed over an appropriate time frame.	
AM-S2. Standard: Varies. See: A1/IA-S1 A1/TE-G13	**AM-S2. Standard:** Same as Alternative 1.	**AM-S2. Standard:** Not applicable.	**AM-S2. Standard:** Adjustments to final reserve boundaries shall be based on project-area-wide bioreserve system needs and consider the following: - Select habitats that support populations of rare, narrowly endemic, or significantly declining species. - Include centers of endemism, rarity, or high biodiversity located on Forest Service- or BLM-administered lands. - Use information from GAP analysis and local assessments for additional areas. - Include at least 10%, but preferably

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ADAPTIVE MANAGEMENT/MONITORING

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
						20 - 30%, of the range of all major vegetation types to large reserves (250,000+ acres) to account for typical disturbance processes. - As needed, replicate vegetation types in reserves in multiple locations within the project area if significant differences exist or the risk of large-scale disturbance is high. - Establish reserves to conserve biodiversity across the landscape and meet needs of groups of plant or animal species communities. - Adjust boundaries using collaborative approach with federal, tribal, state, and county agencies.

Monitoring

AM-O2. Objective: Assess the effects of management strategies by monitoring changes in conditions, and take actions as needed to meet plan objectives.

AM-O2. Objective: Assess the effects of management strategies by monitoring changes in conditions, and take actions as needed to meet ecosystem management goals. Cooperate with federal, tribal, state, and county governments to develop monitoring and evaluation protocols. Collect and inventory data in a consistent, retrievable, and updatable format to acquire essential information about ecological processes and conditions, causal mechanisms, and inherent capabilities and limitations, that are linked across different scales of time and space and are used to address issues identified by ecosystem and other scale analyses.

***Rationale**: Although monitoring plays a role in current management, it is especially critical to ecosystem management, providing feedback to the adaptive management process. Monitoring allows detection of undesirable and desirable changes so that management actions can be modified or designed to achieve desired goals and objectives while avoiding adverse effects to ecosystems. Current Forest Service and BLM monitoring programs within the project area are not systemically designed to provide monitoring information needed to evaluate management plans at multiple planning scales.*

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AM-S3. Standard: Varies. See: A1/HU-G1 NW-G12	**AM-S3. Standard:** Same as Alternative 1.	**AM-S3. Standard:** Within two years, Forest Service regional and BLM state offices shall develop an integrated intergovernmental monitoring and evaluation protocol, coordinated with research, to determine if acceptable progress toward desired conditions is being achieved. Other federal agencies, tribes, states, counties, and affected stakeholders shall have the opportunity to be involved in developing this protocol. It shall include selected key elements to be monitored to provide desired data at a reasonable cost. At a minimum, key ecosystem health indicators that transcend multiple planning scales for aquatic, terrestrial, vegetation, watershed, and socio-economic resources should be assessed and reported to determine progress in meeting management objectives. See Monitoring section of Implementation appendix (Appendix 3-1).
AM-S4. Standard: Varies. See: A1/IA-S1	**AM-S4. Standard:** Same as Alternative 1.	**AM-S4. Standard:** Forest Service regional and BLM state offices shall oversee development and implementation of annual monitoring programs (implementation, effectiveness, and validation) at various scales. Annual report summarizing monitoring results shall be issued.
AM-S5. Standard: Varies. See: A1/IA-S1 NW-G12	**AM-S5. Standard:** Same as Alternative 1.	**AM-S5. Standard:** Critical monitoring (such as implementation monitoring essential to assure progress toward meeting objectives) shall be implemented immediately as an integral part of projects and programs. Regional and state offices shall cooperate with federal agencies and state, tribal, and county governments to develop consistent protocols for methodologies in collection, transmission, and sharing of monitoring data consistent with AM-S3 for other types of monitoring, such as effectiveness, validation, and baseline monitoring. Prior to the development of regional and state protocols, tier monitoring to the five components described in Appendix 3-1.
AM-S6. Standard: Varies. See: A1/IA-S1 A1/TE-G8	**AM-S6. Standard:** Same as Alternative 1.	**AM-S6. Standard:** Riparian area monitoring within all grazing allotments shall be updated to conform with monitoring protocols and evaluation procedures resulting from standard AM-S3 by either modifying annual use plans or revising allotment management plans.
AM-S7. Standard: Varies. See: A1/IA-S1	**AM-S7. Standard:** Same as Alternative 1.	**AM-S7. Standard:** Monitoring shall be conducted by administrative units (Forest Service district and BLM resource area level) to determine if ICBEMP objectives are being met. If it is determined that objectives are not being met due to current management actions, then management actions should be modified to those more likely to achieve objectives. If it is determined that objectives are not being met due to past management actions, then restoration actions should be implemented that are likely to achieve objectives. If analysis indicates that ICBEMP objectives are not being met due to natural conditions or to processes or actions outside of management control, then new objectives should be developed on the basis of new information.

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ACCOUNTABILITY

ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	ALTERNATIVE 5	ALTERNATIVE 6	ALTERNATIVE 7
A-O1. Objective: Not Applicable.	**A-O1. Objective:** Not Applicable.	**A-O1. Objective:** Forest Service/BLM line officers are accountable to ensure this plan is implemented as described and the line officers are accountable for ensuring participation in plan implementation.				
A-S1. Standard: Not Applicable.	**A-S1. Standard:** Not Applicable.	**A-S1. Standard:** BLM State Directors, Regional Foresters, and their subordinate line officers shall ensure that: - ICBEMP objectives and standards are met; - implementation is consistent; - interagency and intergovernmental collaboration occurs on a timely basis; - employees are trained, an appropriate incentive system is in place, and non-compliance is promptly dealt with; and - consultation occurs with the tribes on a timely basis.				
A-S2. Standard: Not Applicable.	**A-S2. Standard:** Not Applicable.	**A-S2. Standard:** An interagency implementation memorandum of understanding shall be developed between the Forest Service, BLM, and the Regulatory Agencies that will ensure: - interagency collaboration occurs on a timely basis; - streamlined consultation process; - interagency monitoring and adaptive management; - participation in the development of appropriate processes; - participation in executive oversight; and - participation in the dispute resolution process.				
A-S3. Standard: Not Applicable.	**A-S3. Standard:** Not Applicable.	**A-S3. Standard:** Tribal, state, county, and federal agencies and Resource Advisory Councils shall be provided opportunities to participate in implementation oversight groups. (See Implementation Appendix.)				
A-S4. Standard: Not Applicable.	**A-S4. Standard:** Not Applicable.	**A-S4. Standard:** Measurable standards that will not weaken the ability of the ecosystem to meet the ICBEMP Desired Range of Future Conditions shall be implemented following Ecosystem Analysis or site-specific NEPA analysis. (See also EM-13.)				

CONTINUE TO CHAPTER 3, PART 3

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