

Appendix A

Applicable Laws and Management Guidance

Appendix A: Applicable Laws and Management Guidance

Decisions contained in this Final EIS and RMP comply with all applicable laws, regulations, and management guidance that direct the BLM in its resource management activities. This appendix lists the major legal authorities relevant to BLM land use planning.

1. The Federal Land Policy and Management Act of 1976 (FLPMA), as amended, 43 U.S.C. 1701 et seq., provides the authority for BLM land use planning.
 - a. Sec. 102 (a) (7) and (8) and 103(c) sets the policy of the United States concerning the management of BLM lands.
 - b. Sec. 201 requires the Secretary of the Interior (the Secretary) to prepare and maintain an inventory of all BLM lands and their resource and other values; and, as funding and workforce are available, to determine the boundaries of the public lands, provide signs and maps to the public, and provide inventory data to State and local governments.
 - c. Sec. 202 (a) requires the Secretary, with public involvement, to develop, maintain, and when appropriate, revise land use plans that provide by tracts or areas for the use of the BLM lands.
 - d. Sec. 202 (c) (9) requires that land use plans for BLM lands be consistent with tribal plans and, to the maximum extent consistent with applicable Federal laws, with State and local plans.
 - e. Sec. 202 (d) provides that all public lands, regardless of classification, are subject to inclusion in land use plans, and that the Secretary may modify or terminate classifications consistent with land use plans.
 - f. Sec. 202 (f) and Sec. 309 (e) provide that federal agencies, state and local governments, and the public be given adequate notice and an opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of the public lands.
 - g. Sec. 302 (a) requires the Secretary to manage BLM lands under the principles of multiple use and sustained yield, in accordance with, when available, land use plans developed under Sec. 202 of FLPMA, except that where a tract of BLM lands has been dedicated to specific uses according to any other provisions of law, it shall be managed in accordance with such laws.
 - h. Sec. 302 (b) recognizes the entry and development rights of mining claimants, while directing the Secretary to prevent unnecessary or undue degradation of the public lands.
 - i. Sec. 505(a) requires that "...each right-of-way shall contain terms and conditions which will ... minimize damage to the scenic and esthetic values...".
2. The National Environment Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321 et seq., requires the consideration and public availability of information regarding the environmental impacts of major federal actions significantly affecting the quality of the human environment. This includes the consideration of alternatives and mitigation of impacts.
3. The Clean Air Act of 1990, as amended, 42 U.S.C. 7418, requires federal agencies to comply with all federal, state, and local requirements regarding the control and abatement of air pollution. This includes abiding by the requirements of State Implementation Plans.
4. The Clean Water Act of 1987, as amended, 33 U.S.C. 1251, establishes objectives to restore and maintain the chemical, physical, and biological integrity of the Nation's water.
5. The Federal Water Pollution Control Act, 33 U.S.C. 1323, requires the federal land manager to comply with all federal, state, and local requirements; administrative authority; process; and

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- sanctions regarding the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity.
6. The Safe Drinking Water Act, 42 U.S.C. 201, is designed to make the Nation’s waters “drinkable” as well as “swimmable.” Amendments establish a direct connection between safe drinking water, watershed protection, and management.
 7. The Endangered Species Act of 1973 (ESA), as amended, 16 U.S.C. 1531 et seq.:
 - a. Provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved and to provide a program for the conservation of such endangered and threatened species (Sec. 1531 [b], Purposes).
 - b. Requires all federal agencies to seek the conservation of endangered and threatened species and utilize applicable authorities in furtherance of the purposes of the Endangered Species Act (Sec. 1531 [c] [1], Policy).
 - c. Requires all federal agencies to avoid jeopardizing the continued existence of any species that is listed or proposed for listing as threatened or endangered or destroying or adversely modifying its designated or proposed critical habitat (Sec. 1536 [a], Interagency Cooperation).
 - d. Requires all federal agencies to consult (or confer) in accordance with Sec. 7 of the Endangered Species Act with the Secretary of the Interior, through the Fish and Wildlife Service and/or the National Marine Fisheries Service, to ensure that any federal action (including land use plans) or activity is not likely to jeopardize the continued existence of any species listed or proposed to be listed under the provisions of the Endangered Species Act, or result in the destruction or adverse modification of designated or proposed critical habitat (Sec. 1536 [a], Interagency Cooperation, and 50 CFR 402).
 8. The Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271 et seq., requires the federal land management agencies to identify river systems and then study them for potential designation as wild, scenic, or recreational rivers.
 9. The Wilderness Act, as amended, 16 U.S.C. 1131 et seq., authorizes the President to make recommendations to the Congress for federal lands to be set aside for preservation as wilderness.
 10. The Antiquities Act of 1906, 16 U.S.C. 431-433, protects cultural resources on federal lands and authorizes the President to designate national monuments on federal lands.
 11. The National Historic Preservation Act (NHPA), as amended, 16 U.S.C. 470, expands protection of historic and archaeological properties to include those of national, state, and local significance and directs federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register of Historic Places.
 12. The American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996, establishes a national policy to protect and preserve the right of American Indians to exercise traditional Indian religious beliefs or practices.
 13. Federally Recognized Tribes and Tribal Reserved Rights - Federally recognized tribes are sovereign nations that maintain a unique government to government and trust relationship with the United States (American Indian Resources Institute 1988:26). The trust relationship is

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essentially one in which Indian tribes trust the federal government to honor the reserved rights made in treaties or other agreements in exchange for Indian lands¹.

In the past, this relationship has been acknowledged in one of three ways; by treaty ratification, Congressional Act, or executive order². The various treaties, congressional acts, and executive orders that have been crafted during the past 150 years have established a unique legal relationship with the three federally recognized tribes and the United States government. Part of that legal relationship may be found in the tribes' reserved rights and privileges to harvest and utilize traditional resources, to visit and maintain sacred sites, and to participate in ceremonies that preserve the essential elements of their culture. Those resources and sacred sites, located on ancestral lands and ceded to the federal government, now constitute a large part of the public domain.

14. The Recreation and Public Purposes Act of 1926, as amended, 43 U.S.C. 869 et seq., authorizes the Secretary of the Interior to lease or convey BLM lands for recreational and public purposes under specified conditions.
15. The Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq., requires application unsuitability criteria prior to coal leasing and also to proposed mining operations for minerals or mineral materials other than coal.
16. The Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181 et seq., authorizes the development and conservation of oil and gas resources.
17. The Onshore Oil and Gas Leasing Reform Act of 1987, 30 U.S.C. 181 et seq., stipulates that:
 - a. Potential oil and gas resources be adequately addressed in planning documents;
 - b. The social, economic, and environmental consequences of exploration and development of oil and gas resources be determined; and
 - c. Any stipulations to be applied to oil and gas leases be clearly identified.
18. The General Mining Law of 1872, as amended, 30 U.S.C. 21 et seq., allows the location, use, and patenting of mining claims on sites on public domain lands of the United States.
19. The Mining and Mineral Policy Act of 1970, 30 U.S.C. 21a, establishes a policy of fostering development of economically stable mining and minerals industries, their orderly and economic development, and studying methods for disposal of waste and reclamation.
20. The Materials Act of 1947, as amended (30 U.S.C. 601–604, et seq.), provides for the sale of common variety materials for personal, commercial, or industrial uses and for free use for local, state, and federal governmental entities. The sales of mineral materials are controlled by the regulations listed in 43 CFR 3600.
21. The Taylor Grazing Act of 1934, 43 U.S.C. 315, “[T]he Secretary of the Interior is authorized, in his discretion, by order to establish grazing districts or additions thereto... of vacant unappropriated and unreserved lands from any part of the public domain...which in his opinion

¹ Pevar, S.L. 1992. *The Rights of Indians and Tribes: The Basic American Civil Liberties Union Guide to Indian and Tribal Rights*. Southern Illinois University Press, Carbondale and Edwardsville.

² Zucker, J., K. Hummel, and B. Hogfoss. 1983. *Oregon Indians: Culture, History and Current Affairs, an Atlas and Introduction*. Western Imprints, the press of the Oregon Historical Society. Portland.

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are chiefly valuable for grazing and raising forage crops[.]...” The Act also provides for the classification of lands for particular uses.

22. The Public Rangelands Improvement Act of 1978, 43 U.S.C. 1901, provides that the public rangelands be managed so that they become as productive as feasible in accordance with management objectives and the land use planning process established pursuant to 43 U.S.C. 1712.
23. The Wild Free Roaming Horse and Burro Act of 1971, 43 U.S.C 1331–1340, provides for the management, protection, and control of wild horses and burros on public lands and authorizes “adoption” of wild horses and burros by private individuals. Regulations applicable to wild horse and burro management on BLM-administered lands are provided in 43 CFR 4700.
24. The Archaeological Resources Protection Act of 1979, 16 U.S.C. 470, secures the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before October 31, 1979.
25. The Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. 3001, addresses the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. It requires federal agencies and museums to provide information about Native American cultural items to parties with standing and, upon presentation of a valid request, dispose of or repatriate these objects to them.
26. The Migratory Bird Conservation Act of 1979, as amended, 16 U.S.C. 715 et seq., establishes a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of the Interior for acquisition with Migratory Bird Conservation Funds.
27. The Bald Eagle Protection Act of 1973, 16 U.S.C. 668, establishes the eagle as a protected species.
28. The Energy Policy and Conservation Act Reauthorization of 2000, as amended, Public Law 106–469. For more information, please visit: <http://www.doi.gov/epca/>.
29. The National Trails System Act of 1968, as amended (16 U.S.C. 1241–1249), establishes a national trails system and requires that federal rights in abandoned railroads be retained for trail or recreation purposes, or sold with the receipts to be deposited in the Land and Water Conservation Fund.
30. Executive Order 11644 as amended by Executive Order 11989 (Off-Road Vehicles on Public Lands) established policies and procedures for controlling the use of off-road vehicles on public lands.
31. Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), 49 Fed. Reg. 7629, requires that each federal agency consider the impacts of its programs on minority populations and low income populations.
32. Executive Order 13007 (Indian Sacred Sites), 61 Fed. Reg. 26771, requires federal agencies to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions to:

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- a. Accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and
 - b. Avoid adversely affecting the physical integrity of such sacred sites.
33. Executive Order 13084 (Consultation and Coordination with Indian Tribal Governments) provides, in part, that each federal agency shall establish regular and meaningful consultation and collaboration with Indian tribal governments in the development of regulatory practices on federal matters that significantly or uniquely affect their communities.
34. Executive Order 13112 (Invasive Species) provides that no federal agency shall authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk or harm will be taken in conjunction with the actions.
35. Executive Order 11990 (Protection of Wetlands) requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.
36. Executive Order 11988 (Floodplain Management) provides for the restoration and preservation of national and beneficial floodplain values, and enhancement of the natural and beneficial values of wetlands in carrying out programs affecting land use.
37. Executive Order 13186 (Migratory Birds) establishes the responsibilities of federal agencies to protect migratory birds.
38. Secretarial Order 3175 (incorporated into the Departmental Manual at 512 DM 2) requires that if Department of the Interior agency actions might impact Indian trust resources, the agency explicitly address those potential impacts in planning and decision documents, and the agency consult with the tribal government whose trust resources are potentially affected by the federal action.
39. Secretarial Order 3206 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act) requires Department of the Interior agencies to consult with Indian tribes when agency actions to protect a listed species, as a result of compliance with the Endangered Species Act, affect or may affect of Indian lands, tribal trust resources, or the exercise of American Indian tribal rights.
40. Executive Order 12548 provides for establishment of appropriate fees for the grazing of domestic livestock on public rangelands and directs that the fee shall not be less than \$1.35 per animal unit month.

Appendix B

**Record of Decision
Northeastern California
and
Northwestern Nevada**

**STANDARDS
for Rangeland Health
and
GUIDELINES
for Livestock Grazing Management**

Prepared by the Bureau of Land Management
California State Office
June 1999

ABSTRACT

**NE California and NW Nevada
Standards for Rangeland Health
and Guidelines for Livestock Grazing Management**

Draft () Final() Record of Decision (X)

United States Department of the Interior, Bureau of Land Management (BLM)

1 Type of Action: Administrative (X) Legislative ()

2 Abstract: This is the Record of Decision for the environmental impact statement (EIS) documenting the effects of adopting regional standards for rangeland health and guidelines for livestock grazing management on BLM-administered lands in parts of California and NW Nevada. This Record of Decision covers that part of California and Nevada formerly known as the Susanville District.

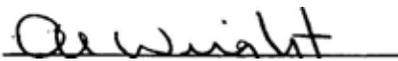
The Preferred Alternative described in the final EIS (Alternative 5), with modifications for clarification, has been chosen as the Standards and Guidelines for California. The changes reflected in this Decision are within the scope and analysis of the EIS.

These Standards and Guidelines will be recommended to the Secretary of the Interior for final approval. They will take effect immediately upon that approval.

This document contains the actual Decision establishing Rangeland Health Standards and Guidelines for California and NW Nevada. It includes the following:

- Decision on Plan Amendments
- Standards and Guidelines for NE California and NW Nevada (formerly the Susanville District)

- Implementation
- Assessments and Monitoring

 
Al Wright, Acting State Director Date Bureau of Land
Management California State Office

SUMMARY

This is the Record of Decision (Decision) recommending Rangeland Health Standards and Livestock Grazing Management Guidelines for NE California and NW Nevada. These recommendations will be submitted to the Secretary of the Interior (Secretary) for his approval, and will become effective immediately upon that approval.

The Decision amends BLM land use plans in NE California and NW Nevada to include the Standards and Guidelines and directs evaluation of existing, and development of new, Desired Plant Community (DPC) standards to ensure conformance of the DPCs with the Standards.

The Decision selects the Preferred Alternative described in the final EIS (Alternative 5), with minor changes for clarification, as the Rangeland Health Standards and Guidelines to be submitted to the Secretary for his approval.

The Decision describes how the Standards and Guidelines will be implemented and how rangeland health conditions will be monitored to assure achieving the Standards.

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DECISION

1. INTRODUCTION

There were five alternatives considered and analyzed in the EIS. Alternative 1 consisted of the standards and guidelines developed by the three Resource Advisory Councils (RACs) for their representative areas. Alternative 2 consisted of the state-wide standards developed by BLM, in consultation with representatives from each of the RACs, but without concurrence by the entire RAC membership. The guidelines for Alternative 2 were essentially the same as those for Alternative 1. Alternative 3 was adoption of the national "fall-back" standards and guidelines listed in the regulations. Alternative 4 (the environmentally preferred alternative) was a rapid improvement or rapid recovery alternative developed by BLM, with suggestions from several interest groups. The Standards in Alternative 4 were the same as those in Alternative 2, except for Water Quality; however, the implementation would have occurred much faster than under other alternatives. Alternative 5 was a modified version of Alternative 1, with changes based upon suggestions and new information from the public, the RACs, and BLM.

The Decision is to select Alternative 5, with some minor changes and clarifications, all of which are within the scope of the analysis. This decision will become effective immediately upon approval by the Secretary of the Interior.

This Alternative was selected for a number of reasons, including (1) it meets the requirements of the regulations at 43 CFR 4180.1 and 4180.2 to address the principles of rangeland health; (2) it was based upon and incorporates a large portion of the regional standards and guidelines recommended by the Resource Advisory Council; (3) it incorporates some good suggestions by other agencies and the public; (4) it is based upon sound science as requested repeatedly by the different parties who commented on the process; and (5) it can be implemented within BLM's existing budgets without undue economic impacts to the grazing operators and the surrounding communities.

2. PLAN AMENDMENTS

In accordance with the grazing administration regulations at 43 CFR 4100, existing land use plans (Resource Management Plans and Management Framework Plans) have been examined to determine their compliance with the new regulations and the principles of rangeland health. In most cases, these plans do comply.

The land use plans identified below, as well as allotment management and other activity level plans, are hereby amended to include the standards and guidelines as adopted in this decision. The standards and guidelines will become effective immediately upon approval by the Secretary of the Interior and will be incorporated into the Plans at that time. Where there are plan decisions that are contrary to the new regulations, the principles of rangeland health, and the standards and guidelines, those decisions will be deleted from the plans or amended to comply.

Where "desired plant community" (DPC) objectives have been determined through the BLM planning and NEPA processes, the DPCs will be evaluated to ensure they meet the standards of rangeland health. Where DPCs have not yet been determined for a pasture or allotment, they will be developed through the BLM planning and NEPA processes to meet local and regional management objectives, and the standards of rangeland health.

Each Field Office will make the physical changes to their land use plans prior to the next grazing season. As this is merely plan maintenance, further NEPA analysis will not be necessary to complete this administrative action.

LAND USE PLAN	PLAN DATE	FIELD OFFICE
Tuledad / Home Camp Management Framework Plan (MFP)	1978	Surprise -- south part
Cowhead / Massacre MFP	1980	Surprise -- north part
CAL / NEVA MFP	1982	Eagle Lake -- NE part
Willow Creek MFP	1983	Eagle Lake -- NW part
Honey Lake MFP	1983	Eagle Lake -- south part
Eagle Lake MFP Amendment	1990	Eagle Lake -- Eagle Lake area
Alturas Resource Management Plan	1983	Alturas -- most of area
Ash Valley Amendment		Alturas -- part only
Mount Dome MFP	1981	Alturas -- part only
Redding (old) MFP	1983	Alturas -- part only

3. STANDARDS AND GUIDELINES for RANGELAND HEALTH in NORTHEASTERN CALIFORNIA and NORTHWESTERN NEVADA

The Preferred Alternative described in the final EIS (Alternative 5), with minor changes for clarification, has been chosen as the Standards and Guidelines for Northeastern California and Northwestern Nevada. The changes reflected in this Decision are within the scope and analysis of the EIS. These Standards and Guidelines will take effect immediately upon their approval by the Secretary of the Interior. These standards and guidelines were developed for, and are hereby adopted for, that part of northeastern California and northwestern Nevada formerly known as the Susanville District.

Preamble

Healthy rangelands contribute to the social and economic well being of rural communities in Northeastern California and Northwestern Nevada, and they provide, over the long term, the most reliable harvest of rangeland resources. The objective of rangeland resource planning is to integrate BLM resources with other resources to achieve the mandate of multiple-use and sustained yield management of renewable resources in an environmentally sound and cost-effective manner.

The **Standards** of rangeland health are expressions of physical and biological condition or degree of function required for healthy, sustainable rangelands. The Standards are applied on a landscape scale. Some standards may not apply to all acres. For example, a mosaic of vegetation types and age classes may produce the diversity associated with healthy rangelands; however, some individual vegetation communities within the mosaic may lack diversity.

The Standards always relate to the capability or potential of a specific site. The land will not be expected to produce vegetation or support habitats not attainable due to climate, soils, or other limiting attributes. In instances where site capability or potential has changed due to human-caused or natural disturbance, recognition will be given to the modified capability when setting or assigning a standard to (for) the site. The Standards are designed to establish the threshold for healthy rangelands. In some

circumstances, an exception to the Standards or Guidelines may be necessary or unavoidable; however, **these instances should be under extreme conditions only** and fully justified (documented) in order to be acceptable.

The **Guidelines** for grazing management are the types of grazing management methods and practices determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard. The Guidelines were designed to provide direction, yet offer flexibility for implementation through activity plans and terms and conditions for grazing permits. The Bureau of Land Management (BLM) must operate within the constraints of other regulatory requirements that may affect how standards and guidelines are applied for livestock grazing, for example the Wild Free-Roaming Horse and Burro Act (1971).

STANDARD 1: UPLAND SOILS

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and landform, and exhibit functional biological, chemical and physical characteristics.

Meaning that:

Precipitation is able to enter the soil surface and move through the soil profile at a rate appropriate to soil type, climate, and landform; the soil is adequately protected against human-caused wind or water erosion; and the soil fertility is maintained at, or improved to, the appropriate level.

Criteria to Meet Standard:

- * Ground cover (vegetation, litter, and other types of ground cover such as rock fragments) is sufficient to protect sites from accelerated erosion.
- * Evidence of wind and water erosion, such as rills and gullies, pedestaling, scour or sheet erosion, and deposition of dunes is either absent or, if present, does not exceed what is natural for the site.
- * Vegetation is vigorous, diverse in species composition and age class, and reflects the potential natural vegetation or desired plant community for the site.

STANDARD 2: STREAMS

Stream channel form and function are characteristic for the soil type, climate, and landform.

Meaning that:

Channel gradient, pool frequency, width to depth ratio, roughness, sinuosity, and sediment transport are able to function naturally and are characteristic of the soil type, climate, and landform.

Criteria to Meet Standard:

- * Gravel bars and other coarse textured stream deposits are successfully colonized and stabilized by woody riparian species.
- * Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks during high stream flow events.
- * The stream water surface has a high degree of shading, resulting in cooler water in summer and reduced icing in winter.
- * Portions of the primary floodplain are frequently flooded (inundated every 1-5 years).

STANDARD 3: WATER QUALITY

Water will have characteristics suitable for existing or potential beneficial uses. Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California and Nevada State standards, excepting approved variances.

Management Objective: For water bodies, the primary objective is to maintain the existing quality and beneficial uses of water protect them where they are threatened, and restore them where they are currently degraded. This objective is of even higher priority in the following situations:

- a. where beneficial uses of water bodies have been listed as threatened or impaired pursuant to Section 303(d) of the Federal Clean Water Act;
- b. where aquatic habitat is present, has been present, or is potentially present for Federal threatened or endangered, candidate, and other special status species dependent on water resources; and
- c. in designated water resource sensitive areas such as riparian and wetland areas.

Meaning That:

BLM will:

Maintain the physical, biological, and chemical integrity of waters flowing across or underlying the lands it administers.

Protect the integrity of these waters where it is currently threatened.

Insofar as is feasible, restore the integrity of these waters where it is currently impaired.

Not contribute to pollution and take action to remedy any pollution resulting from its actions that violates California and Nevada water quality standards, Tribal water quality standards, or other applicable water quality requirements (e.g., requirements adopted by SWRCB or RWQCB in California, or U.S. EPA pursuant to Section 303(d) of the Clean Water Act or the Coastal Zone Reauthorization Act). Where action related to grazing management is required, such action will be taken as soon as practicable but not later than the start of the next grazing year (in accordance with 43 CFR 4180.1).

Be consistent with the non-degradation policies as identified by the States.

Develop and execute a Management Agency Agreement with the States of California and Nevada for the efficient protection of water quality associated with BLM's management.

Work with the States' water quality administrative agencies and U.S. EPA to establish appropriate beneficial uses for public waters, establish appropriate numeric targets for 303(d) listed water bodies, and implement the applicable requirements to ensure that water quality on public lands meets the objectives for the designated beneficial uses of the water.

Develop and implement Best Management Practices (BMPs) approved by the States to protect and restore the quality and beneficial uses of water, and monitor both implementation and effectiveness of the BMPs. These BMPs will be developed in full consultation, coordination, and cooperation with permittees and other interests.

State or Tribal approved variances or exceptions to water quality standards may be applicable within their Basin Plans for specific types of activities or actions. BLM will follow State or Tribal administrative procedures associated with variances.

As Indicated By:

- * The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., indicator macroinvertebrates, fish, algae, and plants).
- * Achievement of the standards for riparian, wetlands, and water bodies.
- * Monitoring results or other data that show water quality is meeting the standard.

STANDARD 4: RIPARIAN and WETLAND SITES

Riparian and Wetland areas are in properly functioning condition and are meeting regional and local management objectives.

Meaning that:

The riparian and wetland vegetation is controlling erosion, stabilizing stream banks, shading water areas to reduce water temperature, filtering sediment, aiding in floodplain development, dissipating energy, delaying floodwater and increasing recharge of ground water that is characteristic for these sites. Vegetation surrounding seeps and springs is controlling erosion and reflects the potential natural vegetation for the site.

Criteria to Meet Standard:

Riparian vegetation is vigorous and mostly perennial, and diverse in species composition, age class and life form sufficient to stabilize stream banks and shorelines.

Riparian vegetation and large woody debris are well anchored and capable of withstanding high stream flow events.

Negligible accelerated erosion as a result of human related activities is evident.

Age class and structure of woody riparian and wetland vegetation are appropriate for the site.

Exceptions and Exemptions to Standard 4 (where Standard 4 is not applicable)

- Structural facilities constructed for livestock/wildlife water or other purposes are not natural wetland and/or riparian areas. Examples are: water troughs, stock ponds, flood control structures, tailings ponds, water gaps on fenced or otherwise restricted stream corridors, etc.

STANDARD 5: BIODIVERSITY

Viable, healthy, productive and diverse populations of native and desired plant and animal species, including special status species, are maintained.

Meaning that:

Native and other desirable plant and animal populations are diverse, vigorous, and able to reproduce, and support nutrient cycles and energy flows.

Criteria to Meet Standard:

- * Wildlife habitats include seral stages, vegetation structure, and patch size to promote diverse and viable wildlife populations.
- * A variety of age classes is present for most species.
- * Vigor is adequate to maintain desirable levels of plant and animal species to ensure reproduction and recruitment of plants and animals when favorable events occur.
- * Distribution of plant species and their habitats allow for reproduction and recovery from localized catastrophic events.
- * Natural disturbances such as fire are evident, but not catastrophic.
- * Non-native plant and animal species are present at acceptable levels.
- * Habitat areas are sufficient to support diverse, viable, and desired populations and are connected adequately with other similar habitat areas.
- * Adequate organic matter (litter and standing dead plant material) is present for site protection and decomposition to replenish soil nutrients and maintain soil health.

GUIDELINES FOR LIVESTOCK GRAZING

The following guidelines are meant to apply to one or more of the standards for rangeland health.

Guideline 1: Adequate stubble will be present on all stream-side areas at the end of the growing season, or at the end of the grazing season if grazing occurs after fall dormancy. The residual or regrowth should provide sufficient herbaceous forage biomass to meet the requirement of plant vigor maintenance, bank protection, and sediment entrapment. Stubble height thresholds will be set on a site-specific basis, except for those allotments to which Guideline 16 applies (see Guideline 16 for an explanation of when Guideline 16 applies).

Utilization of stream-side herbaceous and woody plants should be limited to a specified amount of the current growth, and/or livestock should be removed to allow sufficient time for plant regrowth.

- a. Late season use (summer or fall grazed pastures) requires more restrictive utilization based on site specific situations.
- b. Special situations such as fragile fisheries habitats or easily eroded stream banks may require more restrictive utilization thresholds.
- c. Hoof action impacts or chiseling on stream banks will not exceed specified thresholds so that stream bank stability is maintained or improved.

Guideline 2: Desired seral states will be determined through the Allotment Management Plan development process; generally the goal will be to achieve advanced ecological status in the riparian zone, except where site-specific objectives call for lower ecological status (such as meadows in important sage grouse habitat, where the objective might call for a pattern of meadows in different seral stages from mid-seral to the potential natural community). These site-specific objectives will be determined through allotment management plans or other plans and analyzed through the NEPA process.

Guideline 3: Periods of rest from livestock grazing or other avoidable disturbances must be provided during/after periods of stress on the land (e.g.: fire, flood, drought) and during critical times of plant growth.

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Guideline 4: Plans for grazing on any allotment must consider other uses (recreation, archaeological sites, wildlife, horses and burros, mineral resource extraction, etc.) and be coordinated with the other users of public lands so that overall use does not detract from the goal of achieving rangeland health.

Guideline 5: Intensity, frequency, season-of-use, and distribution of grazing shall provide for growth and reproduction of desired plant species and the achievement of the potential natural vegetation or desired plant community.

Guideline 6: Grazing permits will include site-specific, measurable terms and conditions.

Guideline 7: Design and work towards implementation of a grazing management strategy for livestock for each grazing unit (pasture) within I (Improvement) and M (Maintenance) category allotments, to maintain or improve rangeland health. This may consist of, but not be limited to, season-of-use, rotation, or by setting utilization levels for desirable plants. Each management plan implemented will incorporate the factors necessary to maintain the health of desirable plants.

Guideline 8: Determination of grazing use by livestock must provide for the habitat requirements of fish and wildlife.

Guideline 9: Grazing management practices must sustain biological diversity across the landscape. A mosaic of seral stages, vegetation corridors, and minimal habitat fragmentation must be maintained.

Guideline 10: Take aggressive action to reduce the invasion of undesirable exotic plant species into native plant communities. The spread of noxious weeds will be controlled through appropriate methods such as grazing management, fire management, and other management practices.

Guideline 11: Prescribed fire and (natural) prescribed fire will be utilized to promote a mosaic of healthy plant communities and vegetative diversity.

Guideline 12: Grazing and other management practices shall take advantage of transitional opportunities (e.g., drought, flood, fire) to enhance or establish populations of desirable tree, shrub, herbaceous and grass species. Utilization levels will be established for desired seedlings, saplings, and/or mature plants to promote their presence in the plant community.

Guideline 13: Development of springs, seeps, and other water related projects shall be designed to promote rangeland health. Wherever possible, water sources shall be available year long for use by wildlife.

Guideline 14: Apply the management practices recognized and approved by the States of California and Nevada as Best Management Practices (BMPs) for grazing related activities to protect and maintain water quality.

Guideline 15: In watersheds draining into water bodies that have been listed or are proposed for listing as having threatened or impaired beneficial uses, and where grazing activities may contribute to the pollutants causing such impairment, the management objective is to fully protect, enhance, and restore the beneficial uses of the water.

Guideline 16: Utilization Levels to be Applied to those Allotments Not Meeting or Making Significant Progress Toward Meeting the Standards

If monitoring or documented observation indicates that one or more of the standards is not being met, and if significant progress is not being made toward meeting all of those standards that are not being met, and if there is evidence that current grazing practices are causing or contributing to this unsatisfactory condition, then the following utilization levels will be applied.

Utilization of key upland herbaceous species

UTILIZATION GUIDELINES (adapted from Holechek 1988 and Holechek et al. 1998)	
Community Type	Percent of Use of Key Herbaceous Species
Salt desert shrubland	25-35
Semi-desert grass and shrubland	30-40
Sagebrush grassland	30-40
California annual grassland	50-60*
Perennial grass communities within the California annual grassland vegetation type	30-40
Coniferous forest	30-40
Mountain shrubland	30-40
Oak woodland	30-40
Pinyon-juniper woodland	30-40
Alpine tundra	20-30

* Residual dry matter (RDM) guidelines will be used instead of these utilization levels for management of annual species in the California annual grassland. These RDM levels correspond approximately with these utilization levels. The RDM levels given in the table in the Final EIS under Alternative 5, Ukiah RAC Recommended Standards and Guidelines (Section 2.92), will be used for those few annual allotments within the area covered by this ROD.

Utilization of key upland browse species

There will be no more than 20 percent utilization of annual growth on key browse species prior to October 1 within identified deer concentration areas. These concentration areas are those areas within mule deer habitat where mule deer numbers are most likely to be concentrated during the winter season (winter season normally occurs from December 16 through March 31). These areas have been identified through State Fish and Game Agency fall and spring counts over a period of several years. Maps of these deer concentration areas are on file at the BLM Eagle Lake Field Office.

Utilization of key riparian species

A 4-6 inch minimum stubble height will remain at the end of the growing season in most riparian areas.

There should be no more than 20% utilization on key riparian trees and shrub species in those areas where the presence of woody riparian species is necessary to meet standards.

Application of the above utilization levels

These utilization guidelines will be applied to those areas of the allotment responsible for the determination that the allotment is not meeting the standards. For example, an allotment has 10 riparian areas, of which 6 have been determined to be in proper functioning condition and 4 have been determined to be functional-at risk. The utilization guidelines for riparian species given above would be applied to the 4 riparian areas that are functional-at risk, not to the 6 that are in proper functioning condition (although *all* of the riparian areas will be managed to meet the standards). Also, only those guidelines that are applicable to making progress toward meeting the standards that are not being met would be applied. For example, if only riparian standards are not being met, then only the guidelines applicable to utilization and stubble height of riparian vegetation would be applied.

These utilization levels will be implemented unless and until a current site-specific analysis is completed and new utilization levels are developed for specific allotments and documented in allotment management plans, other management plans, and/or in terms and conditions of grazing permits/leases. New site-specific utilization levels that are developed may be more restrictive than the guidelines presented above, consistent with achieving the desired resource conditions (as prescribed in land use plans and activity plans) and progress toward meeting the standards.

Implementation of this guideline

1. Uplands (including perennial grass and browse communities).

Guideline 16 will be implemented only on those upland areas that are responsible for the determination that the allotment is not meeting one or more of the standards and for which lighter utilization would be expected to move these areas toward meeting the standard(s).

Management changes (such as changes in season of use, timing, duration, and/or intensity; rotational grazing; fencing; herding; and/or adjustments in stocking rates) will be implemented if utilization guidelines on the average of the upland key areas across the pasture (or allotment if there is only one pasture) are exceeded for 2 consecutive years or in any 2 years out of every 5 years. In addition, at least 70% of upland key areas on the pasture (or allotment) are not to exceed maximum utilization guidelines in most years. Because of the potential long-term damage to perennial grass species associated with severe grazing, severe grazing use (>70% utilization) in any upland key area in any year will result in a management change the following year. If any particular key area fails to meet the guidelines for more than 2 consecutive years, then management action will be taken to remedy the problem in the area of the allotment that key area represents. The average (mean) utilization on key species will be estimated at each key area and used to determine if the guidelines have been met. There are indications that the median may be a better statistic to use than the mean; we will calculate both statistics from the same data sets and make a determination on which statistic to use after examining the data over a period of a few years. See Appendix 20 of the Final EIS for further discussion on this issue.

The management options to be implemented to meet this guideline will be determined in full consultation, cooperation, and coordination with affected permittees and other interests.

For allotments not meeting or making significant progress toward meeting the standards (and for which lower utilization levels of perennial upland species would be expected to help move these allotments toward the standards), utilization data already in hand will be used to determine whether a management change is necessary. Thus, for example, if utilization on a particular key area has exceeded the thresholds for the two years previous to the approval of these standards and guidelines, a management change will be implemented prior to the first grazing year following this approval.

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In addition to implementing management changes that are expected to bring utilization levels within threshold values, close monitoring will follow to ensure that the grazing use levels are not exceeded during the grazing period following the management changes. If utilization levels are exceeded or expected to be exceeded during this period, a reduction or curtailment of further grazing in the area represented by the key area will be required for the remainder of the grazing season. In addition, further management changes will be implemented prior to the start of the next grazing season to bring utilization levels within thresholds.

2. Riparian areas (including herbaceous and woody plant communities).

Guideline 16 will be implemented only on those riparian areas that are nonfunctional or functional--at risk and lighter utilization levels would be expected to move these areas toward meeting the standards. The guideline will apply where the riparian area in a healthy state has the capability to produce vegetation of the prescribed height. The stubble heights will be measured at the end of the growing season to determine if the guideline has been met. Management changes (such as changes in season of use, timing, duration, and/or intensity; rotational grazing; fencing; herding; and/or adjustments in stocking rates) will be implemented if stubble heights on the average of the key riparian areas across the pasture (or allotment if there is only one pasture) fall below the guidelines for 2 consecutive years or in any 2 years out of every 5 years. In addition, at least 70% of riparian key areas on the allotment are to exceed minimum stubble heights in most years. If any particular key area fails to meet the guidelines for more than 2 consecutive years, then management action will be taken to remedy the problem in the area of the allotment that key area represents.

Because stream banks may be inadequately protected by heavy use in any one year and because stubble heights below 3 inches result in cattle shifting their preference to shrubs, stubble heights below 2 inches in any one year will require a management change in the following year.

The mean stubble height on key riparian species will be estimated at each riparian key area and used to determine if the guidelines have been met. There are indications that the median may be a better statistic to use than the mean; we will calculate both statistics from the same data sets and make a determination on which statistic to use after examining the data over a period of a few years. See Appendix 20 of the Final EIS for further discussion on this issue.

For allotments not meeting or making significant progress toward meeting the standards (and for which higher stubble would be expected to help move these allotments toward the standards), stubble height data already in hand will be used to determine whether a management change is necessary. Thus, for example, if stubble heights on a particular key area have fallen below the thresholds for the two years previous to the approval of these standards and guidelines, a management change will be implemented prior to the first grazing year following this approval. In addition to implementing management changes that are expected to bring stubble heights within threshold values, close monitoring will follow to ensure that the grazing use levels are not exceeded during the grazing period following the management changes. If utilization levels are exceeded or expected to be exceeded during this period, a reduction or curtailment of further grazing in the area represented by the key area will be required for the remainder of the grazing season. In addition, further management changes will be implemented prior to the start of the next grazing season to bring utilization levels within thresholds.

The management options to be implemented to meet this guideline will be determined in full consultation, coordination, and cooperation with affected permittees and other interests.

If reductions in permitted use are required: Any reductions in permitted use required as a result of implementing this guideline will be held in suspension and apportioned back to the permittee(s) or lessee(s) authorized to graze in the affected allotment if rangeland health improves to the extent that the authorized officer determines additional forage to be available (see Implementation, Appendix 1, for more information on this).

Guideline 17: Rangeland monitoring to determine utilization of forage resources and trend of rangeland health will be conducted in each allotment based on current accepted practices and techniques as directed in the Interagency Technical References: *Utilization Studies and Residual Measurements* (BLM et al. 1996b) and *Sampling Vegetation Attributes* (BLM et al. 1996a). Monitoring methodologies will be applicable to local conditions and developed in consultation with permittees and interested publics.

To the extent possible, monitoring methods will be simple and easily accomplished. BLM, permittees, or others will do the monitoring. BLM will be responsible for ensuring that the monitoring is conducted in accordance with currently accepted practices and techniques, for analyzing and interpreting the data collected (in consultation, coordination, and cooperation with affected permittees and other interests), and for the accuracy of the data.

Existing key areas will be used where they exist. New key areas will be selected in full consultation, coordination, and cooperation with affected permittees and other interests. BLM will periodically review established key areas to determine if they continue to be appropriate to management. This review will be done in full consultation, coordination, and cooperation with affected permittees and other interests. If there is disagreement between BLM, permittees, and other interests over the location of key areas, the RAC will be asked for ideas on resolution. The final decision on the placement of key areas, however, rests with BLM.

BLM, in cooperation with other agencies, including Cooperative Extension, the Natural Resources Conservation Service, and the Forest Service, will provide training for permittees and other interested parties on rangeland monitoring methods.

4. IMPLEMENTATION

BLM will fully implement the grazing standards and guidelines as directed in the rulemaking. The rule states that, "The authorized officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining that grazing practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform to the guidelines...."(43 CFR 4180.2(c)).

Determination of the "appropriate action," and the actual scheduling of the implementation, will be the responsibility of the local Field Managers. However, it will be done using the priority system described in Appendix 1.

5. ASSESSMENTS and MONITORING

Field Offices will conduct assessments of all allotments according to the priority described in Appendix

1. These assessments will be done using an interdisciplinary approach and the findings and reasons for the findings will be documented. The format and content of this documentation will be left to the discretion of the individual Field Manager. (Examples are in the Final EIS.)

APPENDIX B

Field Offices will monitor allotments according to the priority described in Appendix 1. The monitoring will be done using an interdisciplinary approach, using methods described in Appendix 2. Also see Guideline 17. Both assessments and monitoring will be done in consultation, coordination, and cooperation with permittees and other interests.

Rangeland health conditions will be reported annually for each grazing allotment. This information will include the determinations of rangeland health conditions through assessments and monitoring and the progress made towards meeting rangeland health standards. Specifically, for each allotment an identification will be made of what standards, if any, are not met or where significant progress is not being made toward meeting the standard; what progress has been made regarding determining and implementing needed management changes; and the results of making the management changes as determined from monitoring information. Additionally, any changes in the management categories of the allotments will be identified and an explanation of the reasons for the change will be made.

The above information will be gathered at the Field Office which administers the respective allotment(s). A summary of this information will be consolidated for all of the allotments in the state (exclusive of the California Desert District) and made available to the public annually.

6. PUBLIC INVOLVEMENT and RESPONSE to PROTESTS

BLM has had extensive public involvement throughout the process of developing the Standards and Guidelines. Early phases of this involvement were described in the Draft EIS, and in Chapter 5 of the Final EIS. Further, we have consulted extensively with the three Resource Advisory Councils (RAC) on content and wording of the Standards and Guidelines.

As stated in the Final EIS, “following the comment period on the draft EIS, the RAC members were sent copies of all of the comment letters. The RACs discussed the comments and the draft EIS in their meetings. Representatives of the three RACs then met with BLM staff in a workshop setting and made recommendations for modification of their original proposals.”

Comments made by the public following the Draft EIS were individually analyzed by BLM, and responded to in the Final EIS. The Proposed Action (Alternative 5) in the Final EIS was based upon the original RAC proposals, with changes suggested by the RACs and by BLM, based upon analysis of the public comments. There were several meetings with the Susanville RAC and other interested parties prior to issuing the Final EIS because there were items in the Standards and Guidelines that caused concern to RAC members and ranchers in NE California and NW Nevada.

Following release of the Final EIS, BLM received 5 protests, all of which applied to Northeastern California and Northwestern Nevada (3 of these applied only to this area, while the other 2 applied to this area and to the rest of the EIS area). The major concerns were that there were changes made in the Final EIS that the public had not been allowed to review in the Draft; that the water quality guidelines were inappropriate; that utilization guidelines should not be imposed throughout the region; that there was no “no grazing” alternative; and that the Bureau does not have enough staff to implement the Standards and Guidelines.

As a result of these protests, BLM has added some language to this ROD to clarify how the standards and guidelines will be implemented. However, no substantive changes have been made to the Northeastern California and Northwestern Nevada Standards and Guidelines from that contained in the Final EIS. Based on the clarification language, three of the protestors subsequently withdrew their protests. The remaining two protests were dismissed by the Director of BLM, who sent letters to the two protestors explaining the reasons for the dismissals.

APPENDIX 1: IMPLEMENTATION

The fallback standards (43 CFR 4180.2(f)(1)) have been in effect in since August 12, 1997. An initial screening of allotments was made, based on existing information, to determine the status of each allotment with respect to meeting the fallback standards. Each allotment was placed into one of four categories as follows:

- Category 1: Areas where one or more standards are not being met, or significant progress is not being made toward meeting the standards(s), and livestock grazing is a significant contributor to the problem.
- Category 2: Areas where all standards are being met or significant progress is being made toward meeting the standard(s).
- Category 3: Areas where the status for one or more standards is not known, or the cause of the failure to not meet the standard(s) is not known.
- Category 4: Allotments where one or more of the standards are not being met or significant progress is not being made toward meeting the standards due to causes other than (or in addition to) livestock grazing activities. (Those allotments where current livestock grazing is also a cause for not meeting the standards is included in Category 1 in addition to this category.) The authorized officer should take appropriate action based on regulation or policy; however, these actions not related to livestock grazing are outside the scope of this implementation plan and will not be addressed in this document.

An assumption has been made by the BLM field managers that, with few possible exceptions, the implementation needed for the regulatory fallback standards and guidelines will essentially be the same as for any anticipated set of final approved standards and guidelines implemented pursuant to this Record of Decision (ROD). Consequently, the categorization of allotments under the standards in this ROD is likely to be the same as the categorization under the fallback standards and guidelines. Existing allotment assessments and their resulting determinations as to category will be reviewed to ensure that the determination is correct under the standards set in place by this ROD.

New allotment assessments, reviews of existing allotment assessments, and determination of allotment category will be conducted in full consultation, coordination, and cooperation with permittees and other interests.

We intend to conduct rangeland health assessments on all allotments within the next 5 years. First priority for these assessments will be given to those allotments where we already know or suspect one or more of the standards are not being met. These include those allotments placed in Category 1 under the fallback standards and those allotments currently in Category 3 that we have reason to believe may not be meeting standards. After these allotments have been assessed, the remaining allotments will be assessed using the BLM I, M, and C priority management system, with first priority to I, second to M, and last to C.

For those allotments where the standards are not being met (Category 1), management actions will be implemented to correct the situation prior to the next grazing season turn-out period for the allotment. The management options will be determined in full coordination, consultation, and cooperation with permittees and other interests.

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Monitoring will be conducted to evaluate the progress towards improving rangeland health and to evaluate the success of the specific management measures applied (see Guideline 17).

APPLICATION OF GUIDELINES

Once the guidelines are approved by the Secretary of the Interior, they will be applicable to the management of livestock grazing on all allotments not meeting the health standards. Some guidelines will be applicable regardless of the specific rangeland health condition, as they are designed to help protect and sustain rangeland health and are not intended to be applied only to remedy problems. Many of the guidelines will need to be more specifically identified and then applied as terms and conditions of a permit or lease, based upon the specific needs for meeting rangeland health standards. There will be instances where specific terms and conditions will be applied to grazing use authorizations for reasons other than those directly related to rangeland health, such as to accommodate other resource needs and land uses or to meet administrative requirements. Examples of this may include protecting cultural resource sites, requiring a specific breed of livestock to be used that is compatible with the needs of other permittees or lessees using the same allotment, or for meeting various regulatory requirements for grazing administration purposes. In some instances, existing terms and conditions will be carried over from previously made plans and commitments, such as those identified in allotment management plans or coordinated management plans. In these instances, the terms and conditions may or may not be related to rangeland health needs.

Any terms or conditions specified for a permit or lease must be consistent with and support appropriate BLM land use plans or other land use plans applicable to the public lands. BLM will also adhere to requirements such as those identified as terms or conditions from a biological opinion for protecting the habitat of a plant or animal under the Endangered Species Act.

Terms and conditions will be applied to grazing permits, leases, or other grazing authorizations as the authorized officer (Field Manager) determines the need. The determination of what terms and conditions will be applied will be made in full consultation, coordination, and cooperation with the respective permittees/lessees and other interested parties involved in the particular allotment. The same process will be used for making needed changes to any existing terms and conditions. Information from assessments and evaluations of monitoring data will be used to determine the management changes needed. Management options that would be expected to move allotments toward meeting the standards will be determined in full coordination, consultation, and cooperation with permittees/lessees and other interested parties.

Alternative management changes will be considered and evaluated through the NEPA process prior to making final determinations. It is anticipated that in most instances, the terms and conditions will be identified cooperatively and be agreed upon by the affected permittee/lessee and all interested parties. Where an agreement cannot be reached, then a formal decision (which is appealable) will be issued.

If reductions in permitted use are necessary to achieve the standards or meet the guidelines, the animal unit months (AUMs) by which the permitted use is reduced will be held in suspension. Once the authorized officer determines that rangeland health has recovered to an extent that all or part of the suspended permitted use can be restored, this suspended permitted use shall first be apportioned in satisfaction of suspended permitted use to the permittee(s) or lessee(s) authorized to graze in the allotment in which the forage is available (this is in accordance with 43 CFR 4110.3-1(b)).

REPORTING PROGRESS IN RANGELAND HEALTH ACHIEVEMENTS

Rangeland health conditions will be reported annually for each grazing allotment. This information will include the determinations of rangeland health conditions through assessments and monitoring and the progress made towards meeting rangeland health standards. At a minimum the report will identify, by allotment: (1) what standards, if any, are not being met; (2) whether significant progress is being made toward meeting those standards that are not currently being met; (3) the magnitude of those standards not being met, in terms such as acres, miles of stream, number of sites, etc.; (4) the progress that has been made in determining and implementing needed management changes; and (5) the results of making the management changes as determined from monitoring and assessment information. Additionally, any changes in the management categories of the allotments will be identified, accompanied by an explanation of the reasons for the change.

The above information will be gathered at the field office which administers the respective allotment(s). A summary of this information will be consolidated for all of the allotments within the EIS area and made available to the public annually.

Tables were provided in the Final EIS that showed all allotments in the State and the category to which they were assigned in 1997. Since that list was compiled, management changes have been implemented and additional assessment and monitoring work has been completed that makes those lists obsolete. When the annual report is compiled each year, an updated list of all allotments, by category, will be provided as part of the report.

Throughout all processes the public is encouraged to participate in the identification of rangeland health conditions, developing management remedies, monitoring results, and reviewing progress towards achieving rangeland health standards.

APPENDIX 2: ASSESSMENT AND MONITORING

Assessment to Determine if Allotments are Meeting Standards

“Assessment” means the analysis, synthesis, and interpretation of information, including monitoring data, to characterize the health of an allotment or other management unit. Gathering new information in the field may be necessary as part of the assessment process. “Monitoring” means the periodic gathering of information.

In some cases, quantitative monitoring data, gathered over a period of years, may be essential to determine whether an area meets the standards and whether livestock grazing is a significant factor contributing to a failure to meet the standards. However, quantitative monitoring data is not always required to make these determinations nor to implement actions to improve grazing management. The preamble to the 1995 grazing regulations (BLM 1995) states that managers may “use a variety of information, including monitoring records, assessments, and knowledge of the locale.” The 1995 regulations also require the manager to “reduce permitted grazing use or otherwise modify management practices...when monitoring or field observations show grazing use or patterns of use are not consistent with the provisions of 43 CFR subpart 4180” (43 CFR 4110.3-2(b); subpart 4180 includes the standards and guidelines). Changes in permitted use are to be “...supported by monitoring, field observation, ecological site inventory, or other data acceptable to the authorized officer.” Therefore, actions needed to improve grazing management in order to comply with guidelines or meet standards should not be delayed solely because monitoring data are lacking. Rangelands will not be allowed to deteriorate while prolonged monitoring studies are conducted, when reliable indicators of rangeland health demonstrate a need for corrective action.

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Assessments should employ the minimum information needed to determine whether the standards are being met and whether livestock grazing is a significant factor in failing to meet the standards. All resource information or data collected should be tied directly to the standards, guidelines, or resource objectives.

Field Offices will conduct assessments of all allotments according to the priority described in Appendix

1. These assessments will be done using an interdisciplinary approach, and the findings and reasons for the findings will be documented. The format and content of this documentation will be left up to individual Field Managers, but the form used by the Eagle Lake Field Office (Appendix 24 in the Final EIS) is one example of the type of documentation that could be employed.

The term “assessment,” when used by itself, has the meaning described above; that is, it considers all available information, whether from inventory, monitoring, or qualitative assessments. “Qualitative assessment” refers to a particular method used to rapidly assess whether allotments or areas within allotments are meeting standards. The Proper Functioning Condition (PFC) procedure is the qualitative assessment method that is applied to riparian/wetland areas (BLM 1993b and 1994). The Qualitative Procedure to Assess Rangeland Health (Appendix 25 in the Final EIS) is the qualitative method that will be applied to upland rangelands. The use of these procedures, and their relationship to monitoring, will be discussed in more detail below.

Application of Traditional Rangeland Monitoring to Assessing Whether Standards are Being Met

Many rangeland monitoring studies have been in place and read on a regular basis by BLM personnel in California for many years. These studies involve using qualitative or quantitative procedures, or both, and often are directed at determining the condition and trend of key species in key areas. The basic types of studies, as well as the use of the key species and key area approach, are described in Chapter 3, Section 3.2.5, of the Final EIS. The purpose of these studies has primarily been to determine if management objectives relative to particular grazing allotments are being met or if the trend is toward meeting these objectives. For example, a management objective might be to increase the frequency of a key species such as squirreltail (*Elymus elymoides* ssp. *elymoides*) by 10% in Pasture A of Allotment Z in 5 years. Some method of frequency monitoring is then set up in one or more key areas in Pasture A and read on a regular basis (this could be annually but might be once every five years; in this example the frequency of monitoring would have to be at least every five years). In another example, the objective might be to increase the basal cover of the key species bluebunch wheatgrass (*Pseudoregneria spicata* ssp. *spicata*) in Pasture B of Allotment X by 5 percent over the next 6 years. A method of monitoring that measures cover is then set up in one or more key areas of Pasture B and read on a regular basis (this could be annually or on some other schedule, but must be at least every 6 years).

Management objectives have not always been directed at key species. Objectives to increase the total vegetation cover on particular pastures or allotments have also been applied, as well as objectives to decrease the cover of shrubs or trees. In both of these examples, monitoring methods are chosen that measure or estimate cover. These methods might be quantitative in nature or qualitative; the latter might involve taking photographs, either on the ground or aurally.

A second monitoring objective of traditional rangeland monitoring has been to determine the “condition and trend” of rangelands. The condition is determined by comparing the current species composition and production of a given ecological site to the species composition and production of the potential natural community of that site (see Chapter 3, Section 3.3.3 in the Final EIS for a more complete description of the process).

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Trend is recorded as upward, downward, or static, based on whether species composition and production are moving toward, away, or not at all, respectively, from the potential natural community. Ecological site inventory (ESI) is used to determine condition at any one point in time. A second ESI can then be used to determine trend; other monitoring studies, however, can also be used for this purpose, if they yield information on species composition.

Although much of the monitoring currently is being conducted will have applicability to determining the effectiveness of implementation of the rangeland standards, some old methods will have to be modified and new methods introduced. This is because the standards require monitoring of certain rangeland attributes that are not assessed under current methodology.

Table 1 is a list of rangeland attributes that may be assessed in order to determine whether standards are being met.

Table 1. List of rangeland attributes that may be assessed in order to determine whether standards are being met, along with the actual wording of the indicator(s) to which each attribute applies (parentheses following each indicator show the standard to which it applies). Several indicators apply to more than one attribute and therefore are listed under each of the appropriate attributes.

1. Ground cover a. "Gravel bars and other coarse textured stream deposits are successfully colonized and stabilized by woody riparian species" (Streams) b. "Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks during high stream flow events" (Streams) c. "Ground cover (vegetation, litter, and other types of ground cover such as rock fragments) is sufficient to protect sites from accelerated erosion" (Soils) 2. Litter/residual dry matter "Adequate organic matter (litter and standing dead plant material) is present for site protection and decomposition to replenish soil nutrients and maintain soil health" (Biodiversity) 3. Plant species diversity a. "Vegetation is vigorous, diverse in species composition and age class, and reflects the potential natural vegetation or desired plant community for the site" (Upland Soils) b. "Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks during high stream flow events" (Streams) c. "Riparian vegetation is vigorous and mostly perennial, diverse in species composition, age class and life form sufficient to stabilize stream banks and shorelines." (Riparian and Wetland) d. "Riparian vegetation and large woody debris are well anchored and capable of withstanding high stream flow events" (Riparian and Wetland) e. "Habitat areas are sufficient to support diverse, viable, and desired populations and are connected adequately with other similar habitat areas" (Biodiversity) 4. Plant vigor a. "Vegetation is vigorous, diverse in species composition and age class, and reflects the potential natural vegetation or desired plant community for the site" (Upland Soils) b. "Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks during high stream flow events" (Streams) c. "Riparian vegetation is vigorous and mostly perennial, diverse in species composition, age class and life form sufficient to stabilize stream banks and shorelines." (Riparian and Wetland) d. "Vigor is adequate to maintain desirable levels of plant and animal species to ensure reproduction and recruitment of plants and animals when favorable events occur." (Biodiversity)

5. Plant structure

- a) "Vegetation is vigorous, diverse in species composition and age class, and reflects the potential natural vegetation or desired plant community for the site" (Upland Soils)
- b) Gravel bars and other coarse textured stream deposits are successfully colonized and stabilized by woody riparian species" (Streams)

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- c) “Riparian vegetation is vigorous and mostly perennial, diverse in species composition, age class and life form sufficient to stabilize stream banks and shorelines.” (Riparian and Wetland)
 - d) “Age class and structure of woody riparian and wetland vegetation are appropriate for the site” (Riparian and Wetland)
 - e) “A variety of age classes are present for most species” (Biodiversity)
 - f) “Wildlife habitats include seral stages, vegetation structure, and patch size to promote diverse and viable wildlife populations” (Biodiversity)
6. Spatial distribution of plants and their habitats
- a) “Distribution of plant species and their habitats allow for reproduction and recovery from localized catastrophic events” (Biodiversity)
 - b) “Wildlife habitats include seral stages, vegetation structure, and patch size to promote diverse and viable wildlife populations” (Biodiversity)
 - c) “Habitat areas are sufficient to support diverse, viable, and desired populations and are connected adequately with other similar habitat areas” (Biodiversity)
 - d) Natural disturbances “Natural disturbances such as fire are evident, but not catastrophic” (Biodiversity)
 - e) Non-native plants and animals, including noxious and invasive species “Non-native plant and animal species are present at acceptable levels” (Biodiversity)
 - f) Special status species
 - g) “Habitat areas are sufficient to support viable populations and are connected adequately with other similar habitat areas” (Biodiversity)
 - h) “Healthy, productive and diverse populations of native plant and animal species, including special status species, are maintained” (Biodiversity)
7. Tree and shrub canopy cover “The stream water surface has a high degree of shading, resulting in cooler water in summer and reduced icing in winter” (Streams)
- a) Woody debris “Riparian vegetation and large woody debris are well anchored and capable of withstanding high stream flow events” (Riparian and Wetland)
8. Streambank stability
- a) “Stream bank vegetation is vigorous and diverse, mostly perennial, and holds and protects banks during high stream flow events” (Streams)
 - b) “Riparian vegetation is vigorous and mostly perennial, diverse in species composition, age class and life form sufficient to stabilize stream banks and shorelines.” (Riparian and Wetland)
9. Chemical constituents of water “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
- a) Water temperature
 - b) “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
 - c) “The stream water surface has a high degree of shading, resulting in cooler water in summer and reduced icing in winter” (Streams)

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10. Nutrient loading “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
11. Fecal coliform “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
 - a) Turbidity “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
12. Suspended sediment “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
13. Dissolved oxygen “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
14. Aquatic and riparian organisms “The following do not exceed the applicable requirements for physical, chemical, and biological constituents including, but not limited to: temperature, nutrients, fecal coliform, turbidity, sediment, dissolved oxygen, aquatic organisms and plants (e.g., macroinvertebrates, fish, algae, and plants)” (Water Quality)
15. Soil erosion
 - a) “Evidence of wind and water erosion, such as rills and gullies, pedestaling, scour or sheet erosion, deposition of dunes is either absent or if present does not exceed what is natural for the site” (Upland Soils)
 - b) “Negligible accelerated erosion as a result of human activities is present” (Riparian and Wetland)
16. Degree of floodplain flooding “Portions of the primary floodplain are frequently flooded (inundated every 1-5 years)” (Streams)

Monitoring of Vegetation and Physical Attributes

Vegetation monitoring (including soil crusts). Table A.22.2 in the Final EIS lists the trend monitoring methods currently in use or described in the Interagency Technical Reference, Sampling Vegetation Attributes (BLM et al. 1996a) and the plant and vegetation attributes they measure. Of the attributes listed in Table 1 in this appendix, the following can be monitored using a combination of the methods from the technical reference:

- Ground cover
- Litter/residual dry matter
- Plant species diversity
- Plant vigor

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- Soil crusts
- Plant structure
- Spatial distribution of plants and their habitats
- Natural disturbances (although not specifically identified by a column heading on Table A.22.2, these can be tracked under the heading “spatial distribution”)
- Non-native plants (these can be monitored by measuring or estimating density, frequency, or cover)
- Special status plants (these can be monitored by measuring or estimating density, frequency, or cover)
- Tree and shrub canopy cover

Note, however, that in some cases these attributes are not measured or estimated as part of the standard procedure. For example, the typical way in which the Daubenmire method (which estimates canopy cover in either 6 or 10 categories in a series of plots) is used yields measurements of the cover of bare ground, vegetation, litter, gravel/rock, as well as frequency and species composition. Other attributes, such as the cover of biological, physical, and chemical crusts, cryptogams, production, and vigor *can* be incorporated into the standard procedure with proper planning.

Monitoring of Guidelines Associated with Utilization, Residue, and Stubble Heights.

For the reasons given in Section 3.2.5 in the Final EIS, it is important to set and monitor guidelines on utilization levels, minimum residues, and minimum stubble heights. Guidelines have been set for the entire EIS area where standards are not being met; site-specific guidelines may be set by Field Offices. Existing monitoring of utilization, residue, and stubble heights will continue, and new studies will be established as needed. On upland perennial rangelands not meeting the standards, utilization will be measured on key species in key areas, with the average (mean) utilization used to assess whether the portion of the allotment or pasture represented by the key area is meeting the utilization guideline (there are indications that the median may be a better statistic to use than the mean; we will calculate both statistics from the same data sets and make this determination after examining the data over a period of a few years). We recognize that residue, in terms of stubble height and litter, is a better measure of utilization in upland perennial grass communities than percent utilization, but we do not have sufficient information at this time to develop guidelines that use these attributes. We intend to investigate this matter further, however, as time and funding permit, and to eventually replace the utilization guidelines on perennial uplands (which specify percent of key species removed) with guidelines specifying minimum amounts of residue to be left. A very preliminary study proposal is given in Table 2.

Table 2. Preliminary Study Proposal: Developing Residue and Stubble Height Guidelines for Major Vegetation Types in the Great Basin

Objective: Develop upland residue and stubble height guidelines for the major vegetation types in the Great Basin
 Conduct a literature review.
 This review would look at material published in peer-reviewed publications and “gray” literature as well as information collected by field offices. In addition, range scientists at universities and in other agencies (e.g., NRCS, ARS, Forest Service) would be interviewed.

Conduct the following study.

A study would be conducted to fill in the gaps in information that are expected to exist following the literature review. Over a period of several years the residue left following known levels of utilization will be measured at several sites in different vegetation types. This will entail measuring total above ground production in ungrazed areas (using either cages or exclosures), measuring utilization after the grazing season on key species, and measuring the amount of standing and fallen dead plant material (separately) at that level of use. The stubble heights of key species will also be measured both in grazed and ungrazed condition. Photographs will be taken both of the key species and the landscape, both in grazed and ungrazed areas. As much as possible, sites should be selected that are close to existing weather stations (NOAA, RAWS stations, etc.) so the total production can be related to the amount of precipitation received.

The study should be conducted over several years in order to show a range of residue, stubble heights, and utilization levels as related to different amounts of precipitation. This study should enable field personnel to develop either State or regional guidelines on the appropriate residue and stubble height levels that should be left following grazing.

Following is a list of the utilization and residue studies from the Interagency Technical Reference, *Utilization Studies and Residual Measurements* (BLM et al. 1996b) that may be applied to public lands within the EIS area:

Browse Utilization Methods:

- Twig Length Measurement Method
- Cole Browse Method
- Extensive Browse Method

Residue Measuring Methods

- Stubble Height Method
- Visual Obstruction Method
- Comparative Yield Method

Herbaceous Utilization Methods

- Paired Plot Method
- Ocular Estimate
- Key Species Method
- Height-Weight Method
- Actual Weight Method
- Grazed-Class Method
- Landscape Appearance Method

Exact methods to be used to monitor utilization, residue, and stubble heights will be determined by the Field Offices.

The above utilization and residue monitoring studies are usually applied to key areas (see the glossary in the Final EIS for a definition of key area and the discussion of key areas in Chapter 3, Section 3.2.5 of the Final EIS). Utilization pattern mapping is another important monitoring tool. This method entails canvassing the entire allotment or individual pasture and mapping the area into several classes based on the level of utilization (e.g., no use, light use, moderate use, and heavy use) on key species (see Chapter 3, Section 3.2.5 for more information). These studies will continue where necessary.

Actual use monitoring. Actual use studies (BLM 1984) are another form of traditional range monitoring that will continue. These studies track the actual use made by livestock in pastures and/or allotments based on the numbers of livestock and the length of time livestock are present. These numbers are usually provided by lessees/permittees but are sometimes also estimated from counts by BLM professionals. The actual use made by other herbivores such as wild horses and burros and wildlife is often estimated as well. These data are important in determining what changes should be made when objectives and standards are not being met.

Climate monitoring. It is important to consider climate when interpreting monitoring data. Climate monitoring most often consists of compiling precipitation and temperature information collected by the National Oceanic and Atmospheric Administration at the many weather stations in the EIS area. In some cases, precipitation data are collected through the placement of rain gauges in allotments. Additionally, both temperature and precipitation data are collected from 14 Remote Automated Weather Stations (RAWS) within the EIS area.

Riparian-wetland monitoring. The vegetation attributes of riparian-wetland areas are monitored using one or more of the techniques described in Table A.22.2 in the Final EIS. The Greenline Riparian-Wetland Monitoring Method (BLM 1993a) is also used by some field offices. The following physical attributes are also monitored on some riparian-wetland areas:

- Bankfull discharge
- Sinuosity
- Riparian zone width
- Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or large woody debris)
- Width/depth ratio

Use of Qualitative Assessments to Determine if Standards are Being Met

As noted above, traditional range monitoring studies can help assess whether standards are being met. The standards, however, call for the assessment of indicators that are not addressed by these traditional monitoring studies. Where the status of these indicators cannot be inferred from existing monitoring information, other monitoring or assessment methods must be employed. The following qualitative assessment procedures were developed to rapidly assess all the physical and biological components of rangeland health.

Qualitative Upland Assessment. For uplands, the qualitative assessment method will be used. Although a technical reference has not yet been finalized on the method, a draft has been prepared and field tested. The details were given in Appendix 25 in the Final EIS. Field Offices may adapt this method as necessary to meet local needs.

The results of the qualitative assessment will be used in conjunction with all other available information to determine if an allotment is meeting the standards. If it is not, and does not appear to be making significant progress toward meeting the standards, and grazing has been determined to be a significant factor, changes will be made to the management of livestock grazing. To assess whether these management changes are effective in moving toward meeting the standards, monitoring will be initiated (or, if already being conducted, will be continued) that is directed toward those indicators that caused the allotment to not meet the standards. For example, if the qualitative assessment indicates that insufficient litter is present, subsequent monitoring will focus on measuring the amount of litter (either the cover of litter or the amount in weight of litter).

Qualitative Riparian/Wetland Assessment. A qualitative procedure, called proper function condition (PFC) assessment (see Appendix 23 of the Final EIS), is already in place to help assess whether riparian and wetland areas are meeting the standards (BLM 1993b and 1994). This PFC assessment has already been applied to many riparian/wetland areas within the EIS area. Its use will be continued. Just as with the upland qualitative assessment procedure, when the PFC results in one or more indicators being responsible for an allotment not meeting the standards, subsequent monitoring will focus on those indicators. For example, if the width/depth ratio is the main reason a stream is determined to be not meeting the standard of proper functioning condition, subsequent monitoring would focus on the width/depth ratio of the stream.

Wildlife Monitoring for Rangeland Health

The standards for rangeland health include a "biodiversity" standard. They also include several indicators of animal habitats and populations that are attributes of a healthy rangeland ecosystem. These indicators can be divided into those related to habitat and those related to animal populations. The habitat indicators include habitat seral stages, vegetation structure and patch size, spatial distribution of habitats, habitat size, how habitats are connected, and the habitat's ability to support viable populations. The animal population indicators include the spatial distribution of animals, special status species numbers, stable to increasing populations, viable populations, and levels of non-native animals.

The BLM recognizes that determining the biodiversity health for each allotment is an impossible task involving the gathering of species-specific data at many locations and scales. However, a more achievable option is to design monitoring programs that evaluate ecosystem components, structures and processes as indicators of a habitat's *capability* to support healthy animal communities. We would then rely on focused studies to more directly monitor species of management concern.

There are different scales of monitoring and management to evaluate the relationships between habitat management from livestock grazing and animal populations. It is critical to evaluate the assumptions that habitat management at the allotment (or pasture) level will actually affect animal presence and abundance at the monitoring site(s). It is necessary to determine the appropriate scale of monitoring: coarse scale regional monitoring of several allotments for some animal community indicators; fine scale monitoring at the allotment level for some special status, game animals, and keystone species; and site-specific scale for some special status species and ecosystem health indicators that are restricted to very small habitat areas. Monitoring plans should consider these issues of scale when designing allotment monitoring programs.

Habitat mapping and vegetation monitoring would usually suffice to evaluate whether the allotments are providing *adequate opportunities* for wildlife communities in meeting the standards. Spot checking for selected species at the appropriate habitats over several allotments would evaluate rangeland health for many species. At a finer scale of analysis, population censuses at the allotment scale may be needed to determine if the standards are being met.

This finer scale monitoring would be directed at special status animals or at species with a very restricted habitat requirement as a rangeland health indicator.

Most allotment monitoring will evaluate the habitat capability for species of management concern. Vegetation characteristics of habitat structure (for example, ground cover, vertical layering, form of trees and shrubs), plant composition, age structure of plants (young, reproducing, old, or decadent trees or shrubs), plant vigor, and the distribution of plant communities across the landscape will be the focus of BLM's monitoring.

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Field assessments should emphasize the use of habitat quality checklists to identify significant problems at the appropriate scale (allotment or landscape levels). These checklists can be designed to evaluate habitat quality for a particular species, group of species, or general animal community composition. The elements of such a checklist are given in Table 3. More focused studies or monitoring protocols may be developed where habitat monitoring indicates standards are not being met and where management priority is high.

The BLM will consider existing information on soils, habitats, scientific literature, historic records, fire history, and disturbance regimes to assess habitat capability. When more detailed information regarding a particular species is required, wildlife information systems and species records may be used to conduct assessments of habitat quality for animals of management concern. The California Wildlife Habitat Relationships System (CWHR) and Habitat Evaluation Procedures (HEP) models may be used for these assessments. These models are based on the assumptions that through habitat assessments, habitat capability (quality) for a particular species or group of species can be determined. The California Natural Diversity Data Base will be used to help assess the significance of BLM actions on special status animal species and rare plant communities.

The rangeland health indicators for animal (wildlife) populations cannot be assessed separately for each species. Evaluating animal numbers and distributions for each species would require an extensive amount of monitoring of hundreds of animal species, a task far beyond the capability of the BLM and our State and private management partners. Instead, monitoring must be focused on a subset of animal "indicator" species that represent wildlife communities and populations in general as indicators of ecosystem health. While this method of monitoring has been criticized as flawed since each species has its own niche in the ecosystem that cannot be represented by another species, this approach gives the BLM the opportunity to focus wildlife monitoring within our capability. The indicator species may be threatened or endangered, game animals, species of regional or special concern, keystone species, abundant, or rare. The selection of the indicator species will depend on the allotment management objectives, land use plan objectives, and/or BLM commitments to regional plans. The monitoring of the indicator species may include general distribution or abundance surveys or more focused research to better evaluate the relationships between the animals and their habitats and grazing effects. In many cases, data collection may not be required within each allotment, but across the landscape in habitats with similar characteristics.

Table 3. Elements of a Biodiversity and Species Checklist for Wildlife.

Habitats

CWHR Habitats and seral stage (es) present:

Habitat composition and seral stages related to management objectives:

- Seral stages meet management objectives
- Plant community composition indicates good rangeland health
- Native species present at acceptable levels
- Non-native species at acceptable levels
- Invasive weeds at acceptable levels

Habitat structure related to management objectives:

- Plant cover is adequate, within natural range
- Plant height adequate: herbaceous shrub trees
- Plant density is adequate
- Plants distributed normally

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Ground cover is within normal range
Age-class indicates community maintenance
Form-class indicates normal growth characteristics

Distribution of Habitats across landscape:

Patch size is adequate
Fragmentation is not excessive
Habitats are connected within site capability

Species

Management indicators selected:

Habitats meet requirements of indicator species:

Elements are considered acceptable:
Elements lacking:

Key management areas present:

Listed species habitats
Riparian
Wetlands
Seasonal ranges (winter, migratory, calving/fawning, etc)
Breeding/nesting sites

Focused Studies

Focused studies in progress:
Focused studies needed:

Evaluation:

Habitats are meeting management objectives Habitats promote diverse and viable
wildlife populations Seral stages present Composition

Structure Distribution Habitats can withstand catastrophic events (flood/fire/windstorm) Species present
indicate healthy ecosystem function Habitats meeting species/diversity standards Habitats not meeting
species/diversity standards Livestock grazing/management is (is not) significant factor Management
changes needed to meet standards

Water Quality Assessment and Monitoring

Most often, when riparian areas and wetlands are healthy, the quality of water for most beneficial uses
meets standards. Many of the attributes assessed and monitored for riparian and wetland areas also affect
the quality of the water, at least indirectly. There are exceptions, however, where this may not always be
true, particularly with regard to the chemistry and physical properties of the water. Biological assessments
and monitoring of aquatic organisms in water bodies serve to identify important attributes reflecting the
quality of water for many beneficial uses and will be used when it is determined that the quality of the
water may be in question.

In most situations BLM will depend upon the State and Regional water quality agencies to either identify,
or assist BLM in identifying, where water quality is impaired or has a high probability of being impaired.

For those areas where livestock grazing activities on public land are known to cause or are suspected of causing water quality impairment, BLM will closely coordinate with these agencies in obtaining any needed water quality monitoring and assessment information. Where sufficient information is not available, BLM will also closely coordinate with these agencies in the selection and design of the attributes to be assessed and monitored by BLM. Since the states have primary responsibility and primacy regarding the Clean Water Act and the Safe Drinking Water Act, it is important that any water quality assessment or monitoring information obtained by BLM meet the acceptance of those state agencies responsible for identifying the specific requirements of those Acts.

Effectiveness Monitoring of Guidelines

Effectiveness monitoring is used to evaluate whether a particular activity, when carried out as planned, results in the desired effect (MacDonald et al. 1991). In the context of rangeland standards and guidelines, effectiveness monitoring will be used to evaluate whether guidelines, if followed, result in either meeting or making progress toward meeting the standards. This type of monitoring will be employed when the other types of monitoring and assessment discussed in this appendix determine that progress is not being made toward meeting standards despite compliance with guidelines. For example, a grazing system is implemented in order to move an allotment toward meeting standards, but after five years of monitoring no progress is detected. The management system will then be evaluated to determine why it is not producing the desired effects and changed accordingly. Utilization and stubble height guidelines provide another example. If, after several years of compliance with these guidelines, allotments are not moving toward meeting standards, these guidelines will be evaluated and supplanted by new ones as appropriate.

Application of New Technology to Monitor and Assess Rangeland Health

Traditional transect-based techniques for measuring vegetation and other indicators of rangeland health provide detailed information at a plot level. Care must be used when using plot-based measurements to characterize large areas because of problems in extrapolating information from small samples to large areas. Methods for assessing rangeland health at multiple scales are currently in their infancy. The use of remotely-sensed data, primarily satellite imagery, will hopefully become a rapid and inexpensive method for measuring rangeland health on larger areas.

One pilot effort recently initiated in the northeastern portion of the EIS area is a cooperative project between BLM, the National Resource Conservation Service, and the Forest Service's Pacific Northwest Experiment Station. It involves the transitioning from traditional Soil Surveys to Resource Surveys, which are multi-resource, map-based surveys of soil, vegetation, water, and wildlife characteristics. Part of the project will include development of a set of tools that will be designed to assess rangeland health at multiple scales and areal extent.

As new methodologies such as this one are developed, they will be applied to monitoring and assessing rangeland health standards within the EIS area.

Monitoring and Assessment Plans

Each Field Office will develop a plan that will direct its monitoring and assessment activities relative to making determinations on whether standards are being met, whether progress is being made toward meeting the standards if they are not currently being met, and whether livestock grazing is the reason for standards not being met. These plans need not be elaborate, but at a minimum they will include a list of the attributes that will be monitored, the monitoring methods that will be used (with reference to a complete description of the method), the allotments that will be monitored using these methods, the frequency at which the allotments will be monitored, and how often interdisciplinary assessments will be

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made of all the information collected (including monitoring data, qualitative assessment information, inventory data, etc.). A monitoring and assessment schedule will also be included. These monitoring and assessment plans will be made available to all interested parties.

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Appendix C

Northeast California Resource Advisory Council Recommended Off-Highway Vehicle Management Guidelines

Bureau of Land Management
Northeast California Resource Advisory Council
Recommended Off-Highway-Vehicle Management Guidelines

Adopted and Forwarded to the Bureau of Land Management
at a Regularly Scheduled Business Meeting
August 29, 2000
Susanville, California

The guidelines for Off-Highway-Vehicle management are the methods and practices determined to be appropriate to ensure that BLM Land Health Standards can be met, or that significant progress can be made toward meeting the standards. The guidelines were designated to provide direction, yet offer flexibility, for implementation through OHV designations, activity plans and permit terms and conditions.

Guideline 1: OHV use will not be allowed on streams, riparian/wetland areas. Where needed, crossings will be bridged or hardened.

Guideline 2: OHV use will not degrade ecological status.

Guideline 3: OHV use requires review/action during/after periods of high use and or stress (fire, flood, and drought). OHV closure may be appropriate in response to factors such as accelerated erosion or loss of natural barriers to off-road use.

Guideline 4: Plans for OHV use must consider other resources and uses (livestock grazing, recreation, archaeological sites, wildlife, horses and burros, mineral resources extraction, etc.) and be coordinated with other users of public lands. Management of OHV Use should be sensitive to the creation and management of areas for quiet activities.

Guideline 5: OHV use will be managed to provide for the maintenance and reproduction of desired plant species and the achievement of the potential natural vegetation or desired plant communities.

Guideline 6: OHV special events will require permits that will include site specific, measurable terms and conditions.

Guideline 7: OHV projects that are subject to California OHV grant funding shall comply with that program's requirements as well as Land Health Standards. Tread Lightly concepts and non-proliferation principles will be included in permits.

Guideline 8: OHV use must consider habitat requirements for fish and wildlife

Guideline 9: OHV management practices must consider soil erodibility. Route designation and OHV management will be based on erosion hazard ratings.

Guideline 10: The spread of noxious weeds by OHV use will be combated through public education efforts, and vehicle cleaning requirements, or other measures, where appropriate.

Guideline 11: Locate routes, trails and developments away from sensitive areas.

Guideline 12: OHV related activities will be managed to protect and maintain watershed and water quality.

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Guideline 13: Use various communication and interpretive measures and user groups to inform public land visitors about an ethic of public land use.

Guideline 14: OHV utilization and impacts will be monitored using currently accepted practices and techniques.

Guideline 15: “Open” OHV use areas must be specifically designated.

Appendix D

Energy and Minerals

Reasonably Foreseeable Development in the Alturas Field Office

Introduction

This appendix describes scenarios for the reasonably foreseeable development of leasable, locatable, and saleable mineral commodities. The scenario for reasonably foreseeable development estimates the level and type of future mineral activity in the planning area and provides a basis for the analysis of cumulative effects. The scenario first describes the steps in developing a mineral deposit, with presentation of hypothetical exploration and mining operations. Current levels of activity are discussed in Chapter 3. Trends and assumptions affecting mineral activity are discussed in this appendix, followed by estimates for future mineral exploration and development.

Scope

The scenario for reasonably foreseeable development is based on known or inferred mineral resource capabilities and applies the conditions and assumptions discussed below. Changes in available geologic data or economic conditions would alter reasonably foreseeable development, and some deviation should be expected over time. The development scenario is limited to BLM-administered land.

Leasable Mineral Resources

Reasonably Foreseeable Development of Oil and Gas

Future trends and assumptions: Based on the history of minimal interest for oil and gas exploration and the limited development potential of the planning area, activity over the next 15 to 20 years is likely to be sporadic. Oil and gas activity will probably consist of the issuance of some competitive and over-the-counter leases, a few geophysical surveys, and perhaps the drilling of two or three exploratory wells.

Geophysical exploration: Geophysical exploration is conducted to determine the subsurface structure of an area and the potential for mineral resources. Three geophysical survey techniques are generally used to define subsurface characteristics through measurements of the gravitational field, magnetic field, and seismic reflections.

Gravity and magnetic field surveys—involve small, portable measuring units that are easily transported by light off-highway vehicles, such as 4-wheel drive pickup trucks and jeeps, or aircraft. Both off and on-highway travel may be necessary. Although these two survey methods can take measurements along defined lines, it is more common to have a grid of distinct measurement stations. Surface disturbance resulting from these surveys is negligible, consisting almost exclusively of soil or vegetation compaction that persists no more than a few months.

Seismic reflection surveys—are the most common of the geophysical methods, and they produce the most detailed subsurface information. Seismic surveys are conducted by sending shock waves, generated by a small explosion or by mechanically beating the ground with a thumping or vibrating platform. In the mechanical technique, four large trucks are usually used, each equipped with pads about 4-feet square. The pads are lowered to the ground, and the vibrations are electronically triggered from the recording truck. Once information is recorded, the trucks move forward a short distance and the process is repeated. Surface disturbance includes flattening of vegetation and compaction of soils.

The explosive method—requires that small charges be detonated on the surface or in a shallow drill hole. Holes for the charges are drilled using truck-mounted or portable air drills. In general, this method uses 4 to 12 holes per mile of line, and a 5 to 50-pound explosive charge is placed in each hole, covered, and detonated. The shock wave created is recorded by geophones placed in a line on the surface. In rugged terrain, a portable drill carried by helicopter can sometimes be used. The vehicles used for a drilling program may include heavy truck-mounted drill rigs, track-mounted drill rigs, water trucks, a computer recording truck, and a light pickup.

Existing roads and trails are used where possible, but off-road travel is necessary in some cases. Several trips per day are made along a seismograph line, usually resulting in a well defined two-track trail. The surface charge method uses 1 to 5-pound charges attached to wooden laths 3 to 8 feet above the ground. Placing charges lower than 6 feet usually results in destruction of vegetation, whereas placing the charges higher, or on the surface of deep snow, results in little visible surface disturbance.

It is expected that three to five notices of intent, involving seismic reflection and gravity/magnetic field surveys, would be filed under all Alternatives and the Proposed RMP during the life of this plan. The total expected surface disturbance would be approximately 1 acre.

Drilling phase: After an application to drill is approved, the operator may begin construction in accordance with lease stipulations and conditions of approval of the drilling permit. When a site requires construction of an access road, the shortest feasible route is usually selected to reduce the haul distance and construction costs. Environmental factors or a landowner's wishes may dictate a longer route in some cases. Drilling in the planning area is expected to be done using existing roads and construction of only short (approximately 0.5 mile) roads to access drill site locations.

Based on the history of oil and gas exploration in the planning area, it is projected that two or three exploratory wildcat wells would be drilled on BLM-administered land in the planning area during the life of this plan. The estimated success rate would be no greater than 10 percent, based on the average wildcat success rate. Drilling is expected to occur in areas of low oil and gas potential, the highest level of potential in the planning area. There is a low probability that a field will be discovered during the life of this plan, with a strong likelihood that the discovery would be natural gas because most of the occurrences, in surrounding areas, are gas. There are no known occurrences in the actual planning area.

During the first phase of drilling, the operator would move construction equipment over existing maintained roads to the point where the access road begins. Less than 0.5 mile of moderate duty access road with a gravel surface 18 or 20 feet wide is expected for construction. With ditches, cuts, and fill, the total width of surface disturbance would average 40 feet. The second part of the drilling phase is the construction of the drill pad (platform). The likely duration of well development, testing, and abandonment is 3 or 4 months per site. The total disturbance for each exploratory well and any new road is estimated to be less than 5 acres. The total surface disturbance caused by exploratory drilling over the life of this plan is expected to be about 13 acres.

Field development and production: Exploratory drilling is not expected to lead to the development of a producing field in the planning area. Nonetheless, the following scenario describes the operations and effects associated with field development. Any oil and gas deposits found in the planning area will probably be too small to be economically developed.

The minimum size considered economically feasible would be a field containing reserves of 50–60 billion cubic feet of gas with a productive life of 10 years. The total area of the field would be 800 acres, with a likely well spacing of 160 acres. The field would require four development wells in addition to the discovery well. Each development well would require 0.25 mile of road. Development well access roads

would have a surface of crushed aggregate or gravel and would be approximately 20 feet wide (total disturbed width of 40 feet). Gas produced would be carried by pipelines that could be linked to existing and proposed gas transmission lines in the planning area. Average pipeline length is estimated to be 40–50 miles. The width of the surface disturbance for pipelines would average 30 feet. Any oil produced would be trucked to refineries outside of the local area. Established companies would service the wells.

The total surface disturbance would be 8 acres for well pads, 5 acres for roads, 13 acres for field development; and 725 acres for pipelines (145 acres/well site). The total surface disturbance caused by exploration and development would be 761 acres.

Plugging and abandonment: Wells that are completed as dry holes are plugged according to a plan designed for the condition of each well. Plugging involves placing cement plugs at strategic locations in the hole. Drilling mud is used as a spacer between the plugs to prevent communication between fluid-bearing zones. The drill casing is cut off at least 3 feet below ground level and capped by welding a steel plate on the casing stub. After plugging, all equipment and debris would be removed and the site restored as near as reasonably possible to its original condition. It is projected that one exploratory well that may be drilled would be plugged and abandoned.

Reasonably Foreseeable Development of Geothermal Resources Future trends and assumptions

Because environmental protection and enhancement are major concerns for the BLM, sources of energy with a small environmental impact are becoming increasingly important. The geothermal energy resources known to exist in the region are essentially undeveloped, especially in the planning area. With recent interest in geothermal resources expressed by some governmental and private entities, geothermal exploration may be initiated in the planning area which could possibly lead to development of the resource.

Geophysical/geochemical exploration: As with oil and gas, geophysical/geochemical activities can take place on leased or unleased public land. The operator must comply with all terms and conditions of permits, NEPA, regulations, and other requirements, including reclamation, prescribed by the authorized officer. Monitoring for compliance with these requirements would be done during operations and upon their completion. In addition to geophysical methods discussed in the previous section on oil and gas, the following exploration techniques are often employed in geothermal prospecting:

Microseismic: Small seismometers buried at a shallow depth (hand-dug holes) transmit signals from naturally occurring, extremely minor seismic activity (microearthquakes) to an amplifier on the surface. Stations are located away from roads to avoid the effects of traffic. These units are often backpacked into areas inaccessible to vehicles.

Resistivity: Induced polarization techniques are used to measure the resistance of subsurface rocks to the passage of an electric current. A vehicle-mounted transmitter sends pulses of electric current into the ground through two widely spaced electrodes (usually about 2 miles apart). The behavior of these electrical pulses as they travel through underlying rocks is recorded by small devices that receive the current at different locations. The electrodes are either short rods (2–3 feet long) driven into the ground or aluminum foil shallowly buried over an area of several square feet. Two or three small trucks transport a crew of three to five people to transmitting and receiving sites.

Telluric: A string of receivers record the variations in the natural electric currents in the earth. No transmitter is required. Small trucks are used to transport the crew and equipment.

Radiometric: Radioactive emissions (generally radon gas) associated with geothermal resources are measured using a hand-held scintillometer, often at hot spring locations. Another method involves placing plastic cups containing small detector strips sensitive to alpha radiation either on the surface or in shallow hand-dug holes. If holes are dug, they are covered, and the cups are left in place for 3 to 4 weeks. At the end of the sampling period, the cups are retrieved and all holes are backfilled. These surveys can be conducted by walking to the sites or with the aid of light vehicles.

Geochemical surveys: Geochemical surveys are usually conducted at hot springs by taking water samples directly from the spring. Mercury associated with geothermal resources is often sampled using hand tools. These surveys can be conducted by walking to the sites or with the aid of light vehicles.

Temperature gradient drill hole surveys: Temperature gradient holes are used to determine the rate of change of temperature with respect to depth. Temperature gradient holes usually vary in diameter from about 3.5 to 4.5 inches, and from a few hundred feet to 5,000 feet in depth. They are drilled using rotary or coring methods. Approximately 0.1 to 0.25 acre/drill hole would be disturbed. A typical drill site could contain a drill rig (most likely truck-mounted), water tank(s), fuel tank, supply trailer, and a small trailer for the workers. Drilling mud and fluids would be contained in earthen pits or steel tanks. Water for drilling would be hauled in water trucks, or if suitable water sources are close, could be piped directly to the site. Water consumption could range from about 2,000 to 6,000 gallons/day, with as much as 20,000 gallons/day under extreme lost circulation conditions.

Other equipment that could be used includes large flatbed trucks to haul drill rod, casing, and other drilling supplies; in some cases special cementing and bulk cement trucks; and two small vehicles for transporting workers. In most cases, existing roads would be used. It is likely that short spur trails (usually less than 500 yards) would be bladed for less than 10 percent of these holes. All holes would be plugged and abandoned to protect both surface and subsurface resources, including aquifers, and reclamation of disturbed areas would be required, unless some benefit to the public could be gained (for example, a water well or camping area). Depending upon the location and proposed depth of the drill hole, detailed plans of operation that cover drilling methods, casing and cementing programs, well control, and plugging and abandonment could be required. Based upon past geothermal exploration in California and a projected increase in power demand, it is expected that 6 notices of intent for surface geophysical surveys and 5 notices of intent to drill 30 temperature gradient holes would be filed under all Alternatives during the life of this plan. Total surface disturbance resulting from geophysical surveys over the life of the plan is expected to be about 0.5 acre, and disturbance resulting from temperature gradient holes is expected to be about 5.5 acres.

Drilling and testing: Drilling to detect, test, develop, produce, or inject geothermal resources can be done only on land covered by a geothermal lease.

A typical geothermal well drilling operation would require 2–4 acres for a well pad, including reserve pit, and 0.5 mile of moderate duty access road with a surface 18 to 20 feet wide (total disturbed width, with ditches, cuts, and fills, of 40 feet). Existing roads would be used whenever possible. Total surface disturbance for each well and any new road is expected to be less than 6 acres. In some cases, more than one production well could be drilled from one pad. Well spacing would be determined by the authorized officer after considering topography, reservoir characteristics, the optimum number of wells for proposed use, protection of correlative rights, potential for well interference, interference with the multiple uses of the land, and protection of the surface and subsurface environment. There would be close coordination with the State of California. The expected duration of well development, testing, and abandonment (if dry) would be 6 months. It is estimated that eight exploratory wells would be drilled under all alternatives and the Proposed RMP during the life of the plan, resulting in a total surface disturbance of 34 acres.

Plugging and abandonment: Before abandonment, the operator would be required to plug the hole to prevent contamination of aquifers and any effects to subsurface and surface resources. Cement plugs would be placed at strategic locations in the hole using the same techniques as for exploratory oil and gas wells. Any new roads not needed for other purposes would be reclaimed.

Geothermal power plant development: It is projected that one power plant generating 25 megawatts of electricity (gross) may be constructed under all alternatives during the life of the plan and employing an estimated 30 people. It is expected that the developed geothermal power plant would be water-dominated and that the geothermal power conversion system would either be single or double flash, or binary cycle. Before geothermal development could occur, site specific baseline studies and environmental analyses, with public involvement, would be done. The scenario below describes the level of disturbance that would most likely occur from the development of a 25-megawatt power plant.

Five to seven production wells and one or two injection wells would be drilled. Access would be provided by existing roads and new, short roads (0.5–1 mile) 18 to 20 feet wide (up to 40 feet total disturbed width). Surface disturbance from well pad and road construction would probably range from 2 to 6 acres per well. The power plant, including separators, energy converters, turbines, generators, condensers, cooling towers, and switchyard, would cover an estimated 10 to 15 acres. Pipelines and power lines would disturb an additional 3 to 6 acres. If a water cooling system is employed, one to three water wells, requiring approximately 0.25 acre per well, would be drilled, unless the cooling water was obtained from the geothermal steam condensate. Depending upon the location, terrain, geothermal reservoir characteristics, and type of generating facility, the total surface disturbance would probably range from 25 to 75 acres, most likely about 50 acres. After construction, approximately one-third to one-half of the disturbed area would be revegetated. The remaining disturbed area would be reclaimed before abandonment.

Direct use of geothermal energy: Low and moderate-temperature (300 to 500 °F) geothermal resources may have direct applications, including space heating and cooling of residences and businesses; applications in agriculture and industry; and recreational and therapeutic bathing. Depending on the type of use and magnitude of operation, surface disturbance could range from a few acres for a well and greenhouse or food processing facility, to tens of acres for larger agricultural or aquacultural developments. Although geothermal resources are found throughout the planning area, the small, somewhat isolated population makes any direct use of geothermal energy on public land unlikely.

Locatable Mineral Resources

Reasonably Foreseeable Development Scenarios

The major commodities of interest over the next 15 to 20 years will probably be gold/silver and zeolites. Other commodities that may be present in the field area are diatomite, bentonite and perlite. This assessment is based on market conditions (especially for precious metals) and the favorable geologic environment for mineral occurrences. Reclamation science will continue to advance due to experience and research. More detailed design will be required for the reclamation of mined land in the future. This will likely increase reclamation costs but should also increase long-term reclamation success. The economics of mining in the planning area will be driven by the relationship between production costs and the market price of the commodity. Whereas production costs can be controlled, or anticipated through management and technology, the price of a commodity is difficult to predict over time. The overall profitability of an operation—and hence the level of activity at the prospecting, exploration, and mining stages—for development of ore bodies is closely related to the price of the mineral commodity.

Over the next 15 to 20 years, it is expected that two mines may be developed in the planning area: one open-pit gold mine using chemical heap leaching, at least in part; and one mine of zeolites.

Background on the Development of a Locatable Minerals Mine

Typically, the development of a mine goes through five stages, with each stage using progressively more sophisticated (and more expensive) techniques over a successively smaller area to identify, develop, and produce an economic mineral deposit. The full sequence of developing a mineral project involves reconnaissance, prospecting, exploration, economic evaluation, and development.

Reconnaissance: Reconnaissance is the first stage in exploring for a mineral deposit. This involves an initial literature search for the area of interest using available references, such as publications, reports, maps, and aerial photographs. Because the study area is usually large, varying from hundreds to thousands of square miles, this stage normally involves large-scale mapping, regional geochemical and/or geophysical studies, and remote sensing with aerial or satellite imagery. These studies are generally undertaken with minimal surface disturbance, which usually consists of stream sediment, soil, or rock sampling. Minor off-highway vehicle use may be required.

Prospecting: If reconnaissance identifies anomalous geochemical or geophysical readings, rare or unusual geological features, evidence of mineralization, or a historical reference to mineral occurrence, a prospecting area of interest is identified. This area could range from a single square mile to an entire mountain range of several hundred square miles.

Activity to locate a mineral prospect includes more detailed mapping, sampling, and geochemical and geophysical study programs. This is the time when property acquisition efforts usually begin and most mining claims are located to secure ground while trying to make a mineral discovery. Surface-disturbing activities associated with prospecting include more intense soil and rock chip sampling, using mostly hand tools; frequent off-highway vehicle use; and placement and maintenance of mining claim monuments. This activity is usually considered casual use (43 CFR 3809.1-2) and does not require BLM notification or approval.

Exploration: Upon location of a sufficiently anomalous mineral occurrence or favorable occurrence indicator, a mineral prospect is established and subjected to more intense evaluation through exploration techniques. Activities during exploration include those used during prospecting, but at a more intense level and in a small area. In addition, road construction, trenching, and drilling take place. In the later stages of exploration, an exploratory adit or shaft may be driven. If the prospect already has underground workings, these may be sampled, drilled, or extended. Exploration activities use mechanized earth-moving equipment; drill rigs, etc., and may involve the use of explosives.

Typical exploration projects in the planning area could include in-stream dredging with portable suction dredges; exploratory drilling, which could include construction of new roads; use of explosives to sample rock outcroppings; and excavation of test pits. If the exploration project disturbs 5 acres or less, it is conducted under a notice (43 CFR 3809.1-3) which requires the operator to notify the BLM at least 15 days prior to beginning the activity. If a project disturbs more than 5 acres, it is conducted under a plan of operations (43 CFR 3809.1-4) and requires NEPA compliance prior to approval.

Economic evaluation: If an exploration project discovers a potentially economic deposit, activity would intensify to obtain detailed knowledge of the deposit (such as ore grade and deposit size), possible mining methods, and mineral processing requirements. This would involve applying all the previously used exploration tools in a more intense effort. Once enough information is obtained, a feasibility study would be made to decide whether to proceed with mine development and what mining and ore processing methods would be used.

Mine development: Once the decision to develop a property has been made, the mine permitting process begins. Upon approval, work begins on development of the mine infrastructure. This includes constructing the mill, offices, and laboratory; driving development workings if the property is to be an underground mine, or prestripping if it is to be an open-pit mine; building access or haul roads; and placing utility services. Evaluations of ore reserves may be refined at this time.

Once enough facilities are in place, production begins. Satellite exploration efforts may be conducted simultaneously to expand the mine's reserve base and extend the project life. The property is reclaimed concurrently with the mining operation or upon its completion. Often uneconomic resources remain unmined and the property dormant until changes in commodity prices or production technology makes these resources economically feasible to mine.

Activities on these lands include actual mining, ore processing, tailings disposal, waste rock placement, solution processing, metal refining, and placement of support facilities, such as repair shops, laboratories, and offices. Such activities require the use of heavy earth-moving equipment and explosives for mining and materials handling, exploration equipment for refining the ore reserve base, hazardous or dangerous reagents for processing requirements, and other equipment for general construction.

The size of mines varies greatly, and not all mines require all of the previously mentioned facilities and equipment. The amount of land involved can range from only a few acres to several hundred, with most projects disturbing 5 acres or less and requiring a notice pursuant to 43 CFR 3809.1-3. Projects disturbing more than 5 acres require an approved plan of operations pursuant to 43 CFR 3809.1-4.

Reasonably Foreseeable Development

Gold/Silver

Exploration: Based on mineral exploration activity over the past 10 years and known occurrences in the planning area of hot springs type gold deposits, exploration for gold is expected to take place during the life of this plan.

Depending on the market for gold, up to 25 exploration projects for hot springs gold deposits are expected over the next 15 to 20 years. A typical hot springs exploration project would involve six drill holes and approximately 0.5 mile of new road 12 feet wide (total disturbed width of 20 feet) for each drill hole, resulting in 4.2 acres of disturbance/project, or 105 acres of total disturbance.

Economic evaluation/mine development:

Exploration activity may result in the discovery 1 open-pit deposit, employing about 170 people. The possible deposit would be located in or adjacent to areas of known potential for gold/silver.

The open-pit mine is expected to contain between 10 and 90 million tons of ore, with a probable size of 15 million tons, averaging 0.06 troy ounces of gold per ton. Detailed exploration and feasibility studies would involve the construction of about 30 miles of road 12 feet wide (total disturbed width of 20 feet with ditches, cuts, and fills), and 300 drill sites, for a total disturbance of 75 acres. Development of the deposit would involve creation of an open pit, 2,100 feet in diameter and 800 feet deep; a mill complex; a cyanide heap leach pad; a tailings disposal facility; a waste disposal facility; approximately 5 miles of internal graveled haul road 90 feet wide with a total disturbance of 100 feet; and 15 miles of all-weather access road 20 feet wide (total disturbed width of 36 feet). Surface disturbance would cover 85 acres for the pit, 40 acres for the mill complex, 65 acres for the heap leach pad, 140 acres for the tailings disposal facilities, 260 acres for the waste disposal facilities, 60 acres for internal haul roads, and 65 acres for access roads. Total surface disturbance caused by this project would be 715 acres.

Industrial Minerals

Exploration: Based on mineral exploration activity over the past 10 years and known occurrences in the planning area, a moderate amount of exploration for industrial minerals—mainly zeolite—is expected during the life of this plan. Depending on market conditions, up to three projects are expected for zeolite. Exploration for this commodity consists of auger holes or trenching and road construction. An average project would involve up to 10 auger holes; 5 trenches 20–25 feet wide, 60–125 feet long, and 15–25 feet deep; and 1,000 feet of road 12 feet wide (total disturbed width of 20 feet), for a disturbance of 0.8 to 1 acre/project.

Economic evaluation/mine development: Exploration activity is not expected to result in the discovery of an economically mineable deposit. In spite of the low probability of discovery the following scenario would be appropriate based on mine models developed by the U.S. Bureau of Mines. The zeolite deposit would be expected to contain between 50,000 and 120,000 tons of ore, most probably about 85,000 tons, with an assumed moisture content of 25 percent. Development of the deposit would involve an open pit approximately 1,000 feet long by 130 feet wide by 30 feet deep, with a zeolite bed 20 feet thick; a mill complex, assumed to be on public land 15 miles off-site and adjacent to a paved road; a stockpile near the pit; 100 feet of haul road 20 feet wide (total disturbed width of 36 feet); and 10 miles of access road 20 feet wide (total disturbed width of 36 feet). Surface disturbance resulting from this mine would be 3 acres for the pit, 1 acre for the stockpile, 0.1 acre for the haul road, 44 acres for the access road, and 5 acres for the mill.

Saleable Mineral Resources

Reasonably Foreseeable Development Scenarios

The major use of saleable minerals (primarily cinders and sand) would continue to be for road construction and maintenance by the State of California, Lassen, Modoc and Shasta County Road Departments. Most of this activity would be routine seasonal maintenance on county roads which would result in a moderate increase in demand for the materials. Because the population of the area is expected to increase over the life of this plan, it is likely that public demand for saleable minerals will increase slightly over current levels, with the highest demand for decorative stone.

Existing sources of material would handle some of the increased demand. Many of the sites, however, have a small reserve base and could be depleted in a few years. Consequently, up to 20 new sources of material—10 sand and cinder pits, 5 rock quarries and 5 collecting areas for decorative stone—may need to be developed during the next 15 to 20 years:

Background on the Development of Saleable Mineral Deposits

Development of a saleable mineral deposit goes through a sequence similar to that for locatable minerals and includes reconnaissance, prospecting, exploration (sampling and testing), and development. Unlike the process for locatable minerals, however, written approval (such as a permit) must be obtained from the BLM and the material must be purchased by the operator (in the case of a private citizen or commercial operator) before the deposit can be developed, as required by the 1947 “Materials Act” as amended (30 U.S.C. 601 et seq.). The act also grants the Federal government discretionary authority to deny permission to develop a deposit if the damage to public land or resources would outweigh the economic benefits of development.

Reconnaissance and prospecting for saleable minerals involves a literature search, field examination, geologic mapping (if necessary), and surface sampling. Surface disturbance is usually negligible.

Exploration is usually confined to a small area and generally involves drilling or core drilling to determine whether the material meets construction standards. Because exploration is normally limited to areas with good access to major roads, little or no road construction is involved. A typical operation usually involves a number of small trenches or core holes and would disturb less than 0.01 acre/site. Mine development normally involves a pit or quarry, space for processing (crusher, stockpile, and occasionally an asphalt plant), and a staging area for trucks (loading and a turnaround area). Disturbance normally covers about 2 to 3 acres/ project.

Reasonably Foreseeable Development

Exploration

During the next 15 to 20 years, up to 30 exploration projects are expected within the planning area in areas of known or suspected occurrences of mineral materials. Approximately 15 projects may be conducted for sand and cinders, 10 for rock aggregate (crushable or naturally broken material), and 5 for decorative rock.

A typical sand or gravel operation would involve up to five trenches, perhaps 8 by 10 feet and up to 20 feet deep, disturbing about 100 square feet per trench, or about 0.01 acre/project; total disturbance would be approximately 0.15 acre. A typical rock aggregate exploration project would involve up to eight core holes, disturbing about 0.01 acre/hole, or 0.1 acre/project; total disturbance would be about 1 acre. A typical decorative rock exploration project would use no mechanized equipment and would be limited to surface sampling, essentially identical to a prospecting project; surface disturbance would be negligible.

Development

Sand and cinders: During the life of the plan, it is expected that 10 new sand and cinder deposits with good quality material will be developed in easily accessible areas (such as within a few miles of major roads). Site-specific assessments required by NEPA, and inventories of cultural resources and threatened and endangered species, would be conducted prior to development. Existing pits would continue to be used as much as possible, with up to 20 percent closed due to depletion. A typical development of a sand and cinder deposit would contain a pit, stockpile area, processing area (crusher, washer, screener, conveyor, and perhaps asphalt plant), truck loading and turnaround area, and about 0.5 mile of new road 20 feet wide (36 feet total disturbed width). Disturbance for each project would be 2 acres for the pit, processing, and gravel and waste stockpile and 2 acres for the access road, or approximately 4 acres/project. Total disturbance would be 40 acres.

Rock aggregate: During the life of this plan, it is expected that 5 new deposits of good quality material will be developed in easily accessible areas (such as within a few miles of major roads). When the State and County Highway Departments need additional sources of material for major projects, highway material rights-of-way will be granted under title 23 of the "Federal Highway Act" for an estimated five deposits adjacent to highways.

Like sand and cinder, rock aggregate deposits would require site-specific NEPA assessments and inventories of cultural resources and threatened and endangered species prior to development.

A typical rock aggregate quarry would be essentially the same as a sand or cinder operation and would contain a pit, stockpile area, truck turnaround and loading area, processing area (crusher, screener, washer, conveyor, asphalt plant, etc.), and about 2,500 feet of new access road 20 feet wide (36 feet total disturbed width). Disturbance would cover 2 acres for the quarry operations and 2 acres for the access road, or 4 acres per project. Total disturbance would be 20 acres.

APPENDIX D

Decorative stone: A population increase over the next 15 to 20 years will result in a moderate increase in demand for decorative material. It is expected that five new collecting sites would be designated to meet the increase in demand. These sites would be scattered throughout the planning area and would generally be reached by existing roads. Site-specific NEPA assessments and inventories for cultural resources and threatened and endangered species would be required prior to designation.

Extraction of the material would be by surface methods only, such as loading onto pickup or flatbed trucks or pallets, by hand or by rubber-tired front-end loaders. Surface disturbance resulting from these operations would be negligible.

Appendix E

Relevance and Importance Criteria for Areas of Critical Environmental Concern in the Alturas Field Office

Relevance and Importance Criteria for Proposed ACECs in the Alturas Field Office

1. Pit River Canyon ACEC

Designation of the Pit River Canyon as an ACEC is recommended to protect this significant geographically distinctive area, to retain its current undeveloped character, high scenic values, cultural resources, sensitive wildlife species and their habitats, canyon resources, and the setting and context of the National Historic Lassen Emigrant Trail. The ACEC boundary is defined as the portion of the Pit River Canyon Wilderness Study Area that is recommended as suitable for inclusion into the National Wilderness System, and has 6,703 acres. The Pit River Canyon is geologically unique within the region with the extremely steep walled canyon and rims, and warrants special management through designation as an ACEC to protect the significant scenic, wildlife, cultural, and historic qualities of the area.

Relevance

Scenic Values

The Pit River Canyon is a unique scenic and geographically distinct feature which bisects a large basalt tableland of the Cascades/Modoc Plateau geographic province, and is unlike any other canyon complex in the region. This canyon contains many distinctive features that when combined in one area creates this unique resource on public lands. The following statements describe the notable scenic aspects of this area.

- The upper canyon has steep canyon walls with a myriad of colors from the bright lichens, and natural red and black colors of the basalt.
- The scenic quality of the area is outstanding with the vibrant colors of the canyon walls, lichen communities, and changing colors of the seasons. The fall colors are a blaze of yellows, oranges and reds, due to the deciduous Oregon white oak and mountain brush communities.
- The lower portion of the canyon has huge flows of black basalt, which run from the rims to the canyon floor.
- Riparian species of intense greens, line the Pit River water course within the inner canyon of the Pit. Horse Creek enters the main canyon from the east, has a dense, diverse, and unique sedge (carex) and Oregon Ash dominated riparian community in the confined floor of the canyon.
- Canyon depths vary from a few hundred feet deep to over 1000 feet deep. The widest canyon width is upwards of one-half mile rim to rim, with scattered Ponderosa and Jeffery pine dotting the landscape.

Historic Values

Significant cultural resources add to the outstanding character of the Canyon, with many prehistoric and historic sites that are potentially eligible for the National Register of Historic Places. The National Historic Lassen Emigrant Trail passed through the ACEC on the plateaus east and west of Pit River Canyon, as access through the Canyon was impossible. The emigrants used the east branch for a shorter, but rockier route, or the longer and easier route to the west which required two crossings of the Pit River. The 1848 Lassen Trail was used as one of the early emigrant routes to California, use increased dramatically after the discovery of gold in California. The Lassen Trail left the Oregon Trail at Fort Hall, Idaho, crossed the notorious Black Rock Desert and High Rock Canyon complex, and entered California near Fort Bidwell, California. The trail followed the Pit River to the Little Valley area, and eventually made its way through the Sierra Nevada Mountains to the Sacramento Valley of California.

The trail was pioneered by Peter Lassen, used by Emigrants, as well as the military as a supply and patrol route between the Warner Mountains and Chico, California.

Importance

Regional Significance

The scenic values of the Pit River Canyon are unique throughout the region. There is no other canyon in the region or Northeastern California that has the multitude of resource values and the magnitude of the geological and scenic qualities of the Pit River Canyon. The Canyon is visually distinct and unusual in the mixture of geologic formations, depth and steepness of the canyon walls for the entire 13 mile length of the Canyon. The Pit River Canyon and Horse Creek Canyon are unchanged visually from the way they appeared during prehistoric occupation, time of the Lassen Trail, and present day. Visitors seeking back country discovery experiences have the unique opportunity to travel through and experience this rugged and dramatic canyon complex which is much the way it was when the Emigrants and the U.S. Army traversed the area using the Emigrant roads for wagons and cavalry patrols over 150 years ago.

Protection of the Canyon as it is will afford people interested in backcountry travel, sightseeing, and history opportunities to travel through the Pit River Canyon country on the present rough rocky roads. This rugged experience will give visitors an excellent opportunity to enjoy BLM public lands and learn about regional history tied one of the early day Emigrant Trails to California.

Heritage tourism and sightseeing are in the top ten activities that Americans now enjoy (Roper-Starch, 2000 survey for the American Recreation Coalition).

Vulnerability to Change

At present the Pit River Canyon and Horse Creek are within the Pit River Canyon WSA and are protected under WSA status. 6,703 acres of a total of 10,984 acres within the WSA are recommended as suitable for inclusion into the National Wilderness System. If congress released the WSA from interim protection, the Pit River Canyon would need another designation to protect these important resources and the existing character of the Canyon. In this age of critical water supplies, dam construction would probably be considered if the WSA status was lifted from the Canyon. Until the early 1980s, the Bureau of Reclamation had a power site withdrawal on the Canyon for a potential dam. This Pit River Canyon withdrawal was released when another site upstream was selected for the dam site. During preliminary studies the site upstream was discarded due to geologic instability, which makes it even more critical for protection of the Pit River and the unique associated resources. The wildlife resources include critical habitat for wintering populations of deer, and pronghorn, as well as a high density of cliff nesting birds of prey. Birds of prey include: Prairie Falcons, Redtail Hawks, American Kestrels, Barn Owls, and Golden Eagles. Birds of prey within the Pit River Canyon could be in jeopardy from various power generation projects if interim WSA protection status was lost. The existing Malacha Hydro Project diverts flows during the winter and early spring high flow regimes and is located upstream of the Wilderness Study Area. The power plant is located 15 miles downstream from the diversion point, and is immediately west of the WSA boundary. Overtime the Trail has been impacted from utility corridor construction, road construction, forestry, and range management practices and facilities.

Special Management Attention

Special Management of the Canyon complex is warranted under an ACEC designation to assure that the current undeveloped character of the canyons remains unchanged. The area is highly scenic and is managed to meet BLM Visual Resource Management Class I due to WSA status. The Canyon was also rated based on its own merits and rated as VRM Class II. The National Historic Lassen Emigrant Trail is managed as VRM Class II as mandated by Congressional action. These VRM Class objectives require retention of the character of the existing landscape.

Designation of most of the area adjoining the Pit River Canyon is recommended for designation as primitive under the Recreation Opportunity Spectrum classifications proposed in this RMP. If these areas are released from WSA status by act of Congress, it is the intent of designating them as primitive to continue management of this area for the road less character. This designation would help retain the undeveloped character of the area currently enjoyed by hikers, hunters, fishermen, and backcountry sightseers who use the Pit River Canyon country. Protection of the Lassen Trail is included in the proposed action in this RMP under provision of the Historic Trails and Visual Resources Management portion of this RMP. California Department of Forestry and Fire Protection has fire protection over the area of the proposed ACEC and associated resources. Close coordination is required with fire management activities and agencies to prevent impacts from fire protection activities to these sensitive resource values. The intake and diversion point of the existing Malacha Hydro Project is located upstream of the Wilderness Study Area, diverts flows during the winter and early spring high flow regimes, while the power plant is located immediately downstream of the WSA. Coordination is important with the Malacha project to insure there are no impacts to the WSA/ACEC and associated resource values. Designation of the area as an ACEC would give further management emphasis to retain the existing character of the area under VRM Class II, or VRM Class I if the Pit River Canyon is included in the National Wilderness System. These objectives would protect both scenic and historic values of this unique area.

2. Lava ACEC

Designation of the Lava ACEC is recommended to protect this significant geographically distinctive area, to retain its current undeveloped character, as well as to protect geology, sensitive cave resources, high scenic values, sensitive plant and wildlife species and their critical habitats, and the setting and context of the Baker Toll road and the Lockhart Wagon road. Segments of the National Historic Lassen Emigrant Trail may also be present in the Lava ACEC. The sensitive plants focus on the sensitive plants Bogg's Lake hedge-hyssop (*Gratiola heterosepala*-GRHE) and profuse flowered pogogyne (*Pogogyne floribunda*-POFL). The GRHE is associated with vernal pools and shallow pit reservoirs on the east side of the proposed ACEC. The POFL is associated with vernal moist depressions in the SW part of the existing WSA. The vegetation growing among the lava outcrops contain floristic elements from the Cascade Range foothills and the Great Basin. There are mixed plant associations of western juniper, grey pine, Brewer's oak, wedgeleaf ceanothus, low sagebrush, and native perennial grasses and forbs. Much of the area has never been explored or inventoried. The proposed ACEC area has unique lava flows, broken lava tube formations, and two well known caves with one designated as a significant cave. Sensitive cave resources are found in the larger caves. The lava areas have been identified as a special place for the Pit River Tribe. The ACEC boundary is defined as the entire 10,770 acre Lava Wilderness Study Area, and is recommended as suitable for inclusion into the National Wilderness System. Within the proposed Lava ACEC are steep small canyons with twisted and molten lava formations, and a few roads on the perimeter of the lava, which adds to the scenic quality of the area. The proposed Lava ACEC is geographically unique and outstandingly scenic within the region and warrants special management through designation as an ACEC to protect the unique scenic, wildlife, geologic, and historic values of the area.

Relevance

Scenic Values

The proposed Lava ACEC is a unique and distinct lava flow feature; with canyons, fissures, caves, broken lava tubes and scattered islands of pine, juniper, mountain mahogany, and associated vegetation. This lava field is located in relatively large basalt tableland of the Cascades/Modoc Plateau geographic province, and is similar to the cinder cones and buttes of the Hat Creek rim to the south, and the Lava Beds National Monument to the north.

These lava flows are fairly unique and unlike other basalt flows in the region. This area contains many distinctive features assembled in one area to create a highly unique and scenic area. The following statements describe the notable scenic aspects of this area.

- The lava canyons and fissures and flows have a myriad of colors from the bright lichens, and natural red and predominately black colors of the basalt.
- The scenic quality of the area is outstanding with the vibrant colors of the, lichen communities, and the changing colors of the seasons. The fall colors are a blaze of yellows, oranges, and reds, due to the deciduous Oregon white oak and mountain brush communities, which are intermingled with the various shades of green from the pine and juniper.
- The texture of the lava is quite distinct with its swirls, flow patterns, and sharp broken volcanic rocks.

Historic Values

Significant cultural resources add to the outstanding character of the area, with some prehistoric and historic sites that are potentially eligible for the National Register of Historic Places. The Baker Toll road passed through the ACEC on the western edge of the area. The emigrants used the Baker Toll road to bypass the lava enroute to Fall River Mills. The 1848 National Historic Lassen Emigrant Trail passed nearby to the east, and may possibly be located on a portion of the proposed ACEC. The Lassen Trail was used as one of the early emigrant routes to California, and use increased dramatically after the discovery of gold in California. The Trail followed the Pit River and eventually made its way through the Sierra Nevada Mountains to the Sacramento Valley, of California. The trail was pioneered by Peter Lassen, used by Emigrants and the military as a supply and patrol route between the Warner Mountains and Chico, California.

Importance

Regional Significance

The scenic values of the proposed Lava ACEC are unique throughout the region. There are only a few lava fields that exhibit these unique features. The canyons, fissures, lava tubes, and flows are visually distinct and unusual in the mixture of texture, formation, and expanse within a geologically distinct area. The lava fields and formations are unchanged from the time of their development, as the volcanism and rugged nature of the lava has prevented human intrusions except on the periphery of the lava. The Baker Toll road is fairly intact on BLM, with no changes, and appears as it did during the time when it was used by pioneers and emigrants. Visitors seeking back country discovery experiences have the unique opportunity to travel along a historic toll road and experience this rugged and dramatic landscape, much the way everything was when wagons and cavalry patrols used the area over 150 years ago.

Protection of the unique lava field and historic toll road as they are, affords people interested in backcountry travel, sightseeing, and history opportunities to travel through the proposed Lava ACEC on the present rough rocky road. This will give visitors an excellent opportunity to enjoy BLM public lands and learn about geology and regional history tied to the Fall River Mills area.

Interest in history is increasing as our population ages and more people of retirement age seek to explore and learn about our history. Heritage tourism and sightseeing are in the top ten activities that Americans now enjoy (Roper-Starch, 2000 survey for the American Recreation Coalition).

Vulnerability to Change

There have been several requests to improve access to private property adjacent to the Baker Toll Road. Improvement requests have been denied due to the historic nature of the Baker Toll road.

A major subdivision is located immediately to the west of the proposed Lava ACEC; as such many activities take place on public land. With the close proximity of the subdivisions, fire suppression activities by the California Department of Forestry and Fire Protection need to be closely coordinated to prevent impacts to this historical resource and unique geological area. The Lava WSA/ Lava ACEC is protected under the BLM Interim Management Policy for Wilderness Study Areas created by Congressional action. The WSA was not originally recommended for wilderness designation by BLM, but after additional consideration the WSA was recommended as suitable for wilderness, and a wilderness study report was completed for the area. The Lava ACEC would require other protection measures if congress released the area from wilderness consideration.

Special Management Attention

Special Management of the lava complex is warranted under an ACEC designation to assure that the current undeveloped character of the area remains unchanged. The area is highly scenic and is proposed to be managed to meet BLM Visual Resource Management Class I objectives due to WSA status, which requires retention of the character of the existing landscape. The surrounding landscapes are designated as VRM Class II, and most of the area is recommended for designation as primitive area under the Recreation Opportunity Spectrum classifications proposed in this RMP. If this area is released from WSA status by Congress, it is the intent of designating them as primitive to continue management of this road less area adjoining the Baker Toll Road. This designation would help retain the undeveloped character of the area currently enjoyed by hunters and backcountry sightseers who use the proposed Lava ACEC area. Protection of the Baker Toll Road is also proposed as part of the proposed action in this RMP under provision of the Historic Trails and Visual Resources Management portion of this RMP. Designation of the area as an ACEC would give further management emphasis to retain the existing character of the area under VRM Class II objectives for protection of both scenic and historic values.

3. Emigrant Trails ACEC

The Emigrant Trails ACEC is recommended as an ACEC to protect significant and historically distinctive areas for the retention of their current undeveloped character, and high scenic and historic values. The proposed Emigrant Trails ACEC covers approximately 28 linear miles of National Historic Trails and 9,984 acres of landscape. The ACEC is comprised of the Lassen and Applegate National Historic Trails, and the Yreka Trail which is in the process of being designated a National Historic Trail. Also addressed are other historic roads such as the Burnett Road, the Lockhart Wagon road, Baker Toll road, and military routes such as the Fort Crook to Fort Bidwell road, as well as other associated military patrol routes. Many of these historic roads exhibit class 1 (pristine) segment and need protection and interpretation. Due to the unique linear alignments covering long distances and mixed ownerships, these historic trails are susceptible to impacts, and have been impacted by timber harvest, livestock grazing practices, energy and transportation corridors.

Relevance

Scenic Values

The scenic qualities are diverse and spectacular within the areas proposed for the Emigrant Trails ACEC, as the Trails span the field office landscape north to south and east to west. The scenic quality of the area is outstanding with the vibrant colors of the changing fall vegetation in the southern portion of the area. The fall colors are a blaze of yellows, oranges, and reds, due to the deciduous Oregon white oak and mountain brush communities. Whereas the northern portion of the field office has tremendous long range vistas and panoramas, with dynamic geologic formations, and multi-colored valley bottoms.

At the Descent into Goose Lake where the Applegate/Lassen Trail descends into the Goose Lake Valley, the vistas are spectacular for 50 miles in each direction. In the southern portion of the field office, the Lassen Trail has branches on each side of the Pit River Canyon, and the views into the canyon are superb. Whereas, on Devils Garden where the Applegate Trail descends into the Tulelake Basin, the panorama of Mt. Shasta, the Medicine Lake Highlands, the Lava Beds National Monument, and the colors of the agricultural lands in the Tulelake basin are camera ready. To the west, the Applegate Trail follows along the south edge of the Lower Klamath Marsh, with excellent vistas of Mt. Dome, the Klamath Basin and incredible wildlife viewing associated with the marsh. These vistas and panoramas of the Emigrant Trails are unique, and some of the most spectacular scenery in Northeastern California.

Historic Values

Significant cultural resources add to the outstanding character of the proposed Emigrant Trails ACEC, with many prehistoric and other historic sites that are potentially eligible for the National Register of Historic Places.

Early Euro American exploration in the 1820's-1840's, by the Hudson Bay Company, and American explorers such as John Charles Fremont, used trails which criss-crossed the public lands. Some of these sites and trails have been identified and are potential candidates for interpretation.

The 1846 National Historic Applegate Trail was pioneered from Oregon easterly by the Applegate brothers and Levi Scott. The National Historic Applegate/Lassen Trail that descends into the Goose Lake basin from the Warner Mountains is the locale where these two important Trails parted. Near Davis Creek, California, the Lassen Trail continues south to the California goldfields and the Applegate Trail northwest to fertile farmlands of Oregon.

The 1848 National Historic Lassen Emigrant Trail entered the field office lands in the northeast corner near New Pine Creek, followed the Pit River to the southwest corner near Little Valley, and eventually made its way through the Sierra Nevada Mountains to the Sacramento Valley, of California. The Lassen Trail was used as one of the early emigrant routes into California, and use increased dramatically after the discovery of gold in California. The trail was pioneered by Peter Lassen, used by Emigrants and as a supply and patrol route for the U. S. Army between the Warner Mountains and Chico, California.

Both the Lassen and Applegate Trails left the famed Oregon Trail at Fort Hall, Idaho, crossed the notorious Black Rock Desert and High Rock Canyon complex, and entered California near Fort Bidwell, California.

The 1852 Yreka Emigrant Trail branched off of the Applegate Trail west of the Lower Klamath Marsh, passed through Red Rock Valley and on to Yreka and the Siskiyou Country goldfields. The 1848 Burnett Road located on the eastern edge of the Tule Lake Basin, connected the Applegate Trail (i.e., the Southern Road to Oregon) to the California Trail, north of Lookout, California. The Tichnor Road was constructed in 1871/1872 to connect Yreka, California, to Alturas, California, and followed or used segments of the original Yreka Emigrant Trail.

U.S. Army exploration parties were present from the 1840s to the 1870s, when settlement began. Segments of General George Crook's route to the 1867 Battle of the Infernal Caverns have also been identified, but not totally mapped. A portion of the Military Road from Fort Crook to Fort Bidwell lies on public lands, other Military patrol routes generally followed the Emigrant Roads and segments of these routes are also located on public lands.

Importance

Regional Significance

The scenic values and Trail traces of the proposed Emigrant Trails ACEC are unique throughout the region. Much of the early Emigrant Trails have been lost over the years due to; agricultural development, timber harvest, highway and road construction, erosion, subdivisions, livestock grazing management and facilities. One thing that makes this ACEC unique is that the resource spans the field office landscape, is located in discrete locations, and is a linear feature on the public lands of the field office. The proposed Emigrant Trails ACEC is visually distinct and unusual due to the remote character of the BLM lands that possess trail traces, whereas in more populated areas most of the trail traces have disappeared due to a variety of impacts. In some locations, such as portions associated with the Pit River Canyon and Red Rock Valley, the Trails are unchanged visually from the way they appeared during times of heavy use on the Emigrant Trails, to present day. Visitors seeking back country discovery experiences have the unique opportunity to travel through the public lands, and experience these rugged and dramatic landscapes with the associated trail traces. Some of the trail traces and landscapes appear much the way they were when Emigrants and the U.S. Army traversed the area on these roads with wagons and cavalry patrols over 150 years ago.

Protection of these historic trails afford people interested in backcountry travel, sightseeing and history opportunities to travel through exciting landscapes and vistas of the Pit River Country, Devils Garden plateau, and the marshlands of Lower Klamath Marsh. Visitors will have an excellent opportunity to use the present rough and rocky roads, enjoy BLM public lands, and learn about regional history tied to the early day Emigrant Trails of California.

Heritage tourism and sightseeing are in the top ten activities that Americans now enjoy (Roper-Starch, 2000 survey for the American Recreation Coalition).

Vulnerability to Change

Trails have been impacted from past activities for; utility projects and utility corridor construction, transportation systems, forestry, and range management practices and facilities. At present, segments of the Lassen Trail are located within the Pit River Canyon WSA, and are protected under WSA status. The Pit River WSA (6,703 acres) is recommended as suitable for inclusion into the National Wilderness System. If congress released the WSA from interim protection, the Pit River Canyon WSA would need another designation to protect these important resources and the existing character of the canyon. Areas that contain trail resources with a National Historic Trail designation, have protection legislated by congress. However, on Historic Trails with no designation management protection is needed to fully protect these fragile resource values.

Special Management Attention

Special Management of the Emigrant Trails are warranted under an ACEC designation to assure that the current undeveloped character of the designated and undesignated Historic Trails remain unchanged. The areas associated with the Trails are highly scenic, and designated National Historic Trails are protected under legislation for Emigrant Trail Management, and are managed to meet BLM Visual Resource Management Class II. However, other Historic Trails that are not designated as a National Historic Trail do not qualify for the nationally legislated protection, but are afforded some protection under other acts related to cultural resource management. California Department of Forestry and Fire Protection has fire protection over much of the area that contain historic trail resources. Close coordination is required with fire management activities and agencies to prevent impacts from fire protection activities to these sensitive historical resources. The intake and diversion point of the existing Malacha Hydro Project is located upstream of the Wilderness Study Area, diverts flows during the winter and early spring high flow regimes, while the power plant is located immediately downstream of the WSA.

Coordination is important with the Malacha project to insure there are no impacts to Trail segments that are in close proximity to hydro development facilities, roads, or other needed maintenance activities associated with the hydro project. Current VRM Class ratings on historic trails vary from Class I on the Lassen Trail within the Pit River Wilderness Study Area, to Class III in other areas. VRM Classes I and II objectives require retention of the character of the existing landscape. Designation of most of the area adjoining the Pit River Canyon is recommended for designation as primitive areas under the Recreation Opportunity Spectrum classifications proposed in this RMP. If these areas are released from WSA status by Congress, it is the intent of designating them as primitive to continue management of this area for the road less character. An ACEC designation would fully protect all Historic Trails within the field office boundaries. This designation would help retain the undeveloped character of areas with trail resources currently enjoyed by hikers, hunters, fishermen, and backcountry sightseers who use public lands associated with historic trails. Protection of the Trails is included in the proposed action in this RMP under provision of the Historic Trails and Visual Resources Management portion of this RMP. Designation of the area as an ACEC would give further management emphasis to retain the existing character of the area under VRM Class II objectives for protection of both scenic and historic values.

4. Juniper Creek ACEC

Description and Values: The proposed Juniper Creek ACEC is located on the southeastern border of Big Valley, approximately 3.5 miles southeast of Bieber, California. It covers approximately 1182 acres including and surrounding the riparian area of the creek. Juniper Creek is a seasonally inundated water course that supports a thriving riparian plant and animal community. Surrounding the riparian area is juniper woodland, shrubs including sagebrush and rabbitbrush, as well as a low growing perennial plant community. Average elevation for the proposed ACEC is approximately 4300 feet.

The area was the focus of prehistoric and historic occupation and subsistence activities, with several prehistoric sites found within the vicinity, in addition to the remains of an historic structure. Research has been limited in the area, but examination by archaeologists in the 1980's uncovered important sites that could provide information regarding prehistoric land use patterns and boundary issues.

An enclosure was built in the 1980's to protect a portion of the riparian area, as well as a number of important cultural sites. However, the area is primarily unfenced, with the exception of the above mentioned enclosure and a boundary fence that crosses to the south side of the creek and then runs southeast to the US Forest Service boundary. The area is located within an existing grazing allotment, and is accessed by a single two-track road. It is open to livestock grazing and OHV use, except where enclosures preclude such use.

Relevance

The Juniper Creek ACEC meets the relevance criteria in the following ways: it is the locus of significant cultural resource values as evidenced by the high density of archaeological sites, the variety of sites and their time depth, this makes the area important for the study of prehistory in the Modoc Plateau; it supports a Bald Eagle roosting site and is located within critical pronghorn antelope winter range; the riparian community is a micro-ecosystem that supplies forage and water for wildlife, as well as supplying water for irrigation to the local human community.

Importance

The Juniper Creek ACEC meets the importance criteria in the following ways: cultural resources identified within the ACEC have been determined to be eligible for the National Register of Historic Places (NRHP), these resources are sensitive and irreplaceable; as a roosting site for Bald Eagles, it is a rare and sensitive area that requires special management considerations; as a riparian community it is irreplaceable and critical to meeting the needs of both wildlife and humans.

The proposed ACEC is readily accessible, and offers good opportunities for research and educational pursuits, in addition to an interpretive area.

Juniper Creek meets the need for a special management area due to the fact that current management activities are not protecting important cultural, biological and riparian resources.

5. Timbered Crater ACEC

Designate the Timbered Crater Wilderness Study Area (WSA 17,896 acres) as the Timbered Crater ACEC/RNA to protect, enhance and maintain Baker's Cypress, to protect the Green Place vernal pool, and to protect vast expanses of unique lava formations. The Baker's Cypress in the Timbered Crater WSA is the largest stand known in the world, covering approximately 4,246 acres. Baker's Cypress is a California Native Plant Society (CNPS) List 4 species and the Baker's Cypress plant association is a rare plant community (California GAP Analysis, 1998). Both Baker's Cypress and the associated knobcone pine are fire dependent species. The Green Place vernal pool is designated Critical Habitat (FWS, 2002) for the Federally Listed Threatened plant, slender Orcutt grass. The WSA has a Class I Visual Resource Management classification, contains several Bald Eagle territories, numerous caves and potentially unmapped caves containing Sensitive bat species, and a culturally significant Native American trail. The Baker Cypress Natural Area was designated as an Instant Study Area/Natural Area; it is 1,148 acres (see Special Management Areas). Currently only 500 acres of the Timbered Crater WSA are permitted for livestock grazing; the remaining is unsuitable for grazing.

The AFO would coordinate with the Lassen National Forest (this portion of the Shasta-trinity NF is administered by the Lassen NF), for possible designation of the Baker's cypress within NF lands as an RNA. There would be potential to write and implement an interagency HMP for a BLM/USFS RNA. Further refinement of the extent of the Baker's cypress would be conducted through inventory; any changes would be mapped on the AFO GIS layer.

Relevance

The Timbered Crater area is a unique combination of geology, wildlife, and flora. The proposed ACEC/RNA has large expanses of lava with numerous undocumented lava tubes and caves. The landscape provides a striking contrast with Fall River Valley and Ahjumawi Lava Springs State Park. The Baker's cypress and knobcone pine plant associations are mostly undisturbed by human activities and could provide research opportunities on plant floristics, plant community dynamics, and fire effects studies. The WSA has Bald Eagle nesting and roosting sites. The lava caves have the potential to contain sensitive bat species and rare mosses. The southern part of the proposed ACEC/RNA could provide primitive recreational opportunities in the form of hiking trails linked with trails in Ahjumawi Lava Springs State Park.

Importance

The Green Place vernal pool (northern basalt flow vernal pool community, a rare plant community), bald eagle nests, and the largest stand of Baker's cypress warrant protection. The lava caves need to be inventoried for sensitive species. The Baker's cypress-knobcone pine association is a fire dependent plant community and under the preferred alternative for the Draft RMP this area would be designated as Wildland Fire Use; fire would be used as a tool to maintain the plant association. There is reported to be a pre-historic Native American Trail that runs through the proposed ACEC/RNA; the trail would be inventoried and research would be conducted. The visual resources are significant for the communities of the Fall River Valley and other public land users.

Vulnerability to Change

The communities of Fall River Mills, McArthur, Burney and outlying communities in the Fall River Valley are growing. Farming and ranching has fragmented wildlife habitats. More homes are being built on the edge of the Public Lands and demand for recreation is increasing. The Timbered Crater WSAs (viewable from the Fall River Valley), was not recommended for wilderness designation. There have been intrusions from fire suppression forces into the WSA, dozer lines became roads, and private lands within the WSA have been proposed to be harvested for timber.

6. Beaver Creek ACEC

Description and Values: The proposed Beaver Creek ACEC is located approximately 7 miles southeast of Fall River Mills, California. It covers approximately 972 acres through and adjacent to the Beaver Creek drainage. This portion of the Beaver Creek system is a seasonally inundated watercourse that is supplemented by a number of year round springs. The area supports a riparian plant and animal community, juniper woodlands, grasslands and various shrubs in addition to a low growing perennial plant community. Elevation within the proposed ACEC ranges from 3700 to 4000 feet.

The area was the focus of prehistoric and historic occupation and subsistence pursuits, as evidenced by the numerous archaeological sites located within the proposed ACEC. These sites range from small prehistoric task sites to larger occupational sites, to historic ranch remains. A research project undertaken in the 1980's found that occupation within the area had been continuous for at least the last 6000 years (Manuel 1989).

The area is primarily unfenced, save for pasture and allotment fencing constructed for the purposes of rangeland management. The area is located within an existing grazing allotment, and is accessed by a number of two track roads, as well as a county maintained road and a forest service improved road. The proposed ACEC is currently open to livestock grazing and OHV use.

Relevance

The Beaver Creek ACEC meets the relevance criteria in the following ways: as a locus of prehistoric activities, sites found within the area are fragile and irreplaceable, and represent an opportunity to inform researchers on numerous issues important to the study of early human occupation, in addition to its importance within the Native American community; as a riparian ecosystem, it represents an important source of water and forage for wildlife.

Botanically, the Beaver Creek area is unique in that it has floristic elements from both the Cascade Range and the Great Basin. Being on the western edge of the Modoc Plateau there are assemblages of low and big sagebrush, western juniper, and Thurber's needlegrass growing with Oregon white oak, wedgeleaf ceanothus, red bud, and Lemmon's needlegrass. The diversity of vegetation was probably as factor for the large number of prehistoric and historic sites in the area.

There are portions of Beaver Creek that are characterized by narrow steep canyons with riparian vegetation that includes Pacific willow, Oregon ash, Wood's rose, Louisiana sagewort, panicled bulrush, and chamisso sedge. The riparian vegetation is in sharp contrast to the upland vegetation and the lichen covered rimrock. Along with the upland species listed above, there are scattered old growth juniper trees on the rocky rims above Beaver Creek, some estimated to be over 500 years old.

Importance

The Beaver Creek ACEC meets the importance criteria in the following ways: cultural resources identified within the area have been determined to be eligible for the NRHP, and potentially represent some of the most important sites within the Modoc Plateau; the riparian community is sensitive and requires additional measures to protect the water and plant resources found within the area.

Local Significance

The scenic values are unique for this region. Depending on the vista point there are views of the entire Fall River Valley, Mt. Shasta, and Lassen Peak. The geography has cultural and modern day significance—aboriginal peoples and modern man could see a variety of vegetation, from true wetland to pine forest, as well as wildlife species ranging from waterfowl, pronghorn, mule deer, various raptors, and black bears.

Vulnerability to Change

The communities of Fall River Mills, McArthur, Burney and outlying communities in the Fall River Valley are growing. Farming and ranching has fragmented wildlife habitats. More homes are being built on the edge of the Public Lands and demand for recreation is increasing. The Timbered Crater and Lava WSAs are both viewable from the Beaver Creek area, with the Lava WSA recommended for wilderness designation, and Timbered Crater was recommended as nonsuitable. The Timbered Crater is proposed as an ACEC/RNA. Increased urbanization could negatively impact the view shed. The Beaver Creek ACEC would ensure an unspoiled landscape and provide more semi-primitive recreational and research opportunities.

The Beaver Creek ACEC has been identified for special management due to the fact that current management practices have not been sufficient to protect the valuable cultural resources within the area.

7. Tablelands/Yankee Jim/Fitzhugh Creek ACEC

Description and Values

The Tablelands/Yankee Jim/Fitzhugh Creek ACEC is located within the area known as the Likely Tablelands and lies approximately 10 miles southeast of the town of Alturas, California. It covers approximately 27,435 acres including and surrounding the drainage of Fitzhugh Creek, the complete ranch parcel and the easternmost portion of the Likely Tablelands. Fitzhugh Creek is a perennial watercourse that is a tributary to the Pit River system. It supports an important riparian community, Modoc-Great Basin Cottonwood-Willow Riparian Forest, in addition to remnant Ponderosa Pine stands, juniper woodlands, grasslands and shrub communities. The Yankee Jim Ranch portion supports a seasonally inundated wet meadow system, surrounded by juniper and pine woodlands. Several springs can be found in the uplands surrounding the ranch property, each contributing to the lush meadows, with a locally rare (public lands) fen meadow near the ranch house that is surrounded by a stand of Lemmon's willow. The rim of Fitzhugh Creek and the property surrounding the ranch area support geophytic plant communities such as yampa (*Perideridia* spp.), biscuit root (*Lomatium* spp.) and camas that were utilized intensively by Native American groups inhabiting the area. The southwestern portion of the Tablelands encompasses large grassland that has been essentially replaced by invasive medusahead.

APPENDIX E

Areas within the ACEC possess juniper woodland and sagebrush steppe ecological systems. Elevation ranges from 4600 to 5300 feet across the ACEC.

The Likely Tablelands were the focus of intensive prehistoric occupation and subsistence pursuits. Numerous prehistoric sites have been located in the area and across the Tablelands. Some of the finest and most well preserved examples of rock art can be found within the proposed ACEC, as well as a number of habitation locales, special task sites and storage features. The historic component of Yankee Jim Ranch consists of a turn of the century ranch house, corrals and the remains of several outbuildings. There are a number of stone and barbed wire fences dating from the active period of use of the original ranch property. The Historic component of Fitzhugh Creek consists of various water improvements, as well as stone and barbed wire fencing. The historic component of the Tablelands consists of an historic ranch area, numerous water improvements in addition to stone and barbed wire fences. Although research has been relatively limited within the immediate area, recent evaluations have identified a number of sites near Fitzhugh Creek and at several places in the Tablelands that are potentially eligible for the NRHP; the Yankee Jim portion qualifies as a significant archaeological district that is NRHP eligible.

The Tablelands/Yankee Jim/Fitzhugh Creek ACEC lies within existing rangeland allotments. Livestock are allowed access under current permits. A number of range improvement projects have been proposed and implemented within the proposed ACEC, and include water developments, pasture fences, exclosures and gap fencing. Livestock have been excluded from the Fitzhugh Creek watercourse proper, and only have access to the creek at various gap locations during times of drought. However, stock are allowed along the north and south rims of Fitzhugh Creek, in the ranch parcel and across the Tablelands. Two hundred acres of meadows in the Yankee Jim Ranch, and all of Fitzhugh Creek are closed to OHV use. The Tablelands are open to OHV use except where fencing precludes access. The Tablelands/Yankee Jim/Fitzhugh Creek ACEC is accessible only by rugged four wheel drive roads that are inaccessible during inclement weather.

The proposed ACEC is currently the focus of a various recreational opportunities, including the seasonal hunting of ungulates and waterfowl, as well as seasonal coldwater fishing.

Relevance

The Tablelands/Yankee Jim/Fitzhugh Creek ACEC meets the relevance criteria in the following ways: the high density, complexity and time depth of the prehistoric sites represents an invaluable opportunity for research and preservation goals; Yankee Jim Ranch is one of the oldest parcels of homesteaded property within the Alturas area, and the existing ranch house is the only standing ranch building within the Likely Tablelands; the large petroglyph component that is present within the ACEC area, has concentrations that are some of the largest and potentially most important rock art sites within the Alturas Field Office jurisdiction; the combination of rock art, task specific sites and occupation areas within the Tablelands portion makes it an ideal laboratory in which to study themes relevant to NRHP designations. In addition to high cultural resource values, the ACEC also includes critical deer winter range, deer and antelope fawning/kidding grounds, and sage grouse habitat. The riparian areas provide important forage and water for wildlife. The hydrologic and scenic values inherent in the wet meadows, seasonal and perennial water courses in the ACEC are unique to the area and are especially important.

There are at least 6 different riparian plant associations in the Yankee Jim area including Nebraska sedge, meadow barley-Nevada bluegrass, Nebraska sedge/meadow barley/Baltic rush, clover-monkey flower/meadow barley, mixed sedge/grass/forb, and lesser paniced sedge. The presence of the fen meadow is unique for the Alturas Field Office, as only a few are present on public lands. The large concentration of wetland plants includes both obligate and facultative wetland species.

The upper meadow system was formed by a fault that runs north-south, creating a contact zone with the water table. Numerous springs come out of this contact zone. The unique scenic quality and botanically diverse area was probably one attraction to the aboriginal peoples.

Importance

The Tablelands/Yankee Jim/Fitzhugh Creek ACEC meets the importance criteria in that the cultural resources identified within the area are fragile and irreplaceable resources that are eligible for the National Register of Historic Places. The Ranch environs are eligible as an historic district, with several contributing properties. Suitable sage grouse habitat has been identified within the ACEC, and the location of key fawning and kidding grounds marks this area as a unique and sensitive locale.

Special Management Attention

The need for special management has been identified during the course of field work and projects conducted within the potential ACEC. Current management of the area includes permitting livestock, which is having a significant impact on cultural, riparian, biological and visual resources. Special management of the ACEC is warranted to assure that further degradation of the archaeological district does not occur; in addition to protecting the biological, botanical and riparian values identified in the area. Management actions outside the normal range of management practices may be necessary to reduce impacts to all resources within the ACEC. These actions could include the following: reduction in numbers of livestock, exclusion of livestock from areas that are important concentrations of resources or the implementation of special grazing systems.

Vulnerability to Change

The Yankee Jim portion of the proposed ACEC (1400 acres) represents one of the most archaeologically important and sensitive areas under Field Office Management. Sites within this area have little protection from primary impact agents such as livestock and the illegal collection of artifacts. If these impacts are not addressed, it is likely that the elements that make this an NRHP eligible district will be lost.

8. Mt. Dome ACEC/RNA

Designate the Mt. Dome ACEC/RNA. This 1,510 acre area contains an isolated stand of ponderosa pine, the sensitive plant little rice grass (*Oryzopsis exigua*), native grassland communities of bluebunch wheatgrass (*Pseudoroegneria spicata*) and Thurber's needlegrass (*Achnatherum thurberianum*), a critical winter Bald Eagle roost site, and a Class II Visual Resource Management classification. There is also an occurrence of the sensitive plant Baker's globemallow (*Iliamna bakeri*) on the NW part of the proposed ACEC/RNA. The unique feature of Mt. Dome is that it is an uplifted fault block that can be seen from as far away as the Warner Mountains. The AFO would coordinate with the Modoc National Forest for a potential interagency RNA. There are 2 grazing permits that fall within the proposed ACEC/RNA; the majority of the lands on Mt. Dome proper are inaccessible to livestock grazing. The portion of the proposed ACEC/RNA that contain the bluebunch wheatgrass and Thurber's needlegrass communities are within the West Dome grazing allotment; current grazing practices have no negative effect on the perennial grasslands on the upper slopes of the mountain. Under this proposal, monitoring plots would be established on the lower slopes of the mountain to determine if grazing is having any impacts to the perennial grass communities.

Relevance

Mt. Dome is a dominant landmark that can be seen throughout much of the Modoc Plateau and southern Oregon. The top of Mt. Dome is unique due to the presence of Ponderosa pine and plant species common to not only the Modoc Plateau but the Southern Cascades and Columbia Plateau.

The mid to upper slopes of the mountain contain an assemblage of undisturbed native perennial grasses; this native grassland offers research opportunities. Research potential is immense; inventories, mapping, community descriptions, and ecological and genetic studies would be invaluable for this unique area of the Alturas Field Office

Importance

The basalt talus fields have an occurrence of the sensitive plant, little rice grass; this is only one of two locations in California of this plant. Bald Eagle roosting sites are a critical part of the eagles range throughout the Tule Lake, Klamath basin, and Butte Valley regions. The high scenic values need to be protected for public land users and the communities of the Tule Lake and Butte Valley.

9. Old Growth Juniper ACEC/RNA

Designate the Old Growth Juniper ACEC/RNA. These 2 areas form the ACEC, cover 3015 acres, and contain old growth juniper stands that are estimated to be in excess of 1,000 years old. Old growth juniper is a high priority for the AFO and these areas need protection from surface mineral extraction, wood cutting, and road construction. The proposed ACEC/RNA would serve as an area for research into old growth stand dynamics and genetic studies. The areas also contain numerous species of lichens and mosses that need to be identified and studied for their role in these extremely cobbly to very stony juniper/low sagebrush associations. There is very little information on lichens in these community types; it is unknown whether any are sensitive. Sheep Valley is 2,025 acres and Ticker Spring is 1,090 acres. The proposed ACEC/RNA are currently permitted for livestock use. These areas receive little livestock use due to low forage production.

Relevance

The proposed ACEC/RNA are two examples of nearly pristine old growth western juniper. These areas could provide opportunities for research and other ecological studies on old growth stand dynamics, juniper /shrub/perennial grass community structure, and the identification and role of lichens and other biological crusts associated with old growth as well as juniper/soil/air quality relationships. These rocky areas also contain possible relict assemblages of perennial grasses and forbs which are not found in areas preferred by livestock.

The visual aesthetics of these open savanna-like plant associations with large lichen covered rocks are some of the highest quality in the Field Office. The savanna-like juniper/shrub associations (mountain big sagebrush, low sagebrush, and bitterbrush), have high value for diverse structural diversity and wildlife habitat. The complex of lichen species found on the flat basalt rocks provide a multitude of colors that add to the scenic and biological value of the proposed ACEC/RNA.

Importance

Many of the old juniper trees are 500 to 1,000 years old, with some estimated to be approaching 2,000 years old. As Federal and State agencies and county and private entities jointly develop a comprehensive juniper management strategy for NE California, preserved/protected old growth communities would provide a baseline for biological diversity, genetic and botanic studies, and desired or potential natural plant communities. The California Lichen Society considers the lichen associations in these juniper communities to be of significant ecological interest, worth protecting. Old growth juniper woodlands would also provide opportunities for sightseeing by the general public.

Vulnerability to Change

With no significant management or protection of old growth western juniper, these plant communities would be threatened from fire, wood cutting, juniper removal for livestock forage production, and flat (decorative) rock collecting. The proposed ACEC/RNA would provide the public with old growth sites that are undisturbed. These unique biologic resources would also show the need to protect and manage other old growth juniper associations from Fall River Valley to Silva Flat to Alturas and beyond.

10. Mountain Peaks ACEC/RNA

Designate the Mountain Peaks ACEC/RNA. There are 2 distinct mountain peaks that combined together form the ACEC. The Tule Mtn portion is (985 acres) and the McDonald Mtn. area is (2515 acres). The Tule Mtn. section has plant associations of white fir, eastside pine, and aspen that are in good ecological condition; they are within a dominant mountain big sagebrush alliance. Elevation is over 7,000 feet and the area is within the Tule Mountain WSA. The McDonald Mtn. portion is at an elevation of nearly 8,000 feet and has associations of white fir, aspen, and curlleaf mountain mahogany. These associations are in good ecological condition. The eastside pine, aspen and curlleaf mountain mahogany communities are high priority communities for inventory by the CNDDDB and BLM; the mahogany is a priority for conservation. The Tule Mtn. area needs to be inventoried to confirm if the alliance is eastside or Jeffrey pine. There are four Jeffrey pine associations that could occur on Tule Mtn. and are a high priority for inventory: they are Jeffrey pine/bitterbrush/wooly mule's ear, Jeffrey pine/bitterbrush-mountain mahogany/western needlegrass, Jeffrey pine/mountain mahogany, and Jeffrey pine/mountain big sagebrush/Idaho fescue. The Mountain Peaks ACEC/RNA would serve as a good research site for genetic and fire effects/history studies of high elevation Great Basin forests and woodlands. The sagebrush steppe communities surrounding both these sections are approaching a late seral condition having mature mountain big sagebrush that has nearly closed canopies; the area needs to be treated to protect the unique communities from a wildfire.

Relevance

The proposed ACEC/RNA is unique in terms of scenic quality, geographic location, and botanical composition. Tule Mtn and McDonald Peak are the highest points in the Field Office and can be seen by travelers driving on Highway 395. Tule Mtn, with its conifer, mountain shrub, mountain mahogany, and sagebrush associations on the upper slopes is in striking contrast to the juniper woodlands on its lower slopes. The white fir and Jeffrey pine associations are isolated from similar associations on the Modoc National Forest. McDonald Peak located in the true Great Basin, is a prominent feature in the southern part of the Field Office and of the Madeline Plains and provides a contrast in vegetation types with the presence of white fir, aspen, curlleaf mountain mahogany, and high elevation perennial grass and forb associations. The Mtn Peaks ACEC/RNA would provide research opportunities for studying high elevation Great Basin plant associations, genetic studies of isolated conifer associations, and fire history.

Importance

The proposed ACEC/RNA is unspoiled except for a few four wheel drive roads. Habitat quality for raptors and mule deer is high, with McDonald Peak being an important mule deer fawning ground. Both peaks lack complete botanical inventory, so designation as an ACEC/RNA would create the need accomplish this. These peaks are at risk of losing floristic diversity and wildlife habitat from wildfires; establishment of an ACEC/RNA would result in complementary proposed management actions to reduce fuel loading on the lower slopes. Both peaks are identified for vista management with Tule Mts. Managed as VRM Class I due to WSA status, and McDonald Mt. proposed to be managed as VRM Class II. In the Recreation Opportunity Spectrum, McDonald Peak is proposed to be managed as primitive to maintain its road less character.

Appendix F

Noxious Weed Prevention Schedule for the Alturas Field Office

ALTURAS FIELD OFFICE WEED PREVENTION SCHEDULE

9 February 1999

PREVENTION ACTIVITY	WHEN	WHO IS RESPONSIBLE
GENERAL		
Check body and under carriage of off road vehicles and ATV's for plant material and clean with best available method before leaving weed infested area.	All year	All field going employees
Check body and under carriage of vehicles and ATV's for plant material and clean with best available method, preferably high-pressure washing, before leaving for field.	All year	All employees
Include in all NEPA documents, noxious Weeds in the list of Critical Elements of the Human Environment.	All year	All employees working with NEPA documents
All field personnel will have an active role in detection/inventory of noxious weed; reporting species and location to the field office weed coordinator,	All year	All field going employees
Weed identification and reporting procedures training for all field office employees.	Once a year	Weed Coordinator
LANDS AND REALTY		
Include noxious weed prevention and control in all Right of Ways, leases or permits, and acquisition/disposal. Benefiting party will be financially responsible for controlling weeds.	As required	Realty Specialist Weed Coordinator
Coordinate with AFO Weed Coordinator on all acquisitions.	As appropriate	Realty Specialist
Assure permits that involve soil disturbing activities have provisions for sanitizing equipment prior to entering BLM lands.	As appropriate	Realty Specialist Weed Coordinator
RECREATION/WILDERNESS		
Consider off road vehicle closures in areas of known weed infestations.	As appropriate	Recreation Planner Ranger Weed Coordinator
Ensure that areas under recreation permits have on site weed control and minimize spread to other areas.	As required	Recreation Planner Weed Coordinator
Require use of weed free hay in Wilderness Study Areas; sign trail heads and include in hunting/guiding permits weed free ethics.	As required	Recreation Planner Weed Coordinator

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PREVENTION ACTIVITY	WHEN	WHO IS RESPONSIBLE
Monitor areas under concentrated recreation activity.	As necessary	Recreation Planner Weed Coordinator
Provide standard weed prevention information to Special Recreation Permit applications to encourage a weed free ethic. This information would be provided by the employee administering the permit.	As appropriate	
MINERALS/RECLAMATION		
Require weed prevention and treatment procedures in all mining plans and activities.	As appropriate	Geologist Weed Coordinator
For all mineral activity, retain bonds for weed control until the site is returned to desired vegetative conditions.	As required	Geologist Weed coordinator
Require all mining sites to be revegetated after completion of mining activities.	As soon as possible after mining activity has stopped.	Geologist Weed Coordinator
Require use of certified weed free seed and mulch for all reclamation activities.	As required	Geologist Weed Coordinator
If topsoil is brought in from another location, require site identification/certification of borrow area for absence of noxious weeds.	As required	Geologist Weed Coordinator
Inspect gravel pits and fill sources to identify weed-free sources; all gravel and fill must come from these sources.	As appropriate	Geologist Force Account Supervisor Weed Coordinator
ROADS		
Train County and BLM Force Account road maintenance crews in noxious weed ID and spread prevention techniques.	Spring - Fall As necessary	Weed Coordinator
Minimize road disturbance in weed infested areas and high-risk areas.	As required	Force Account Supervisor Equipment Operator
Coordinate with County and BLM road crews on road maintenance schedules and proposed activities.	As required	Weed Coordinator
Use fill/gravel from weed free sources. Inspect gravel pits and fill sources for noxious weeds.	As required	Geologist Weed Coordinator
Minimize new road construction through established and high-risk noxious weed areas. Control/ eradicate weeds prior to or after road construction.	As required	Field Office Manager through NEPA process
Clean equipment of mud, debris and plant parts before leaving noxious weed areas or at appropriate location before dispatching to next project. High-pressure wash equipment upon returning to BLM facility.	All year	Force Account Supervisor Equipment Operators Road Crews

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PREVENTION ACTIVITY	WHEN	WHO IS RESPONSIBLE
SUPPORT SERVICES		
Incorporate weed prevention into road layout, design and alternative evaluations.	All year	Engineer Force Account Supervisor Weed Coordinator
Include stipulations to stop the spread of noxious weeds in all contractual activities.	As required	Engineer Project lead Weed Coordinator
Coordinate with Force Account to avoid spreading weeds if known infested sites are to be disturbed. High-pressure wash plant parts, debris, etc. from construction equipment utilized by BLM employees.	All year	Force Account Supervisor Equipment operators Weed Coordinator
RANGELAND MANAGEMENT		
Monitor livestock disturbances at salt licks, watering areas and sensitive grazing areas to reduce potential weed invasion.	Field Season	Range Specialist Weed Coordinator
Control timing of turnout/use in infested areas to reduce seed production and transport.	Grazing Season	Field Office Manager through NEPA process
Consider noxious weeds in the allotment evaluation process.	As appropriate	Range Specialist Weed Coordinator
Include stipulations to stop the spread of noxious weeds in all contractual activities.	As required	Engineer Range Specialist Weed Coordinator
Educate permittees in noxious weed ID, documenting locations and control efforts. Encourage users to report noxious weed locations to resource specialists.	Pre-season meetings, field trips. As appropriate	Range Specialist Weed Coordinator
WILDLIFE/FISHERIES		
Incorporate noxious weed prevention in all wildlife habitat improvement projects and Habitat Management Plans	As appropriate	Wildlife Biologist
Emphasize critical wildlife habitat and sensitive areas where noxious weeds have invaded. Initiate control measures to reduce infestation in these areas.	As appropriate	Wildlife Biologist Weed Coordinator
Coordinate transplanting/reintroduction activities with California Department of Fish and Game to eliminate spread of noxious weeds by vehicles and animals. Consider quarantine of reintroduced species.	As appropriate	Wildlife Biologist Field Manager

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PREVENTION ACTIVITY	WHEN	WHO IS RESPONSIBLE
Identify listed, T&E, and all BLM Sensitive flora and fauna in or adjacent to noxious weed infestations. Ensure that they are given consideration and protection. Inventory and flag plants before any noxious weed treatment begins.	All year	Wildlife Biologist Botanist Weed Coordinator Field Office Manager through NEPA process
CULTURAL		
Monitor known cultural sites for noxious weed infestations.	Field season	Archaeologist Weed Coordinator
Require reseedling of archaeological site excavations with certified weed-free seed if high potential for noxious weed establishment exists.	As appropriate	Archaeologist Weed Coordinator
FIRE		
Train fire crews in noxious weed awareness, ID and prevention techniques.	Pre-fire season	Weed Coordinator
Ensure that fire suppression and rehabilitation efforts minimize weed spread.	Fire season Post-burn	Fire Management Officer Weed Coordinator Hydrologist Range Specialist
Include noxious weed prevention in Resource Advisor duties. Advise IC and Resource Advisor of known noxious weed sites in or near the fires.	All year Fire season	Weed Coordinator Resource Advisors Fire Management Officer
Conduct prescribed burns on noxious weeds present in areas suppressed by fires. Burn at appropriate season to optimize control efforts and seed reduction.	Spring/summer Fall	Fire Management Officer Weed Coordinator Range Specialist
Evaluate natural revegetation potential on wildland fire incidents. Emphasize reseedling burn areas with native species to reduce weed establishment. Refer to Emergency Fire Rehabilitation (EFR) Handbook, H-1742, for guidelines. Incorporate integrated weed management in all EFR Plans.	Post-burn	Fire Management Officer Botanist Weed Coordinator Range Specialist
Prior to prescribed burns, monitor areas for noxious weed invasion. Document fuel break disturbance in known noxious weed areas. Conduct post-burn monitoring for weed invasion. Incorporate weed control in hazard reduction and prescribed burn projects.	Pre and post prescribed burn	Fire Management Officer Crew Bosses Weed Coordinator
During the transition meeting on wildland fires, command staff will be made aware of AFO noxious weed prevention measures.	Wildland fires	Fire Management Officer Weed Coordinator Field Office Manager Incident Commander

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PREVENTION ACTIVITY	WHEN	WHO IS RESPONSIBLE
Washing down of vehicles, equipment, etc. See Appendix 1.	Fire season Prescribed burns	Fire Management Officer Incident Commander Fire crews Support personnel
WEED COORDINATOR		
Coordinate and conduct noxious weed awareness and prevention training to BLM office personnel. Present Noxious Weed Education programs to public user groups, schools and civic groups.	Pre-field season Throughout year	Weed Coordinator
Be involved in cooperative weed management efforts with other groups, volunteers, resource agencies and local and state governments. Attend weed management meetings and report on AFO and Sierra Cascade Modoc Plateau Weed Province integrated weed management activities.	All year	Weed Coordinator
Conduct inventory, monitoring and GPS mapping of noxious weeds in Weed Management Areas. Prepare GPS files for export to Arc Info GIS system.	Field Season	Weed Coordinator
Coordinate with California Department of Agriculture, and Lassen, Modoc, Shasta and Siskiyou County Departments of Agriculture on noxious weed treatment. Assist and supervise on treatment activities.	As necessary	Weed Coordinator
Provide map locations of infested areas to all field personnel. Stress limited entry into these areas to reduce weed transport by contamination and clothing.	Field season	Weed Coordinator

Appendix 1

As the battle against undesirable plants and noxious weeds accelerates in Northeastern California, the Alturas Field Office continues to take proactive measures to implement the Integrated Weed Management Program. One action is to prevent the transportation of noxious weeds in from other field offices, districts, states and regions by vehicles. Fire Management and fire suppression vehicles are at special risk of carrying undesirable plant seeds and parts by the nature of their work.

To reduce the risk of introducing undesirable plants as part of the Field Office weed prevention program, the following procedures are recommended to be followed by vehicles entering and leaving the Alturas Field Office:

1. Off-district engines, crew carriers, overhead vehicles and helitac/helicopter support vehicles will, upon check-in, wash down at the West Valley Fire Station.
 - a. The washdown will concentrate on the undercarriage, with special emphasis on axles, frame, crossmembers, motormounts, skid plates and on and underneath steps, runningboards and front bumper/brush guard assemblies. Vehicle cabs will be swept out with refuse disposed of in waste receptacles.

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- b. During initial briefings, washdowns will be mentioned and facilities made available for oncoming crews.
 - c. If the Base Camp or ICP is at a location other than West Valley Fire Station, the washdown station will be at a centralized location and upon demobilization, it will be GPS'd and flagged and the location be made known to the AFO Fire Management Officer, Environmental Specialist or the Weed Coordinator.
2. Alturas Field Office crews will follow the same procedures when returning from fieldwork or wildland fires, especially when vehicles are used in known noxious weed areas infested with knapweeds, yellow starthistle, tall whitetop, leafy spurge, and thistles.
3. Upon leaving the Field Office when released from an incident, all off-unit vehicles will follow aforementioned washdown procedures so that Alturas' noxious weed problems do not become someone else's problems.
4. All ancillary equipment incidental to use in fire suppression will be cleaned of weed seed, stems, parts, stalks, etc. prior to release from an incident.

This Field Office policy (NORCAL East), will be followed for all equipment involved in fire suppression while on Alturas Field Office assignments. Vehicles will be cleared of washdown procedures during checkout and crew evaluations. In the event vehicles are released from fires away from the Field Office, the closest wash facility (government or commercial), will be utilized.

Appendix G

List of Species Known to Occur in the Alturas Field Office Area

List of Species Known to Occur in the Alturas Field Office Area

Common name	Scientific name
BIRDS	
American Avocet	<i>Recurvirostra americana</i>
American Bittern	<i>Botaurus lentiginosus</i>
American Coot	<i>Fulica Americana</i>
American Crow	<i>Corvus brachyrhynchos</i>
American Goldfinch	<i>Carduelis tristis</i>
American Kestrel	<i>Falco sparverius</i>
American Robin	<i>Turdus migratorius</i>
American Wigeon	<i>Anas Americana</i>
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>
Audubon's warbler (AKA Yellow-rumped)	<i>Dendroica coronata</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Bank Swallow	<i>Riparia riparia</i>
Barn Swallow	<i>Hirundo rustica</i>
Belted kingfisher	<i>Ceryle alcyon</i>
Bewick's Wren	<i>Thryomanes bewickii</i>
Black Phoebe	<i>Sayornis nigricans</i>
Black Swift	<i>Cypseloides niger</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Black-throated Sparrow	<i>Amphispiza bilineata</i>
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>
Blue-winged teal	<i>Anas discors</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Brewer's Sparrow	<i>Spizella breweri</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Bullock's Oriole	<i>Icterus bullockii</i>
Burrowing Owl	<i>Athene cunicularia</i>
Bushtit	<i>Psaltiriparus minimus</i>
California Gull	<i>Larus californicus</i>
California Quail	<i>Callipepla californica</i>
Calliope Hummingbird	<i>Stellula calliope</i>
Canada Goose	<i>Branta canadensis</i>
Canyon Wren	<i>Catherpes mexicanus</i>
Caspian Tern	<i>Sterna caspia</i>
Cassin's Finch	<i>Carpodacus cassinii</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Chipping Sparrow	<i>Spizella passerine</i>
Chukar	<i>Alectoris chukar</i>
Cinnamon Teal	<i>Anas cyanoptera</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Common Nighthawk	<i>Chordeiles minor</i>
Common Pochard*	<i>Aythya ferina</i>
Common Poorwill	<i>Phalaenoptilus nuttallii</i>
Common Raven	<i>Corvus corax</i>
Common Snipe	<i>Gallinago gallinago</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Dusky Flycatcher	<i>Empidonax oberholseri</i>
Eared Grebe	<i>Podiceps nigricollis</i>
European Starling	<i>Sturnus vulgaris</i>
Evening Grosbeak	<i>Coccothraustes vespertinus</i>
Ferruginous Hawk	<i>Buteo regalis</i>
Forster's Tern	<i>Sterna forsteri</i>
Fox Sparrow	<i>Passerella iliaca</i>
Gadwall	<i>Anas strepera</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Gray Flycatcher	<i>Empidonax wrightii</i>

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Common name	Scientific name
Great Horned Owl	<i>Bubo virginianus</i>
Greater Sage-Grouse	<i>Centrocercus urophasianus</i>
Greater Sandhill Crane	<i>Grus canadensis tabida</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>
BIRDS (continued)	
Green-winged Teal	<i>Anas crecca</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Horned Lark	<i>Eremophila alpestris</i>
House Finch	<i>Carpodacus mexicanus</i>
House Sparrow	<i>Passer domesticus</i>
House Wren	<i>Troglodytes aedon</i>
Juniper Titmouse	<i>Baeolophus ridgwayi</i>
Killdeer	<i>Charadrius vociferus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Lazuli Bunting	<i>Passerina amoena</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
Lesser Scaup	<i>Aythya affinis</i>
Lincoln Sparrow	<i>Melospiza lincolni</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Long-billed Curlew	<i>Numenius americanus</i>
MacGillivray's Warbler	<i>Oporornis tolmiei</i>
Mallard	<i>Anas platyrhynchos</i>
Marsh Wren	<i>Cistothorus palustris</i>
Mountain Bluebird	<i>Sialia mexicana</i>
Mountain Chickadee	<i>Poecile gambeli</i>
Mourning Dove	<i>Zenaida macroura</i>
Nashville Warbler	<i>Vermivora ruficapilla</i>
Northern Harrier	<i>Circus cyaneus</i>
Northern Pintail	<i>Anas acuta</i>
Northern Pygmy-Owl	<i>Glaucidium gnoma</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Northern Saw-whet Owl	<i>Aegolius acadicus</i>
Northern Shoveler	<i>Anas clypeata</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Orange-crowned Warbler	<i>Vermivora celata</i>
Oregon Junco (AKA Dark-eyed)	<i>Junco hyemalis</i>
Pied-billed Grebe	<i>Podilymbus podiceps</i>
Pine Siskin	<i>Carduelis pinus</i>
Prairie Falcon	<i>Falco mexicanus</i>
Redhead	<i>Aythya Americana</i>
Red-breasted Nuthatch	<i>Sitta Canadensis</i>
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>
Red-shafted Flicker (AKA Northern flicker)	<i>Colaptes auratus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Ring-necked Duck	<i>Aythya collaris</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Rock Pigeon (AKA Rock dove or feral pigeon)	<i>Columba livia</i>
Rock Wren	<i>Salpinctes obsoletus</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>
Sage Sparrow	<i>Amphispiza belli</i>
Sage Thrasher	<i>Oreoscoptes montanus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Say's Phoebe	<i>Sayornis saya</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
Song Sparrow	<i>Melospiza melodia</i>
Sora	<i>Porzana Carolina</i>
Spotted Sandpiper	<i>Actitis macularia</i>
Spotted Towhee	<i>Pipilo maculates</i>
Steller's Jay	<i>Cyanocitta stelleri</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Turkey Vulture	<i>Cathartes aura</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>

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Common name	Scientific name
Violet-green Swallow	<i>Tachycineta thalassina</i>
Virginia Rail	<i>Rallus limicola</i>
Warbling Vireo	<i>Vireo gilvus</i>
Western Bluebird	<i>Sialia mexicana</i>
Western Grebe	<i>Aechmophorus occidentalis</i>
Western Kingbird	<i>Tyrannus verticalis</i>
Western Meadowlark	<i>Sturnella neglecta</i>
BIRDS (continued)	
Western Scrub-Jay	<i>Aphelocoma californica</i>
Western Tanager	<i>Piranga ludoviciana</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
White-faced Ibis	<i>Plegadis chihi</i>
Willet	<i>Catoptrophorus semipalmatus</i>
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>
Wilson's Phalarope	<i>Phalaropus tricolor</i>
Wilson's Snipe (AKA Common snipe)	<i>Gallinago galinago</i>
Wilson's Warbler	<i>Wilsonia pusilla</i>
Yellow Warbler	<i>Dendroica petechia</i>
Yellow-breasted Chat	<i>Icteria virens</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
MAMMALS	
Least chipmunk	<i>Eutamias minimus</i>
Great Basin pocket mouse	<i>Perognathus parvus</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Cottontail or brush rabbit	<i>Sylvilagus sp.</i>
Golden-mantled ground squirrel	<i>Callospermophilus lateralis</i>
Belding's ground squirrel	<i>Citellus beldingi</i>
Sagebrush vole	<i>Lagurus curtatus</i>
Northern pocket gopher	<i>Thomomys talpoides</i>
Pygmy rabbit	<i>Sylvilagus idahoensis</i>
Kangaroo mouse	<i>Microdipodops sp.</i>
Ord'd kangaroo rat	<i>Dipodomys ordii</i>
Townsend's ground squirrel	<i>Citellus townsendii</i>
Yellow pine chipmunk	<i>Eutamias amoenus</i>
Common porcupine	<i>Erethizon dorsatum</i>
Bushy-tailed wood rat	<i>Neotoma cinerea</i>
Northern flying squirrel	<i>Glaucomys sabrinus</i>
Chisel-toothed or Great Basin kangaroo rat	<i>Dipodomys microps</i>
Heerman kangaroo rat	<i>Dipodomys heermanni</i>
Northern grasshopper mouse	<i>Onychomys leucogaster</i>
Dark kangaroo mouse	<i>Microdipodops megacephalus</i>
Black-tailed jackrabbit or hare	<i>Lepus californicus</i>
Canyon mouse	<i>Peromyscus crinitus</i>
Long-tailed weasel	<i>Mustela frenata</i>
Western harvest mouse	<i>Reithrodontomys megalotis</i>
Piñon or Pinyon mouse	<i>Peromyscus truei</i>
White-tailed or Antelope ground squirrel	<i>Ammospermophilus leucurus</i>
Shrew (very likely Preble's)	<i>Sorex sp.</i>
Dusky-footed wood rat	<i>Neotoma fuscipes</i>
Long-tailed meadow mouse or vole	<i>Microtus longicaudus</i>
Long-tailed pocket mouse	<i>Perognathus formosus</i>
Wild horse	<i>Equus caballus</i>
Mule deer	<i>Odocoileus hemionus</i>
Pronghorn antelope	<i>Antilocapra americana</i>
Rocky mountain elk	<i>Cervus elaphus nelsoni</i>
California bighorn sheep	<i>Ovis canadensis californiana</i>
Coyote	<i>Canis latrans</i>
Bobcat	<i>Lynx rufus</i>
Cougar	<i>Felis concolor</i>
Yellow-bellied marmot	<i>Marmota flaviventris</i>
Badger	<i>Taxidea taxus</i>
Beaver	<i>Castor canadensis</i>
Raccoon	<i>Procyon lotor</i>

APPENDIX G

Common name	Scientific name
Striped skunk	<i>Mephitis mephitis</i>
Muskrat	<i>Ondatra zibethicus</i>
Long-eared myotis	<i>Myotis evotis</i>
Small-footed myotis (AKA Western s.f. myotis)	<i>Myotis ciliolabrum</i>
Little brown bat	<i>Myotis lucifugus</i>
Long-legged myotis	<i>Myotis volans</i>
Pallid bat	<i>Antrozous pallidus</i>
Yuma myotis	<i>Myotis yumanensis</i>
Townsend's western big-eared bat	<i>Plecotus townsendii</i>
Western pipistrelle bat	<i>Pipistrellus hesperus</i>
MAMMALS (continued)	
Big brown bat	<i>Eptesicus fuscus</i>
Spotted bat	<i>Euderma maculatum</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Hoary bat	<i>Lasiurus cinereus</i>
Mexican free-tailed bat	<i>Tadarida brasiliensis</i>
AMPHIBIANS AND REPTILES	
Northern sagebrush lizard	<i>Sceloporus graciosus graciosus</i>
Great Basin rattlesnake	<i>Crotalus viridis lutosus</i>
Pacific treefrog	<i>Hyla regilla</i>
Desert horned lizard	<i>Phrynosoma platyrhinos</i>
Bullfrog	<i>Rana catesbeiana</i>
Western fence lizard	<i>Sceloporus occidentalis</i>
Western toad	<i>Bufo boreas</i>
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>
Western terrestrial garter snake	<i>Thamnophis elegans</i>
Northern leopard frog	<i>Rana pipiens</i>
Side-blotched lizard	<i>Uta stansburiana</i>
Short-horned lizard	<i>Phrynosoma hernandesi</i>
Northern alligator lizard (unverified)	<i>Gerrhonotus coeruleus</i>
Gopher snake	<i>Pituophis catenifer</i>
Common kingsnake (unverified)	<i>Lampropeltis getulus</i>
EUBRANCHIOPODS	
Tadpole shrimp	<i>Lepidurus</i> sp. [Likely (<i>L. lemmoni</i>)]
GASTROPODS	
<i>Pyrgulopsis gibba</i>	<i>Pyrgulopsis gibba</i>
FISH	
Warner sucker	<i>Catostomus warnerensis</i>
Warner valley redband trout	<i>Oncorhynchus mykiss</i> spp.
Eagle lake rainbow trout	<i>Salmo gairdnerii aquilarum</i>
Brown trout	<i>Salmo trutta</i>
Cuttbow	<i>Oncorhynchus clarkii x mykiss</i>
Redside shiner	<i>Richardsonius balteatus</i>
Speckled dace	<i>Rhinichthys osculus</i>
Wall Canyon sucker	<i>Catostomus</i> sp.
Cowhead Lake tui chub	<i>Gila bicolor vaccaceps</i>
Sheldon tui chub	<i>Gila bicolor eury soma</i>
Smallmouth bass	<i>Micropterus dolomieu</i>

Note: This is a list of species known to use lands within the boundaries of the Alturas Field Office.

Sources: Scientific names of birds are from Sibley (2000) except where noted by “*” or “AKA” which is via Sibley and/or Scott et al. (1987). Mammals follow Ingles (1965), amphibians and reptiles follow Stebbins (1985) and eubranchiopods and gastropods follow Pennak (1989). Fish references are after various current sources including; Page and Burr (1991), U. S. Fish and Wildlife Service (1998), and U. S. Geological Survey (2002, 2003).

Appendix H

Management of Lands with Wilderness Characteristics

APPENDIX H

MANAGEMENT OF LANDS WITH WILDERNESS
CHARACTERISTICSMANAGEMENT DIRECTION

Management of Lands with Wilderness Characteristics is part of BLM's multiple-use mandate, and is recognized within the spectrum of resource values and uses.

Public lands with wilderness characteristics generally:

- Have been affected primarily by the forces of nature, with the imprint of humans substantially unnoticeable,
- Have outstanding opportunities for solitude or a primitive and unconfined type of recreation,
- Have at least five thousand acres of land or of sufficient size as to make practicable its preservation and use in unimpaired condition, and
- Potentially containing ecological, geological, or other features of scientific, educational, scenic, or historical value.

With exceptions, public lands having wilderness characteristics should be managed to protect these values. In addition, they should augment multiple-use management of the Alturas Field Office and adjacent lands particularly for the protection of watersheds and water yield, wildlife habitat, natural plant communities, and similar natural values.

With exceptions, the following activities generally do not occur within lands having wilderness characteristics:

- Commercial enterprises
- Permanent roads
- Temporary roads
- Use of motor vehicles
- Use of motorized equipment
- Use of motorboats
- Landing of aircraft
- Mechanical transport
- Structures Installations

However, there are exceptions to these prohibitions and they are generally grouped into three categories.

- Valid Existing Rights. Prior-existing rights may continue. New discretionary uses that create valid existing rights are not allowed.
- Administrative Activities. New commercial activities or new permanent roads will not be authorized. BLM may authorize any of the other prohibitions if it is necessary to meet the minimum requirements to administer and protect the lands with wilderness character (called the "minimum requirement exception") and to protect the health and safety of persons within the area.

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- Other General Allowances. Subject to limitations determined by the State Director, general allowances could include actions necessary to control fire, insects, and diseases, recurring Federal mineral surveys, established livestock grazing, commercial services to the extent necessary for activities which are proper for realizing the recreational or other wilderness character purposes and compatible with the defined values, and adequate access to in-holdings.

SPECIFIC GUIDANCE

1. Emergencies. The use of motor vehicles and mechanical transport, and the construction of temporary roads, structures, and installations is allowed for emergency purposes and when consistent with the management principles of the Alturas Field Office and the “minimum requirement exceptions.”

2. Land Disposals, Rights-of-Ways, Use Authorizations. These lands will be retained in public ownership. They will not be disposed through any means, including public sales, exchanges, patents under the Recreation and Public Purposes Act, color of title Class II, desert land entries (except where a vested right was established prior to October 21, 1976) or State selections. Disposals may be permitted under normal BLM procedures for mining patents, color of title Class I, and desert land entries in which a vested right was established. Prior existing rights, such as leases under the Recreation and Public Purposes Act, leases/permits under 43 CFR 2920, and rights-of-ways (ROWs) may continue. These also could be renewed if they are still being used for their authorized purpose. New authorizations, leases, permit, and ROWs will not be authorized since they are considered new valid rights.

3. Routes of Travel. The construction of new permanent roads will not be allowed. New temporary roads could be allowed if the BLM determines it is consistent with the “minimum requirement exception,” if it is necessary to protect the health and safety of persons within the area, or if necessary to control fire, insects, and diseases.

Motorized or mechanized use of the existing routes is allowed subject to prescriptions outlined in the route designation process or stipulations identified in an authorization. Unless stipulated in the plan, any motorized or mechanized uses off those routes of travel will not be allowed.

4. Mining. Existing and new mining operations will be regulated using the 43 CFR 3809 regulations to prevent unnecessary and undue degradation of the lands.

5. Mineral Leasing. Existing mineral leases represent a valid existing right. These rights are dependent upon the specific terms and conditions of each lease. Existing leases will be regulated to prevent unnecessary or undue degradation.

No new surface occupancy leases will be issued. Non-surface occupancy leases may be issued if they will not impact the area’s wilderness character. This applies to public lands, including split-estate.

6. Grazing. Existing livestock grazing, and the activities and facilities that support a grazing program are permitted to continue at the same level and degree, subject to any additional prescriptions.

Adjustments in the numbers and kind of livestock permitted to graze would be made as a result of revisions in the land use plan. Consideration is given to range condition, the protection of the range resource from deterioration, and protection of the wilderness character of the area.

The construction of new grazing facilities would be permitted if they are primarily for the purpose of protecting wilderness characteristics and more effective management of resources, rather than to accommodate increased numbers of livestock.

The use of motorized equipment for emergency purposes is allowed.

7. Fire Management. Fire management will be consistent with Bureau policy. Fires must be controlled to prevent the loss of human life or property. They must also be controlled to prevent the spread of fires to areas outside of Lands With Wilderness Character where life, resources, or property may be threatened.

Human caused wildfires will be prevented and/or controlled. It may be appropriate to allow natural fires to burn in conformity with a fire management plan. Prescribed fires are allowed in conformity with a fire management plan so long as it consistent in improving or maintaining the areas wilderness character.

Light-on-the-land fire management techniques will be applied.

New fire management structures are allowed if it is necessary to meet the minimum requirements to administer and protect the Lands With Wilderness Character and to protect the health and safety of persons within the area.

8. Forest/Vegetation Health. Insects, disease, and invasive species may be controlled if determined that it is necessary to meet the minimum requirements to administer and protect these lands.

Insect and disease outbreaks must not be artificially controlled, except to protect timber or other valuable resources outside the Land With Wilderness Character, or in special instances when the loss to resources within these lands is undesirable.

Vegetative manipulation to control noxious, exotic, or invasive species is allowed when there is no effective alternative and when the control is necessary to maintain the natural ecological balances within the area. Control may include manual, chemical, and biological treatment provided it will not cause adverse impacts to the wilderness character.

Where naturalness has been impacted by past timber harvesting, forest stand treatments such as thinnings would be allowed in limited areas, as long as the primary purpose is to accelerate to return these impacted areas to a natural character.

9. Recreation. Primitive and unconfined recreational uses such as hiking, camping, rock climbing, caving, fishing, hunting, trapping, etc. are allowed on these lands. Recreational uses will not be allowed if they require:

- Motor vehicles or mechanical transport (e.g, mountain bikes) off routes designated as open or limited as designated through the route designation process.
- The use of motorboats.
- Permanent structures or installations (other than tents, tarpaulins, temporary corrals, and similar devices for overnight camping).

New commercial services will not be allowed unless they are necessary for realizing the primitive and unconfined recreational values. An example of an allowed commercial service would be an outfitting and guide service. Existing commercial recreational authorizations may be allowed to continue under its terms and conditions to their expiration date.

Recreational or hobby collecting of mineral specimens when conducted without location of a mining claim may be allowed. This use will be limited to hand collection and detection equipment.

10. Cultural and Paleontological Resources. Cultural and paleontological resources are recognized as unique and valuable. They are also important supplemental values to an area's wilderness character.

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Resource inventories, studies, and research involving surface examination may be permitted if it benefits wilderness values. This same standard applies for the salvage of archeological and paleontological sites; rehabilitation, stabilization, reconstruction, and restoration work on historic structures; excavations; and extensive surface collection may also be permitted for a specific project.

Permanent physical protection, such as fences, will be limited to those measures needed to protect resources eligible for the National Register of Historic Places and will be constructed so as to minimize impacts on apparent naturalness.

11. Wildlife Management. Fish and wildlife resources are a special feature that may contribute to an area's wilderness character. Whenever possible, these resources should be managed to maintain that character.

Nothing will be construed as affecting the jurisdiction or responsibilities of the State agencies with respect to fish and wildlife management on these lands. Fishing, hunting and trapping are legitimate activities on these lands. The State establishes regulations and enforcement for these uses.

State wildlife agencies and the BLM are responsible for fostering a mutual understanding and cooperation in the management of fish and wildlife. Management activities on these lands will emphasize the protection of natural processes. Management activities will be guided by the principle of doing the minimum necessary to manage the area to preserve its natural character.

Management of public lands having wilderness character will follow the guidelines provided in the Memorandum of Understanding between the BLM and the International Association of Fish and Wildlife Agencies. It will also follow any additional site-specific wildlife decisions addressed through the land use planning process.

Appendix I

Livestock Grazing Allotments

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
00101	SOUTH TABLELANDS	Three	M	15932	2464	2 CATTLE	4/16	6/30
00105	RUSSELL SLOUGH/CAPIK	Four	M	1517	167	1 CATTLE	6/1	6/16
00109	PORTUGUESE FLAT	Two	I	3516	551	2 CATTLE	5/1	6/15
00127	BLACKS CANYON RIM	Three	C	823	102	1 CATTLE	5/16	9/30
00131	NEER	Three	C	882	77	1 CATTLE	5/1	5/20
00132	PERRY	Three	C	200	24	1 CATTLE	5/1	5/31
00133	XL	Three	C	1747	143	1 CATTLE	4/16	6/30
00134	PROCK	Three	C	548	58	1 CATTLE	4/16	6/15
00135	PINE CREEK MESA	Three	M	2390	257	1 CATTLE	4/16	5/31
00137	NORTH TABLELANDS	Three	M	24202	3582	2 CATTLE	4/16	6/30
00138	YANKEE JIM	Three	I	1400	400	2 CATTLE	7/1	8/31
00139	RUSSELL	Three	C	119	8	1 CATTLE	9/1	10/30
00140	THOMAS CK	Three	C	467	69	1 CATTLE	4/16	5/30
00141	STERNES ALLOTMENT	Three	C	120	20	1 CATTLE	5/1	6/30
00143	S-X ALLOTMENT	Two	C	760	56	1 CATTLE	4/1	10/30
00144	BROWN FIELD	Three	C	652	32	1 CATTLE	4/16	8/31
00146	WESTSIDE	One	M	5139	879	1 CATTLE	4/10	6/10
00148	PINE CREEK FIELD	Three	C	320	18	1 CATTLE	4/16	5/30
00150	CORBIE FIELD	Three	C	173	27	1 CATTLE	4/16	8/31
00162	RAMOS	Three	C	52	2	1 HORSE	4/16	9/30
00200	LOOMIS	Two	C	670	84	1 CATTLE	5/1	11/30
00201	BABCOCK	Two	C	605	41	1 CATTLE	4/16	6/15
00202	WEST BEAVER CREEK	One	I	7371	674	2 CATTLE	4/16	6/30
00203	CHASE VALLEY	Three	C	2460	214	1 CATTLE	4/16	5/15
00204	CLARK	Three	C	148	12	1 CATTLE	5/1	7/31

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
00205	DIXIE VALLEY	Two	M	16332	1291	1 CATTLE	5/15	10/14
00206	BALD MOUNTAIN	Two	I	9547	677	1 CATTLE	4/16	8/1
00208	BIG VALLEY MTN	Two	C	3541	189	1 CATTLE	4/16	6/15
00209	EICHOLZ	Three	C	306	43	1 CATTLE	4/1	6/30
00210	TURNER CANYON	Three	C	897	110	2 CATTLE	4/1	5/15
00211	HAURY	Three	C	769	64	1 CATTLE	4/16	5/15
00212	HITCHENS	Three	C	2029	175	1 CATTLE	4/16	11/15
00213	HAYES SPRING	Three	C	643	100	1 CATTLE	4/1	4/15
00215	AVERY	Three	C	155	18	1 CATTLE	5/1	5/31
00216	MAJOR	Three	C	477	73	1 CATTLE	4/16	5/30
00217	SOUTH JUNIPER	Three	C	507	73	1 CATTLE	4/16	4/30
00218	SILVA FLAT	One	M	14750	1247	2 CATTLE	5/1	9/30
00219	KNUDSON	Three	C	297	36	1 CATTLE	5/16	9/15
00220	KRAMER	Three	C	998	125	1 CATTLE	5/1	5/30
00221	DIBBLE HILL	Three	C	485	28	1 CATTLE	5/16	6/15
00223	NORTH DIBBLE	Three	C	590	53	1 CATTLE	9/1	10/31
00224	HARPER HILL	Three	C	453	73	1 CATTLE	5/15	8/14
00225	RADIO HILL	Three	C	80	4	1 CATTLE	9/1	10/31
00226	RECLAMATION	Three	C	160	16	1 CATTLE	6/1	6/30
00228	ROUND VALLEY	Three	C	121	43	1 CATTLE	4/16	5/7
00229	INDIAN PEAK	Three	C	694	44	1 CATTLE	4/16	9/30
00231	MAMATH	Three	C	960	61	1 CATTLE	4/1	5/15
00232	NORTH JUNIPER	Three	C	1753	263	1 CATTLE	5/1	7/19
00235	BARROWS	Three	C	810	69	1 CATTLE	4/20	6/30
00236	BUTTE CREEK	Three	C	511	42	1 CATTLE	4/16	5/16
00237	DAISY DEAN SPRING	Three	C	1025	80	1 CATTLE	5/16	9/30
00238	PIPER	Three	C	83	10	1 CATTLE	4/16	9/15
00239	EAST BEAVER CREEK	One	I	3696	935	1 CATTLE	4/16	5/31
00241	ROBERTS RESERVOIR	Three	C	1062	43	1 CATTLE	5/1	8/15
00243	BEND	Three	C	744	50	1 CATTLE	4/16	5/31

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
00244	THOMPSON	Two	I	5460	613	1 CATTLE	5/1	5/15
00245	ROUND BARN	Three	C	830	150	1 CATTLE	4/16	5/31
00246	MUCK VALLEY	Two	I	12186	1371	1 CATTLE	4/15	6/30
00247	PLANTATION FIELD	One	I	1400	267	1 CATTLE	4/16	5/31
00248	HENCRAFT FIELD	Three	C	1222	154	1 CATTLE	5/15	9/5
00250	PILOT BUTTE	Three	C	189	21	1 CATTLE	5/1	6/15
00300	NORTH ASH VALLEY	One	I	17465	2522	3 CATTLE	5/1	9/30
00301	WING	Two	C	2161	489	1 CATTLE	5/15	8/1
00302	COLD SPRINGS	One	I	17661	3305	1 CATTLE	5/1	10/15
00303	CRABTREE	One	C	340	15	1 CATTLE	5/1	10/15
00304	CRAMER	Three	C	645	36	1 CATTLE	4/16	8/15
00305	SOUTH MCDONALD	One	I	11607	1518	2 CATTLE	5/1	7/15
00306	DRY COW	One	M	5104	1103	1 CATTLE	5/16	10/20
00307	MARR	One	C	73	4	1 CATTLE	4/16	8/15
00308	ROCKY PRAIRIE	One	M	10182	961	1 CATTLE	5/1-5/31	9/16-10/15
00309	CLARKS VALLEY	Three	C	115	30	1 CATTLE	5/1	9/30
00310	TULE MOUNTAIN	Three	I	49376	5284	2 sheep, 4 cattle	5/1	9/30
00311	NELSON CORRAL	One	M	12849	2256	1 CATTLE	5/16	9/20
00312	WARM SPRINGS	Three	C	949	128	1 CATTLE	4/16	8/15
00313	DEEP CANYON	One	C	2259	225	1 CATTLE	4/16	9/15
00314	HALL FIELD	Three	C	1373	192	1 CATTLE	6/1	9/30
00316	SOUTH ASH VALLEY	One	I	15467	1507	1 CATTLE	5/1	8/1
00318	ANDERSON	One	M	610	90	1 CATTLE	5/1	9/1
00319	FILLMAN-DIABLO	Three	C	1490	150	1 CATTLE	5/1	9/30
00320	MCDONALD MOUNTAIN	One	I	14874	2608	1 CATTLE	6/1	10/30
00321	MITCHELL HILL	Two	M	7522	2063	3 CATTLE	4/16	9/15
00322	LOWER HIGHWAY	Three	C	3000	160	1 CATTLE	8/1	10/30

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
00323	SAID VALLEY	Two	M	826	110	1 CATTLE	9/1	9/20
00324	DRY VALLEY	Three	C	1960	280	1 CATTLE	4/16	9/30
00325	SOUTH FORK	Four	M	4220	1175	1 CATTLE	5/1	9/15
00326	SUMMIT FIELD	Three	C	1020	35	1 CATTLE	5/1	9/30
00327	FLOURNEY INDIVIDUAL	Three	C	1183	70	1 CATTLE	4/16	9/15
00328	WILLIAMS ALLOT	One	C	1915	48	1 CATTLE	5/1	7/1
00329	BROCKMAN	Three	C	1195	130	1 CATTLE	11/15	5/15
00330	COFFIN ALLOT	Three	C	1457	70	1 CATTLE	4/16	10/30
01301	WEST COYOTE ALLOT	Four	C	440	29	1 CATTLE	5/1	7/30
01302	WEST SHEEP MT ALLOT	Three	C	1813	227	1 CATTLE	4/15 to 5/15	10/1-12/31
01303	RATTLESNAKE BUTTE	Three	C	452	41	1 CATTLE	5/1	7/31
01304	NORTH RED ROCK LAKE	Four	M	1279	54	1 CATTLE	5/15	8/1
01306	WEST DOME	Three	C	2328	84	1 CATTLE	4/15	6/30
01308	BLOODY POINT	Two	M	956	175	1 CATTLE	2/5	4/30
01309	BRYANT MOUNTAIN	Three	C	2570	498	1 CATTLE	3/1	2/28
01310	MT DOME	Three	C	1422	120	1 CATTLE	9/1	12/30
01311	WEST PANHANDLE	Three	C	720	48	1 CATTLE	9/1	12/30
01312	MODOC GULCH	Four	M	2198	361	1 SHEEP	4/15 to 6/15	10/1 to 10/15
01313	NORTH SHEEPY	Three	C	120	5	1 CATTLE	4/15	7/1
01314	BIG TABLELANDS	Two	M	7214	595	1 CATTLE	4/8	5/1
01315	LOWER LAKE	Three	C	418	30	1 CATTLE	5/1	7/15
01316	MAHOGANY MOUNTAIN	Two	M	4699	373	1 CATTLE	4/15	6/30
01317	LAVA FLOW	Three	C	965	139	1 CATTLE	4/15	6/30
01318	COYOTE RIDGE	Four	M	1742	115	1 CATTLE	4/15	7/15
01319	WINDMILL	Four	M	1340	85	1 CATTLE	4/15	7/15

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
01320	BARNTOP	Three	C	760	134	1 CATTLE	4/15	6/30
01322	SOUTH RED ROCK LAKE	Four	M	1160	73	1 CATTLE	4/15	6/30
01323	WEST MAHOGANY	Three	C	3400	224	1 CATTLE	5/1	9/15
01324	RED ROCK VALLEY	Three	C	1466	263	1 CATTLE	4/15	6/30
01325	CASUSE MOUNTAIN	Three	C	195	30	1 CATTLE	4/15	5/15
01326	LOVENESS	Three	C	685	152	1 CATTLE	4/15	7/15
01327	NORTH BLOODY POINT	Two	C	80	5	1 CATTLE	11/1	11/15
01328	HOT CREEK	Three	C	240	16	1 CATTLE	5/15	9/15
01401	PETERSON	Three	C	400	46	1 CATTLE	4/15	6/30
01402	MOON SPRINGS	Two	M	6865	651	1 CATTLE	4/15	7/14
01403	CAYTON	Three	C	400	23	1 CATTLE	3/1	2/28
01404	POPCORN CAVE	Three	C	9806	315	1 CATTLE	4/1	5/31
01409	STARVATION GULCH	Three	C	600	50	1 CATTLE	5/1	6/30
01410	SADDLE MOUNTAIN	Three	C	1637	60	1 CATTLE	4/1	5/30
01411	HOGBACK	Two	I	4867	432	1 CATTLE	4/1	6/10
01412	DAY	Three	C	360	17	1 CATTLE	5/1	5/31
01413	ARCHGATE	Two	M	4164	210	1 CATTLE	4/15	8/20
01414	HOT SPRINGS	Three	C	1126	125	1 CATTLE	4/15	7/14
01415	FOUR CORNERS	Three	C	660	56	1 CATTLE	6/1	9/15
10100	BACON	Three	C	331	42	1 CATTLE	4/1	10/31
10102	MENG	Three	C	28	4	1 CATTLE	5/16	6/15
10103	POLSON	Three	C	57	8	1 CATTLE	5/16	6/15
10104	CLOUD	Three	C	80	9	1 CATTLE	6/16	9/15
10106	STRIP	Two	M	7398	245	1 CATTLE	5/1	9/30
10107	ROBERTS CREEK	Three	C	200	12	1 CATTLE	5/1	10/30
10108	RYEGRASS SWALE	Four	M	4244	608	1 CATTLE	4/16	5/30

Appendix I Grazing Allotments and Associated Information in the Alturas Field Office

Allotment Number	Allotment Name	Rangeland Health Category	Management Status Category	Public Acres	Active AUMs	Number of Authorizations	Period Begin Date	Period End Date
10110	BRUNNEMER	Three	C	40	5	1 CATTLE	4/1	8/31
10111	FISHER	Three	C	511	28	1 CATTLE	4/1	10/31
10112	SOUTH GRAVES	Two	I	12950	1570	1 CATTLE	5/1	8/31
10114	WEST FIELD	Two	C	810	27	1 CATTLE	4/16	6/30
10115	EAST FIELD	Two	M	4520	397	1 CATTLE	6/1	6/23
10116	GARDNER #1	Three	C	195	23	1 CATTLE	6/1	8/15
10117	CROWDER	Two	M	2088	161	1 CATTLE	5/1	7/31
10118	NORTH GRAVES/MACKEY	Two	I	3901	421	1 CATTLE	4/16	5/31
10119	LAKESHORE	Three	C	516	10	1 CATTLE	4/16	5/1
10120	HAGGE	Three	C	400	33	1 CATTLE	4/1	6/30
10121	HUGHES	Three	C	304	24	1 CATTLE	4/1	5/15
10122	KELLEY	Three	C	80	7	1 CATTLE	4/1	7/15
10123	RIMROCK	Four	M	2446	250	1 CATTLE	4/10	5/10
		Totals		457519	54881			

Total Acres of Rangeland Health and Management Status by Category

Rangeland Health Category	Acres
1	143,407
2	117,033
3	176,493
4	20,586
Total	457,519
Management Status Category	Acres
C	90,887
I	192,744
M	173,888
Total	457,519

Appendix J

Wild and Scenic River Eligibility and Suitability

WILD AND SCENIC RIVER ELIGIBILITY AND SUITABILITY

Wild and Scenic River System

The Wild and Scenic Rivers Act of 1968 (Public Law 90-542) was passed by Congress to preserve river systems that contain outstanding features. The law was enacted during an era when many rivers were being dammed or diverted, and is intended to balance this development by ensuring that certain rivers and streams remain in their free-flowing condition. The BLM is mandated to evaluate stream segments on public lands as potential additions to the National Wild and Scenic Rivers System (NWSRS) during the Resource Management Plan (RMP) Process under Section 5(d) of the Act. The NWSRS study guidelines are found in BLM Manual 8351, U.S. Departments of Agriculture and Interior Guidelines published in Federal Register Vol. 7, No.173, September 7, 1982 and in various BLM memoranda and policy statements. Formal designation as a Wild and Scenic River requires Congressional Legislation, or designation can be approved by the Secretary of Interior if nominated by the Governor of the state containing the river segment. The following discussion provides information on how BLM considered waterways for potential inclusion in the NWSRS.

The NWSRS study process has three distinct steps:

- Determine what rivers or river segments are eligible for NWSRS designation;
- Determine the potential classification of eligible river segments as wild, scenic, recreational or any combination thereof; and
- Conduct a suitability study to determine if the river segments are suitable for designation as components of the NWSRS.

This report documents all three steps of the process for the streams in the planning area.

Eligibility of Streams in the Alturas Field Office

Identification

A variety of sources were reviewed to identify waterways which could have potential for wild and scenic river designation. They include the Nationwide Rivers Inventory List, the Outstanding Rivers List compiled by American Rivers, Inc., river segments identified in the riparian inventory (2002), and river segments identified by the planning team as having potential to meet Wild and Scenic River eligibility requirements.

The Wild and Scenic Rivers Act defines a river as a “flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes.”

Eligibility Determination

Each identified river segment was evaluated to determine whether it is eligible for inclusion in the NWSRS. To be eligible, a river segment must be “free flowing” and must possess at least one “outstandingly remarkable value” (ORV). These ORVs include the following values:

- Scenic
- Recreational
- Geological
- Fish

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- Wildlife
- Historical
- Cultural
- Ecological
- Riparian
- Botanical
- Hydrological
- Scientific

To be considered as “outstandingly remarkable,” a river related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. Only one such value is needed for eligibility. All values should be directly river related, meaning they should:

- Be located in the river or on its immediate shorelands (generally within ¼ mile on either side of the river);
- Contribute substantially to the functioning of the river ecosystem; and/or
- Owe their location or existence to the presence of the river.

These are the only factors considered in determining the eligibility of a river segment. All other relevant factors are considered in determining suitability. A river need not be navigable by watercraft to be eligible. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain the outstandingly remarkable value(s) identified within the segment.

Table L-1 summarizes the eligibility evaluation of all identified river segments. The table includes information on the length of stream segments studied, indicates if outstandingly remarkable value(s) are present, and identifies the potential classification of each eligible segment.

Classification

The Wild and Scenic Rivers Act and subsequent interagency guidelines provide the following direction for establishing preliminary classifications for eligible rivers:

- **Wild Rivers:** Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- **Scenic Rivers:** Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- **Recreational Rivers:** Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Suitability of Streams

Segments displayed in Table L-1 were found to be eligible for inclusion into the NWSRS. Section 4(a) of the Wild and Scenic River Act mandates that all rivers found eligible as potential additions to the NWSRS be studied as to their suitability for such a designation.

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The purpose of the suitability study is to provide information upon which the President of the United States can base his recommendation and Congress can make a decision.

The study report describes the characteristics that do or do not make the stream segment a worthy addition to the system, the current status of land ownership and use in the area, the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the system, and several other factors. The suitability study is designed to answer these questions:

- Should the river's free-flowing character, water quality, and outstandingly remarkable values (ORV) be protected, or are one or more other uses important enough to warrant doing otherwise?
- Will the river's free-flowing character, water quality, and ORVs be protected through designation? Is it the best method for protecting the river corridor? (In answering these questions, the benefits and impacts of wild and scenic river designation must be evaluated, and alternative protection methods considered.)
- Is there a demonstrated commitment to protect the river by any nonfederal entities that may be partially responsible for implementing protective management?

Pursuant to Sections 4(a) and 5(c) of the Wild and Scenic Rivers Act, the following factors were considered and evaluated as a basis for the suitability determination for each river.

- Characteristics that do or do not make the area a worthy addition to the NWSRS.
- The current status of land ownership, minerals (surface and subsurface), and use in the area, including the amount of private land involved and associated or incompatible uses.
- The reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the NWSRS. Historical or existing rights which could be adversely affected.
- The federal agency that will administer the area should it be added to the NWSRS.
- The estimated cost to the United States of acquiring necessary lands and interests in lands and of administering the area should it be added to the NWSRS.
- A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS.
- An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development.
- Federal, public, state, local, or other interests in designation or non-designation of the river, including the extent to which the administrator of the river, including the cost thereof, may be shared by state, local, or other agencies and individuals. Support or opposition to the designation.
- The consistency of designation with other agency plans, programs or policies and in meeting regional objectives.
- The contribution to river system or basin integrity.
- The ability of BLM to manage the river segments under designation, or ability to protect the river area other than Wild and Scenic designation.
- The potential for water resources development.

**Table J-1. Wild and Scenic River Inventory (Streams evaluated for eligibility)
Alturas Field Office**

Inventoried Streams	X—Identified Outstandingly Remarkable Values P—Potential Outstandingly Remarkable Values										
	Free Flowing	Scenic	Recreational	Geologic	Wildlife	Fish	Cultural		Botanic/ Ecologic	Hydrologic/ H2O Quality	Further Evaluation as WSR
							Prehistory	History			
Pit River Canyon-Lower	Yes	X	X	X	X	X		X			X
Pit River Canyon-Upper	Yes	X	X	X	X	X		X			X
Horse Creek-Lower	Yes				X	X		x	x		X
Hat Creek	Yes		P		P	P					
Horse Creek-Upper	Yes										
Horse Creek-Middle	Yes										
Lassen Creek	Yes										
Rattlesnake Creek	Yes										
Fitzhugh Creek	Yes										
Pine Creek	Yes										
Crooks Creek	Yes										
South Fork Pit River	Yes										
Dry Creek	Yes										

Inventoried Streams	X—Identified Outstandingly Remarkable Values P—Potential Outstandingly Remarkable Values										
Cedar Creek-Upper	Yes										
Cedar Creek-Lower	Yes										
East Ash Valley Creek	Yes										
Sheep Valley Creek-Upper	Yes										
Sheep Valley Creek-Lower	Yes										
Russell Dairy Creek	Yes										
Beaver Creek-	Yes										

J.2 Wild and Scenic Rivers Suitability Determinations

WSR Suitability Report for Upper Pit River Canyon

The following are general questions that the suitability determination must answer.

1. *Should the river's free-flowing character, outstandingly remarkable values, and water quality be permanently protected or are there compelling reasons to do otherwise?*

Alternatives 1, 2, and the Preferred: *Yes; this river segment should receive protection as a wild and scenic river (WSR).*

Relative remoteness and difficult canyon access have thus far protected this wild and pristine river segment. Resource exploitation and other kinds of development (including inappropriate or excessive recreational pressures) could permanently alter or destroy its free-flowing character and outstandingly remarkable values. Wild and scenic river (WSR) designation is required to ensure permanent protection. Remarkable values include abundant fish and wildlife (particularly birds-of-prey), a dramatic canyon and impressive scenery. Pristine, natural conditions add immeasurably to its recreational value.

2. *Would the river's free-flowing character, outstandingly remarkable values, and water quality be protected through designation as a 'wild,' 'scenic,' or 'recreational' river?*

Alternative 1, 2 and the Preferred: *Yes; with a 'wild' designation.*

A 'wild' designation provides the highest level of protection for WSR qualities and is necessary to preserve the areas wilderness-like character. Such conditions are increasingly valued—especially by urban dwellers seeking relative solitude in unspoiled, natural surroundings. The city of Redding has the largest population in the North State and is only 70 miles distant. With this and other urban centers relatively near, such conditions will be hard to maintain without the protection afforded by a 'wild' designation.

Alternative 1: *Yes; with a 'wild' designation and a variance for recreational mining.*

A 'wild' designation is recommended for the reasons discussed above. However, a variance that would allow recreational mining (e.g. gold panning) would broaden recreational opportunity without materially altering the river segment's pristine, natural conditions.

3. *Is wild and scenic river designation the best method for protecting the river?*

Alternatives 1, 2, and the Preferred: *Yes*

BLM programs provide a good measure of general protection for the Pit River's scenic qualities, riparian habitats, historic and archaeological sites, and recreational opportunities—this would continue under all alternatives. A wilderness study area (WSA) encompasses this portion of the river; therefore, it is managed under the wilderness interim management policy (IMP). The IMP provides excellent—but uncertain—protection because wilderness designation requires congressional approval. Should Congress decide against wilderness designation, this remarkable area would revert to multiple-use management. The foreseeable future includes an expanding population and ever-increasing demands on resources—particularly water. This means that economic and political pressure to build more dams for hydro-power,

agriculture, and flood-control is expected to rise. Hence, the remaining free-flowing rivers (such as the upper Pit) are in jeopardy. Wild and scenic river designation would provide ironclad protection for the free-flowing character and outstandingly remarkable values of this river segment that could not be altered, other than by congressional intervention.

4. Is there a demonstrated commitment to protect the river by any non-federal entities that may be partially responsible for implementing protective management?

All Alternatives: No

The following are important determinants of suitability under the Wild and Scenic Rivers Act.

1. What are the prime characteristics that make the area worthy under the Act?

In order to be eligible, a river must be free-flowing and have one or more of seven identified ‘outstandingly remarkable values.’ The specified categories are ‘scenic,’ ‘recreational,’ ‘geologic,’ ‘fish,’ ‘wildlife,’ ‘cultural,’ ‘historic’ (or other similar) values. A river is evaluated according to suitability criteria contained in the BLM’s Wild and Scenic Rivers Manual (8351). Once accomplished, results and conclusions are published in the Federal Register. If the suitability analysis is favorable, specific requirements of the designation are incorporated in the applicable land-use plan for the purpose of interim protection and management. Next, the BLM manager responsible for the river submits the (suitability) report to the Secretary of the Interior. The Secretary determines whether the suitability report could justify designation. Assuming that designation is justifiable, the Secretary forwards that recommendation to the President of the United States, who in turn forwards the Secretary’s recommendation to Congress.

a. Unimpeded Flow

The Pit River drains the volcanic uplands of northeast California (from the Warner Mountains [east of Alturas] to the Goose Lake country south of the Oregon border). It is the largest river entering the Sacramento River from this region. The eligible segment begins near Muck Valley and flows, unimpeded, for 13 miles through a canyon that ends two miles from the Fall River Valley. The river has cut through a volcanic plateau to form a spectacular, steep-sided gorge.

The watershed is typical of the Intermountain West, in that the flow régime is snowmelt-dominated; therefore, subject to large seasonal and yearly fluctuations. There are several agricultural water diversions, and one small hydro-power diversion, on private lands upstream from the study area. Streamflow in the eligible segment is low, but reasonably stable, at 2-5 ft³/s in late summer (low water). The low flow is principally due to irrigation in three upstream valleys. Although decommissioned, a USGS gauging station monitored flow volume nine miles upstream from the study area from 1904–1978 (from a drainage that encompasses 2,475 mi.²). The station recorded an all-time yearly high of 23,000 ft³/s in 1970 (USGS-Monthly Streamflow Statistics for California; for Bieber, near Muck Valley, CA 1904-1978). Although water volume entering the study area is low, it is augmented by a minimum (late summer) average of 3–10 ft³/s from Horse Creek (which enters the study area six miles downstream from the upstream border of the proposed WSR). Thus, low-water exit volume from the study area would average 5-15 ft³/s.

b. Outstandingly Remarkable Values

Geologic Values:

The portion of the upper Pit River containing the study area flows through the Modoc Plateau. The area is a transition zone between two geomorphic provinces, i.e. basin-and-range country to the east and the volcanic Cascade Range to the west and north. The plateau is thought to derive from basin-and-range faulting in a terrain overlain by volcanic rocks (Bailey 1966). The plateau is capped by basalt flows and small cinder cones. Typical rock formations include breccias, mud-and-ash flows, lava and other pyroclastic rocks, as well as lacustrine (lake) deposits. The elevation of the plateau is 4,200 feet on the upstream border of the study area and 3,300 feet on its downstream border. The region through which the river flows is part of the Cascade Range, with glacier-mantled Mt. Shasta (14,162 feet) to the north and Lassen Peak (which last erupted in 1915) to the south. The Cascades are transected by a number of river canyons; however, the Pit River Canyon is the largest, deepest, and most spectacular in the region.

Scenic Values:

The Pit River Canyon's remarkable scenic qualities are due to its geological features and the variety of its vegetation. Its origins and milieu have already been discussed. The canyon itself, varies in depth from 240 to 710 feet and is characterized by steep, blocky, basalt cliffs and talus slopes. The pristine, riparian habitats of the canyon bottom are flanked by ponderosa and Jeffrey pines, western juniper, Oregon white oak, Oregon ash, and various mountain shrubs. The riparian vegetation is dominated by large sedges (which overhang the river in many places) interspersed with grasses, willows and other woody shrubs. Bunch-grasses and scattered juniper transition between these areas. In the fall, the greens, yellows, and reds of the autumn foliage form a striking contrast with the somber brown and black basalt and colorful lichens of the canyon walls. Amidst all this, the river tumbles over rock and gravel, rests in quiet pools, and wanders among massive boulders on its journey through the canyon.

Wildlife and fisheries:

The area is year-round habitat for mule deer and pronghorn and contains critical wintering areas for both species. Pronghorn use the flats above the river for kidding. The flats are priority habitat for the species, and for mule deer associated with the (proposed) WSR segment. The canyon is renowned as habitat for birds-of-prey. Species commonly found here include golden eagle, prairie falcon, red-tailed hawk, American kestrel, great horned owl, and barn owl. In addition to the animals already mentioned, the canyon contains mountain lion, bobcat, hare and rabbits, porcupine, squirrels, and a variety of reptiles and amphibians.

Native fish include Sacramento sucker, Sacramento pike minnow, Pit sculpin, and (possibly) remnant populations of indigenous rainbow trout. Whether anadromous fish utilized upstream reaches of the Pit River (including the study area) is unknown. However, salmon and steelhead runs are documented for the Fall River (a tributary of the Pit just a few miles west of the study area) prior to construction of Pacific Gas & Electric's (PG&E) Pit River hydro-power dams in the 1920s. Current opinion is that the study area would have been used by anadromous fish in years when water quality and quantity was sufficient (Mike Dean, CDFG). Very small, but self-sustaining populations of wild rainbow trout descended from hatchery stock planted in Horse Creek during the 1930s, 40s, and 50s (and, perhaps, remnant populations of native rainbows) are found in the WSR segment along with healthy populations of black bass, green-eared sunfish, bluegill, and brown bullhead.

Cultural Resources:

Peter Lassen, an important figure in early California history, forged a trail through the region in 1848. The eastern branch of what is now the National Historic Lassen Emigrant Trail follows the river on the east side of the canyon, while its western branch crosses the river above the western boundary of the study area, then parallels the south boundary on its way to the Central Valley of California. In 1846 John Charles Fremont used portions of the Upper Pit River WSR in route to the Klamath country, from which he was recalled as one of the main operatives in the Bear Flag revolt, and was instrumental in taking California from the Mexican government. Fall River Valley to the west of the WSR study area was settled in the 1850's, with Fort Crook established in the late 1850's to prevent confrontations between the early settlers and Native Americans. Famous Civil War General George Crook had his first independent command as a lieutenant protecting emigrants and settlers, and established U.S. Army patrol routes in the area for their protection.

Certain features (as yet unexamined) in the study area may be connected with Native American religious ritual. Ethnographic accounts identify the surrounding country as an important habitation and subsistence area for the Aporige and Atwamsini bands of the Pit River tribe (because of the areas abundant game and useful plants). The river received its name from Peter Skene Ogden, a Hudson's Bay Company explorer and chief-trader who visited the region in 1826 and named the river for the numerous large-animal traps (pits) dug along its banks by aboriginal people. A number of cultural resource surveys have been conducted in the drainage. These have revealed habitation and task-related sites, as well as plant-gathering and hunting areas. Many of these sites are eligible for documentation in the National Register of Historic Places (NRHP), but have yet to be formally evaluated.

Recreation:

Recreational activities immediately outside the canyon are typically those of the surrounding area; however, recreation within the canyon study area is more specific due to difficult access and unique habitats. Fishing (for a number of species) is pursued on a limited basis, due to access challenges and low water conditions. There is good hunting for mule deer in the study area and on adjacent BLM-administered lands. The Canyon has great potential as a backpacking destination because of its unique and varied ecosystems, remote and untrammled setting, and outstanding scenic qualities. There are outstanding opportunities for photography, nature study, and quiet contemplation because of the wealth of vegetation, dramatic ecotones, and abundant wildlife. For similar reasons, the canyon is ideal for bird-watching--particularly for individuals with a special interest in birds-of-prey. Overall, recreational use is low and visitor impacts minimal, because of a minimum three quarter-mile walk from the nearest vehicular access point and the steep, rugged topography. Boating and rafting are not tenable activities due to inadequate water volume and difficult access. (Although, apparently, some rafting has been attempted in spring when the river has higher flows.) However, these very conditions are likely to increase the area's popularity if Congress grants wilderness status to the Pit River Canyon WSA, and even more so if it also receives wild and scenic river designation. Official recognition and protection will attract those seeking solitude, scenic beauty and unaltered natural surroundings—especially since the area is so handy to significant population centers, such as Redding, California.

2. What is the current status of land ownership and mineral use in the area?

Land Ownership

The proposed WSR corridor is 13 miles long and a little over one-half mile in width. With the exception of two private in-holdings (a combined area of 200 acres that was not included in the study area), it encompasses 1,500 acres of BLM-administered land. At one point, one of these owners expressed an interest in selling or exchanging 160 acres on the river (which is the largest in-holding associated with the study area) along with 640 acres of associated uplands.

Mineral Status and Activity

Mineral potential is low, and there are no mining claims, mineral leases, or salable mineral operations in the Upper Pit River Canyon study corridor (refer to “Energy and Minerals, Reasonably Foreseeable Development in the Alturas Field Office” [2005]). Exploratory wells have not been drilled in the area; though 20 years ago there was some interest in geothermal potential 14 miles northeast of the study area. There’s been no nearby activity or interest since this time. The nearest geothermal exploration area is the Medicine Lake Highlands, which are more than 50 miles distant. A small gold mine was briefly in operation (early 1990s), 20 miles to the east, on the historic Hayden Hill Gold Mine property. This has been the only mine in the region since the 1870s. There are small amounts of decorative rock (‘flat-rock’) on canyon rims of the study area—but its collection is prohibited under the wilderness IMP.

Other Land Uses

Wilderness characteristics and visual resources: The entire (proposed) WSR lies within the Pit River Canyon WSA; therefore, it is protected and managed under the terms of the wilderness IMP until such time as Congress makes a determination regarding wilderness designation. This includes visual resource management (VRM) under strict Class I criteria (preserve landscape character, change limited to natural processes). The wilderness IMP also protects the free-flowing character, ‘outstandingly remarkable’ values and water quality of the WSR study area (though interim protection is also provided under the Wild and Scenic Rivers Act).

Water development: There is one hydro-power diversion on private land two miles upstream from the study area; however, it does not affect the free-flowing character of the river, since water is only diverted in winter and spring when volume is high (a minimum-flow requirement ensures a free-flowing condition when volume is low). Water storage and power generation is off-stream, on private land downstream from the WSR study area. There are no additional applications for irrigation, water storage or power production on BLM land that would affect the study area. However, informal and initial talks to create additional water storage for the existing hydro-power facility have been expressed. The proposed water storage site is west of the study area, and would require land exchanges. The significance of the proposal would exchange public lands adjacent to the study area, some of which would include WSA land if the Pit River Canyon was rejected for wilderness. These public lands included in the exchange would provide an additional storage area for water diverted from the same source and present diversion season. These WSA lands which now protect the canyon and river would be available for potential development and outstandingly remarkable values could be lost. In the late 1970s, the Pit River Canyon was released from consideration as a dam site in favor of the Allen camp site; this site also, was later released. However, in light of growing demand, decisions regarding large hydro-power and irrigation reservoirs are being revisited. The Pit River Canyon is currently protected by the wilderness IMP (due to its WSA status). However, if Congress were to release the canyon from wilderness consideration, it could become a reservoir site. WSR designation would prevent this possibility and would be critical for preserving the canyon.

Livestock grazing: The Upper Pit River WSR study area is adjacent to four grazing allotments and grazing is authorized in all four. Although cattle graze the flats beyond the canyon rims, the canyon itself is inaccessible, due to its steep walls and rugged terrain within. There is no potential for grazing or agriculture development on public or private land within the canyon.

Roads, facilities, and other development: Vehicle access to the Pit River on the north side of the canyon is limited to three rough, unimproved trails that end one mile from the canyon rim. A good road network may also be available on the north and west sides, but legal public access is questionable. On the south side of the canyon there is a rough, two-track road that ends one mile from the south rim. This road crosses private lands, but easements permit public use. (Other south-side roads lack legal public access.) The river bottom must be reached on foot from either side. Travel within the canyon is on user-established trails and signs of human use are minimal-to-nonexistent. A powerline parallels the west boundary of the WSA (2 miles from the WSR corridor), then crosses the river outside the study area boundary. To the east, the Burlington Northern and Santa Fe Railroad right-of-way forms the eastern border of the WSA, but comes no closer than one half mile to the WSR study corridor.

3. What are the reasonably foreseeable or potential uses of land and water that would be enhanced, curtailed, or foreclosed if the area were included in the national wild and scenic rivers system?

Upper Pit River Canyon is part of the Pit River Canyon WSA; therefore, it is managed under the more restrictive stipulations of the wilderness IMP. Should Congress reject wilderness status for the WSA--and designate the Upper Pit River Canyon WSR--wild and scenic river stipulations would be enforced in place of the wilderness IMP. For the sake of clarity alone, the following discussion is based on the premise that Congress rejects wilderness designation for the WSA but grants wild and scenic river status for upper Pit River Canyon.

Enhanced Uses: WSR designation would enhance protection of raptor habitats--and other important fish and wildlife habitats--by eliminating the possibility of a dam and reservoir (or other water development) within the canyon. Non-motorized recreation would be preserved through maintenance of the canyon's walk-in access and primitive, undeveloped character.

Curtailed Uses: Some watershed enhancement projects would be constrained, or require alternative methods, to preserve the canyon's scenic qualities. For example, (invasive) juniper is crowding canyon-side springs. Clearcutting may be the most expeditious treatment, but an alternative method would be necessary to preserve scenic quality. Infrastructure and activities connected with public utilities and other uses (e.g. right-of-ways for electricity, natural gas, or water) would not be allowed and would be routed outside WSR boundaries.

Foreclosed Uses: Dams, reservoirs, water diversions, levies, hydro-power and other water development would be precluded by wild and scenic river designation. The significant golden eagle habitat is protected under the Eagle Act (EA), but would not foreclose dam construction and reservoir development. The EA would no longer play a major role in protecting habitat for this species or prevent water development in the study area.

4. Which federal agency would administer the designated river segment?

The BLM would have sole responsibility for administering the Upper Pit River Canyon WSR.

5. To what extent would the cost of administration be shared by State and local agencies?

Administrative costs would be entirely assumed by the BLM. (State and local interest in WSR designation appears to be low to moderate.) As elsewhere, the California Department of Fish and Game (CDFG) would manage fish and wildlife within the river corridor.

6. What are the estimated costs to the federal government?

a. What would be the cost of acquiring lands and interests in lands?

The area is almost entirely public land administered by the BLM. However, 200 acres within the canyon, and 640 acres of associated slope and uplands, should be acquired if the owners are willing to sell. An informal estimate would place the cost at \$252,000 (\$300/acre). The only (possible) additional cost would be easement or property acquisition to improve public access—particularly to the north rim from (State) Highway 299.

b. What would be the cost of administering the (proposed) Upper Pit River Canyon Wild and Scenic River?

One-time expenses: These would be management plan development costs (BLM costs of \$15,000 to \$20,000, plus \$2,000 for printing), area development (capital investment in facilities—particularly interpretive displays—about \$18,000), and initial implementation costs for area administration (e.g. costs for map development [including initial print run]—\$10,000 to \$15,000).

Recurring expenses: These would be facility operation and maintenance costs of \$2,000/year and general administration costs (e.g. boundary posting, cleanup, monitoring, and law-enforcement patrols) of \$6,000/year.

Therefore, total initial administrative costs (including first-year recurring expenses) would be \$52,000 to \$63,000. Estimated yearly expenses for area administration would be \$6,000-\$8,000.

7. To what degree might the State (or its political subdivisions) participate in protecting or administering the river, should it become part of the national wild and scenic river system?

The BLM would have sole responsibility for protecting and administering the (proposed) Upper Pit River Canyon WSR. State and county governments are not expected to participate in its protection or administration, if designated. However, there is also no opposition from these or other government sources and the Pit River tribe is also on record as supporting WSR designation.

8. Are local zoning and land-use controls adequate to ensure protection of the river's outstandingly remarkable values and prevent incompatible development?

County land-use controls and local zoning would not be adequate to ensure permanent protection. Economic and political pressures to build more large dams for hydro-power, agriculture, and flood control are expected to rise. While the BLM will continue to protect and manage sensitive resources, this RMP (and state or county plans) could be amended, in response to changing national priorities or other influences, to permit such development.

9. *What are the intentions and abilities of State and local governments to protect and manage the outstandingly remarkable values of the eligible river segment?*

Although WSR designation has been discussed with the Lassen County Board of Supervisors (there is no opposition), management scenarios have not been discussed with the County or the State of California. Because of current budget constraints, it is unlikely that these entities would provide funds or help manage the WSR. However, a partnership to manage some phase or activity connected with the Upper Pit River Canyon WSR may be possible.

10. *What is the level of support versus the level of opposition to wild and scenic river designation for the upper Pit River Canyon?*

Friends of the River, the California Wilderness Coalition, the Wilderness Society, the Natural Resources Defense Council and many individuals have voiced enthusiastic support for WSR designation. The Pit River Tribal Council has also voiced official support and requested documentation of their position in the final EIS/RMP. The Lassen County Board of Supervisors and all State and Federal legislators have been briefed on the proposal, and no opposition has been forthcoming. Finally, no statements of opposition were received from the public during the public comment period (summer, 2006) for the Draft Alturas Resource Management Plan.

11. *Would wild and scenic river designation be consistent with regional objectives for other-agency policies, plans, and programs?*

The other regional agency with a significant interest in wild and scenic rivers is the US Forest Service, which has objectives (in this regard) very similar to the BLM. Lassen National Forest has completed its management plan, and they are awaiting Congressional action on WSR proposals contained therein. Modoc National Forest is still in process, but they have identified two creeks as eligible for WSR designation. WSR proposals for these areas will be refined in the course of developing a new forest management plan.

Private lands along the Pit River, which have been identified for acquisition (from willing sellers), may eventually come under BLM management. These lands, if transferred to federal management, may qualify as wild and scenic rivers.

Designation would also be consistent with:

- The Lassen County 2004 Economic Development Strategic Plan; Economic Development Policy #5, Tourism Promotion and Development (p. 6): “Capitalize on the beauty, wildlife and abundant open space in Lassen County by promoting compatible tourism and visitor services.”
- The Lassen County General Plan–2000 includes this statement: “The basic resource of the recreation industry in Lassen County is its natural scenic quality. This quality must be protected, enhanced and appropriately exploited.” Lassen County’s emphasis on protecting the scenic quality of its natural resources, developing trails and promoting special outdoor recreation events would support protecting the free-flowing character and outstandingly remarkable values of the Upper Pit River.
- Designation of the eligible segment would support Lassen County’s official policy of protecting scenic resources and would enhance its reputation as a premier outdoor recreation destination.
- The Lassen County Chamber of Commerce systematically promotes the County’s natural resources for fishing, hunting, and sightseeing. Protecting the free-flowing character of the upper Pit River is consistent with their message of espousing Lassen County as a sportsmen’s vacation destination.

12. *Would wild and scenic river designation contribute to basin or river system integrity?*

Upper Pit River's waters are derived from snowmelt augmented by cool mountains springs and wet meadows. The river flows through a broad volcanic plateau before losing itself in a dramatic canyon. This canyon is the deepest and most spectacular in northeastern California. The river segment is part of the Pit River Canyon Wilderness Study Area. The WSR study area (Upper Pit River Canyon) provides high-quality recreation (e.g. fishing, hunting, hiking and backpacking, photography, nature study and bird-watching) in an unaltered natural environment. Designation would protect a distinctive aquatic environment, associated riparian and upland areas, and canyonland features that provide critical habitat for fish and wildlife within and beyond the canyon rim. River canyons such as this are rare and special places on this arid volcanic plateau and in Northern California generally. WSR designation would help preserve the hydrologic integrity of the watershed and the free-flowing character of this pristine river segment.

13. *What is the potential for developing water resources?*

Waters within what is now the Pit River Canyon WSA (which includes the proposed Upper Pit River Canyon WSR) were part of a hydro-power withdrawal (i.e. reserve) until the wilderness study area was established in the 1970s. Development of water resources are prohibited under the wilderness IMP. This policy would, of course, be sustained if the area receives wilderness designation. A small hydroelectric plant is located immediately downstream from the proposed WSR. The plant uses water diverted from above the study area in winter and spring (when flow volume is high). For the rest of the year, generating capacity is sustained by stored water. A minimum-flow requirement protects the river and the study area in summertime, when flow volume is very low (flow volume is also subject to large yearly fluctuations). Therefore, an increase in generating capacity would require additional (water) storage obtained from outside the study area. Therefore, water supply is almost certainly inadequate (or insufficiently reliable) to generate power or sustain irrigated agriculture without additional water storage from outside the study area. For this reason and WSA status there have been no applications, studies, or interest in water development on BLM lands within the canyon of the upper Pit River. However, there have been informal discussions amongst private landowners regarding the possibility of creating additional storage (west of the study area) through public land exchanges. Exchanged lands would be used for additional water storage to provide more generating capacity for the existing facility.

14. *What is the ability of the agency to manage the river segment as a wild and scenic river?*

Management of the proposed Upper Pit River Canyon WSR would coincide with that for the Pit River Canyon WSA--if designated. Even without wilderness designation, management would focus on preserving the river segment's wilderness-like qualities. The primary recreational activities are hunting, fishing, hiking/backpacking, photography, bird-watching and wildlife observation. These are low-impact activities and, although use has not been quantified, it is almost certainly low. Recreational development is not planned and access would remain primitive; therefore, the management burden would be minimal.

15. *What other issues or concerns were identified in the land-use planning process?*

Wildland fire is an issue. The appropriate management response (AMR) is judged to be prompt and full suppression on wildfires that threaten the unique features of the WSR corridor. The proposed river segment (and adjacent upland area) is currently protected by the California Department of Forestry (CDF). Their fire management activities are coordinated with the BLM. Fire-fighting tactics must comply with the "Interim Management Policy for Lands under Wilderness Review." This means avoiding the use of heavy equipment in WSAs (and, therefore, the WSR) if at all possible. If heavy equipment is required for an emergency situation, the approval of the (fire) line officer is necessary and

use would be restricted to the roads and trails of the plateau. Since roads and trails do not exist in the WSR study area, use of heavy equipment would not be allowed under any circumstances--in order to preserve its wilderness-like character. In like manner, fire retardant could be used for initial attack on the rims, but extended use is strongly discouraged and must be justified by imminent concern for human life or the exceptional value of the resources at risk.

Summary of Findings and Rationale

The eligibility assessment (November, 2003) determined that the 13-mile study corridor on the upper Pit River is 'administratively suitable' for designation by Congress as a wild and scenic river, with a (tentative) 'wild' classification. The area meets the 'geological,' 'scenic,' 'recreational,' 'wildlife' (habitats and populations), and 'cultural' requirements for 'outstandingly remarkable values.' Scenic values, in particular, are closely associated with the panoply of fall colors combined with the area's dramatic geological features and scenic vistas. Although recreational use is currently low, the proximity to Redding, California and the presence of the Pit River Canyon WSA (if designated) should dramatically increase visitation, particularly for those seeking wilderness-like conditions. Recreational potential is particularly high for hiking/backpacking, hunting, fishing, bird-watching and photography.

The geological, biological, and scenic features of the Pit River Canyon are rare in northern California and unequalled in size. Except for a half-mile stretch in private ownership, the entire 13-mile study corridor is publicly owned and administered by the BLM. There are no mining claims, or leasable or saleable mineral deposits within the study corridor. There is potential--albeit very low--for increasing hydro-power generating capacity in the existing (downstream) hydro-power plant by creating additional water storage. However, the proposed WSR is also a part of a wilderness study area, and protected from such development under the terms of the wilderness IMP. On the other hand, if Congress rejects wilderness designation for the WSA, an option for development would be available. At the present time, no applications have been filed, but there is interest in creating additional water storage for the existing hydroelectric plant. Prior to becoming a WSA, the Pit River Canyon was part of a hydro-power withdrawal (i.e. earmarked for possible dam construction and reservoir formation to generate electrical power). Designation of the Upper Pit River Canyon WSA would satisfy the intentions behind WSR designation with a 'wild' classification. However, if the WSA does not become a wilderness area, wild and scenic river designation is the only means of ensuring permanent protection for the river segment's free-flowing character and outstandingly remarkable values.

WSR Suitability Report for Lower Pit River Canyon

The following are general questions that the suitability determination must answer.

1. *Should the river's free-flowing character, outstandingly remarkable values, and water quality be permanently protected or are there compelling reasons to do otherwise?*

Alternatives 1, 2, and the Preferred: *Yes; this river segment should receive protection as a wild and scenic river (WSR).*

Relative remoteness and difficult canyon access have thus far protected this wild and pristine river segment. However, resource exploitation and other kinds of development (including inappropriate or excessive recreational pressure) could permanently alter or destroy its free-flowing character and outstandingly remarkable values. Wild and Scenic River (WSR) designation is required to ensure permanent protection. Remarkable values include a dramatic canyon, impressive scenery, dynamic historical resources, and abundant fish and wildlife (particularly birds-of-prey). Pristine, natural conditions add greatly to its recreational value.

2. *Would the river's free-flowing character, outstandingly remarkable values, and water quality be protected through designation as a 'wild,' 'scenic,' or 'recreational' river?*

Alternative 2 and the Preferred: *Yes; with a 'scenic' designation.*

A 'scenic' designation would provide an intermediate level of protection for WSR characteristics. It would protect the areas remarkable visual qualities, but may not fully preserve pristine, natural conditions. Wild and scenic areas such as this are increasingly valued—especially by urbanites seeking unspoiled, natural surroundings. The study area is adjacent to State Highway 299 and immediately downstream from Fall River Mills, California. The city of Redding, with the largest population in the North State, is only 70 miles distant. With these and other population centers so near, the scenic qualities and free-flowing, natural condition of this river segment will be hard to maintain without the protection afforded by WSR designation.

Alternative 1: *Yes; with a 'recreational' designation.*

A 'recreational' designation provides the lowest level of WSR protection. In this instance, there would be little difference from a scenic designation. The most noteworthy difference would be recognition of recreational mining (e.g. gold panning) as an appropriate activity.

3. *Is wild and scenic river designation the best method for protecting the river?*

Alternatives 1, 2, and the Preferred: *Yes*

Multiple-use is basic to BLM management. Although current resource programs do provide a measure of protection for the Lower Pit River Canyon, there are no substantial legal barriers to prevent development that would alter or destroy the river segment's free-flowing character or the remarkable scenic qualities of its canyon. The same forces could also degrade or destroy vital riparian habitats, historic/archaeological sites, and the area's exceptional river-based recreation—given sufficient economic pressure and political influence. The foreseeable future includes an expanding population and ever-increasing demands on resources—particularly water. This means that incentives for building more dams (for hydro-power,

agriculture, and flood-control) are likely to increase. Hence, the State's remaining free-flowing river sections (such as the lower Pit) are in jeopardy. Wild and scenic river designation would provide ironclad protection for the free-flowing character and outstandingly remarkable values of this river segment that could not be altered, other than by congressional action.

4. *Is there a demonstrated commitment to protect the river by any non-federal entities that may be partially responsible for implementing protective management?*

All Alternatives: *No*

The following are important determinants of suitability under the Wild and Scenic Rivers Act.

1. *What are the prime characteristics that make the area worthy under the Act?*

In order to be eligible, a river must be free-flowing and have one or more 'outstandingly remarkable values.' Seven such values have been identified. These are: 'scenic,' 'recreational,' 'geologic,' 'fish,' 'wildlife,' 'cultural,' and 'historic' (or other similar values). A river is evaluated according to suitability criteria contained in BLM Manual 8351 (Wild and Scenic Rivers). When assessment is complete, results and conclusions are published in the Federal Register. If the suitability analysis is favorable, the specific requirements of the designation are incorporated in the applicable land-use plan for the purpose of interim protection and management. The BLM manager responsible for the river submits the (suitability) report to the Secretary of the Interior. The Secretary determines whether the suitability report could justify designation. Assuming that designation is justifiable, the Secretary forwards that recommendation to the President of the United States, who in turn forwards the Secretary's recommendation to Congress.

a. Unimpeded Flow

The Pit River drains the volcanic uplands of northeastern California from the Warner Mountains (east of Alturas) to the Goose Lake country south of the Oregon border. It is the largest river in the region, and has cut through a volcanic plateau to form a spectacular gorge. The eligible segment begins immediately southwest of Fall River Mills, CA and flows, unimpeded, through 2.5 miles of canyon. Eventually, after leaving the canyon, it flows into Shasta Lake and the Sacramento River.

The watershed is typical of the intermountain West, in that the flow régime is snowmelt-dominated; therefore, subject to large seasonal and yearly fluctuations. There are several agricultural water diversions before the river enters the study area. There are also two hydro-power diversions. The first supplies a small generating facility on private land upstream from the study area. The second ("Pit One"), diverts much of the Fall River before it joins the Pit immediately upstream from the study area. (The plant itself is located off the river, downstream from the study area.) Streamflow in the eligible segment is moderate, and reasonably stable, at 70-80 ft³/s in late summer (low water), and an average discharge of 461 ft³/s. Maximum discharge was 28,600 ft³/s, with a minimum discharge of 12 ft³/s during the rating period. The low flows are principally due to water diversions (for irrigation) in four upstream valleys. (Pacific Gas & Electric Co./USGS-Monthly Streamflow Statistics for California; for the Pit River, near Fall River Mills, CA 1923-1951).

Although now decommissioned, a USGS gauging station monitored flow volume one mile downstream from the study area (at Fall River Mills) from 1921-1951 (a drainage area encompassing 4,150 mi²).

b. Outstandingly Remarkable Values***Geology:***

The portion of the lower Pit River containing the study area flows through the Modoc Plateau. The area is a transition zone between two geomorphic provinces, i.e. basin-and-range country to the east and the volcanic Cascade Range to the west and north. The plateau is thought to derive from basin-and-range faulting in a terrain overlain by volcanic rocks (Bailey 1966). The plateau is capped with basalt flows and small cinder cones. Typical rock formations include breccias, mud-and-ash flows, lava and other pyroclastic rocks, as well as lacustrine (lake) deposits. Canyon depth on the upstream border of the study area is 180 feet; near-vertical cliffs dominate a gorge that reaches 520 feet on its downstream border. The region through which the river flows is part of the Cascade Range, with glacier-mantled Mt. Shasta (14,162 feet) to the north and Lassen Peak (which last erupted in 1915) to the south. The Cascade Range is transected by a number of river gorges; however, the Lower Pit River Canyon is one of the largest and most spectacular.

Scenery:

The Pit River Canyon's remarkable scenic qualities are due to its geological features and the variety of its vegetation. Its origins and milieu have already been discussed. The canyon is characterized by steep, blocky, basalt cliffs and talus slopes. The pristine, riparian habitats of the canyon bottom are flanked by ponderosa and Jeffrey pines, western juniper, Oregon white oak, Oregon ash, and various mountain shrubs. The riparian vegetation is dominated by large sedges (which overhang the river) interspersed with grasses, willows and other woody shrubs. Bunch-grasses and scattered juniper transition between these areas. In the fall, the greens, yellows, and reds of the autumn foliage form a striking contrast with the somber brown and black basalt and colorful lichens of the canyon walls. Amidst all this, the river tumbles over rock and gravel, rests in quiet pools, and wanders among massive boulders on its journey through the canyon. The regionally-famous Pit River Falls (one of the largest in northeastern California) can be viewed from a vista point on the lip of the canyon (off Highway 299).

Wildlife and fish:

The plateau (on both sides of the gorge) is priority, year-round habitat for mule deer—and the canyon is critical wintering habitat. The canyon is renowned habitat for birds-of-prey. Raptors commonly found here include: golden eagle, prairie falcon, red-tailed hawk, American kestrel, great horned owl, and barn owl (including two federally-listed species, and historical habitat for a third that is no longer present). In addition to the birds already mentioned, the canyon contains mountain lion, bobcat, hare and rabbit, porcupine, squirrel, and a variety of reptiles and amphibians.

Native fish include Sacramento sucker, Sacramento pike minnow, Pit sculpin, and remnant populations of indigenous rainbow trout (possibly with steelhead genes). Prior to construction of PG&E's (Pacific Gas & Electric Co.) Pit River hydro-power dams (in the 1920s), salmon and steelhead migrated through the study area and also entered the Fall River (a tributary that joins the Pit immediately above the study area), in years when the flow was sufficient (Mike Dean, CDFG). However, anadromous fish were well-established in the study area--particularly below Pit River Falls--where resting fish provided a valuable and abundant source of food for Native Americans and, at a later date, for Euro-American settlers. Resident non-native fish include healthy populations of black bass, green-eared sunfish, bluegill, and brown bullhead.

Recreation:

Recreational activities immediately outside the canyon are typically those of the surrounding area; however, recreation within the study area is more specific due to difficult access and unique habitats. Fishing (for a number of species) is pursued on a limited basis, due to access challenges and low water conditions. There is good hunting for mule deer in the study area and on adjacent BLM-administered lands. The Canyon has great potential as a backpacking destination because of its unique and varied ecosystems, remote and untrammeled setting, and remarkable scenic qualities. There are outstanding opportunities for photography, nature study, and quiet contemplation because of the wealth of vegetation, dramatic ecotones, and abundant wildlife. For similar reasons, the canyon is ideal for bird-watching--particularly for individuals with a special interest in birds-of-prey. Overall, recreational use is low and visitor impacts minimal, because of a minimum one and one-half mile walk from the nearest vehicular access point and the steep, rugged topography. Despite this, rafting is gaining some measure of popularity, due mostly to the near-wilderness setting and the presence of Pit River Falls. Springtime volume is more than adequate for rafting; however, volume is often marginal in summer and early fall, primarily due to irrigation and power diversions (due to relicensing stipulations, PG&E occasionally augments the water supply for the benefit of rafters with Fall River water). Wild and scenic river designation--and proximity to significant population centers (e.g. Redding, CA)--would bring public attention to the area and attract those seeking solitude, exceptional scenic beauty, and unaltered natural surroundings.

Cultural Resources:

Certain features (as yet unexamined) in the study area may be connected with Native American religious ritual. Ethnographic accounts identify the surrounding country as an important habitation and subsistence area for the Atsugewi Band of the Pit River Tribe because of its abundant game and useful plants. A number of cultural resource surveys have been conducted in the general area of the drainage. These have revealed large and small habitation and task-related sites, as well as plant-gathering and hunting areas. Many of these sites are eligible for documentation in the National Register of Historic Places (NRHP), but have yet to be formally evaluated.

Historic references begin with the exploration of this area (and the surrounding region) by Hudson's Bay Company fur brigades in the 1820s, followed shortly thereafter (1830s) by American trappers. The river received its name from Peter Skene Ogden, a Hudson's Bay Company explorer and chief-trader who visited the region in 1826 and named the river for the numerous large-animal traps (pits) dug along its banks by aboriginal people. A road was established through the Lower Pit River Canyon that became the main travel route for the HBC fur brigades of the 1820s and 30s, which they used to access the rich trapping grounds of California's Great Valley. John Charles Fremont passed through the Canyon in 1846 en route to the Klamath country, from which he was recalled to become a major participant in the Bear Flag Revolt that took California from Mexico. R.S. Williamson, of the U.S. Army Topographical Engineers, traversed this route in his search for a feasible rail link to the Pacific. In 1855 it gained importance as the military road to Fort Cook. This was also the period when the Fall River Valley was settled. Fort Cook was established to protect settlers and prevent confrontations with Native Americans. In the 1920s, the old road became State Highway 299--until rerouted (out of the canyon) due to excessive maintenance costs.

2. What is the current status of land ownership and mineral use in the area?

Land Ownership

The river corridor (study area) is about 400 acres in size, and is entirely public land administered by the BLM. It is 0.25-.50 miles in width and 2.5 miles long. The land above and below the study area is owned by PG&E; however, because of their recent bankruptcy and subsequent divestiture of lands, the BLM may well have the opportunity to acquire an additional 10 miles of river corridor—much of this would also be suitable for inclusion in the study area. Discussions with the PG&E Stewardship Council (an organization established to negotiate the divestiture of PG&E lands) are underway concerning disposal of these lands.

Mineral Status and Activity

Mineral potential is low; there are no mining claims, mineral leases, or salable mineral operations, in the Lower Pit River Canyon study corridor, nor has there been any exploration for leasable minerals (refer to “Energy and Minerals, Reasonably Foreseeable Development in the Alturas Field Office” [2005]). The nearest geothermal exploration area is the Medicine Lake Highlands, which are more than 40 miles distant. A small gold mine was briefly in operation (early 1990s), 40 miles to the east, on the historic Hayden Hill Gold Mine property. This has been the only mine in the region since the early years of the last century, when some placer and hard-rock gold mining took place 40 miles to the west of the study area.

Other Land Uses

Water development: There is one hydro-power plant on private land 18 miles upstream from the study area; however, it does not affect the free-flowing character of the river, since water is only diverted in winter and spring when volume is high (a minimum-flow requirement ensures a free-flowing condition when volume is low). Water storage and power generation is off-stream, on private land upstream from the WSR study area. A second hydro-power facility (“Pit One”) diverts much of the Fall River before it joins the Pit immediately upstream from the study area. (However, the plant itself is located off the river, downstream from the study area.) At present, there are no applications for additional diversions or reservoirs on BLM land that would affect the study area. However, the canyon itself is certainly at risk, since it’s a technically feasible reservoir site. Wild and scenic river designation is required to preclude this possibility.

Livestock grazing: The study area is adjacent to the Hogback Grazing Allotment; however, there is no grazing within the canyon. Although cattle use the flats near the south rim, the canyon itself is inaccessible because of its steep walls, and the rugged terrain within. There is no potential for agriculture or other commercial development.

Roads, facilities, and other development: Vehicular access to the Pit River on the north side of the canyon is limited to three rough, unimproved trails that end near the canyon rim. A good road network may be available on the north side (from Highway 299), but legal access on all trails is questionable. The old Highway 299 roadbed may be traced along the north rim from the eastern access westerly, where it crosses the river on an abandoned bridge to reach the western access at the PG&E generating facility. The bridge dates from 1928 and is no longer useful, as many of the planks are gone or rotten, making crossing exceedingly dangerous. The river bottom must be reached on foot from either side. Vehicular access from the south side of the canyon is over a two-track road that ends 500 feet from the canyon rim. The network of south-side roads and trails crosses public and private land, and some sections lack legal access. There are no commercial powerlines in the WSR (large 500KV lines are present 2 miles west),

although a few residential lines extend north and south of the study area. Travel along canyon rims, and within the canyon itself, is on user-established trails; other signs of human use are minimal-to-nonexistent.

3. *What are the reasonably foreseeable or potential uses of land and water that would be enhanced, curtailed, or foreclosed if the area were included in the national wild and scenic rivers system?*

Lower Pit River Canyon is under multiple-use management; however, because of difficult access, precipitous canyon walls, and rugged topography, use has been limited to recreation and wildlife use. Should Congress grant WSR status to the area, restrictions and stipulations that apply to the designation would be enforced. The following discussion is based on the premise that the study area receives wild and scenic river designation.

Enhanced Uses: WSR designation would enhance wildlife values by protecting habitats for fish and wildlife (especially birds-of-prey). Some of these species (i.e. the bald eagle and Shasta crayfish) are federally-listed. Designation would eliminate the possibility of a dam and/or reservoir or water diversion within the canyon. Non-motorized recreation would be preserved by maintaining the area's primitive, undeveloped character and walk-in access.

Curtailed Uses: Some watershed enhancement projects would be constrained, or require alternative methods, to preserve the canyon's scenic qualities. For example, (invasive) juniper is crowding canyon-side springs. Clearcutting may be the most expeditious treatment, but an alternative method would be necessary to preserve scenic quality. Infrastructure and activities connected with public utilities (e.g. right-of-ways for electricity, natural gas, or water) and other development would not be allowed; such facilities would be routed outside WSR boundaries.

Foreclosed Uses: Dams, reservoirs, water diversions, levies, hydro-power and other water development would be precluded by wild and scenic river designation.

4. *Which federal agency would administer the designated river segment?*

The BLM would bear sole responsibility for administering the Lower Pit River Canyon WSR.

5. *To what extent would the cost of administration be shared by State and local agencies?*

Administrative costs would be entirely assumed by the BLM. (State and local interest in WSR designation appears to be low to moderate.) As elsewhere, the California Department of Fish and Game (CDFG) would manage fish and wildlife within the river corridor. It is possible that the Stewardship Council (responsible for handling the divestiture of PG&E lands) may provide some financial support, if plans for the WSR are compatible and synchronous with those of the Stewardship Council.

6. *What are the estimated costs to the federal government?*

a. *What would be the cost of acquiring lands and interests in lands?*

There would be no acquisition costs, since the entire study area is public land administered by the BLM.

b. What would be the cost of administering the (proposed) Lower Pit River Canyon Wild and Scenic River?

One-time expenses: These would be management plan development (BLM costs of \$15,000 to \$20,000, plus \$2000 for printing), area development (capital investment in facilities, such as interpretive displays, about \$18,000), and initial implementation costs for area administration (e.g. costs for map development [including initial print run]—\$10,000 to \$15,000).

Recurring expenses: These would be facility operation and maintenance, and general administrative costs (e.g. boundary posting, cleanup, monitoring, and law-enforcement patrols) of \$8,000/year.”

Therefore, total initial administration costs (including first-year recurring expenses) would be \$53,000 to \$63,000. Estimated yearly expenses for area administration would be \$8,000.

7. To what degree might the State (or its political subdivisions) participate in protecting or administering the river, should it become part of the national wild and scenic river system?

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8. Are local zoning and land-use controls adequate to ensure protection of the river’s outstandingly remarkable values and prevent incompatible development?

County land-use controls and local zoning would not be adequate to ensure permanent protection. Economic and political pressure to build more dams for hydro-power, agriculture, and flood control are expected to rise. While the BLM will continue to manage and protect sensitive resources, this RMP (and state or county plans) could be amended, in response to changing national priorities or other influences, to permit such development.

9. What are the intentions and abilities of State and local governments to protect and manage the outstandingly remarkable values of the eligible river segment?

Although WSR designation has been discussed with the Shasta County Board of Supervisors (there is no opposition), management scenarios have not been discussed with the County or the State of California. Because of current budget constraints, it is unlikely that these entities would provide funds or help manage the WSR. However, a partnership to manage some phase or activity connected with the Lower Pit River Canyon WSR may be possible.

10. What is the level of support versus the level of opposition to wild and scenic river designation for Lower Pit River Canyon?

Friends of the River, the California Wilderness Coalition, the Wilderness Society, the Natural Resources Defense Council and many individuals have voiced enthusiastic support for WSR designation. The Pit River Tribal Council also supports WSR designation and has requested documentation of their position in the final EIS/RMP. The Shasta County Board of Supervisors and all State and Federal legislators have been briefed on the proposal, and no opposition has been forthcoming. Finally, no statements of opposition were received from the public during the public comment period (summer, 2006) for the Draft Alturas Resource Management Plan.

11. *Would wild and scenic river designation be consistent with regional objectives for other-agency policies, plans, and programs?*

The other regional agency with a substantial interest in wild and scenic rivers is the U.S. Forest Service, whose objectives in this regard are very similar to the BLM. Lassen National Forest has completed its management plan. They are awaiting Congressional action on WSR proposals contained therein.

PG&E is beginning to divest itself of lands in the Pit River watershed. The Pit River, from Fall River Mills to Lake Britton, and Hat Creek, from Cassel to Lake Britton, may eventually come under BLM management. Both streams have reaches that, if acquired by the BLM, could qualify as wild and scenic rivers.

Designation would also be consistent with The Shasta County General Plan:

“Although the General Plan Guidelines allow for a separate recreation element, the discussion of Countywide recreational resources in Shasta County has been incorporated into the Open Space Element to emphasize the relationship between open space land and recreational uses.”

“These multi-purpose uses are particularly valuable in the SCR planning area, but the anticipated urbanization of parts of this planning area presents a major threat to these resources. In the other planning areas, development presents far less of a threat to these resources, but their value is no less important. For these reasons, the major rivers and creeks of the County are symbolically designated on the General Plan maps to denote the application of policies specified in this and other Plan elements. With respect to this element, these policies address the scenic value of these resources and their recreation potential.”

Under the Open-Space Element, water resources are designated as open-spaces when considered as any one of the following:

- Open-space for the preservation of natural resources including . . . rivers, streams, bays, and estuaries; lakeshores, banks of rivers and streams, and watershed lands. (Government Code Section 65560(b-1))
- Open-space for the managed production of resources including . . . areas required for recharge of groundwater basins, bays, estuaries, marshes, and rivers and streams which are important for the management of commercial fisheries . . ."(GCS 65560(b-2))
- Open space for outdoor recreation including, but not limited to, ...lakeshores, beaches, and rivers and streams ...banks of rivers and streams, trails, ... and areas which serve as links between major recreation and open-space reservations, including ...banks of rivers and streams. (GCS 65560(b-3))

12. *Would wild and scenic river designation contribute to basin or river system integrity?*

The Pit River is derived from snowmelt, augmented by water from wet meadows and mountain springs. It flows across a broad volcanic plateau before descending into a canyon that is one of the deepest and most spectacular in northeast California. The Lower Pit River Canyon provides quality recreation (e.g. fishing, rafting, hunting, hiking and backpacking, photography, nature study and bird-watching) in an unaltered natural environment. Designation would protect a distinctive aquatic environment, including riparian and upland areas and canyonland features that provide critical habitats for fish and wildlife (within and beyond canyon rims). River canyons such as this are rare and special places on this arid volcanic plateau--and in northern California generally. WSR designation would ensure the survival of this pristine canyon by protecting its free-flowing character and eliminating the possibility of another dam or water diversion. It would also help to preserve the natural hydrologic function of the watershed.

13. What is the potential for developing water resources?

The Lower Pit River Canyon WSR study area is immediately upstream from the “Pit One” hydro-power generating facility. The water to run the plant comes from the Fall River (via a diversion tunnel), a tributary whose remaining waters join the Pit just upstream from the study area. A second hydro-power facility (“Pit Two”)--that included plans to store water behind a large reservoir--was proposed 15 years ago for a site three miles below the downstream border of the study area. This never materialized, but remains a possibility, given the rising demand for hydro-power and irrigation water. Although there are large seasonal and yearly fluctuations, volume is nonetheless sufficient to sustain an additional reservoir. Because of its feasibility (from a strictly engineering standpoint), there has been continued interest (and a number of previous studies and applications) to dam public river land or private land below the canyon. Any dam which would flood the gorge would also destroy this scenic treasure.

14. What is the ability of the agency to manage the river area (segment) as a wild and scenic river?

Significant recreational development is not planned and the management burden would be minimal. The BLM would maintain primitive access thereby preserving the river segment’s scenic qualities and near-wilderness conditions. The primary recreational pursuits are hunting, fishing, rafting, hiking/backpacking, sightseeing, photography, bird-watching and wildlife observation. These are low-impact activities. Although current use has not been quantified, it is known to be limited, but with increasing demands for white-water rafting.

15. What other issues and concerns were identified in the land use planning process?

Wildland fire is an issue. The appropriate management response (AMR) is judged to be prompt and full suppression of wildfires that threaten the unique features of the WSR corridor. The California Department of Forestry (CDF) and the BLM are jointly responsible for fire management in the study area and on the adjacent plateau. Fire-fighting tactics must employ measures to protect sensitive resources. This means avoiding the use of heavy equipment, if at all possible. If heavy equipment is required for an emergency situation, the approval of the (fire) line officer is necessary; however, use must be restricted to existing roads and trails. Since the (proposed) WSR has no roads or trails that remain passable to vehicles, use of heavy equipment would not be allowed under any circumstances--in order to preserve the area’s scenic qualities and near-wilderness character. In like manner, fire retardant could be used on the plateau for initial attack, but would not be allowed in the canyon. Even in areas adjacent to the canyon, extended use would be strongly discouraged and must be justified by imminent concern for human life or the exceptional value of the resources at risk.

Summary of Findings and Rationale

The eligibility assessment (November 2003) found that the 2.5-mile study corridor was ‘administratively suitable’ for designation as a wild and scenic river, and recommended a ‘scenic’ classification. The study area meets the ‘outstandingly remarkable values’ criteria for ‘geology,’ ‘scenery,’ ‘recreation,’ ‘wildlife’ (habitats and populations), and ‘historic’ resources. Awe inspiring scenery is the most obvious and impressive value. This is largely based on dramatic geology, impressive scenic vistas, and colorful fall foliage. Although recreational use is currently low, the proximity to Redding, California and the nearby Pit River Canyon WSA (if designated) should dramatically increase visitation, particularly by those seeking wilderness-like conditions. The area is especially suitable for hunting, fishing, rafting, hiking/backpacking, bird-watching and photography.

APPENDIX J

The scenic, historical, geological, and biological features of the Lower Pit River Canyon are rare and unsurpassed in northern California. The entire study area is public land administered by the BLM. There are no mining claims, or leasable or saleable mineral potential, within the study corridor. There is no livestock grazing or agricultural potential. However, hydro-power development could be expanded; either by diverting more water (and creating additional off-site storage) or by building another dam. There are no pending applications, but interest remains for sites on downstream locations. Wild and scenic river designation is the only means of ensuring permanent protection for the free-flowing character and outstandingly remarkable values of the Lower Pit River Canyon.

WSR Suitability Determination for Lower Horse Creek Canyon

The following are general questions that the suitability determination must answer.

1. *Should the river's free-flowing character, outstandingly remarkable values, and water quality be permanently protected or are there compelling reasons to do otherwise?*

Alternatives 1, 2, and the Preferred: *Yes; this river segment should receive protection as a wild and scenic river (WSR).*

Horse Creek's free-flowing character, remoteness, wild character, and outstandingly remarkable values should be best protected through congressional designation, and is recommended for addition to the National Wild and Scenic River System. The segment abounds in wildlife, fisheries, history, and wilderness like solitude. Relative remoteness and difficult canyon access have thus far protected this wild and pristine river segment. Resource exploitation and other kinds of development, including inappropriate or excessive recreational pressures, could permanently alter or destroy its free-flowing character and outstandingly remarkable values. WSR designation would permanently protect the canyon's wilderness-like qualities, scenic beauty, and outstanding fish and wildlife resources.

2. *Would the river's free-flowing character, outstandingly remarkable values, and water quality be protected through designation as a 'wild,' 'scenic,' or 'recreational' river?*

Alternative 2 and the Preferred: *Yes; with a 'wild' designation.*

A 'wild' designation would provide the highest level of protection for the WSR. Redding, California, only 70 miles away has the highest population density in the north state, and more and more people are attracted to wilderness like settings. As population growth continues, this designation would maintain the primitive setting within Lower Horse Creek for future generations. Under this "wild" designation in both the Preferred and Alternative 2, all outstandingly remarkable values would be fully protected and attract visitors who want a wilderness like experience.

Alternative 1: *Yes; with a 'recreational' designation.*

A 'recreational' designation may provide greater accessibility and provide for more user-friendly activities to benefit a wider range of recreational interests--thus increasing the area's value for a greater number of people. This alternative allows for a variance for recreational mining activities which can compliment recreational uses and provides for a wider variety of uses within the WSR. A "recreational" designation would provide adequate protection for WSR qualities and values while creating economic benefits for the community.

3. *Is wild and scenic river designation the best method for protecting the river?*

Alternatives 1, 2, and the Preferred: *Yes*

Yes, a wild and scenic river designation would provide ironclad protection for the river's free-flowing character, outstandingly remarkable values, and water quality that could not be altered (other than by congressional intervention). Current BLM management programs are protecting the scenic qualities, riparian values, cultural values and recreation values of Horse Creek and those management priorities would continue under all alternatives. Presently Lower Horse Creek is protected under Wilderness Study

Area status as part of the Pit River Canyon Wilderness Study Area. However, designation of wilderness is entirely at the discretion of congress; should congress decide not provide wilderness status to Lower Horse Creek, this remarkable area would once again be managed under multiple-use. The need for dams in the foreseeable future is expected to rise, particularly for flood-control, water storage, and energy production. Hence, free-flowing rivers such as Lower Horse Creek Canyon are in jeopardy of losing their irreplaceable resources and values.

4. *Is there a demonstrated commitment to protect the river by any non-federal entities that may be partially responsible for implementing protective management?*

All Alternatives: *No*

The following are important determinants of suitability under the Wild and Scenic Rivers Act.

1. *What are the prime characteristics that make the area worthy under the Act?*

In order to be eligible, a river must be free-flowing and have one or more of the seven identified ‘outstandingly remarkable values’ categories. The specified categories are ‘scenic,’ ‘recreational,’ ‘geologic,’ ‘fish,’ ‘wildlife,’ ‘cultural,’ ‘historic,’ or other similar values. A river must be evaluated according to suitability criteria contained in the BLM’s Wild and Scenic Rivers Manual (8351). Once this is accomplished, results and conclusions are published in the Federal Register. If the suitability analysis is favorable, specific requirements of the designation are incorporated in the applicable land-use plan for the purpose of interim protection and management. The BLM land manager responsible for the river then submits the (suitability) report to the Secretary of the Interior. The Secretary determines whether the suitability report could justify designation. Assuming that designation is justifiable, the Secretary forwards that recommendation to the President of the United States, who in turn forwards the Secretary’s recommendation to Congress.

a. Unimpeded Flow

The Horse Creek drainage originates from the uplands of a large volcanic plateau (237 square miles) and Horse Creek is formed from several small perennial streams and spring systems. The segment of Horse Creek proposed for WSR designation begins 2.5 miles west of Little Valley, California and flows, unimpeded, for three miles through a spectacular scenic canyon to its juncture with the Pit River. (There are four additional miles on BLM-administered land upstream from this segment, but this portion is not deemed eligible for designation.) The watershed is typical for the intermountain west, in that the flow régime is snowmelt-dominated. For this reason there are large seasonal and yearly fluctuations. Though there are several small agricultural water diversions on private land upstream from the study area, streamflow in the eligible segment is reasonably stable and predictable for watersheds of this type. This is principally due to large springs and wet meadows higher in the drainage. Although decommissioned, a USGS gauging station monitored flow on Horse Creek (including the study area) from 1929 through 1967. This station recorded an 11-year mean daily discharge of 4.97 ft³/s (cubic feet per second) for August and 76.7 ft³/s for January (USGS, Monthly Streamflow Statistics for California, Horse Creek near Little Valley, CA 1929-1967).

b. Outstandingly Remarkable Values

Scenic Value:

Horse Creek’s remarkable scenic qualities are based on spectacular geology, plus varied and abundant vegetation. The creek has cut through a dry, volcanic plateau to form a deep and precipitous gorge.

Depth varies from 240 to 400 feet. The narrow canyon is flanked by steep cliffs and talus of blocky, dark basalt. Its floor contains dense riparian vegetation that overhangs the creek in numerous locations. This is mostly sedges, interspersed with grasses, willows and other woody bottomland plants. The creek itself is the center of interest as its blue-green water tumbles over rock and gravel, rests in quiet pools, and wanders among boulders on its journey to the Pit River. Dense, bottomland vegetation gives way to bunchgrass, sage and other brushland species, interspersed with ponderosa and Jeffrey pines, with scattered juniper in the dryer, upland areas. The greens, yellows, and reds of autumn form a striking contrast to the somber brown and black basalt of the rubble-strewn canyon walls.

Wildlife and Fish:

The proposed creek segment is important winter (and also year-round) habitat for mule deer. It is also a significant fawning area for this species. An important pronghorn seasonal migration corridor follows the creek borders and canyon. The lower end (near the Pit River) harbors numerous raptors, notably; golden eagle, red-tailed hawk, prairie falcon, American kestrel, great horned and barn owls. Mountain lion, bobcat, rabbit, squirrel, porcupine, and a variety of reptiles and amphibians are also common in this environment. Native fish include Sacramento sucker, Sacramento pike minnow, Pit sculpins, and (possibly) remnant populations of indigenous rainbow trout. There are self-sustaining populations of (non-native) black bass, green-eared sunfish, bluegill, brown bullhead, and especially, ‘wild’ rainbow trout (mostly descended from strains stocked in the 1950s).

Cultural and Historic resources:

(Prehistoric) The Horse Creek drainage was a locus of habitation and subsistence for the Aporige Band of the Pit River Tribe. Ethnographic accounts highlight the importance of the area to native inhabitants due to the abundance of game and plants, and relate the presence of at least five major villages in the general area. Previous cultural resource surveys document a high number of culturally significant sites within the drainage that include gathering and hunting areas, task specific sites and habitation locales. Many of these sites are eligible for the National Register of Historic Places (NRHP), but have yet to be formally evaluated.

(Historic) This area is rich in history beginning with Euro American exploration of the region by the Hudson Bay Company fur brigades in the 1820’s, the American fur trappers of the 1830’s, and U.S. Army expeditions in the 1840’s through the 1870’s. Peter Skene Ogden an early explorer and chief trader for the Hudson Bay Company was one of the first documented Euro Americans in the region in 1826. Peter Lassen, an important figure in early California history was first to forge the Lassen Trail into northern California in 1848. The eastern branch of the National Historic Lassen Emigrant Trail crosses Horse Creek 2 miles upstream of the WSR, while the western branch crosses the Pit River approximately 5 miles downstream from Horse Creek. At one point near the Round Barn this western branch of the trail passes within one mile of the WSR on its way to the great valley of California. Fall River Valley to the west of the WSR study area was settled in the 1850’s, with Fort Crook established in the late 1850’s to prevent confrontations between the early settlers and Native Americans. Famous Civil War General George Crook had his first independent command as a lieutenant protecting emigrants and settlers, and established U.S. Army patrol routes for their protection.

2. What is the current status of land ownership and mineral use in the area?

Land Ownership

a. The proposed designation area--which encompasses the creek segment and canyon--is about 0.25 mile wide and 3 miles long. The entire area (approximately 400 acres) is public land administered by the BLM. A 40-acre parcel of private land may border the corridor. (This private parcel is located differently

on various maps, hence, a survey will be required to identify where this parcel lies in relation to the WSR.)

Land Use

b. Associated or conflicting uses:

Wilderness characteristics and visual resource management: The entire (proposed) WSR lies within the Pit River Canyon WSA; therefore, it is managed, and currently protected, under the wilderness interim management policy (IMP) until such time as Congress makes a determination regarding wilderness designation. This includes visual resource management (VRM) under strict Class I criteria (preserve landscape character, change limited to natural processes). This also protects the free-flowing character, ‘outstandingly remarkable’ values and water quality of the WSR study area--though interim protection is also provided under the Wild and Scenic Rivers Act.

Water resource development: There is no current threat to this area. There are no dams or hydroelectric power facilities on nearby BLM or private lands. Hydropower development is unlikely due to the arid landscape and low streamflow. There is a small dam and several small water diversions (for irrigated agriculture) on private lands four miles or more above the eligible creek segment. However, these are used to divert water from late spring through early fall and do not threaten the free-flowing character of the eligible segment. No applications have been filed for water storage, irrigation, power production or other development on public lands in the area, although the canyon would provide an ideal location for a large dam in this era of low water and expanding water uses. The lack of applications are probably due to the area being within the Pit River Canyon WSA since the late 1970s.

Transportation, facilities, and developments: Motorized access is limited on the north side of Horse Creek Canyon to two jeep trails that stop within .75 miles of the rim. These roads cross private lands and have legal easements in place. County Road 404 (a paved access) extends to approximately one mile south and west of the creek, but easements have not been secured to ensure public access. Legal access from the county road is stopped by private lands, and permission is needed for entry.

Nonmotorized travel within the canyon is over user-established walking trails, and access to the rims or bottom of the canyon is by foot only. There are no other developments on the rims or within the WSR corridor. Signs of human use in the area are minimal to non-existent. No power lines are located within the WSR segment, but are present on adjacent private lands. The Burlington Northern Santa Fe Railroad line crosses Horse Creek 2 miles upstream of the WSR corridor.

Mineral status and activity: Mineral potential within the Horse Creek study corridor is low (see “Energy and Minerals, Reasonably Foreseeable Development in the Alturas Field Office” 2005). There are no mining claims, mineral leases, or salable mineral operations. There has been no exploration for leasable minerals in the area, though there is active exploration for geothermal sources in the Medicine Lake Highlands, more than 50 miles to the northwest. In the early 1990’s a gold mine was developed on the historic Hayden Hill gold mine property, 20 miles to the east. This has been the only active gold mine in the region since the 1870’s, but this mine is now closed. Small amounts of decorative rock rim the canyon; however, sale is prohibited under the wilderness IMP.

Recreational: Fishing--mostly for a variety of species is popular within the canyon. The canyon provides unique opportunities to catch wild fish in a spectacularly beautiful setting. There is also hunting for mule deer within the canyon and on adjacent BLM-administered lands. There is abundant opportunity for hiking and nature photography and the canyon has great potential as a backpacking destination because of its unique and varied ecosystems, remote and untrammled setting, outstanding scenic qualities, and readily-available water. It is ideal for nature study and quiet contemplation, because of the proximity of

dramatic ecotones and the importance of its water, cliffs, and canyon to native plants and wildlife. For similar reasons, the canyon is ideal for birdwatching--particularly for individuals with a special interest in birds of prey. Overall, recreational use is low and visitor impacts minimal, due to difficult access (a minimum three quarter-mile walk from the nearest vehicular access point) and steep, rugged topography. Boating and rafting are not tenable activities because streamflow is inadequate and access too difficult. However, these very conditions are likely to increase the area's popularity if Congress grants wilderness status to the Pit River Canyon WSA or WSR designation for lower Horse Creek Canyon. Official recognition and protection will attract those seeking solitude and unaltered natural surroundings.

Vegetation: For most of its course on public lands, Horse Creek is in a relatively steep canyon with ponderosa pine, western juniper, and Oregon white oak growing on the slopes down to the riparian zone. Within the riparian zone a diversity of willows, sedges, rushes, and grasses are found, as well as old growth pine and Oregon ash. Shrubs found along the banks and slopes of the canyon include chokecherry, gooseberry, Modoc plum, mountain big sagebrush, bitterbrush, mountain mahogany, and serviceberry. Natural springs and the perennial flow within the canyon provide lush areas of riparian vegetation.

Livestock grazing: Grazing is authorized in the Bald Mountain allotment (of which the canyon is a part). Cattle graze the flats beyond the canyon rim but the canyon itself is inaccessible due to steep, treacherous slopes and the rough, boulder-strewn nature of the creek bed. Therefore, there is no potential for agricultural development or livestock grazing in the canyon.

3. What are the reasonably foreseeable or potential uses of land and water that would be enhanced, curtailed, or foreclosed if the area were included in the national wild and scenic rivers system?

Horse Creek Canyon is part of the Pit River Canyon WSA; therefore, it is managed under the more restrictive stipulations of the wilderness IMP. Should Congress reject wilderness status for the WSA--and designate the Lower Horse Creek Canyon WSR--wild and scenic river stipulations would then be enforced. (Stipulations would also vary according to whether the creek segment receives a 'wild' or 'recreational' designation.) For the sake of clarity alone, the following discussion is based on the premise that Congress rejects wilderness designation for the WSA but grants wild and scenic river status for lower Horse Creek.

Enhanced Use: WSR designation would enhance protection for raptor habitats (including some species which are federally-listed)--and other important fish and wildlife habitats--by eliminating the threat posed by dams and water development within the canyon. Non-motorized recreation would be preserved through maintenance of the canyon's walk-in access and primitive, undeveloped character.

Curtailed Use: Some watershed enhancement projects would be constrained, or require alternative methods, to preserve the scenic quality of the canyon. For example, springs on canyon slopes are being crowded by invasive juniper. Clearcutting may be the most expeditious treatment, but an alternative method would be necessary in order to preserve scenic quality. Infrastructure and activities connected with utility transmission and other public uses (e.g. right-of-ways for electrical transmission, natural gas and water lines) would not be allowed.

Foreclosed Use: Dams, water diversions, levies, hydropower and other forms of water development would be precluded by wild and scenic river designation.

4. Which federal agency would administer the designated river segment?

The BLM would be the sole federal agency responsible for administering the Lower Horse Creek Canyon WSR.

5. To what extent would the cost of administration be shared by State and local agencies?

Administrative costs would be the sole responsibility of the BLM. Local public interest in designation is thought to be low to moderate. The California Department of Fish and Game (CDFG) is responsible for fish and wildlife management within the river corridor.

6. What are the estimated costs to the federal government?

a. What would be the cost of acquiring lands and interests in lands?

Acquisition costs would be minimal since the area is almost entirely public land. However, a 40-acre parcel of rimrock and slope is in private hands. This should be acquired if the owner is willing. An informal estimate would place the cost at around \$12,000 (\$300/acre). The only possible additional cost would be easement or property acquisition to improve public access--particularly to the south rim from (Lassen) County Road 404.

b. What would be the cost of administering the (proposed) Lower Horse Creek Canyon Wild and Scenic River?

One-time expenses: These would be management plan development (BLM costs of \$15,000 to \$20,000, plus \$2000 for printing), area development (capital investment in facilities such as interpretive displays, about \$9,000), and initial implementation costs for area administration (e.g. costs for map development [including initial print run]—\$10,000 to \$15,000).

Recurring expenses: These would be facility operation and maintenance costs of \$1,000/year and general administration costs (e.g. boundary posting, cleanup, monitoring, and law-enforcement patrols) of \$5,000/year.

Therefore, total initial administration costs (including first-year recurring expenses) would be \$42,000 to \$52,000. Estimated yearly expenses for area administration would be \$6,000.

7. To what degree might the State (or its political subdivisions) participate in protecting or administering the river, should it become part of the national wild and scenic river system?

The BLM would have sole responsibility for protecting and administering the (proposed) Lower Horse Creek Canyon WSR. It is not anticipated that state and/or local governmental entities would participate in the administration or preservation of the Pit River if proposed for inclusion in the national wild and scenic river system. However, there is no opposition from County, State, or Federal governments and the Pit River Tribe is on record for support of Lower Horse Creek for designation and inclusion into the wild and scenic river system.

8. *Are local zoning and land-use controls adequate to ensure protection of the river's outstandingly remarkable values and prevent incompatible development?*

No, county zoning and land-use controls are not adequate to provide the permanent, long-term protection required to ensure that the free-flowing character and outstandingly remarkable values of lower Horse Creek Canyon are not destroyed or compromised by a dam or other water resource development. The need for dams (flood-control, water storage, and energy production) in the foreseeable future is expected to rise. BLM management and protection of sensitive resources can be expected to continue, but National priorities can change management, or redirect present management strategies.

9. *What are the intentions and abilities of State and local governments to protect and manage the outstandingly remarkable values of the eligible river segment?*

State and local government management of the WSR has not been discussed, although support for designation has been discussed with local governments and there is no opposition for designation and inclusion into the national wild and scenic river system. Due to current budget restraints on state and local governments, it is doubtful that those entities would provide much of the management of the Lower Horse Creek WSR. Opportunities may exist that these entities enter into partnerships with BLM for some part or phase of management activities associated with the Lower Horse Creek WSR.

10. *What is the level of support versus the level of opposition to wild and scenic river designation for Lower Horse Creek Canyon?*

The Lower Horse Creek Canyon WSR met eligibility criteria within the BLM planning process, and was recommended for further study. After additional study and analysis, the Lower Horse Creek Canyon WSR has been recommended as suitable for inclusion into the wild and scenic river system.

Friends of the River, California Wilderness Coalition, Wilderness Society, Natural Resources Defense Council, as well as private individuals have identified the Pit River as potentially eligible for recommendation to congress to be included in the wild and scenic river system.

On September 16, 2005, the Pit River Tribal Council officially supported designation of Lower Horse Creek for inclusion into the wild and scenic river system, and wanted their support documented in the comments for the final EIS/RMP for the Alturas Field Office.

The Lassen County Board of Supervisors, State and Federal legislators have all been briefed on the proposal, and no opposition exists for designation and inclusion of Lower Horse Creek into the wild and scenic river system.

No public comments were received during the Draft Alturas Resource Management Plan public comment period (summer 2006) that opposes designation of Lower Horse Creek for inclusion into the national wild and scenic river system.

11. *Would wild and scenic river designation be consistent with regional objectives for other-agency policies, plans, and programs?*

Yes, the Lassen National Forest to the south, and the Modoc National Forest to the north have both undergone wild and scenic river planning. The Modoc N.F. has completed eligibility on two creeks; Boles and Willow (further north of the WSR), additional planning will be continued in the Land use plan update. The Lassen National Forest has completed their land use plan and is waiting for wild and scenic river designation from Congress.

Designation would also be consistent with:

- The Lassen County 2004 Economic Development Strategic Plan; Economic Development Policy #5, Tourism Promotion and Development (p. 6); “Capitalize on the beauty, wildlife and abundant open space in Lassen County by promoting compatible tourism and visitor services.”
- The Lassen County General Plan–2000 includes this statement: “The basic resource of the recreation industry in Lassen County is its natural scenic quality. This quality must be protected, enhanced and appropriately exploited.” Lassen County’s emphasis on protecting its natural scenic resources, plus trail development and maintenance and promotion of special outdoor recreation events, support protecting the free-flowing character of lower Horse Creek for the use and enjoyment of residents and visitors to Lassen County.
- Designation of the eligible segment supports Lassen County’s official policy of protecting scenic resources. The presence of a wild and scenic river would enhance Lassen County’s reputation as a premier outdoor recreation destination.
- The Lassen County Chamber of Commerce systematically promotes enjoyment of the County’s natural resources for fishing, hunting, and sight-seeing. Protecting the free-flowing character of lower Horse Creek is consistent with their message of espousing Lassen County as a sportsmen’s vacation destination.

12. Would wild and scenic river designation contribute to basin or river system integrity?

Horse Creek’s waters are derived from snowmelt augmented by cool mountains springs and wet meadows. The creek flows through a broad volcanic plateau before losing itself in a dramatic canyon that joins a larger canyon where Horse Creek enters the Pit River. The creek segment is part of the Pit River Canyon Wilderness Study Area. The lower Horse Creek Canyon provides high-quality recreation (e.g. fishing, hunting, hiking and backpacking, photography, nature study and bird-watching) in an unaltered natural environment. Designation would protect a distinctive aquatic environment, associated riparian and upland areas, and canyonland features that provide critical habitats for fish and wildlife within and beyond the canyon rim. Creeks such as this are rare and special places on this arid volcanic plateau--and in Northern California generally. WSR designation would help preserve the hydrologic integrity of the watershed and the free-flowing character of this pristine creek.

13. What is the potential for developing water resources?

Waters within what is now the Pit River Canyon WSA (which includes the proposed Lower Horse Creek Canyon WSR) were part of a hydropower withdrawal prior to establishment of the wilderness study area in the 1970s. Development of water resources are prohibited under the wilderness IMP. This policy would, of course, be sustained if the area receives wilderness designation. In any case, this is probably immaterial with respect to Horse Creek, since flow is very modest and characterized by large seasonal and yearly fluctuations. Therefore, water supply is minimal, but would be adequate--or sufficiently reliable--to generate power from a reservoir system. Due to WSA consideration there have been no applications, studies, or interest in water development within the canyon of Lower Horse Creek since it became part of the Pit River Canyon WSA in the late 1970s. Although, if Congress released this area from wilderness consideration, there is a good chance that water developments would be considered for this drainage.

14. What is the ability of the agency to manage the river area (segment) as a wild and scenic river?

The Alturas Field Office would have the ability to manage Lower Horse Creek Canyon as part of the national wild and scenic river system. On-going management of the Pit River Canyon WSA would also coincide with WSR management. Recreational use in the study corridor is unknown, but probably quite low at this time. The main recreational activities are hunting, fishing, photography, hiking, camping, sightseeing, bird watching, and wildlife observation. These recreational activities are not intense at this time, and there are no existing or planned developed recreation opportunities.

15. What other issues and concerns were identified in the land use planning process?

a. *Fire management:* An appropriate management response on all wildland fires within the river corridor would be provided with an emphasis on firefighter and public safety. The appropriate management response would provide initial attack and full suppression on wildland fires which may threaten the outstandingly remarkable values within the stream corridor. The WSR study corridor and uplands are currently under fire protection from California Department of Forestry and Fire Protection, who coordinates with BLM for fire management. Fire fighting tactics would also adhere to guidelines established for WSAs in the “Interim Management Policy for Lands under Wilderness Review”. Use of heavy equipment in the WSR and WSA will be avoided. If heavy equipment is needed for emergency situations, line officer approval would be required for use, and equipment would be restricted to existing roads and trails on the plateau (no trails or roads exist within the WSA/WSR study area). Use of retardant would be allowed only on the rims and plateaus for initial attack, and restricted within the canyon and riparian corridor. Retardant use during extended attack would be considered as a part of the wildland fire situation analysis, considering the resource values at risk and public and firefighter safety.

Finding and Rationale

The 3-mile study corridor on Lower Horse Creek is administratively recommended suitable for potential designation by Congress as a national wild and scenic river, with a tentative classification as “wild”. Based on the eligibility assessment (November 2003) it was determined that the Lower Horse Creek Canyon WSR met the criteria for ‘scenic’, “historic”, and “wildlife habitat/populations” as outstandingly remarkable values. Specifically, Lower Horse Creek Canyon has outstanding scenic values associated with the change of color in the vegetation during the fall, coupled with the dynamic vistas, panoramas, spectacular geologic features and the associated colors of the canyon. Recreational visits are low at this time, but with the close proximity to Redding, California and the Pit River Canyon WSA recommended as suitable for wilderness designation, it is anticipated that visits will increase dramatically in the future with the upward trend for “wilderness type” recreation activities. The river related recreation opportunities are classified as high for: hiking, photography, wildlife observation, camping, fishing, and hunting.

The potential designation of Lower Horse Creek Canyon as part of the national wild and scenic river system would ensure an adequate and long-term level of protection relating to the outstandingly remarkable values for which it was found eligible. The WSR study area is within the Pit River Canyon WSA and all protections are afforded the resources as above. If congress elected not to include the Pit River Canyon into the National Wilderness System, the protections for these outstandingly remarkable values and rare resources would be in jeopardy. Tentatively recommended as “wild” under this suitability assessment, the classification would provide the needed level of protection for these outstandingly remarkable values.

APPENDIX J

Horse Creek is linked to the Pit River, and this canyon type is rare and unique in northern California on public lands. A tentative recommendation based on the eligibility assessment is a classification of a “wild” designation in the national wild and scenic river system. The entire 3-mile study corridor is publicly owned. There are no mining claims, saleable, or leasable mineral potential within the corridor. Hydropower potential on Horse Creek is low. There is a potential, albeit low, for hydropower or water storage system, but the WSR is within the Pit River Canyon WSA which negates development as long as the study area is in WSA status. If Congress were to delete the WSA, an option for development would be available. However, there are no applications or interest at the present time. The WSR study area lands were released from a power site withdrawal in the 1970’s. Potential designation and inclusion in the national wild and scenic river system would foreclose the opportunity for any water development such as flood control, hydropower, and water supply dams, etc. Livestock grazing takes place only on the canyon rims and is nonexistent within the study corridor due to the steep canyon and boulder strewn bottom, as such, grazing uses would not change.

The potential inclusion of Lower Horse Creek Canyon as part of the national wild and scenic river system would add a moderate amount of protection to the outstandingly remarkable wildlife values, as the Golden Eagle is protected under the “Eagle Act (EA).” Under the EA the potential for impacting developments would be diminished but not foreclosed. However, national priorities for water development or hydropower could force the Golden Eagle out of this territory; the protection afforded through the EA would no longer play a key role in the protection of the species or habitat.

Appendix K

Energy and Minerals

Surface Use and Occupancy Requirements

APPENDIX K

SURFACE USE AND OCCUPANCY REQUIREMENTS

This appendix describes practices intended to be applied, when needed, to minimize surface disturbances.

The requirements listed below will pertain to all activities conducted in the Alturas Field Office area. They will be applied primarily to the federal surface estate. However, in the case of activities related to the development of oil and gas and other minerals, these standards could be applied to split estate in order to meet the requirements of Onshore Oil and Gas Order No. 1, federal law or regulations or with the concurrence of surface landowners.

The intent of the Surface Use and Occupancy Requirements is to best manage mechanical surface disturbance and other effects on specified natural resources. Mechanical surface disturbance is created by the use of such things as tools and machinery. Activities such as grazing by livestock or wildlife or certain recreational pursuits (e.g., hiking) are not considered to create surface disturbance in the context of these requirements. Circumstances of waivers of the requirements have been included so that they will not be applied needlessly. Exceptions to the requirements will be considered in emergency situations involving human health and safety and the protection of the environment.

The basis for the “200 meter rule” used in the Surface Use and Occupancy Requirements is 43 CFR 3101.1-2, which states that, at a minimum, mitigation measures are deemed consistent with oil and gas lease rights if they do not require “...relocation of proposed operations by more than 200 meters...” The intent of the actions described in this Appendix is to comply with the regulations and allow the relocation of proposed activities to mitigate impacts, but by no more than 200 meters, without undertaking additional NEPA analysis. The opportunity exists through the NEPA process to design mitigations of impacts that would require relocations greater than 200 meters. The “200 meter rule” simply allows relocation of an activity, such as during on-site meetings prior to APD approval, without the need for detailed NEPA analysis.

The Surface Use and Occupancy Requirements identify minimum use standards for activities around certain natural and man-made features to ensure protection of those features. Specific information on those features is maintained for review at the Alturas Field Office.

Table AI - 1 estimates the acreages affected by the Surface Use and Occupancy Requirements. These estimates reflect the maximum amount of acreage that could be affected and are for purposes of disclosure, comparison and analysis, only. The most likely situation is that the requirements will cumulatively affect only a small area.

- **Wildlife Habitat Projects:** Surface disturbances will not be allowed within up to 200 meters of existing or planned wildlife habitat improvement projects. Large-scale vegetation manipulation projects such as prescribed burns will be excepted. This requirement will be considered for waiver with appropriate off-site mitigation, as determined by Authorized Officer.
- **Raptor Nests:** Raptor nests on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity of the nest.

- **Slopes or Fragile Soils:** Surface disturbance will not be allowed on slopes over 30 percent. Exceptions will be considered for authorized mineral material extraction sites and designated OHV areas, for the installation of projects designed to enhance or protect renewable natural resources, or if a plan of operations and development which provides for adequate mitigation of impacts was approved by the Authorized Officer. Occupancy or use of fragile soils will be considered on a case-by-case basis.
- **Streams, Rivers and Floodplains:** Surface disturbance will not be allowed within up to 200 meters of the outer edge of 100-year floodplains, to protect the integrity of those floodplains. On a case-by-case basis, an exception to this requirement may be considered based on one or more of the criteria listed below. The first three criteria would not be applied in areas of identified critical or occupied habitat for federally listed threatened or endangered species.
 - Additional development in areas with existing developments that have shown no adverse impacts to the riparian areas as determined by the Authorized Officer, following a case-by-case review at the time of permitting.
 - Suitable off-site mitigation if habitat loss has been identified.

An approved plan of operations ensures the protection of water or soil resources, or both.
 - Installation of habitat, rangeland or recreation projects designed to enhance or protect renewable natural resources.
- **Playas and Alkali Lakes:** Surface disturbance will not be allowed within up to 200 meters of playas or alkali lakes. Waiver of this requirement will be considered on a case-by-case basis for projects designed to enhance or protect renewable natural resources. An exception for oil and gas development will be considered if playa lake loss was mitigated by the protection and development of another playa exhibiting the potential for improvement. Mitigation could include: installing fencing; developing a supplemental water supply; planting trees and shrubs for shelter belts; conducting playa basin excavation; constructing erosion control structures or cross dikes; or by improving the habitat in another area.
- **Springs, Seeps, Lakes and Reservoirs:** Surface disturbance will not be allowed within up to 200 meters of the source of a spring or seep, or within downstream riparian areas created by flows from the source or resulting from riparian area management. Surface disturbance will not be allowed within up to 200 meters of lakes or reservoirs or the adjacent riparian areas. Exceptions to this requirement will be considered for the installation of habitat or rangeland projects, designed to enhance the spring or seep, or downstream flows.
- **Caves:** Surface disturbance will not be allowed within up to 200 meters of known cave entrances, passages or aspects of significant caves. Waiver of this requirement will be considered for projects that enhance cave resources or when an approved plan of operations ensures the protection of cave resources.
- **Sage-grouse:** Lands within ¼ mile of sage-grouse leks will have no surface occupancy (1,507 acres around 12 leks). If new leks develop, the same restrictions will apply to them. Drilling for oil and gas and 3-D geophysical exploration operations will not be allowed in sage-grouse habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. to 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting.

Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise. Exceptions to these requirements will be considered for areas of no or low sage-grouse strutting activity, or unoccupied habitat, including leks, as determined at the time of permitting, or in emergency situations.

- **Visual Resource Management:** Painting of oil field equipment and structures to minimize visual impacts will be required. Low profile facilities also may be required, when needed, to reduce the contrast of a project with the dominant color, line, texture, and form of the surrounding landscape. Other surface facilities or equipment approved by the BLM, such as large-scale range improvements or pipelines, will be painted, when needed, to conform with the requirements of visual resource management to minimize visual impacts. The selected paint color will match as closely as possible the predominant soil or vegetation color of the area.
- **Recreation Sites:** Surface disturbance will not be allowed within 200 meters of developed recreation areas including campgrounds, interpretive sites, etc. Waiver of this requirement will be considered for projects that enhance ecological quality in the area

**Table A1-1
SUMMARY of ESTIMATED ACREAGES AFFECTED by
SURFACE USE and OCCUPANCY REQUIREMENTS
ALTURAS FIELD OFFICE**

FOR PURPOSES OF ANALYSIS ONLY

RESOURCE OR FEATURE	ACRES
Wildlife Habitat Projects	5,500
Raptor Nests	20,000
Slopes/Fragile Soils	103,000
Sensitive Plants	57,000
Streams, Rivers, Floodplains	99,000
Playas and Alkalai Lakes	2,400
Springs, Seeps, Lakes and Reservoirs	22,000
Caves	1,700
Sage-Grouse	
timing requirements	125,000
occupancy requirements	1,507
Visual Resource Management	55,000
Recreation Sites	675

Notes:

1. For purposes of analysis, acreages represent the maximum number of acres affected by the requirements. Acreages actually affected when the requirements are applied will be substantially less than those listed.
2. Acreages are not additive, since many different features may occur in the same area.
3. Acreages represent BLM surface only.

Appendix L

Alturas Land Tenure Adjustment Plan

**BUREAU OF LAND MANAGEMENT
ALTURAS FIELD OFFICE, CALIFORNIA**

**Land Tenure Adjustment Plan and Amendment
of the Alturas RMP, Cinder Cone MFP and Mt. Dome MFP**

Names of Plans Amended (the “Alturas Plans”):

Alturas Resource Management Plan and Environmental Impact Statement (Alturas RMP)

Date Approved: August 28, 1984

Cinder Cone Management Framework Plan (Cinder Cone MFP)

Date Approved: July, 1973

Mt. Dome Management Framework Plan (Mt. Dome MFP)

Date Approved: November 24, 1981

Cedar Creek/Tule Mountain Integrated Resource Management Plan (IRMP)

Date Approved: December 1989

Tablelands IRMP

Date Approved: June, 1999

1.0 INTRODUCTION

The Alturas Field Office is located in Northeastern California. The Field Office boundaries encompass public land in four counties as follows:

Lassen	Modoc	Shasta	Siskiyou
265,611 ac	140,975 ac	52,120 ac	38,736 ac

This constitutes a total public land base of 497,442 acres.

The Field Office includes a few large contiguous blocks of public land, such as on the Likely Tablelands, Tule Mountain and in Silva Flat. However, much of the rest of the public land is located in smaller, scattered parcels. A significant portion of the acreage under the jurisdiction of the Field Office is also within the ancestral homelands of the Pit River, Modoc, Shasta and Klamath Indian Tribes.

This Land Tenure Adjustment (LTA) Plan Amendment has two general goals: (1) to implement and expand on the land acquisition decisions of the existing Alturas Plans; and (2) to expand on the disposal and exchange decisions of the Alturas Plans. The management goals and objectives identified in the existing Alturas Plans will continue, except where specifically changed by this Plan Amendment. This Plan Amendment must be read in the context of the established goals and objectives for public land management that have already been set in the existing Alturas Plans. This Plan Amendment is intended as a process step, enabling the Alturas FO to use exchanges and other disposal methods to achieve the goals and objectives of the existing Alturas Plans. This Plan Amendment does not commit the Alturas FO to conduct any specific exchange or other disposal.

This LTA Plan Amendment identifies broad areas of public lands for retention and intensive management in accordance with the goals and objectives of the Alturas Plans. These areas are referred to as **Retention/Acquisition** areas, and they represent portions of, and in some cases all of specific existing Management Areas (MAs) as described in the existing Alturas Plans. Within these retention/acquisition

areas, the BLM will work with willing private landowners to complete land exchanges that will provide public land management benefits as well as management benefits for the private landowners. The retention/acquisition areas where the BLM wishes to acquire private land by exchange are generally larger expanses of public lands with smaller private inholdings. These retention/acquisition areas are those places where the BLM intends to focus on long-term management of the public lands, in accordance with the goals, values and objectives identified in BLM planning. This LTA Plan Amendment also adds an objective of acquiring lands along the Pit River and Hat Creek in Shasta County.

In addition, this LTA Plan Amendment identifies broad areas of public lands where the BLM generally intends to dispose of the existing public lands, either by land exchange or sale. These areas are referred to as **Disposal** areas, and they represent areas where the BLM will not be seeking to acquire any private lands by land exchanges or other methods. Within these disposal areas, there may be some specific parcels of public land that the BLM intends to retain in public ownership for a variety of resource management reasons. These public land parcels will be in a “**custodial**” category, where the BLM will continue to manage them for existing resource values. The public lands to be exchanged or sold into private ownership in the disposal areas are generally smaller, scattered, isolated parcels surrounded by private land, in areas where the BLM does not generally intend to focus on long-term continued management.

1.1 Exchange Objectives

The BLM Alturas Field Office (FO) will use land exchanges to manage the public lands in the Alturas FO in accordance with the policy objectives established by the Congress of the United States in Sections 102(a)(8), 102(a)(12), and 206(a) of the Federal Land Policy and Management Act (FLPMA) of 1976:

Sec 102(a): “The Congress declares that it is the policy of the United States that -
 (1) the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest.”

102(a)(8): “...the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;...”

102(a)(12): “the public lands be managed in a manner which recognizes the Nation’s need for domestic sources of minerals, food, timber, and fiber from the public lands ...”

206(a): “A tract of public land or interests therein may be disposed of by exchange by the Secretary [of Interior] under this Act ... where the Secretary ... determines that the public interest will be well served by making that exchange: *Provided*, That when considering public interest the Secretary ... shall give full consideration to better Federal land management and the needs of State and local people, including needs for lands for the economy, community expansion, recreation areas, food, fiber, minerals, and fish and wildlife and the Secretary ... finds that the values and objectives which Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the values of the non-Federal lands or interests and the public objectives they could serve if acquired.”

The Alturas Plans contain full descriptions of the resource values and objectives of the Federal lands to be retained in Federal ownership. This LTA Plan Amendment is intended to implement the goals and objectives identified in the Alturas Plans by acquiring private lands with potentially high public resource values which would provide better Federal land management, in exchange for public lands that would meet the needs of State and local people as described in Section 206(a) of FLPMA. Potential exchanges are intended to result in better Federal land management by the BLM, and in better private land management for the landowners who may acquire the public lands through the exchanges.

There are different methods for completing land exchanges, In many cases, BLM will deal directly with the private landowner, with both sides of the exchange paying for their share of the exchange cost, or completing different parts of the exchange process. Given the complex nature of the exchange process (see Appendix A), private landowners may wish to pay various contractors to assist them in completing their share of the exchange process.

In other cases, BLM might use third-party facilitators for land exchanges. In a third-party exchange, the BLM bundles together scattered parcels of public land and offers them to the third-party facilitator in exchange for private lands that the BLM has asked the facilitator to acquire in other areas. Generally, third-party facilitators are only interested in trading for BLM managed land that they know they can sell quickly to adjoining landowners or other interested buyers. Where public land is completely surrounded by private land and has no legal access, the parcel would logically be offered to the surrounding landowner. In cases where there is more than one adjoining landowner, the third party facilitator may negotiate with the different owners or conduct a competitive process so all adjoining owners have an opportunity to acquire the parcel. Individual landowners may act as third-party facilitators to assist in completion of their proposed exchanges.

1.2 Sale Objectives

In some of the disposal areas where the BLM does not generally intend to focus on long-term continued management of smaller parcels, there may not be any interest by the potential purchasers in dealing with third party land exchange facilitators. In those cases, it may be possible to dispose of public lands through public sales under Section 203 of FLPMA (43 USC 1713), in accordance with the policy objectives established by the Congress of the United States in Sections 102(a)(8), 102(a)(12) of FLPMA, as described above. Disposals of public lands by sale under Section 203 of FLPMA have different requirements and conditions than land exchanges under Section 206 of FLPMA. These requirements and conditions are contained in Section 203(a) through (g). Section 203(a) contains the general sale criteria:

“A tract of public lands ... may be sold under this Act, where, as a result of land use planning required under section 202 of this Act, the Secretary [of Interior] determines that the sale of such tract meets the following disposal criteria:

- (1) such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or
- (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or
- (3) disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in Federal ownership.”

Methods of sale and consideration for potential purchasers are specified in Section 203(f):
 “Sales of public lands under this section shall be conducted under competitive bidding procedures to be established by the Secretary. However, where the Secretary determines it necessary and proper in order (1) to assure equitable distribution among purchasers of lands, or (2) to recognize equitable considerations or public policies, including but not limited to, a preference to users, he may sell those lands with modified competitive bidding or without competitive bidding. In recognizing public policies, the Secretary shall give consideration to the following potential purchasers:

- (1) the State in which the land is located;
- (2) the local government entities in such State which are in the vicinity of the land;
- (3) adjoining landowners;
- (4) individuals; and
- (5) any other person.”

This LTA Plan Amendment does not identify specific parcels for sale, but identifies land disposal areas and establishes general criteria to be used in later determinations that a specific tract may be suitable for sale under Section 203 of FLPMA. Each potential sale will be examined on a case-by-case basis to evaluate equitable considerations and public policies that may be used to determine whether any consideration for potential purchasers is needed, in accordance with Section 203(f).

2.0 DESCRIPTION OF THE PLAN AMENDMENT

This Amendment of the Alturas Plans expands on the land acquisition decisions of the Alturas Plans, and expands on the disposal/exchange decisions of the Alturas Plans. This LTA Plan Amendment identifies broad areas of public land for retention/acquisition where private lands may be acquired by land exchange, and broad areas of public lands for disposal through exchange and sale. For the reasons given in the introduction to this LTA plan amendment, it has been determined that disposal of public land parcels in accordance with this plan amendment will serve the national interest. The following retention/acquisition and disposal decisions will be implemented by this LTA Plan Amendment, on public lands managed by the Alturas FO.

2.1 Planning Decisions for Retention/Acquisition Areas and Subregions

A. The BLM will acquire, through direct exchange with willing owners, through third-party exchanges for lands owned by willing sellers, or through other suitable acquisition methods from willing owners, private lands within the retention/acquisition management areas or subregions that enhance the management goals, values and objectives identified for the management areas in the Alturas Plans or in specific activity management plans for those areas.

B. Public lands within Areas of Critical Environmental Concern, Wilderness Areas, Wilderness Study Areas, Research Natural Areas, National Cooperative Land and Wildlife Management Areas, National Historic and Scenic Trails and other legally designated special status areas (established by Act of Congress, Executive Order, Secretarial Order, Withdrawals, or other formal agency designation through Federal Register notice) will not be exchanged or otherwise removed from public ownership. The BLM may acquire, by direct or third-party exchange, or by other acquisition methods, private lands (from willing owners) within those designated special areas.

C. Parcels of public lands within the retention/acquisition management areas may be exchanged only for private lands within the same or other Alturas FO retention/acquisition areas, or within other adjacent BLM FO management areas at the discretion of the Alturas Field Manager. The exchange must have been specifically determined by the BLM to well serve the public interest and to provide enhancement of the management goals, values and objectives identified for those areas in the Alturas Plans, other FO planning, or in specific activity management plans for those areas. Such exchanges may occasionally include incidental acquisitions of lands that are within the boundaries of other Federal land managing agencies, but only as a portion of a larger exchange for lands that will be managed by the BLM. Acquired lands within the boundaries of other Federal agencies' management units will be automatically transferred to the other agencies' jurisdiction, by operation of law. Public (BLM) lands within retention/acquisition areas will not be used as an exchange base to acquire lands for other agencies.

D. All newly acquired parcels would be initially managed the same as similar adjacent parcels, unless the site-specific environmental analysis and the record of decision for that exchange identifies different management prescriptions. Any such management prescriptions and/or resource allocations would not require additional land use plan amendments.

E. The Cinder Cone MFP is hereby amended to add a management objective of acquiring lands from willing private owners for the purpose of providing access to the Pit River and Hat Creek and for the enhancement of riparian, fisheries, recreation, cultural resources, watershed and wildlife values in the area.

F. Exceptions to these exchange and acquisition methods may be made, at the discretion of the BLM Authorized Officer, for the public interest. Such exceptions include the following:

1. Based on a showing of public need, the Authorized Officer may approve specific leases and/or sales under the Recreation and Public Purposes Act within the retention/acquisition areas, if no private lands are reasonably available for the proposed public use.

2. At the discretion of the BLM Authorized Officer, public lands may on rare occasions be sold within the retention/acquisition areas under Section 203 of FLPMA, if they meet the criteria of that Section, and if they meet either of the two following described criteria:

- (a) the sale is needed to resolve good-faith unintentional occupancy trespass, involving substantial buildings that cannot be feasibly moved; and the occupancy trespass has resulted from survey errors, or updated surveys that show the buildings were inadvertently located on public land; and the occupancy trespass cannot be resolved under either Section 315 or Section 316 of FLPMA; and such lands are not suitable for disposal by third-party or direct land exchanges; and funding is available, either within the Alturas FO's Lands and Realty budget appropriation, or through contributed funds from potential purchasers, to conduct the necessary environmental studies prior to sale of the specific parcels. Such sales would be limited to the smallest feasible aliquot part or lot that would resolve the trespass, as determined by the BLM Authorized Officer.

- (b) the sale is needed to resolve land management problems that consist of small "slivers" of public land isolated by larger areas of private land,

resulting from prior survey errors or more-recent surveys of previously unsurveyed lands; and such lands do not provide legal access to other areas of public lands, either because they are too small to feasibly accommodate such access or because they do not connect to other public lands; and such lands are not suitable for disposal by direct land exchanges with the surrounding landowner; and funding is available, either within the Alturas FO's Lands and Realty budget appropriation, or through contributed funds from potential purchasers, to conduct the necessary environmental studies prior to sale of the specific parcels. Such sales would be limited to the smallest feasible aliquot part or lot that would resolve the issue, as determined by the BLM Authorized Officer.

2.2 Planning Decisions for Disposal Areas and Subregions

A. Various smaller, scattered parcels of public lands, outside the retention/acquisition areas and within the designated disposal areas, may be disposed of by exchange, either through direct exchange or through third-party exchange agreements, whichever method provides the most public benefits.

B. Custodial Parcels within the Disposal Areas: Certain parcels within the designated disposal areas may be retained in public ownership if they are found to have superior resource values. Such values may include but are not limited to National Register quality prehistoric and historic sites, threatened and endangered species and habitat for such species, special status species habitat, significant wildlife habitat values, wetlands, floodplains, and any other legislatively protected resources. These parcels will be designated as “**Custodial**” parcels. Some custodial parcels have been identified during this planning amendment, and they are listed below. Other custodial parcels would be specifically identified during preparation of environmental analyses for individual disposals in the disposal areas. The BLM does **not** intend to acquire any additional private lands within or adjacent to these custodial parcels, and designation of a parcel as “custodial” does not obligate the BLM to conduct any specific management activities on that parcel.

C. Lands within the designated disposal areas may be sold, at the discretion of the BLM Authorized Officer, if they meet either of the two following criteria:

1. Based on a showing of public need, the Authorized Officer may approve specific leases and/or sales under the Recreation and Public Purposes Act within the disposal areas, if no private lands are reasonably available for the proposed public use.

2. Within the disposal areas, public lands may be sold under Section 203 of FLPMA if they meet the criteria of that section, and if they meet the following additional criteria: such lands are not suitable for disposal by third-party or direct land exchanges, due to a lack of interest in that disposal method by potential purchasers; and funding is available, either within the Alturas FO's Lands and Realty budget appropriation, or through contributed funds from potential purchasers, to conduct the necessary environmental studies prior to sale of the specific parcels.

D. On an exception basis, specific parcels of public lands within the disposal areas may be identified by the BLM Authorized Officer for exchanges to acquire lands that would be under the jurisdiction of other Federal agencies, if the specific exchange is documented to meet the exchange requirements of FLPMA. Any such exchanges must be funded entirely by the acquiring agency.

E. On an exception basis, the Bureau of Land Management would be willing to acquire specific private lands (from willing owners) within the disposal areas that contain verified remaining significant traces of the Applegate, Applegate-Lassen, Yreka, and Lassen Emigrant Trails. These National Historic Emigrant and Military Trails are unique linear resources on the landscape, and can provide significant values and opportunities within a managed and designated corridor.

F. The 480 acre parcel of public land east of Modoc Estates, in a disposal subregion in MA3 in Modoc County, will be used as the offset for the proposed Modoc National Wildlife Refuge acquisition at Dorris Reservoir.

2.3 **Planning Decisions for Both the Retention/Acquisition and the Disposal Areas and Subregions**

A. Separate, site-specific environmental analyses would be prepared for each land exchange, sale or other land disposal action conducted under this LTA Plan Amendment. All environmental analyses will comply with legislative and regulatory mandates, including but not limited to FLPMA, NEPA, the Endangered Species Act, the Wilderness Act, the various cultural resource protection laws, Executive Orders on wetlands and floodplains, etc. All land disposal patents would be subject to valid existing rights, and the BLM would consult with holders of permits, rights-of-way, easements and other valid existing uses during the exchange or other disposal process.

B. Third-party exchanges may be used for all lands within the Alturas FO area of jurisdiction, when they are determined to be in the public interest by the Alturas Field Manager. All of the Alturas Plans are hereby amended to reflect this authorized use of third-party exchanges.

C. Implementation of this LTA Plan Amendment by the Alturas FO would be done in compliance with the Memorandum of Agreement (MOA) with the US Fish and Wildlife Service, National Marine Fisheries Service, and the Forest Service. (Through this MOA the BLM agrees to promote the conservation of candidate, proposed and listed species and to consult/confer on listed and proposed critical habitat during the planning process. In accordance with the Endangered Species Act of 1973, the Alturas FO began plan-level Section 7 consultation in December 2000).

D. The following public lands will be held available for transfers to other Federal and State agencies or appropriate private entities through withdrawals or exchanges initiated by those agencies or the BLM:

Lava Beds National Monument: (a) Approximately 200 acres of public lands adjacent to the detached Petroglyph Point section of the Monument are located in Sections 3 and 10 of T. 46 N., R. 5 E., MDM. Inclusion of these lands in the Monument would enhance resource protection and public use values. The BLM will consult with the Bureau of Reclamation (BOR) to determine whether BOR

lands adjacent to the Monument would be suited for transfer to the Park Service. During consideration of this transfer, the Park Service and adjoining private landowners will be consulted to determine whether equitable considerations require that portions of this area be sold or exchanged to the adjoining landowners.

Tule Lake WWII Relocation Center: Public lands associated with the Tule Lake Relocation Center around the Newell Townsite are located in T 47 N., 5E. MDM. This land will be managed for preservation and stabilization and may be transferred to another agency or appropriate private entity once long term plans for preservation of historic lands are completed.

U.S. Forest Service: (a) 400 acres of public land in Cayton Valley in Sections 10 and 15 of T. 37 N., R. 3 E., MDM are best managed by the USFS. These lands are adjacent to and nearly surrounded by Shasta National Forest lands (administered by the Lassen NF) northeast of Lake Britton in Shasta County. (b) 240 acres of public land near Day, in Sections 15 and 24 of T. 39 N., R. 5 E., MDM, and 360 acres of land near Big Lake in Sections 22 and 27 of T. 38 N., R5 E., MDM, in Shasta County, are best managed by the USFS. These lands are adjacent to, and similar in resource management issues to National Forest lands in the Shasta NF (administered by the Lassen NF).

(c) Approximately 1300 acres of public land near Rattlesnake Butte, south of Mt. Hebron, in Siskiyou County, in Sections 2, 4, 8, 10 and 12 of T. 45 N., R. 1 W., MDM, are best managed by the USFS. These lands are adjacent to, and similar in resource management issues to National Forest lands in the Klamath National Forest.

California Department of Fish and Game: Public lands in Section 24 of T. 39 N., R. 7 E., and Section 19 of T. 39 N., R. 8 E., MDM (Pilot Butte) are habitat for a sensitive species (sage grouse). This parcel is best managed as part of the adjacent CDFG Ash Creek Wildlife Area, and would be transferred to the CDFG through an exchange or other action.

E. The Alturas Field Office will consult with appropriate Tribal governments prior to completing any proposed land exchange or sale. In accordance with existing laws and the policies of the Department of the Interior, the BLM will coordinate and cooperate with Native American Tribes in their efforts to acquire land through Act of Congress. The BLM Alturas Field Office will continue to pursue cooperation and consultation through appropriate Tribal Consultation Protocol Agreements. Potential land sales will be examined on a case-by-case basis, as described in Part 1.2 of this plan amendment, to evaluate equitable considerations and public policies that may be used to determine whether a Tribe should be given consideration for purchase as an adjoining landowner, in accordance with Section 203(f) of FLPMA.

2.4 Designation of Retention/Acquisition Areas and of Disposal Areas within the Management Areas identified in the Alturas Plans

The Alturas Plans identify twelve Management Areas (MA) within the Alturas FO, with land tenure decisions within each MA. This LTA Plan Amendment amends those land tenure decisions for the MAs. The following is a summary description of the proposed land tenure amendments for each MA:

2.4.1 MA1 - Tablelands This MA will be a **retention/acquisition** area in its entirety. Public lands may be exchanged only for private lands within this MA or within other retention/acquisition MAs.

Public lands within this MA are already managed for a wide range of multiple uses under the Tablelands Integrated Resource Management Plan (1999).

2.4.2 MA2 - Rocky Prairie This MA will have a **retention/acquisition subregion** [Rocky Prairie South], and a **disposal subregion** [Warm Springs Valley], as shown on the management area map. Due to prehistoric and historic cultural values, the following public lands within the Warm Springs Valley subregion will be kept in public ownership, in the **custodial** category: Public lands within Sections 26, 27, 32 and 34 of T. 42 N., R. 11 E., MDM.

Public lands in the Rocky Prairie South subregion support a number of important values including livestock grazing, wildlife habitat and recreation.

2.4.3 MA3 - Devil's Garden This MA will have two **retention/acquisition subregions** [Devil's Edge and Russell Slough], and two **disposal subregions** [Clover Swale and Mud Lake], as shown on the management area map.

Public lands in the Devil's Edge subregion support important deer winter range and riparian habitat. Public land in the Russell Slough subregion is important for livestock grazing, wildlife values and archeology.

2.4.4 MA4 - North Fork This MA will have one **retention/acquisition subregion** [Thoms/Joseph Creek], and two **disposal subregions** [North End and South End], as shown on the management area map. The Thoms/Joseph Creek retention/acquisition subregion contains significant deer winter range and critical public recreation values for Modoc County. Due to significant historic emigrant trail values, the following public lands on the Applegate/Lassen and Applegate Emigrant Trails will be kept in public ownership, in the **custodial** category: Public lands within Sections 2, 9 and 10, T. 46 N., R. 14 E., within Sections 27 and 34, T. 45 N., R. 13 E., and Section 29, T. 45 N., R. 14 E., MDM.

2.4.5 MA5 - Big Valley This MA will have four **retention/acquisition subregions** [Roberts Reservoir, Juniper Creek, Rush Creek and Willow Creek], and a **disposal subregion** [Big Valley], as shown on the management area map. Due to antelope winter range values, the following public lands within the Fox Mountain and Barber Ridge portions of the Big Valley subregion will be kept in public ownership, in the **custodial** category: Public lands within Sections 12 and 13 of T. 40 N., R. 7 E., MDM; Sections 18, 19, 30 and 32 of T. 40 N., R. 8 E., MDM; Sections 3, 4, 5, 8, 9 and 10 of T. 39 N., R. 8 E., MDM.

Public lands in the Roberts Reservoir and Juniper Creek subregions support important wildlife and recreation values. Public lands in the Rush Creek subregion and in the Willow Creek subregion contain critical habitat for the Modoc sucker.

2.4.6 MA6 - Widow Peak This MA will be a **limited disposal** area. Public lands may be disposed of only by exchange as described in Part **2.1**, and then only for high resource value lands such as those along the Pit River and Hat Creek in Shasta County, or to provide access to the Pit River Canyon WSA, or other compelling reasons within retention/acquisition areas of the Alturas FO.

2.4.7 MA7 - Little Valley This MA will be a **retention/acquisition** area in its entirety. Public lands may be exchanged only for private lands within this MA or within other retention/acquisition MAs.

Public lands in the MA support important wildlife and riparian values as well as livestock grazing.

2.4.8 MA8 - Pit River Canyon This MA is a Wilderness Study Area (WSA) **retention/acquisition** area. Public lands within the WSA may not be exchanged unless Congress finds that such lands are not suitable for wilderness designation. The BLM will seek to acquire private or State lands within this WSA from willing owners, through exchange or purchase, in accordance with the provisions of the BLM's WSA guidelines.

2.4.9 MA9 - Madeline This MA will be a **disposal area**. Public lands may be exchanged as described in Part **2.1**.

2.4.10 MA10 - Mountain This MA will be a **retention/acquisition** area in its entirety. Public lands may be exchanged only for private lands within this MA or within other retention/acquisition MAs.

Public lands in this MA support important wildlife, sensitive species and riparian habitat. Recreation use and livestock grazing are other important public land uses.

2.4.12 MA12* - Cinder Cone This MA will have two **retention/acquisition subregions** [Fall River Mills and Hat Creek], and a **disposal subregion** [Cayton Valley], as shown on the management area map. The public lands in the Cayton Valley subregion will be held available for transfer to the U.S. Forest Service.

Public lands and lands proposed for acquisition in the Fall River Mills and Hat Creek subregions include important riparian and sensitive species habitat as well as recreation and archeological values.

2.4.13 MA13 - Mt. Dome This MA will have three **retention/acquisition subregions** [Lower Klamath Lake, Scorpion Point and Horse Mountain], and three **disposal subregions** [Butte Valley, Dorris and Tulelake], as shown on the management area map. Due to prehistoric and historic cultural values, and hazardous materials issues at the old Dorris dump, the following parcels will be kept in public ownership within the Dorris subregion, in the **custodial** category: Public lands within Sections 34 and 35 of T. 48 N., R. 1 E., MDM. Due to prehistoric and historic cultural values, the following parcels will be kept in public ownership within the Tulelake subregion, **in the custodial category**: Public lands within Section 6 of T. 47 N., R. 6 E., MDM (Bloody Point), and public lands within Section 23 of T. 46 N., R. 5 E., MDM.

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Public lands in the Lower Klamath Lake subregion support sensitive species, wild horses, wildlife values and livestock grazing. Public lands in the Horse Mountain subregion provide important seasonal ranges and migration habitat for antelope and deer. Public lands in the Scorpion Point subregion contain important prehistoric and historic cultural values.

*Note: MA11, identified in the Alturas RMP, is within the Surprise FO's area of jurisdiction, and is therefore not included within this plan amendment. To avoid confusion with the terminology used in the Alturas RMP, the number "MA11" is deliberately omitted from this plan amendment.

Appendix M

Interim Flat Rock Policy for the Alturas Field Office

**ALTURAS FIELD OFFICE
INTERIM FLAT ROCK POLICY
EFFECTIVE MAY 6, 2002**

BACKGROUND

Historically, the Alturas Field Office has permitted flat rock collection on public land under its jurisdiction. However, the permitting process has grown increasingly unmanageable over the last few years, leading to a suspension of the program in 2001.

We are faced with the following dilemma:

Commercial and personal flat rock collections are legitimate uses of the public land. By issuing permits, the BLM is providing a service to the public and contributing to local economies. However, the permitting process is labor intensive and time consuming. Due to limited staffing, permitting of flat rock collection has a low priority in the Field Office. And, issuing permits with inadequate oversight leads to increased resource theft and damage. Illegal operators use the cover of legitimate operations to become less noticeable. There is also increasing concern that flat rock collection is a vector for the spread of noxious weeds.

Balancing the benefits and costs of flat rock collection on public land is a difficult proposition. In response to the continuing demand for flat rock, we hereby initiate testing of a process whereby much of the clearance and assessment work for commercial operations is the responsibility of flat rock collector. The following information outlines the Interim Policy.

COMMERCIAL FLAT ROCK COLLECTION PROCESS AND POLICY

1. Applicant determines an area of proposed operations on the ground.
 - There must be legal access to the area.
 - Boundaries of proposed areas should be easily recognizable such as drainages, roads or fences.
2. Applicant prepares a topographic map delineating the boundaries of the area of proposed operations along with an estimate of the tonnage proposed for removal.
3. Applicant delivers the map and estimate to the Alturas Field Office.
4. Once the map and estimate are received in the Field Office, the staff has 14 days to review the proposal, notify potential interested parties, and make recommendations on, or adjustments to, the area of proposed operations. The Field Manager makes an initial determination of proposal feasibility and notifies applicant.
5. If the applicant receives the initial go-ahead from the Field Manager, the applicant must then flag the boundaries of the area with pink flagging to the extent that all flagging is visible from adjacent flags.
6. The applicant will then contract with a consultant acceptable to the Field Office to complete archaeological and threatened or endangered species clearances and an environmental assessment on the proposal. Botanical clearances will be completed between April and July when plants are most identifiable and will include identification of prevalent mosses and lichens. The environmental assessment must be completed on the approved Field Office template. The clearances and environmental assessment are then to be delivered to the Alturas Field Office.

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7. Once the clearances and EA are received in the Field Office, the staff has 30 days to review the documents and provide comments back to the applicant.
8. The applicant/consultant then finalizes the clearances and environmental assessment and returns the completed documents to the Field Office.
9. Depending on the level of public interest, the staff prepares a FONSI or FONSI/DR for public review.
10. Permit may be issued following the review/appeal period (minimum of 30 days). The permit will include stipulations: a) Limiting collection season (eg. 5/15-10/15). b) Trucks must be washed and free of noxious weeds and weed seed prior to entering public land. c) Permittee must present copies of weight slips for material removed from public lands.

Due to previous planning decisions, there is no flat rock collection authorized in the Cinder Cone Planning Area. This unit includes all areas of Shasta County administered by the Alturas Field Office. Other areas, such as Wilderness Study Areas and Areas of Critical Environmental Concern, are also closed to flat rock collection.

A list of potential EA/clearance consultants is available upon request from the Alturas Field Office. This list does not constitute a recommendation.

PERSONAL USE FLAT ROCK COLLECTION POLICY

Previously approved and worked flat rock collection areas will remain open to personal use only. Authorized personal use will not exceed 3 tons per calendar year per collector. Permits and maps may be obtained at the Alturas Field Office.

ALL FLAT ROCK IS CURRENTLY OFFERED AT \$12 PER TON

Appendix N

BLM Drought Management Policy

Alturas and Surprise Field Offices

**BLM DROUGHT MANAGEMENT POLICY
ALTURAS AND SURPRISE FIELD OFFICES**

When dealing with drought conditions and issues, the principal focus of the Bureau of Land Management's actions is to maintain the long-term health and productivity of the Nation's rangelands. Likewise, a conscious awareness needs to be maintained that every action taken may and often does place a hardship on those who use or rely on the public lands for their livelihood. This policy attempts to balance these two priorities.

Drought has a significant impact on vegetative vigor and stand composition, creates conditions favorable for invasion of exotic plants, reduces water quality and quantity, and creates economic hardship for many users of the public land. These problems can be exacerbated by livestock overgrazing. Therefore, it is critically important that, during periods of drought, livestock grazing be managed in a manner which minimizes potential adverse resource impacts.

During the normal course of business, BLM consults, cooperates and coordinates with grazing permittees and lessees (operators) to establish annual operating plans. When lack of moisture begins to impact grazing conditions on particular allotments, grazing use adjustments or mitigation measures are generally agreed to and implemented as necessary. When particularly dry conditions prevail, the Surprise and Alturas field offices propose to implement a consistent, understandable drought policy.

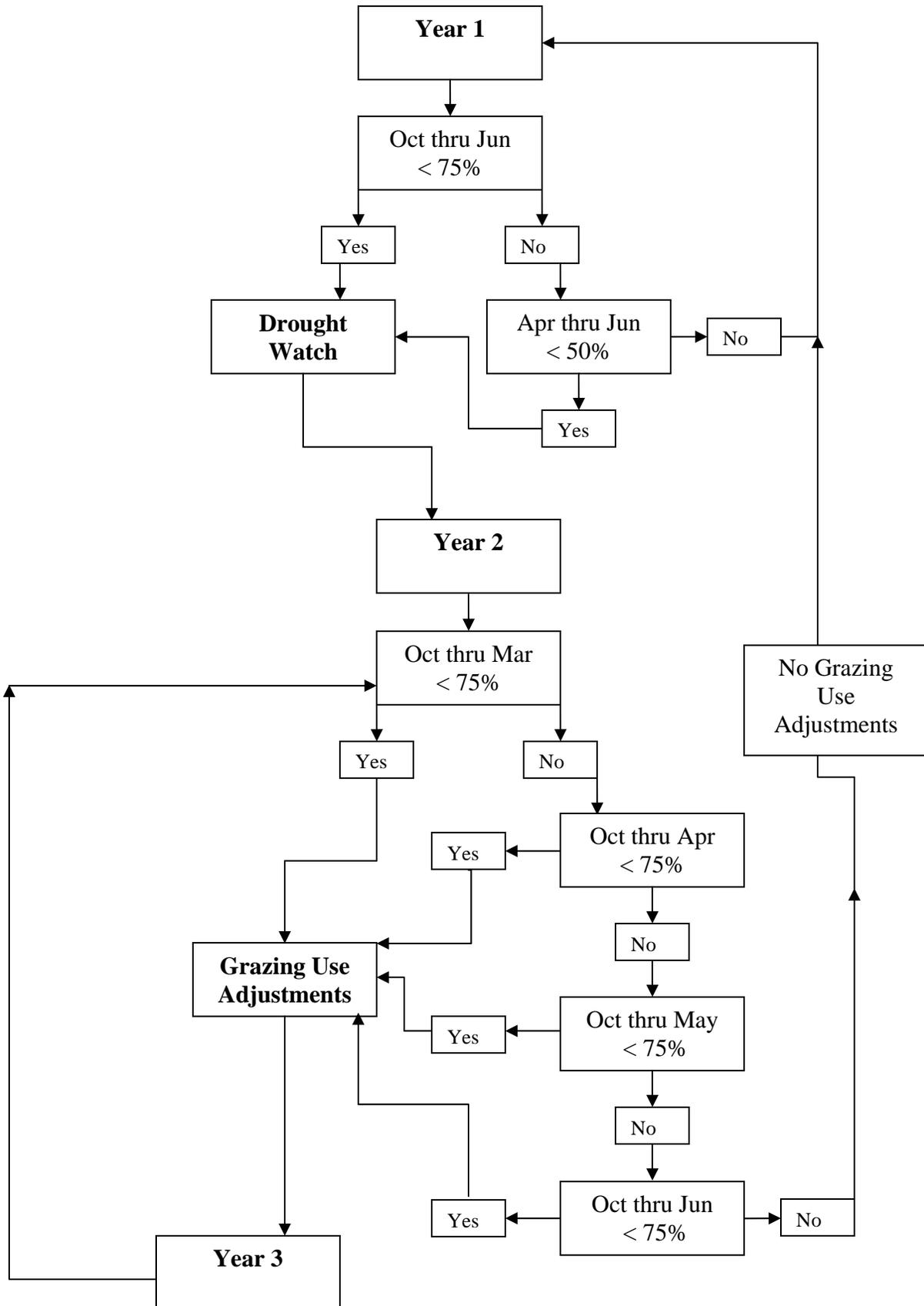
For the purposes of this policy, a drought watch will be declared in an area when precipitation received from October through June in a representative rain gauge is less than 75% of average. A drought watch will also be declared when the April through June precipitation is less than 50% of average. A drought watch may be declared over the entire two field office area, over individual field offices or portions of field offices. Average precipitation will be based on the most recent three decade period of record, where available. However, a minimum of a 10 year record is acceptable to determine average precipitation.

Once a watch is declared, operators will be notified that grazing use adjustments will be necessary unless precipitation received during the upcoming October through March period is at least 75% of average. The grazing use adjustments will be linked to the percentage of average precipitation actually received. For example, once a drought watch is declared, if the October through March precipitation is calculated at 57% of average, the operator would initially be allowed to graze for 57% of his normal season-of-use.

At a minimum, the BLM will notify operators no later than July 31 that the drought watch is in effect and that grazing use adjustments may be necessary during the upcoming grazing year. Once the grazing season begins, the BLM will also provide operators with precipitation updates early in May, June and July as appropriate. Grazing use adjustments may be fine tuned depending on the precipitation received in April, May and June.

For example if, by the end of April, the October to April precipitation has increased to 75% of average, the drought watch would be suspended and the operator could graze livestock as normally authorized so long as precipitation levels received in May and June do not drop the October-June precipitation total below 75% of average. On the other hand, if the end of April precipitation figure drops total precipitation to 50% of average, the operator would have to reduce use to 50% of the normally authorized season-of-use.

APPENDIX Simplified Diagram of a 3-Year Drought Watch – Grazing Use Adjustment Cycle



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When a drought watch is declared and this policy is put into effect for the upcoming grazing year, grazing operators will have the opportunity to meet with BLM staff to discuss potential allotment by allotment exceptions to drought policy grazing restrictions. These meetings will be undertaken at the initiative of the grazing operator prior to the grazing season, or during the grazing season as local conditions change and operators believe that exceptions are warranted. The operator should have data, photos or other information relative to factors such as: light grazing utilization levels the previous year, diverse vegetative composition, good plant vigor, available stock water and soil moisture. Following review and discussion of the operator's information, livestock use agreements may be entered into on a case-by-case basis.

Should the operator and field manager be unable to reach a livestock use agreement, either party may request that the situation be reviewed by an outside party. This review is to be conducted by a Drought Advisory Subcommittee (DAS). In the Surprise Field Office, the DAS will be appointed by the Chairman of the Modoc-Washoe Experimental Stewardship Committee. In the Alturas Field Office, the DAS will be appointed by the Chairman of the Northeast California Resource Advisory Council. The DASs will be established and positions filled within 30 days of the declaration of a drought watch. At least one member of each DAS will have soils or hydrology expertise.

The DAS is to review the data, photos or other information compiled by the operator, meet with both the operator and the field manager, and submit recommendations to the field manager for consideration within 7 days of this meeting. The ultimate decision on exceptions to drought policy grazing restrictions remains with the field manager.

During droughts, the BLM will use a categorical exclusion to authorize placement and use of temporary water troughs for a period not to exceed one month. If appropriate, troughs may be moved to other locations to facilitate livestock distribution within an allotment.

In all cases, operators will be notified as early as possible when a drought is broken and drought related grazing restrictions will be dropped.

Conversely, when wet conditions prevail, operators should be aware that temporary nonrenewable grazing use may be available. For instance, in areas where above average precipitation is received and vegetation growth exceeds normal expectations, operators may apply for nonrenewable grazing permits or leases. These grazing authorizations allow for the use of forage, which is temporarily available, provided that the use is consistent with multiple use objectives. Regardless of climatic conditions, land health standards apply to all grazing allotments. On allotments where standards are not being met, grazing guidelines apply as well.

This Drought Policy will be reviewed, evaluated for effectiveness and refined following each period of declared drought. At a minimum, each review and evaluation will include consultation, cooperation and coordination with grazing operators.

Appendix O

Wind Energy Best Management Practices

Appendix O. WIND ENERGY BEST MANAGEMENT PRACTICES

O.1. Introduction

The following BMPs would be applied to all wind energy development projects to establish environmentally sound and economically feasible mechanisms to protect and enhance natural and cultural resources. These BMPs would be adopted as required elements of project-specific PODs and/or as ROW grant stipulations. They are categorized by development activity: site monitoring and testing, development of the POD, construction, operation, and decommissioning. The BMPs for development of the POD identify required elements of the POD needed to address potential impacts associated with subsequent phases of development.

Some of the proposed BMPs address issues that are not unique to wind energy development but that are more universal in nature, such as road construction and maintenance, wildlife management, hazardous materials and waste management, cultural resource management, and pesticide use and integrated pest management. For the most part, however, the level of detail provided by the BMPs is less specific than that provided in other, existing BLM program-specific mitigation guidance documents. As required by proposed policy, mitigation measures identified in or required by these existing program-specific guidance documents would be applied, as appropriate, to wind energy development projects; however, they are not discussed in detail in the programmatic BMPs proposed here.

In summary, stipulations governing specific wind energy projects would be derived from a number of sources: (1) the proposed BMPs discussed in this section; (2) other, existing and relevant program-specific mitigation guidance; and (3) the mitigation measures. Guidelines for applying and selecting project-specific requirements include determining whether the measure would (1) ensure compliance with relevant statutory or administrative requirements, (2) minimize local impacts associated with siting and design decisions, (3) promote post-construction stabilization of impacts, (4) maximize restoration of previous habitat conditions, (5) minimize cumulative impacts, or (6) promote economically feasible development of wind energy on BLM land.

O.2 Site Monitoring and Testing

- The area disturbed by installation of meteorological towers (i.e., footprint) shall be kept to a minimum.
- Existing roads shall be used to the maximum extent feasible. If new roads are necessary, they shall be designed and constructed to the appropriate standard.
- Meteorological towers shall not be located in or near sensitive habitats or in areas where ecological resources known to be sensitive to human activities (e.g., prairie grouse) are present.
- Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.

O.3 Plan of Development Preparation

O.3.1 General

- The BLM and operators shall contact appropriate agencies, property owners, and other stakeholders early in the planning process to identify potentially sensitive land uses and

issues, rules that govern wind energy development locally, and land use concerns specific to the region.

- Available information describing the environmental and sociocultural conditions in the vicinity of the proposed project shall be collected and reviewed as needed to predict potential impacts of the project.
- The project shall be planned to avoid, if possible, minimize, or mitigate impacts to wildlife, habitat, visual resources, surface water resources, cultural and historical resources, other valued resources, and other land use.
- The Federal Aviation Administration (FAA)-required notice of proposed construction shall be made as early as possible to identify any air safety measures that would be required.
- To plan for efficient use of the land, necessary infrastructure requirements shall be consolidated wherever possible, and current transmission and market access shall be evaluated carefully.
- The project shall be planned to utilize existing roads and utility corridors to the maximum extent feasible, and to minimize the number and length/size of roads, lay-down areas, and borrow areas.
- A monitoring program shall be developed to ensure that environmental conditions are monitored during the construction, operation, and decommissioning phases. The monitoring program requirements, including adaptive management strategies, shall be established at the project level to ensure that potential adverse impacts of wind energy development are mitigated.
- The monitoring program shall identify the monitoring requirements for each environmental resource present at the site, establish metrics against which monitoring observations can be measured, identify potential mitigation measures, and establish protocols for incorporating monitoring observations and additional mitigation measures into standard operating procedures and BMPs.
- “Good housekeeping” procedures shall be developed to ensure that during operations the site will be kept clean of debris, garbage, fugitive trash or waste, and graffiti to prohibit scrap heaps and dumps; and to minimize storage yards.

0.3.2 Wildlife and Other Ecological Resources

- Operators shall review existing information on species and habitats in the vicinity of the project area to identify potential concerns.
- Operators shall conduct surveys for federally and/or state-protected species and other species of concern (including special status plant and animal species) within the project area and design the project to avoid, if possible, minimize, or mitigate impacts to these resources.
- Operators shall identify important, sensitive, or unique habitats in the vicinity of the project and design the project to avoid, if possible, minimize, or mitigate impacts to these habitats (e.g., locate the turbines, roads, and ancillary facilities in the least environmentally sensitive areas; i.e., away from riparian habitats, streams, wetlands, drainages, or critical wildlife habitats).
- BLM shall prohibit the disturbance of any population of federally listed plant species.
- Operators shall evaluate avian and bat use of the project area and, design the project to minimize or mitigate the potential for bird and bat strikes (e.g., development shall not occur

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in riparian habitats and wetlands). Scientifically rigorous avian and bat use surveys shall be conducted; the amount and extent of ecological baseline data required shall be determined on a project basis.

- Turbines shall be configured to avoid landscape features known to attract raptors.
- Operators shall determine the presence of bat colonies and avoid placing turbines near known bat hibernation, breeding, and maternity/nursery colonies; in known migration corridors; or in known flight paths between colonies and feeding areas.
- Operators shall determine the presence of active raptor nests (i.e., raptor nests used during the breeding season). Measures to reduce raptor use at a project site (e.g., minimize road cuts, maintain either no vegetation or non-attractive plant species around the turbines) shall be considered.
- A habitat restoration plan shall be developed to avoid, if possible, minimize, or mitigate negative impacts on vulnerable wildlife while maintaining or enhancing habitat values for other species.
- The plan shall identify revegetation, soil stabilization, and erosion reduction measures that shall be implemented to ensure that all temporary use areas are restored. The plan shall require that restoration occur as soon as possible after completion of activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- Procedures shall be developed to mitigate potential impacts to special status species. Such measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota.
- Facilities shall be designed to discourage their use as perching or nesting substrates by birds. For example, power lines and poles shall be configured to minimize raptor electrocutions and discourage raptor and raven nesting and perching.

0.3.3 Visual Resources

- The public shall be involved and informed about the visual site design elements of the proposed wind energy facilities. Possible approaches include conducting public forums for disseminating information, offering organized tours of operating wind developments, and using computer simulation and visualization techniques in public presentations.
- Turbine arrays and turbine design shall be integrated with the surrounding landscape. Design elements to be addressed include clustering of turbines, visual uniformity, use of tubular towers, proportion and color of turbines, non-reflective paints, and prohibition of commercial messages on turbines.
- Other site design elements shall be integrated with the surrounding landscape. Elements to address include minimizing the profile of the ancillary structures, burial of cables, prohibition of commercial symbols, and security lighting. Regarding lighting, efforts shall be made to minimize the need for and amount of lighting on ancillary structures.

0.3.4 Roads

- An access road siting and management plan shall be prepared incorporating existing BLM standards regarding road design, construction, and maintenance such as those described in the BLM 9113 Manual (BLM 1985) and the Surface Operating Standards for Oil and Gas Exploration and Development (RMRCC 1989) (i.e., the Gold Book).

0.3.5 Transportation

- A comprehensive transportation plan shall be developed, particularly for the transport of turbine components, main assembly cranes, and other large pieces of equipment. The plan shall consider specific object sizes, weights, origin, destination, and unique handling requirements and shall evaluate alternative transportation approaches. In addition, the process to be used to comply with unique state requirements and to obtain all necessary permits shall be clearly identified.
- A traffic management plan shall be prepared for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan shall incorporate measures such as informational signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configuration.

0.3.6 Noise

- Proponents of a wind energy development project shall take measurements to assess the existing background noise levels at a given site and compare them with the anticipated noise levels associated with the proposed project.

0.3.7 Noxious Weeds and Pesticides

- Operators shall develop a plan for control of noxious weeds and invasive species, which could occur as a result of new surface disturbance activities at the site. The plan shall address monitoring, education of personnel on weed identification, the manner in which weeds spread, and methods for treating infestations. The use of certified weed-free mulching and the cleaning of vehicles prior to arrival at a location to avoid the introduction of invasive weeds shall be required.
- If pesticides are used on the site, an integrated pest management plan shall be developed to ensure that applications would be conducted within the framework of BLM and DOI policies and entail only the use of EPA-registered pesticides. Pesticide use shall be limited to non-persistent, immobile pesticides and shall only be applied in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications.

0.3.8 Cultural/Historic Resources

- The BLM shall consult with Indian Tribal governments early in the planning process to identify issues regarding the proposed wind energy development, including issues related to the presence of cultural properties, access rights, disruption to traditional cultural practices, and impacts to visual resources important to the Tribe(s).
- The presence of archaeological sites and historic properties in the area of potential effect shall be determined on the basis of a records search of recorded sites and properties in the area and/or, depending on the extent of existing information, an archaeological survey. Archaeological sites and historic properties present in the area of potential effect shall be reviewed to determine whether they meet the criteria of eligibility for listing on the National Register of Historic Places (NRHP).
- If cultural resources are present at the site, or if areas with a high potential to contain cultural material have been identified, a cultural resources management plan (CRMP) shall be developed.

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- This plan shall address mitigation activities to be taken for cultural resources found at the site. Avoidance of the area is always the preferred mitigation option.
- Other mitigation options include archaeological survey and excavation (as warranted) and monitoring. If an area exhibits a high potential, but no artifacts were observed during an archaeological survey, monitoring by a qualified archaeologist could be required during all excavation and earthmoving in the high potential area. A report needs to be prepared documenting these activities. The CRMP also shall (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of artifacts and destruction of property on public land.

0.3.9 Paleontological Resources

- Operators shall determine whether paleontological resources exist in a project area on the basis of the sedimentary context of the area, a records search for past paleontological finds in the area, and/or, depending on the extent of existing information, a paleontological survey.
- If paleontological resources are present at the site, or if areas with a high potential to contain paleontological material have been identified, a paleontological resources management plan shall be developed. This plan shall include a mitigation plan for collection of the fossils; mitigation could include avoidance, removal of fossils, or monitoring. If an area exhibits a high potential but no fossils were observed during survey, monitoring by a qualified paleontologist could be required during all excavation and earthmoving in the sensitive area. A report needs to be prepared documenting these activities. The paleontological resources management plan also shall (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of fossils on public land.

0.3.10 Hazardous Materials and Waste Management

- Operators shall develop a hazardous materials management plan addressing storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall identify all hazardous materials that would be used, stored, or transported at the site.
- It shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. The plan shall also identify requirements for notices to federal and local emergency response authorities and include emergency response plans.
- Operators shall develop a waste management plan identifying the waste streams that are expected to be generated at the site and addressing hazardous waste determination procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures. This plan shall address all solid and liquid wastes that may be generated at the site.
- Operators shall develop a spill prevention and response plan identifying where hazardous materials and wastes are stored on site, spill prevention measures to be implemented, training requirements, appropriate spill response actions for each material or waste, the locations of spill response kits on site, a procedure for ensuring that the spill response kits are adequately stocked at all times, and procedures for making timely notifications to authorities.

0.3.11 Storm Water

- Operators shall develop a storm water management plan for the site to ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion.

0.3.12 Human Health and Safety

- A safety assessment shall be conducted to describe potential safety issues and the means that would be taken to mitigate them, including issues such as site access, construction, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.
- A health and safety program shall be developed to protect both workers and the general public during construction, operation, and decommissioning of a wind energy project. Regarding occupational health and safety, the program shall identify all applicable federal and state occupational safety standards, establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; Occupational Safety and Health Administration [OSHA] standard practices for safe use of explosives and blasting agents; measures for reducing occupational electric and magnetic fields [EMF] exposures), establish fire safety evacuation procedures, and define safety performance standards (e.g., electrical system standards, lightning protection standards). The program shall include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.
- Regarding public health and safety, the health and safety program shall establish a safety zone or setback for wind turbine generators from residences and occupied buildings, roads, rights of ways, and other public access areas that is sufficient to prevent accidents resulting from the operation of wind turbine generators. It shall identify requirements for temporary fencing around staging areas, storage yards, and excavations during construction or decommissioning activities.

It shall also identify measures to be taken during the operations phase to limit public access to facilities (e.g., permanent fencing would be installed only around electrical substations, and turbine tower access doors would be locked).

- Operators shall consult with local planning authorities regarding increased traffic during the construction phase, including an assessment of the number of vehicles per day, their size, and type. Specific issues of concern (e.g., location of school bus routes and stops) shall be identified and addressed in the traffic management plan.
- If operation of the wind turbines is expected to cause significant adverse impacts to nearby residences and occupied buildings from shadow flicker, low-frequency sound, or EMF, site specific recommendations for addressing these concerns shall be incorporated into the project design (e.g., establishing a sufficient setback from turbines).
- The project shall be planned to minimize electromagnetic interference (EMI) (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with FCC regulations. Signal strength studies shall be conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communication systems (e.g., radio traffic related to emergency activities) shall be avoided.

APPENDIX O

- The project shall be planned to comply with FAA regulations, including lighting regulations, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.
- Operators shall develop a fire management strategy to implement measures to minimize the potential for a human-caused fire.

O.4 Construction

O.4.1 General

- All control and mitigation measures established for the project in the POD and the resource specific management plans that are part of the POD shall be maintained and implemented throughout the construction phase, as appropriate.
- The area disturbed by construction and operation of a wind energy development project (i.e., footprint) shall be kept to a minimum.
- The number and size/length of roads, temporary fences, lay-down areas, and borrow areas shall be minimized.
- Topsoil from all excavations and construction activities shall be salvaged and reapplied during reclamation.
- All areas of disturbed soil shall be reclaimed using weed-free native grasses, forbs, and shrubs. Reclamation activities shall be undertaken as early as possible on disturbed areas.
- All electrical collector lines shall be buried in a manner that minimizes additional surface disturbance (e.g., along roads or other paths of surface disturbance). Surface lines may be used in cases where burial of lines would result in further habitat disturbance.
- Operators shall identify unstable slopes and local factors that can induce slope instability (such as groundwater conditions, precipitation, earthquake activities, slope angles, and the dip angles of geologic strata). Operators also shall avoid creating excessive slopes during excavation and blasting operations. Special construction techniques shall be used where applicable in areas of steep slopes, erodible soil, and stream channel crossings.
- Erosion controls that comply with county, state, and federal standards shall be applied. Practices such as jute netting, silt fences, and check dams shall be applied near disturbed areas.

O.4.2 Wildlife

- Guy wires on permanent meteorological towers shall be avoided.
- In accordance with the habitat restoration plan, restoration shall be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- All construction employees shall be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship, nesting) seasons. In addition, pets shall not be permitted on-site.

0.4.3 Visual

- Operators shall reduce visual impacts during construction by minimizing areas of surface disturbance, controlling erosion, using dust suppression techniques, and restoring exposed soils as closely as possible to their original contour and vegetation.

0.4.4 Roads

- Existing roads shall be used, but only if in safe and environmentally sound locations. If new roads are necessary, they shall be designed and constructed to the appropriate standard and be no higher than necessary to accommodate their intended functions (e.g., traffic volume and weight of vehicles). Excessive grades on roads, road embankments, ditches, and drainages shall be avoided, especially in areas with erodible soils. Special construction techniques shall be used, where applicable. Abandoned roads and roads that are no longer needed shall be recontoured and revegetated.
- Access roads and on-site roads shall be surfaced with aggregate materials, wherever appropriate.
- Access roads shall be located to follow natural contours and minimize side hill cuts.
- Roads shall be located away from drainage bottoms and avoid wetlands.
- Roads shall be designed so that changes to surface water runoff are avoided and erosion is not initiated.
- Access roads shall be located to minimize stream crossings. All structures crossing streams shall be located and constructed so that they do not decrease channel stability or increase water velocity. Operators shall obtain all applicable federal and state permits.
- Existing drainage systems shall not be altered, especially in sensitive areas such as erodible soils or steep slopes. Potential soil erosion shall be controlled at culvert outlets with appropriate structures. Catch basins, roadway ditches, and culverts shall be cleaned and maintained regularly.

0.4.5 Transportation

- Project personnel and contractors shall be instructed and required to adhere to speed limits commensurate with road types, traffic volumes, vehicle types, and site-specific conditions, to ensure safe and efficient traffic flow and to reduce wildlife collisions and disturbance and airborne dust.
- Traffic shall be restricted to the roads developed for the project. Use of other unimproved roads shall be restricted to emergency situations.
- Signs shall be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuters, consideration shall be given to limiting construction vehicles traveling on public roadways during the morning and late afternoon commute time.

0.4.6 Air Emissions

- Dust abatement techniques shall be used on unpaved, un-vegetated surfaces to minimize airborne dust.
- Speed limits (e.g., 25 mph [40 km/h]) shall be posted and enforced to reduce airborne fugitive dust.

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- Construction materials and stockpiled soils shall be covered if they are a source of fugitive dust.
- Dust abatement techniques shall be used before and during surface clearing, excavation, or blasting activities.

0.4.7 Excavation and Blasting Activities

- Operators shall gain a clear understanding of the local hydrogeology. Areas of groundwater discharge and recharge and their potential relationships with surface water bodies shall be identified.
- Operators shall avoid creating hydrologic conduits between two aquifers during foundation excavation and other activities.
- Foundations and trenches shall be backfilled with originally excavated material as much as possible. Excess excavation materials shall be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
- Borrow material shall be obtained only from authorized and permitted sites. Existing sites shall be used in preference to new sites.
- Explosives shall be used only within specified times and at specified distances from sensitive wildlife or streams and lakes, as established by the BLM or other federal and state agencies.

0.4.8 Noise

- Noisy construction activities (including blasting) shall be limited to the least noise-sensitive times of day (i.e., daytime only between 7 a.m. and 10 p.m.) and weekdays.
- All equipment shall have sound-control devices no less effective than those provided on the original equipment. All construction equipment used shall be adequately muffled and maintained.
- All stationary construction equipment (i.e., compressors and generators) shall be located as far as practicable from nearby residences.
- If blasting or other noisy activities are required during the construction period, nearby residents shall be notified in advance.

0.4.9 Cultural and Paleontological Resources

- Unexpected discovery of cultural or paleontological resources during construction shall be brought to the attention of the responsible BLM authorized officer immediately. Work shall be redirected to avoid further harm, while the resources are evaluated and appropriate mitigation strategies are developed.

0.4.10 Hazardous Materials and Waste Management

- Secondary containment shall be provided for all on-site hazardous materials and waste storage, including fuel. In particular, fuel storage (for construction vehicles and equipment) shall be a temporary activity occurring only for as long as is needed to support construction and decommissioning activities.
- Wastes shall be properly containerized and removed periodically for disposal at appropriate offsite permitted disposal facilities.

APPENDIX O

- In the event of an accidental release to the environment, the operator shall document the event, including a root cause analysis, appropriate corrective actions taken, and a characterization of the resulting environmental or health and safety impacts. Documentation of the event shall be provided to the BLM authorized officer and other federal and state agencies, as required.
- Any wastewater generated in association with temporary, portable sanitary facilities shall be periodically removed by a licensed hauler and introduced into an existing municipal sewage treatment facility. Temporary, portable sanitary facilities provided for construction crews shall be adequate to support expected on-site personnel and shall be removed at completion of construction activities.

0.4.11 Public Health and Safety

- Temporary fencing shall be installed around staging areas, storage yards, and excavations during construction to limit public access.

0.5 Operation

0.5.1 General

- All control and mitigation measures established for the project in the POD and the resource specific management plans that are part of the POD shall be maintained and implemented throughout the operational phase, as appropriate. These control and mitigation measures shall be reviewed and revised, as needed, to address changing conditions or requirements at the site, throughout the operational phase. This adaptive management approach would help ensure that impacts from operations are kept to a minimum.
- Inoperative turbines shall be repaired, replaced, or removed in a timely manner. Requirements to do so shall be incorporated into the due diligence provisions of the ROW authorization.

Operators will be required to demonstrate due diligence in the repair, replacement, or removal of turbines; failure to do so could result in termination of the ROW authorization.

0.5.2 Wildlife

- Employees, contractors, and site visitors shall be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship, nesting) seasons. In addition, any pets shall be controlled to avoid harassment and disturbance of wildlife.
- Observations of potential wildlife problems, including wildlife mortality, shall be reported to the BLM authorized officer immediately.

0.5.3 Ground Transportation

- On-going ground transportation planning shall be conducted to evaluate road use, minimize traffic volume, and ensure that roads are maintained adequately to minimize associated impacts.

O.5.4 Monitoring Program

- Protocols defined in the site monitoring program for incorporating monitoring program observations and additional mitigation measures into standard operating procedures and BMPs to minimize future environmental impacts shall be implemented.
- Results of monitoring program efforts shall be provided to the BLM authorized officer.

O.5.5 Public Health and Safety

- Permanent fencing shall be installed and maintained around electrical substations, and turbine tower access doors shall be locked to limit public access.
- In the event an installed wind energy development project results in EMI, the operator shall work with the owner of the impacted communications system to resolve the problem. Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from wind turbines can be quickly recognized.

O.6 Decommissioning

O.6.1 General

- Prior to the termination of the ROW lease, a decommissioning plan shall be developed and approved by BLM. The decommissioning plan shall include a site reclamation plan and monitoring program.
- All management plans, BMPs, and stipulations developed for the construction phase shall be applied to similar activities during the decommissioning phase.
- All turbines and ancillary structures shall be removed from the site.
- Topsoil from all decommissioning activities shall be salvaged and reapplied during final reclamation.
- All areas of disturbed soil shall be reclaimed using weed-free native shrubs, grasses, and forbs.
- The vegetation cover, composition, and diversity shall be restored to values commensurate with the ecological setting.

Appendix P

TABLELANDS INTEGRATED RESOURCE MANAGEMENT PLAN

United States Department of Interior

Bureau of Land Management

Alturas Field Office

June 1, 1999

TABLELANDS INTEGRATED RESOURCE MANAGEMENT PLAN

United States Department of Interior
Bureau of Land Management

Alturas Field Office

June 1, 1999



June 1999

TABLELANDS INTEGRATED RESOURCE MANAGEMENT PLAN

United States Department of Interior
Bureau of Land Management
Alturas Field Office

PREPARED BY: The Tablelands IRMP Team
Alturas Field Office

RECOMMENDED BY: Tablelands Steering Committee

Steve Nelson Steve C. Nelson Date: 6/1/99
North Tablelands Allotment

Rodney Flournoy Rodney Flournoy Date: 6/1/1999
South Tablelands Allotment

Rick Delmas Rick Delmas Date: 6-1-99
UC Cooperative Extension

Sean Curtis Sean CURTIS Date: 7 June 99
Modoc Co. Land Use Committee

Don Stahl Don Stahl Date: 6-1-99
Trout Unlimited

Tom Mocilac Tom Mocilac Date: 6-25-99
CalTrout

Doug Propst Doug Propst Date: 6/1/99
Public at Large

APPROVED BY: Tim Burke Date: 8/3/99
Tim Burke, Field Manager
Alturas Field Office

June 1999

TABLELANDS ALLOTMENT MANAGEMENT PLAN

United States Department of Interior
Bureau of Land Management
Alturas Field Office

PREPARED BY: The Tablelands IRMP Team and The Alturas Field Office in consultation with the Permittees.

Steve Nelson _____ Date: _____
North Tablelands Allotment

Bill Wilson _____ Date: _____
North Tablelands Allotment

Rodney Flournoy Rodney Flournoy Date: 6/4/1999
South Tablelands Allotment

Denny Land and Cattle Denny Land + Cattle by Post as B use Date: 6-23-99
South Tablelands Allotment

Rodney Flournoy Rodney Flournoy Date: June 4th, 1999
East Field Allotment

Rodney Flournoy Rodney Flournoy Date: 6/4/99
West Field Allotment

Howard Knuepel Howard Knuepel Date: 6-11-99
Pine Creek Mesa Allotment

Keith and Hazel Brown Keith and Hazel Brown Date: 6-24-99
Pine Creek Field/Corbie Field Allotments

_____ Date: _____
Yankee Jim Ranch Allotment

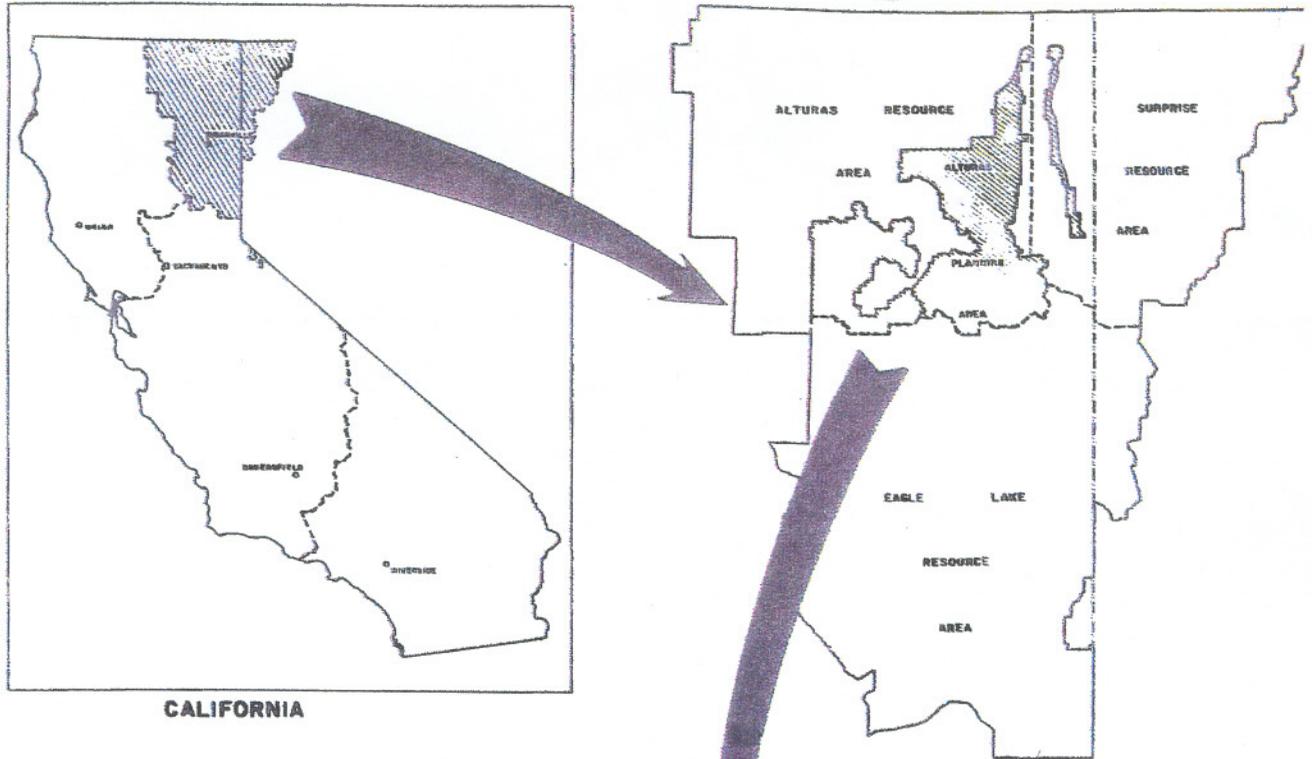
APPROVED BY: _____ Date: _____
Tim Burke, Field Manager
Alturas Field Office

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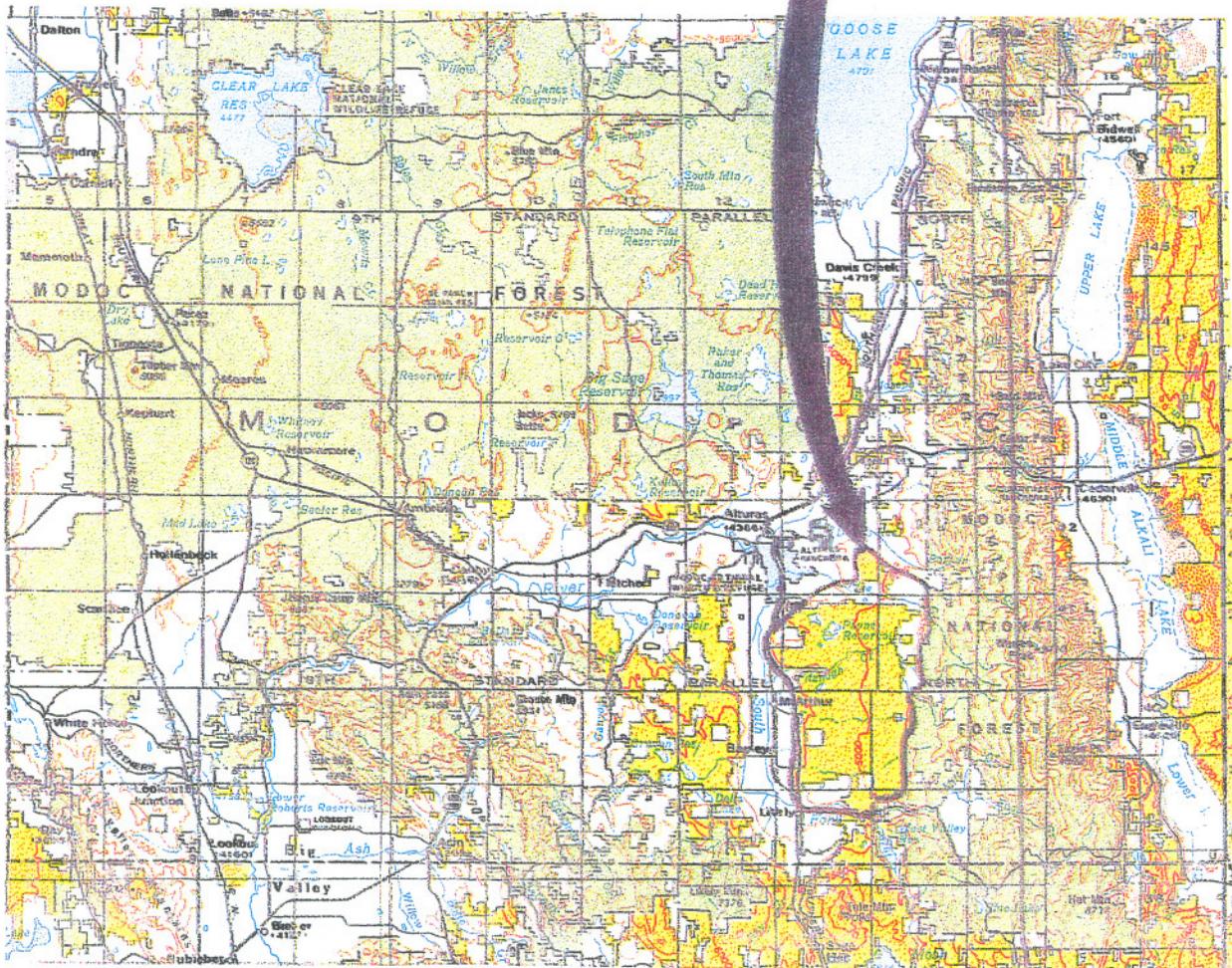
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FIGURE 1 VICINITY MAP



CALIFORNIA



PART 1: INTRODUCTION AND CURRENT SITUATION

CHAPTER 1: INTRODUCTION

PURPOSE OF THE PLAN

The purpose of the Tablelands Integrated Resources Management Plan (Plan) is to provide an interdisciplinary resource management strategy for the Likely Tablelands in the Alturas Field Office of the Bureau of Land Management (BLM). Strong local public opinion exists regarding BLM's management of the Tableland's varied resources. Over the past twenty years, BLM has developed numerous management plans (Appendix A) for the Tablelands. Unfortunately, many of these past plans were prepared without the integration of activities and public participation necessary in today's land management environment.

In addition, BLM has acquired 2,480 acres of the Tablelands from private inholdings and the land use allocations have never been made on these areas. The acquired parcels are the Yankee Jim Ranch (1,400 acres), Jochim Field (160 acres) and the Millward Field (920 acres).

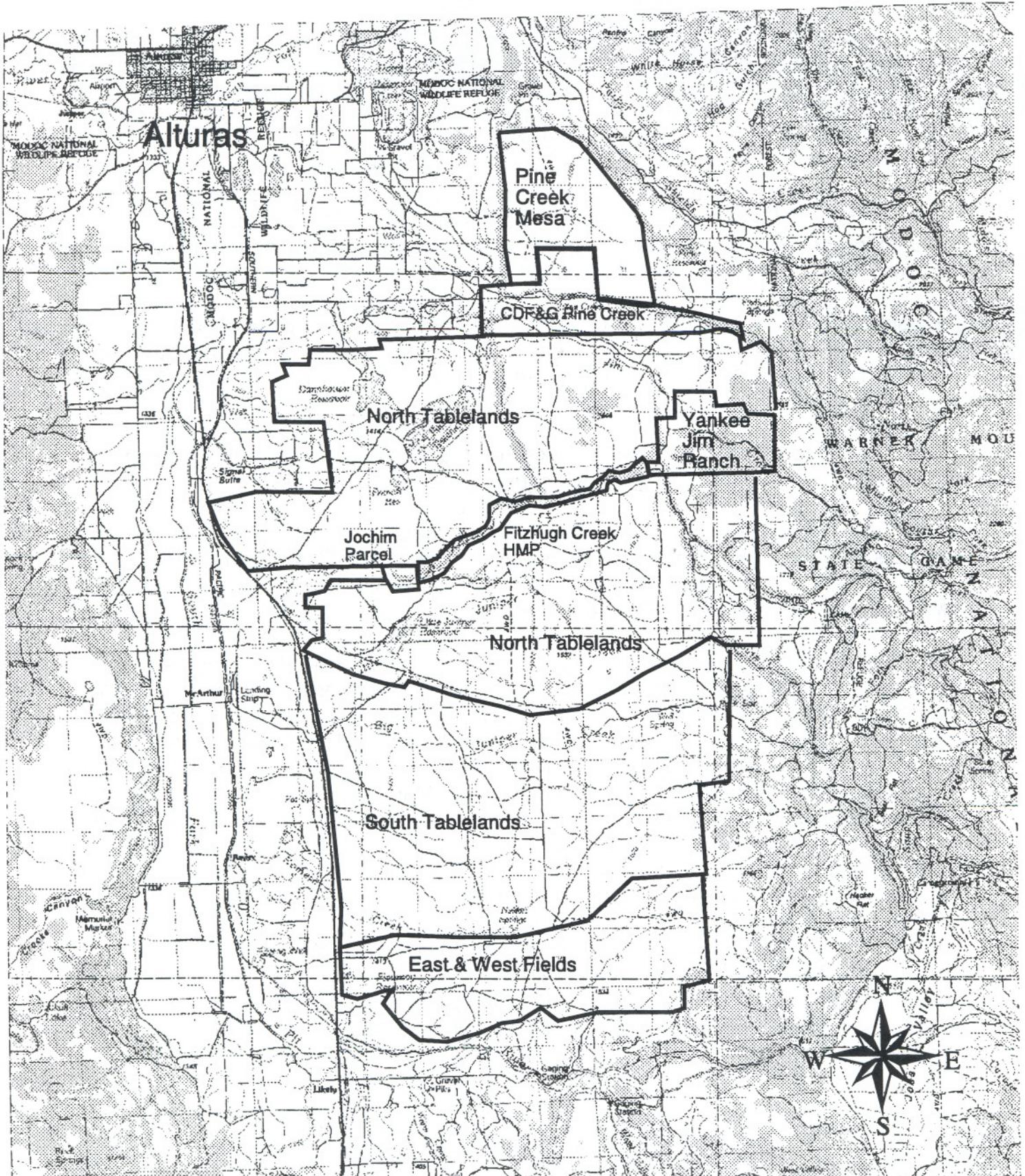
The Plan integrates and updates existing management plans and incorporates management strategies for the newly acquired parcels.

The Plan is a comprehensive activity level document that describes resource management objectives and detailed management actions. This Plan implements and amends the general land use planning decisions set forth in the Alturas Resource Management Plan (RMP), completed in 1984.

Specifically, the Plan serves as an Allotment Management Plan (AMP) for grazing use on the North Tablelands, South Tablelands and Pine Creek Mesa Allotments. The Plan establishes livestock grazing use on, and serves as an AMP for, the Yankee Jim Ranch Allotment. It establishes grazing use on Millward Field and includes it as part of the South Tablelands. It excludes livestock grazing from the Jochim parcel. In addition, the Plan replaces the existing Fitzhugh Creek Habitat Management Plan and serves as a guiding document for other resource management activities including riparian, watershed, water quality, wildlife, fisheries and special status species habitat, forestry/woodlands, cultural resources and recreation. It seeks to strike a balance between resource use and resource protection resulting in healthy rangeland, woodland and riparian areas.

The Plan is a living document and provides for adaptive management. The Plan may be amended or updated following appropriate consultation, cooperation and coordination with Steering Committee members and affected grazing permittees. The plan will be formally evaluated in 2005. All monitoring data will be evaluated and correlated with progress in completing proposed projects. Formal evaluations will continue at six year intervals.

Figure 2 - Location



GENERAL LOCATION AND FEATURES

The Tablelands Planning Area is located in Northeastern California, approximately 7 miles to the southeast of the town of Alturas, extending south approximately 17 miles to the town of Likely (Figure 2). This 56,000 acre planning area consists primarily of Public Lands administered by the BLM (85%). The remainder of these lands are in private ownership (10%) or owned by the state of California (5%).

The Tablelands Planning Area is a gently sloping 100 square mile tract of land, lying between the South Fork Pit River Valley and the foot of the Warner Mountains. It is about seven miles across from east to west, 17 miles from north to south. The Tablelands rise gradually in elevation from 4,400 feet on the west side, bordering the South Fork Pit River Valley, to 5,600 feet on the east side, bordering the Warner Mountain Ranger District of the Modoc National Forest. A prominent rim running from north to south divides the area into an upper (eastern) and lower (western) table in the northern two thirds of the area; this dividing rim is not as prominent in the southern one third of the Tablelands.

Most of the perennial and intermittent creeks flow in a westerly direction across the Tablelands, originating in the Warner Mountains on the Modoc National Forest and ultimately flowing into the South Fork Pit River. Two perennial creeks, Fitzhugh and Pine Creek, cross the northern half of the Tablelands. Their canyons vary from 100 to 200 feet in depth and are prominent riparian corridors. Several intermittent streams flow through the Tablelands, most notably Jim Creek, Flourney Swale, Big and Little Juniper Creeks and Romero Creek. Numerous ephemeral streams originating on the Tablelands are tributaries to perennial and intermittent streams, or flow directly into the South Fork Pit River Valley.

CURRENT PUBLIC USES

GRAZING MANAGEMENT

Livestock grazing on public lands is central to the livelihood and culture of Northeastern California. Among all commodities, livestock grazing has the highest indirect effect as dollars recirculate through local economies, resulting in an economic multiplier effect of 4.3 (USDI 1999). ~~Also, livestock grazing does not necessitate a tradeoff with fish and wildlife habitat, water quality and other watershed values. Proper grazing management can restore the long term productivity of many riparian areas and associated uplands (Chaney 1990).~~

There are ten grazing allotments in the Tablelands Planning Area. All Alturas Resource Area grazing allotments were categorized into one of three categories in 1982 to prioritize management and funding strategies.

"C" category allotments were defined as those with limited resource use conflicts, little opportunity for economic return from public investment and where present management appeared satisfactory.

"M" category allotments were in satisfactory range condition, opportunities existed for positive economic return from public investment and present management appeared satisfactory.

"I" category allotments had unsatisfactory range condition, use conflicts existed and there were opportunities for economic return from public investment.

North Tablelands was the only "I" category allotment. South Tablelands, Pine Creek Mesa and East Field were all "M" category allotments. The remaining six allotments were "C" category allotments.

The North Tablelands, South Tablelands and Pine Creek Mesa Allotments are the only allotments where Allotment Management Plans (AMPs) have been completed.

North Tablelands Allotment

The original grazing system was developed in 1968. The AMP was revised in 1985 and that grazing system is still in place.

The North Tablelands AMP has a three-pasture grazing system where each of the three main pastures is rested once every three years. A three year period is needed to complete one grazing cycle under this system. The Holding Fields, two small pastures, hold part of the cattle prior to the opening and following the closing of the United States Forest Service (USFS) Yankee Jim Allotment in early July and late September. In 1981, the Signal Butte Allotment was added to the North Tablelands AMP as an early use pasture. Intensive early use from 04/15 - 05/05 for 300 AUMs reduces pressure on the lower table and at the same time uses the seeding in the Signal Butte Pasture. Heavy utilization is permitted as long as the cattle are off by May 5th, to allow regrowth while there is still good soil moisture available. Signal Butte Pasture has been utilized for fall use rather than early spring use during several years.

South Tablelands Allotment

The original grazing system was developed in 1968. The AMP was revised in 1972 and that grazing system is still in place.

The South Tablelands AMP utilizes a three pasture deferred grazing system. On a one year rotation basis, Pasture 1 is grazed during the critical growth period for perennial grass from 04/15 to 06/06 by both permittees. Pasture 2 receives a full years rest. Pasture 3 on the upper table is used from 06/07 to 06/30 every year by one permittee,

who then trail their cattle onto the USFS allotment. The next year, Pasture 2 will receive early use and Pasture 1 will be rested completely. Pasture 3 receives deferred use. A two year period is needed to complete one grazing cycle of this system.

This grazing system has not been maintained as scheduled since 1987. Due to past drought conditions, one permittee has been allowed to use the rest pasture. This grazing schedule has continued during the five year drought period and has not been properly corrected to date. Pasture 2 was rested in 1995 following a fire.

Pine Creek Mesa Allotment

The original grazing system was developed in 1968. The AMP was revised in 1973 and that grazing system is still in place.

The Pine Creek Mesa AMP has a two pasture rotation system developed for it. Pasture 1 is grazed for two years while Pasture 2 is rested. The grazing is reversed for years 3 and 4. It takes 4 years to complete the grazing cycle in this system.

Other Allotments

The seven remaining smaller allotments are grazed during the seasons of use that were established during the adjudication. These allotments are mostly smaller in acreage or have limited opportunity for intensive livestock management.

WOODLAND/FOREST MANAGEMENT

Commercial Forest Use

57 acres are classified for intensive management as commercial timber base lands. 18 acres of commercial timber lands have restricted commercial entry for watershed values. These lands are in sections 4, 9 and 28 of township 41 north, range 14 east, in the Corbie Allotment. There has been one timber sale in 1978, which harvested 50 MBF.

Woodland Use

The Alturas RMP is silent in Management Area 1 (Tablelands) on juniper firewood cutting. Commercial or personal use of the juniper resource in the Tablelands is limited in this area due to the lack of a good road system, low density of the juniper and readily available juniper elsewhere.

RECREATION USE

In general, the main recreation activity on the Tablelands is dispersed hunting and fishing. Recreation associated with hunting and fishing coincides with dates for season of use established by the California Department of Fish and Game (CDF&G) Commission.

Hunting

Antelope hunting is the earliest hunting activity, occurring in August, and is followed by deer hunting in October. The Likely Tables have the largest concentration of wintering antelope in California, as well as a large resident population, thus making it a favored place for hunters who have successfully drawn a special tag.

Upland game hunting is a late summer to mid fall activity, and mainly centers around dove hunting. Sage grouse hunting is closed due to the declining sage grouse populations.

Waterfowl hunting takes place from mid October through January, with most of the use on the larger reservoirs.

Fishing

Pine Creek and Fitzhugh Creek both attract numerous trout fisherman. Pine Creek, Little Juniper and Dobe Swale Reservoirs are excellent warm water fisheries.

Camping

Access into the area is from Highway 395, the Jess Valley road, the Pine Creek Reservoir road or from the Modoc National Forest to the east.

Most of the camping is in conjunction with hunting and fishing activities. Campsites are dispersed and there are no recognized or maintained campgrounds in the area. The major sites that are used from year to year are posted with fire prevention information and are cleaned up when needed.

Watchable Wildlife

Watchable wildlife is receiving increased emphasis. Partnerships have been formed with groups such as the Defenders of Wildlife, who have produced several user guides. These documents promote specific areas with wildlife viewing attractions on public lands.

DESCRIPTION OF PLANNING PROCESS

To promote and maximize community involvement, a Field Office level Steering Committee was created to advise the Field Manager on resource management in the Tablelands Planning Area. This Plan was developed through the cooperative efforts of the Tablelands Steering Committee, BLM resource specialists and interested members of the public. With technical assistance provided by the BLM and public land users, the Steering Committee identified issues, defined goals and objectives, developed descriptions of desired future conditions and identified specific planned actions. The BLM staff then used these recommendations to prepare this Plan.

At the start of the planning process, the Alturas Field Manager directed the Steering Committee to adhere to the following basic guidelines:

1. Maintain and enhance Fitzhugh Creek as a coldwater fishery.
2. Provide for livestock grazing on Yankee Jim Ranch.
3. Protect cultural sites.
4. Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements including meeting State standards.
5. Follow all appropriate laws, regulations and executive orders. (The Plan will provide for appropriate AMPs in compliance with PRIA.)
6. Maintain an ecosystem focus as the management strategy.
7. Provide for appropriate compatible recreational opportunities.

ISSUES

In the initial meetings, 33 issues were discussed. The Steering Committee consolidated and focused on 13 issues and goal statements for each of the thirteen issues that were established. A fourteenth issue was added by the staff to focus on Yankee Jim Ranch.

Table 1 ISSUES AND GOALS

Issue	Goal Statement
1. Upland Perennial Vegetation Management	Where feasible, enhance perennial vegetation so as to increase the proportion of desirable species within the vegetative composition.
2. Medusahead Management	Replace medusahead with vigorous populations of perennial fire-tolerant plant species which are palatable to deer, pronghorn and livestock. Maintain the native shrub component within areas dominated by medusahead.
3. Woodland Management	Maintain juniper in sites historically occupied by juniper, i.e., rim rock areas and areas with juniper over 150 years of age. Reduce numbers and densities of juniper elsewhere, particularly in stands of bitterbrush, mountain mahogany and other key shrubs.
4. Wildlife Habitat Management	Maintain and enhance a complex and diverse age class and mosaic of upland and riparian habitats within the capabilities of the Tablelands ecosystem. Promote native perennial vegetation species in the habitat.
5. Fire Management	Utilize sound fire management principles, including fire prevention, fire suppression and fire use to enhance, achieve desired future conditions of vegetation and habitats on the Tablelands. Allow fire to function as a natural process in areas where fire will not degrade resources or threaten life or property.
6. Fire Rehabilitation	Utilize fire rehabilitation opportunities to achieve the desired future conditions of vegetation and habitats on the Tablelands. Development of a programmatic fire management rehabilitation plan for the Tablelands is critical to the achievement of this goal.
7. Riparian Communities	Riparian communities will be managed in a healthy condition for wildlife and fisheries habitat, livestock use and compatible recreation opportunities.
8. Fitzhugh Creek Canyon	Maintain and enhance the creek as a coldwater fishery and provide a mosaic of native riparian vegetation types within the canyon system. Most vegetation will be trending towards an advanced ecological status, characterized by multi-aged stands of riparian deciduous trees and shrubs and vigorous grasses and grass-like plants. Areas may be maintained in an earlier successional status where resource management objectives, including properly functioning condition are required.

Issue	Goal Statement
9. Waterfowl Habitat	Maintain and improve waterfowl habitat on viable ponds, reservoirs or new impoundments on the Tablelands.
10. Livestock Management	Maintain a stable livestock industry on the Tablelands.
11. Land Tenure Adjustment	Adjust land ownership patterns to facilitate the achievement of Plan goals.
12. Recreation Management	Maintain recreational use of the Tablelands at existing levels to prevent resource degradation.
13. Cultural Resources	Ensure that historic and prehistoric resources are available for the use and enjoyment of future generations.

With the complexity and importance of the Yankee Jim Ranch, the Alturas Staff decided to separate all goals, objectives and planned actions which dealt with the ranch and include it in its own section of the plan.

14. Yankee Jim Ranch	Enhance wildlife habitat while providing for livestock forage and recreational use, and maintaining cultural and watershed integrity.
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Table 2 RELATION BETWEEN LAND TYPES AND ISSUES

LAND TYPES	ISSUES
Loamy Perennial	Upland Perennial Health Wildlife Habitat Fire Management Fire Rehabilitation Livestock Management
Clay Annual	Medusahead Management Wildlife Habitat Fire Management Fire Rehabilitation Livestock Management
Stoney Perennial	Upland Perennial Health Wildlife Habitat Fire Management Fire Rehabilitation Livestock Management Yankee Jim
Canyon Systems	Wildlife Habitat Riparian Communities Fisheries Habitat Fitzhugh and Pine Creek Canyons Recreation
Woodlands	Juniper Management Wildlife Habitat Fire Management Fire Rehabilitation Yankee Jim
Springs and Meadows	Wildlife Habitat Riparian Communities Recreation Yankee Jim
Reservoirs	Wildlife Habitat Waterfowl Habitat Fisheries Habitat Recreation
Livestock Ponds	Wildlife Habitat Waterfowl Habitat Livestock Management Recreation

CHAPTER 2: GENERAL TABLELANDS FEATURES

CLIMATE

The Tablelands is in the northeast mountain climatic zone of California (Rykaczewski 1980), which is characterized by wet winters and dry summers. This zone experiences a rain shadow effect from the Cascade and Sierra Mountain ranges to the west, resulting in light annual precipitation. However, localized mountainous terrains experience lower temperatures and higher precipitation.

On the Tablelands, annual precipitation is lowest on the west side at about 12 inches per year, increasing to about 16 inches per year on the east side. Most of the annual precipitation falls in the late fall, winter and spring in the form of rain or snow (Figure 3).

Snowfall peaks in January, and the proportion of annual precipitation which comes as snowfall increases with rising elevation. In spring, precipitation gradually decreases after March, as storm centers usually move across the area from the southwest toward the northeast. A secondary precipitation spike occurs in May, which is associated with the passage of cold low pressure systems across the area. Rainfall typically lasts through June, but diminishes markedly in July. The summers are warm and dry with occasional thunderstorms producing some localized precipitation.

SOILS

The majority of the Tableland soils are formed in material weathered from hard basalt, with surface textures of very cobbly clay, very cobbly silt loam and stony loams. Smaller areas of gravelly loams are present in the southern and western parts of the area (USDA, 1980).

A summary of the soils and some selected characteristics are shown in Table 3. Effective rooting depths and available water capacities of the soils are variable. The ecological sites indicate the kinds and amounts of plants that the soils can support, which is discussed further in Appendix D. Along with the precipitation zone, these influence the ability of plants to survive on these soils.

The ecological site descriptions do not consider the extensive occurrence of medusahead, an exotic annual grass which covers much of Tablelands on the clay-textured soils. Medusahead is shallow-rooted and uses only the upper part of the soil profile. If deeper rooted perennial plants are not present, these sites are not as productive as they could be relative to their potential, as reflected by the ecological site descriptions.

Figure 3 - Precipitation

Average Monthly Precipitation for Alturas, CA.

Month	Total Precipitation (inches)	Snow (inches)
Oct.	0.99	0.3
Nov.	1.43	3.3
Dec.	1.5	5.7
Jan.	1.51	8.9
Feb.	1.44	5.8
March	1.37	5.4
April	1.04	2.9
May	1.26	0.9
June	0.98	0
July	0.26	0
Aug.	0.36	0
Sept.	0.47	0
TOTAL:	12.62	33.2

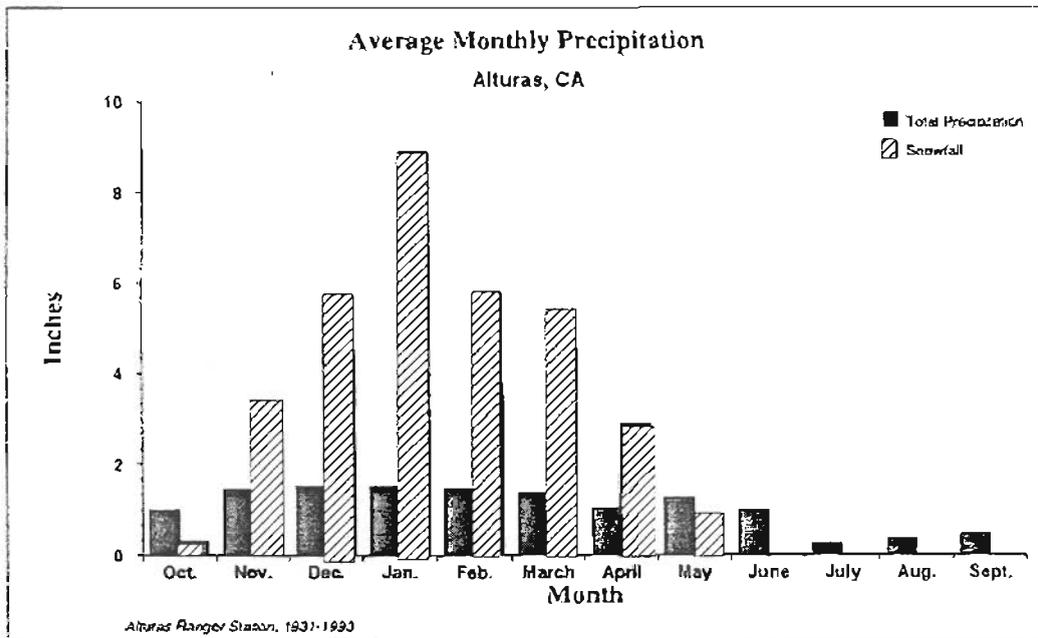


TABLE 3: Soil Mapping Units for the Tablelands, Sorted by Acreage

MAP UNIT	ACRES	MAPPING UNIT NAME	VERTISOL	SLOPE PERCENTAGE RANGE		AVAILABLE WATER CAPACITY (inches)	EFFECTIVE ROOTING DEPTH (inches)	ECOLOGICAL SITE
147	32580	Karcál-Ninecar complex						
		Karcál (50% of map unit) = 16300 acres	x	0-9	2-3	20-30	20-30	Stony clay
		Ninecar (40% of map unit) = 13000 acres		0-9	3-5	20-38	20-38	Shallow stony loam
132	6850	Deven-Rock outcrop complex		2-30	2-3	13-20	13-20	*Shallow stony uplands
146	3395	Karcál very cobbly clay	x	0-9	2-3	20-30	20-30	Stony clay
172	2880	Packwood-Rock outcrop complex		0-9	1-2	8-15	8-15	*Shallow stony uplands, Dry loamy
183	1895	Rock outcrop-Lithic Xerorthents complex		----	----	----	----	not assigned
121	1495	Daphnedale stony loam		30-50	5-6	25-30	25-30	*Loamy
170	1260	Ninecar very stony silt loam		0-9	2-3	20-30	20-30	Shallow stony loam 10-12, 12-14, & 14-16
181	1085	Puls-Rock outcrop complex		0-9	2-4	14-20	14-20	Shallow stony loam 14-16
109	865	Bieber gravelly loam		0-9	2-3	8-20	8-20	Shallow coarse loamy 10-12 & 12-14
H20	775	Water		----	----	----	----	-----
161	605	Lorella, deep variant-Rubbieland association		45-50	5-6	30-40	30-40	Stony loam 14-16
106	520	Barnard gravelly loam		0-9	4-5.5	26-40	26-40	Loamy 10-12 & 12-14
101	465	Ager cobbly clay	x	2-15	8-9	40-50	40-50	*Clayey slopes (BASE OF RIMS NEAR PAYNE RES. & MILWARD)
128	310	Delma cobbly loam		0-9	2.5-3	11-16	11-16	*Shallow loamy
145	240	Jenny silty clay	x	0-5	9-11	60+	60+	Clayey (YANKEE JIM MEADOW)
127	200	Delma loam		30-50	1-2.5	11-14	11-14	*Shallow loamy
199	175	Woodcock stony loam		30-50	1-3	40-60	40-60	not assigned (FOREST SOIL)
120	110	Daphnedale cobbly loam		9-30	5-6	25-30	25-30	*Loamy
193	105	Tuff outcrop-Casuse, eroded complex (35%)		2-15	2	12-20	12-20	not assigned/shallow coarse loamy 10-12 & 12-14
129	80	Delma cobbly loam		9-30	2.5-3	11-14	11-14	*Shallow loamy
169	70	Modoc gravelly loam		0-9	4-6.5	24-40	24-40	Loamy 12-14 & 14-16
119	60	Daphnedale loam		2-9	5-6	25-35	25-35	*Loamy
198	60	Woodcock stony loam		2-30	1-3	40-60	40-60	not assigned (FOREST SOIL)
131	30	Deven very stony clay loam		30-50	2-3	13-20	13-20	*Shallow stony uplands
152	25	Lakeview loam		0-5				Bottomland loamy (FITZ CR EXCLOSURE MEADOW)
107	20	Barnard cobbly loam		0-9	3.5-4.5	26-40	26-40	Stony loam 10-12 & 12-14
104	15	Balman loam		0-2	6-7	----	----	Saline subirrigated
111	15	Bieber cobbly loam, eroded		2-15	2-3	8-16	8-16	Shallow stony loam 10-12 & 12-14
112	5	Buntingville clay loam		0-2	9.6-11	60+	60+	Semi-wet meadow
151	5	Ladd sandy loam		2-9	9-12	60+	60+	Loamy 10-12 & 12-14
Total:	56,195 AC							* = general range site; p.72 of Soil Survey X = Vertisol soils

Soils associated with the medusahead sites are primarily montmorillonitic vertisols (heavy clays). These soils account for about 20,000 acres in the planning area. Similar soils in Lassen County have been damaged by equipment use and livestock trampling, when the soils were saturated (USDA; S. Borchard, personal communication). Of primary concern is compaction, destruction of the soil structure, alteration of the surface organic layer and shearing and punching of desired perennial plants. Blank et al (1991) states that degraded medusahead sites will not improve, except through soil stabilization resulting from the reintroduction of shrubs, formation of cryptogamic communities and the slow aggradation of wind deposited sand. They also state that the accumulation of medusahead litter will enable wildfires to spread on historically fire safe ecosystems; the resulting loss of shrub communities risks the near permanent loss of site potential.

LAND TYPE DESCRIPTIONS

The Tablelands Planning Area was divided into eight different land types for analyzing the current situation and for identifying the desired future conditions. These land types were identified by making logical distinctions between landscape features of the Tablelands based on land forms, soil and vegetation characteristics and water characteristics. The land types relate to the Plan goals identified by the Steering Committee and the Alturas staff. The main relationships between land type and planned goals and issues are illustrated in Table 2. Figure 4 shows the boundaries of these land types.

LOAMY/PERENNIAL

This land type describes the general soil and vegetation characteristics of the westernmost area of the Tablelands. This land type has soil surface textures which are generally loamy, but with varying degrees of gravel, cobbles and stones in the soil. The existing vegetation is primarily shrubs and perennial grass species. Overall, this area is identified as our most productive region of the Tablelands because of good available water capacity and rooting depths for vegetation.

CLAY/ANNUAL

This land type describes the general soil and vegetation characteristic of the largest area of the Tablelands. This land type exhibits mostly clay soil types of varying depths and existing vegetation, which is dominated by exotic annual grasses and remnant shrubs. When wildfires occur, this type converts to predominately annual grassland stands with little or no shrub regeneration. Though these soils have good rooting depth and available water capacity, shallow rooted annual species have taken over and impacted the productivity of this land type. Developed water sources are common and include large reservoirs such as Payne and Little Juniper.

STONY/PERENNIAL

This land type describes the general soil and vegetation characteristic of the upper table on the eastern side of the Tablelands. Soil surface textures are both clays and loams, but the surface stoniness generally is greater and there are distinct vegetation differences from the clay/annual type (the presence of more perennial grass species) based on slightly higher precipitation. This type is higher in vegetation productivity potential than the clay/annual type. Developed water sources exist throughout the type.

CANYON SYSTEMS

This land type includes the Fitzhugh and Pine Creek corridors from rim to rim. The Canyon Systems traverse east/west across the Tablelands and dissect the Tablelands complex into three distinct areas. The Canyon Systems have a variety of vegetation communities primarily centered around perennial creeks. Within this type are juniper woodlands, deciduous riparian communities, numerous small wet meadows and interspersed throughout are ponderosa/jeffrey pines. Though the Canyon System type is highly productive, management limitations exist because of the access, sheer canyon walls, narrowness of the corridor and its uniqueness relative to the rest of the planning area.

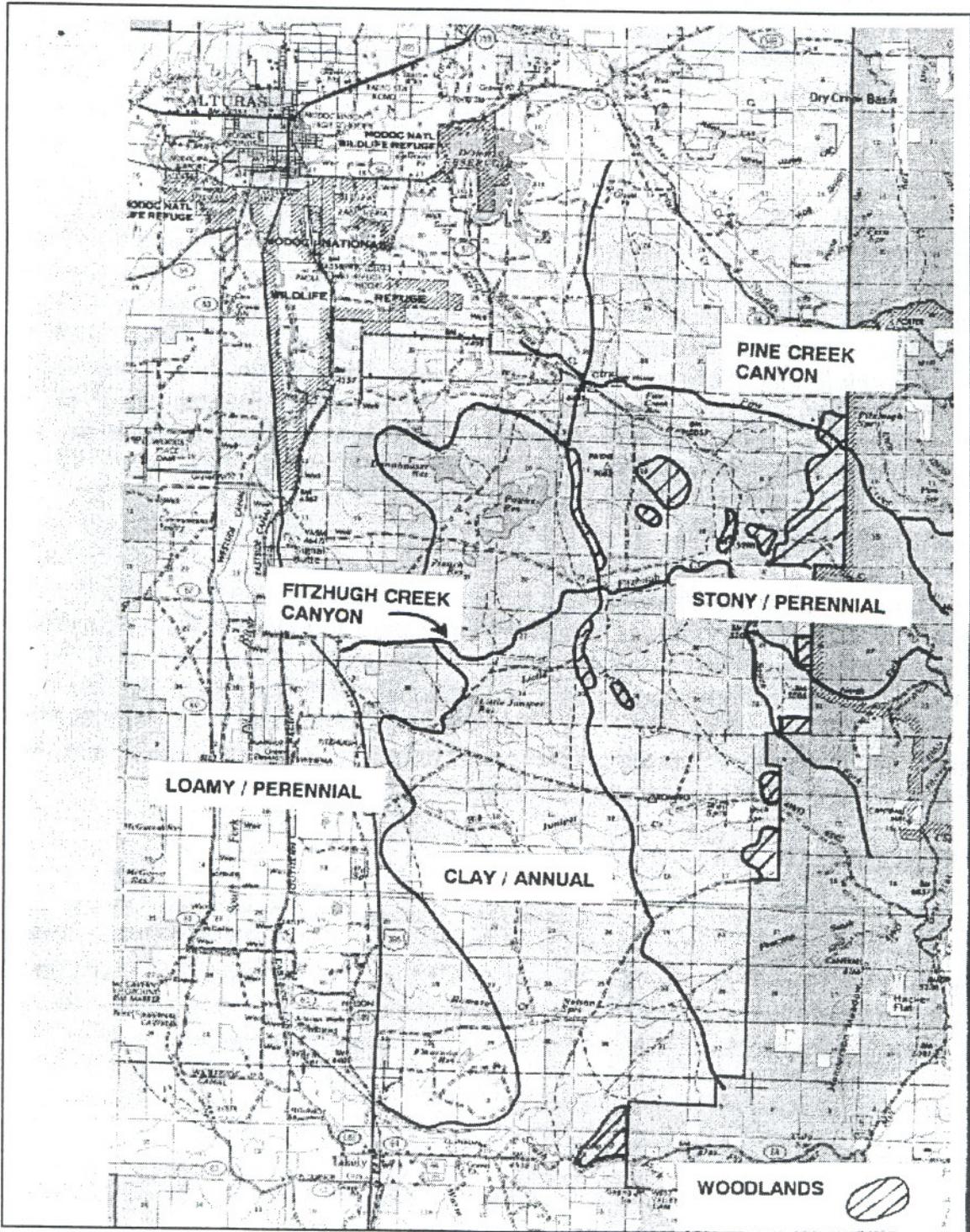
WOODLANDS

Woodlands comprise the easternmost fringes of the Tablelands and is composed of both juniper woodlands, ponderosa pine and jeffrey pine forests. The juniper areas were historically located in fire safe rocky terrain. The juniper areas are expanding with the exclusion of fire, in both total acreage and density. The pine communities are found mainly on the north aspects of drainages, with stony loam soils where they have historically occurred. Some of the woodland areas are classified as commercial forest lands due to productivity and site potential.

SPRINGS/MEADOWS

There are small springs and meadows throughout the Tablelands. Most have been developed to provide water for livestock and wildlife. With the exception of springs in Millward Field and Yankee Jim Ranch, public land spring heads are at least partially protected from livestock trampling. Though limited in size, these areas are extremely important to livestock, wildlife and other uses as year-round water sources.

Figure 4 - Land Types



RESERVOIRS

The appearance of reservoirs varies with seasonal precipitation, irrigation use and grazing. Seasonal precipitation and water removals for irrigation affect the water level of the reservoirs. A wide variety of waterfowl use the open water of the reservoirs for resting and foraging during seasonal migrations. Resident diving ducks forage on submergent plants in the open water.

Shoreline vegetation during years of rest from grazing may be fairly tall, dense herbaceous vegetation. This dense vegetation provides nesting habitat for early nesting ducks that prefer tall vestigial vegetation. Ducklings and very young goslings forage for aquatic invertebrates in areas of emergent vegetation. During grazing years, the herbaceous vegetation will be shorter with some areas of close-cropped vegetation and bare soils. Areas of shorter vegetation provide foraging areas for waterfowl and cranes. Sandhill cranes prefer to nest in vegetation that is approximately 10" tall. Ducks nest and both ducks and geese forage in the shorter vegetation, while shorebirds use areas of bare ground. As water levels recede, herbaceous vegetation, with a large forb component, will grow in the recently exposed shorelines. This vegetation provides important forage for waterfowl, pronghorn and sage grouse.

Man-made nesting islands have been constructed in all of the reservoirs. These islands are primarily used by Canada geese, because the vegetation tends to be short and sparse and does not provide enough cover for nesting ducks.

Bald eagles may occasionally use the reservoirs as foraging areas.

Recreational use of the reservoirs is primarily waterfowl hunting and fishing. Little Juniper Reservoir supports the largest recreational fishery. The relatively easy access and recreational use of Little Juniper Reservoir may be limiting its potential for waterfowl use.

Biologists have felt that the early season recreational fishing use at Little Juniper Reservoir may have some negative impacts to nesting geese, shorebirds and ducks. The access is pretty much year around to the reservoir, and people use it as early as possible. It is this early season use, when geese are just starting to nest, followed up by continuous use through June and July that has the potential negative impacts. After the month of May, other waters are accessible and the pressure slacks off. The nesting islands on the reservoir are located on the eastern shoreline, which is fairly inaccessible, especially during the early season.

LIVESTOCK PONDS

Livestock ponds and pit reservoirs are scattered throughout the Planning Area. These ponds were constructed to provide water for livestock and this remains their primary purpose. In addition, they provide water, forage and nesting cover for wildlife species.

WILDLIFE DESCRIPTIONS

Pronghorn antelope and mule deer are the primary hunted big game species. Sage grouse are a species of concern for the state of California. Coldwater and warmwater fisheries are both present on the Tablelands. Generally, the reservoirs support the warmwater species and the streams provide habitat for the coldwater species. Additional site specific information regarding these species and others is in Appendix B.

PRONGHORN

Northeastern California is home to over 95% of the free roaming pronghorn in California (Pyshora 1982). The Likely Tables herd is the largest wintering herd in California (Pyshora 1982) and includes approximately 25-30% of all pronghorn in the State (Thayer 1996). The Tablelands Planning Area provides important yearlong and winter habitat for the Likely Tables herd. This herd also ranges beyond the Tablelands to the west (Rocky Prairie) and north (Devil's Garden).

MULE DEER

The Tablelands Planning Area provides winter and early spring range and critical winter range for migratory members of the Warner Mountain mule deer herd. The area also supports a small number of resident deer that occupy the Planning Area year-round. The Tablelands Planning Area represents a small portion of the Warner Mountain herd's range. Most of the summer range for this herd is in the Warner Mountains.

The population of this herd peaked in 1965 at 32,330. Since then, the population has shown a steady decline to an estimated 4,900 in 1996 (Moore 1996). This decline is due to loss of quality habitat due to fire suppression, agricultural development, timber reforestation (BLM 1989) and invasion of exotic annuals (Thayer 1996). Northeastern California is an area of focus by the USFS, BLM and CDF&G for reversing declining trends in deer populations.

SAGE GROUSE

Sage grouse in the Tablelands Planning Area have been declining since the early 1960's. There has been no sage grouse hunting in Modoc County since the early 1980's (Thayer 1996). The Alturas Resource Management Plan (RMP 1984) identified 14 leks (strutting grounds) in the Planning Area. Three of these leks were active at that time. In 1996, strutting was observed at only one of the leks described as active in the RMP. Habitat has been lost to settlement, agricultural conversion, sagebrush removal, depletion of native understory and heavy livestock grazing within sagebrush stands. By 1950, it was estimated more than 50 percent of original sage grouse habitat had been eliminated (Call and Maser 1985). The State of California has designated the sage grouse as a species of "concern".

FISHERIES

Coldwater fisheries (trout) are associated with two perennial streams: Pine Creek managed by the CDF&G and Fitzhugh Creek, managed by the BLM. The watersheds of both creeks are managed by the USFS, BLM and private individuals. Management activities on the upper watersheds can have downstream influences, negative or positive.

At this time both creeks are self-sustaining and managed as potential wild trout fisheries. Native non-game fish species also provide an important component of these stream systems.

Warm water fisheries with bass, bluegill and catfish have been established in various reservoirs and ponds in the area, some stocked and coordinated with the CDF&G, while unauthorized stocking of other waters has occurred.

CHAPTER 3: HISTORIC ASPECTS

PREHISTORY

Portions of this historical documentation are passages from old journals, various source documents and the "Cultural Resource Overview Modoc National Forest" (Gates 1983).

The Achumawi people of the Pit River region populated this portion of Modoc County and areas to the west as far as Montgomery Creek, California. The territory occupied by the Achumawi or Pit River people was a vast area rich in usable resources and centered around the Pit River, with its large meadow and marsh systems in the high intermountain valleys of northeastern California. Tribal designation is from the Achumawi, which means "river people" (Olmsted 1978). Eleven bands of the Achumawi inhabited the Pit River country, with the Hammawi band living in the area of the Tablelands and South Fork Valley.

The pre-history of the Tablelands dates back thousands of years based on a hunter/gatherer society. Research and field studies conducted in the general area indicate a long duration of human occupation centered around the riverine and upland resources of the region (Moratto 1984).

The Tablelands were a high use area due to the abundance of pronghorn, upland game, birds, fish and the vast array of species utilizing the stream corridors and riparian zones. Strategic locations were utilized for hunting blinds for taking pronghorn. Seasonal rounds were followed to exploit plant or animal resources, with a focus on riverine ecosystems.

Vegetation resources were relied upon heavily, as indicated by the abundance of ground stone associated with the sites. Ground stone, Metates, manos, etc., were the implements used to reduce seeds, tubers and other vegetation into meal like substances, to be eaten then or at a later time. Epos or apaws (a starchy tuber of the Umbelliferae family) played a large part in the diet of the people utilizing the resources of the Tablelands. Epos grow in clay soils and this area has a dominant clay soil component in much of the area. Epos can still be seen in abundance on the clay flats at certain times of the year. Epos were an important food source and were dug in large quantities in the late spring and early summer, dried and stored for winter use. Special plant gathering areas existed for the Pit River people and select areas would be visited year after year on their seasonal rounds. Much of the information and monitoring data for cultural resources was obtained from the Alturas Resource Area EIS/RMP inventory.

Additional surveys were completed for fire rehabilitation plans, as well as site specific project clearances.

The site types represented in the Tablelands correspond to site types described in earlier surveys of the area (USDI 1976). The sites are described as follows:

1. Permanent village
2. Seasonal village/base camp
3. Temporary camp site
4. Lithic scatter/lithic task site
5. Rock shelters
6. Hunting blinds
7. Bedrock milling or mortar sites
8. Burial sites
9. Quarry/source sites
10. Petroglyph/pictograph sites

All of the above sites are represented on and around the Tablelands Planning Area. Additional site specific information regarding cultural resources is presented in various chapters and issue discussions.

AREA HISTORY AND SETTLEMENT

EURO/AMERICAN INFLUENCE

Throughout the early contact period during the 1800's, many expeditions passed through or near the area, but for this history only the expeditions that had an influence or were directly related to the study area were documented.

The earliest documented contact with the Pit River people were by the early day fur trappers of the Hudson's Bay Company. In 1826-1827, Peter Skene Ogden explored the upper Pit River country and named the Pit River based on his observations of the large pits dug into the banks of the river to trap game animals. The following is a quote from the journals of Peter Skene Ogden-1827.

"Altho the trappers were warn'd to avoid the Indians paths along the banks of the River from the number of deep Pits that they have made for

entrapping Wolves and Deer still three fell in with their Horses two escape fortunately without injury but the third was kill'd a serious loss to his master, at the bottom of the Pits a number of stakes are driven, the Natives inform us at times they kill a number of Animals, some of them nearly thirty feet deep.

...It is almost incredible the number of Pits the Indians have made along the River on both sides of the track as well as in it they are certainly deserving of praise for their industry but from our not seeing the track of an Animal I am not of opinion their labor is rewarded from the number of Pits so as to warn others who may chance to travel in this quarter I have name'd this Pit River, it is true we have lost a Horse and most valuable one and it is now almost surprising to me we have not lost more."

During the 1826-1827 expedition, Ogden also explored and trapped the South Fork of the Pit River and several major tributaries of the South Fork, which flowed down from the Warner Mountains (Fitzhugh and Pine Creeks). Ogden made another journey into the Pit River area in 1828-1830. In 1832-1833, another large fur trapping party entered the region under the command of chief trader John Work. This fur brigade also trapped and explored the South Fork of the Pit River and both sides of the valley with the comment "...it is a swamp all the way".

The American influence started in 1841 with Charles Wilkes of the U.S. Navy when his United States Exploring Expedition crossed the lower reach of the Pit River enroute to San Francisco Bay. In 1843-1844, John Charles Fremont commanded the U.S. Army Topographical Corps exploration into Oregon and the Great Basin. This was followed by three additional expeditions into and out of California, where he made several trips through the Pit River country in close proximity to Alturas and the Tablelands (1844-1846).

During two of these U.S. Army Topographical Corps expeditions, he explored portions of the Pit River country. One of his guides was the famous Kit Carson, who ventured with him into the far west. In Fremont's 1846 expedition, he was met by Peter Lassen and informed of the impending war with Mexico and participated in the Bear Flag Revolt.

In 1849, Chief Topographical Engineer Captain William H. Warner, led an expedition up the Pit River to discover a railroad route through that section of the country (Goetzman 1959). This expedition also explored the South Fork Valley and lower environs of the Tablelands, then explored easterly up the South Fork of the Pit River to Jess Valley, then southwesterly towards the Madeline Plains. Captain Warner was killed by Indians on the east side of the Warner Mountains and the mountain range was named after him.

In 1855, Lt. R.S. Williamson was seeking a railroad route north from the Sacramento Valley to the Columbia River Country. The expedition included engineers, scientists and

a pack train. The quartermaster in charge of the pack train was Lt. George Crook, who later was involved in the Battle of the Infernal Caverns, the Sioux Wars, as well as the Apache Wars against Geronimo. Another famous military officer involved in this campaign was Lt. Phillip Sheridan, later noted for his Civil War exploits. Lt. Sheridan made a reconnaissance up the Pit River from his camp in Big Valley.

EMIGRANT TRAILS

One of the first emigrant parties that passed through the Pit River country was under the direction of civilian guide Joseph Chiles in 1843. This party used only horses and mules for the overland journey through northeastern California, as they broke off from a larger emigrant party at Fort Hall, Idaho.

Jesse and Lindsay Applegate, along with Levi Scott led an expedition for the South Road Company to find a trail into Oregon that eliminated the hazards of the Columbia River portion of the Oregon Trail. This trail became known as the Applegate Trail and helped pioneer several new routes into California.

Peter Lassen diverged from the Applegate Trail at Goose Lake and followed the Pit River south to a point near the edge of the Tablelands, where the trail turned west near Alturas and continued along the Pit River towards the Sacramento Valley. The heaviest use of the Lassen Trail occurred in 1849 with the influx of gold seekers, also known as the "49ers". During 1849, some 9000 people used the trail and endured the hardships of the Black Rock Desert and later enjoyed the benefits of water and lush grass of the Pit River country. The following is a quote from Alonzo Delano in 1846, about his stop at Chimney Rock, on the North Fork of the Pit River.

"August 30. Some of the men of the Missouri train reported that there were plenty of fish in the stream, and a proposition was made to make a seine and drag the river, This party I joined with pleasure; and taking an old wagon cover, we proceeded to a beaver-dam, and while a party went above to drive the fish down, we waded in the deep water with the primitive net. In three hauls we caught fifty-five fine trout, and going with them to their camp, we had a delicious feast, made more acceptable by a sharpened appetite...Near the place of our halt were several singular out-crops of volcanic sandstones. There were between forty and fifty of these, standing isolated from each other, in the form of cones, being from ten to fifteen feet high, and some of them were filled with yellow mica, which glitters in the sun like gold."

MILITARY ACTIONS

On September 22, 1867, General George Crook and his command crossed into California from Oregon in pursuit of hostile Indians. Crook and his troops followed along the west slope of the Warner Mountains on the Tablelands to the South Fork of the Pit River Canyon and entered the South Fork Valley near the present town of Likely, California.

His Warm Springs Indian guides reported the hostiles to be held up in fortifications in a lava formation just to the northwest. The Battle of the Infernal Caverns lasted for three days, September 26-28, 1867. Under the cover of darkness and using the lava tunnels the Indians escaped, similar to the Modoc War five years later. Casualties and injuries occurred on both sides and Crook described his "victory" as a "white elephant prize", since all he gained were empty fortifications.

SETTLEMENT

In 1870, the Pit River Valley was settled by cattlemen, Presley A. Dorris and Henry Fitzhugh, other Dorris relatives claimed the lands around the North Fork of the Pit River, known as Dorris Bridge. In 1874, Modoc County was created from the eastern half of Siskiyou County and Dorris Bridge became the county seat. In 1876, the name of the town was officially changed to Alturas.

South Fork Valley was also settled in 1870 by George Heard Bayley, with other ranchers to soon follow. The post office was known as South Fork, from 1878-1882. In 1886, the name Likely was authorized for the community.

Jonathan and Archie Jess settled Jess Valley in 1875, while downstream Herbert and Rollin West acquired and named West Valley in 1878 for their ranching interests.

Railroads played a large part in the development of the west. The Moran Brothers started building the Nevada, California and Oregon Railway (NC&O) in 1882. The line ran from Reno, Nevada to Lakeview, Oregon, finally reaching its destination in 1912. For many years Madeline, California was the end of the line and it wasn't until 1906 that the NC&O reached Alturas. Deep snows of winter, spring washouts and summer cloudbursts made the schedule of the freight and passenger trains somewhat uncertain and it was not unusual for passengers to "camp out" somewhere along the line. At times, the city of Alturas was without mail for as long as three weeks. Sometimes town citizens would turn out en masse to dig their train out of the snow on Madeline Mountain (Tule Mountain).

During World War I the southerly 100 miles of the NC&O was purchased by Western Pacific and the narrow gauge tracks were replaced with standard gauge tracks. In 1925, Southern Pacific purchased the remainder of the line and converted it to standard gauge (Brown 1945). During the early 1900's, Madeline became known as a railhead for shipping large numbers of sheep to market.

GENERAL GRAZING HISTORY

The livestock industry started in this area in the early 1870's. Two types of livestock husbandry were practiced at this time, dependent upon the direction from which the settlers had come from. Settlers who came from the Sacramento Valley followed California/Mexican livestock practices that evolved from older Spanish husbandry.

Basically, the cattle were allowed to roam freely over unfenced meadows and valley bottoms, gathered in the fall and trailed to market. This occurred in the South Fork Valley. The settlers who came from back east followed Northern European livestock husbandry practices, which involved putting up hay to be fed in the winter months. This occurred in the Goose Lake Valley.

During the 1870's and 1880's, livestock were grazed close to the home ranches and valley bottoms. Livestock use was limited in the upland areas to areas with sufficient surface water that satisfied drinking requirements. The severe winters of 1875-1876 and 1889-1890 forced the adoption of the Northern European husbandry method of winter feeding. During the late 1880's and 1890's, grazing pressure increased on the upland areas for two reasons. First, the ranch meadows had to be protected from summer grazing in order to produce hay. Second, the area had been discovered for sheep summer range. The heaviest use was around perennial streams and other natural bodies of water in the upland areas.

The 1890's and early 1900's saw substantial over crowding and over use on the uplands by both cattle and sheep. Transient sheep were arriving in large numbers and the range forage was being depleted. The placement of cattle on the same summer range also taxed the carrying capacity of the uplands. The Modoc and Warner Forest Reserves were established in 1905 to control rangelands and banish sheep from the country.

The establishment of the Forest Reserves in 1905, the Stockraising Homestead Act of 1914, and the addition of nearby South Fork Mountain to the Forest Reserve in 1924 combined to move substantial grazing use onto the continually shrinking public domain. This range was, therefore, overstocked during the 1929 to 1934 priority years established by the Taylor Grazing Act.

The passage of the Taylor Grazing Act in 1934 brought the public domain lands on the Tablelands area under Federal control for livestock grazing. The Grazing Service, with advice by local Grazing Advisory Boards, reduced much of the grazing pressure. First, the transient sheep operations were eliminated for failure to control base property. Second, marginal cattle operators were eliminated for not having base property or reduced to lower numbers of livestock, commensurate with their base.

The Class I Demand established by the Grazing Advisory Board and the Grazing Service was set at 16,606 AUMs. Range surveys were scheduled to be done, but World War II and the reorganization and combining of the General Land Office and the Grazing Service to form the Bureau of Land Management in 1948 delayed the start of these surveys until the 1950's and 1960's. An ocular range survey was conducted in 1965 and the current adjudication was concluded in 1968. The adjudication resulted in 7,404 AUMs for cattle and 476 AUMs for big game in the Tablelands Planning Area.

LAND ACQUISITION

The Yankee Jim Ranch was established in 1882, by James R. Northrup, listed in the 1880 census of South Fork as a horse trader. James Northrup was from New England and it is probable that the Yankee Jim Ranch and Jim Creek were both named after him. Within a few years, the ownership of the ranch and surrounding lands passed through several different owners. The Flournoy and Hershey families were primary owners over a long period of time. The Weber family owned another portion of the ranch for an equally long period of time. In 1990, the BLM obtained title to the entire ranch covering 1,400 acres.

It is believed that during the early 1890's, the large house at the ranch was constructed adjacent to the meadow. The lumber for the house was cut and milled on Fitzhugh Creek and transported to Alturas for planing, then transported back to Yankee Jim. The large hand cut foundation stones came from a local quarry. At one time there were two large horse barns on the property just north of the existing house (Herman Weber 1993, personnel communication).

Millward Field is the second large land holding that was held in private ownership within the Tablelands area. Fred A. and L. Millward were granted a homestead patent in 1905 for the original 160 acres. What followed were a series of additional patents and desert land entries issued to several different owners. The Wall and Rice families owned the land for a longer period of time than other listed owners. In 1987, through a land exchange with the Rice Livestock Company and the John Hancock Mutual Life Insurance Company, the Bureau of Land Management took possession of Millward Field.

In 1907, an Indian Fee Patent was issued to Andy Williams on the 160 acres presently referred to as the Jochim Parcel. In 1952, the property changed ownership to another Native American, "Boomer" Charlie Turner. In 1958, Boomer sold the property to the Derner Family, which was held in family ownership until 1976, when it was sold to Valentine Jochim. In 1987, the Trust for Public Lands purchased the land for inclusion into the Fitzhugh Creek Habitat Management Plan. In 1989, this land was transferred to the BLM.

FIRE HISTORY

Lightning storms are not uncommon on the Tablelands. Historical and scientific research indicates that fire has been a major disturbance process in the ecosystems of the Alturas Resource Area for hundreds if not thousands of years. History suggests that large fires periodically swept across similar plant communities to those found in the Resource Area. These fires would typically consume most of the above ground vegetation, setting the plant successional cycle back to pioneering species.

In the Tablelands Planning Area, however, the Wyoming big sagebrush dominated areas of pre-settlement times may have had a fire return interval of 100 years or more. Other areas, such as low sagebrush sites where vegetation is sparse, rarely burn (Wright et al 1979). These long fire return intervals are mostly attributed to the substantial distance between plants.

In the higher elevations where mountain big sagebrush is dominant, the pre-settlement fire return interval may have been 10 to 30 years. In these high mountain areas, grasslands were more widespread than today and woody species, such as brush and juniper were less abundant. In the forested areas, periodic fire kept the stands more open and park like.

After Euro-American settlement of the west, fire return intervals appear to have been altered. Heavy livestock grazing that consumed the fine herbaceous fuels necessary to carry fires, may have helped exclude fire from the landscape leading to a vegetation type that favored woody species.

Since World War II, fire suppression practices have contributed to a build up of wildland fuels, favoring woody species over herbaceous and fire dependent vegetation.

In areas of the Tablelands where non-native annual grasses (such as cheatgrass and medusahead) have invaded and become a significant component in the plant communities, large fires may be more frequent than during pre-settlement times. In some communities, frequent fire and non-native annuals may virtually eliminate shrub components such as Wyoming big sagebrush, low sagebrush or antelope bitterbrush. Annual grasses may dominate these sites for many years, with fire return intervals as short as 3 to 5 years.

SEASONAL TRENDS

Fire occurrence and fire behavior increase and decrease on a seasonal basis. In early spring before green-up (March-April), lightning and human caused fires can occur and spread with moderate intensities. Following green-up, fine fuels cure and live fuel moisture values begin to drop; both fire occurrence and behavior are at peak levels between July and September. The potential for multiple starts and large fires is high at these times. In some seasons, fire danger has remained extreme well into October. By November, fire season usually ends when winter weather patterns eliminate fire potential.

Seasonal trends are very important to live fuel moisture levels and the fuel moisture in large diameter dead woody fuels. Extended periods of drought, common to California, can increase the potential for extreme fire behavior by creating extremely low live fuel moisture levels in brush and trees. Extended periods of drought can also significantly lower moisture levels in large dead fuels and contribute to die off of brush and trees, leading to a higher potential for extreme burning conditions in high volume fuel beds.

Conversely, unusually wet springs combined with warm temperatures can spawn heavy germination of grasses and forbs, contributing to greater than normal loadings and continuity of fine fuels. During these years, fires have a greater potential to spread rapidly, often growing to hundreds or thousands of acres in a matter of hours.

In the riparian areas and wet meadows of Fitzhugh Creek, Pine Creek and the old Yankee Jim Ranch, there has been little fire occurrence in the last 20 years. In most of these areas, the vegetation stays too green throughout the fire season to support fire spread. Some lightning fires have occurred in the creek and meadow areas, but are usually limited to less than 1 acre in size.

In the Fire Management Activity Plan for the Susanville District, the Tablelands area is identified as a Fire Management Zone 4. This Fire Management Zone (FMZ) calls for keeping all wildfire ignitions to 10 acres or less 90% of the time. Because of the sensitivity of cultural resources in the area, use of heavy equipment (bulldozers) is discouraged. Fire retardant chemicals are also discouraged within 300 feet of reservoirs and streams.

The following is a 40 year record of fires 40 acres and larger within the Tablelands area.

Table 4 TABLELANDS LARGE FIRE HISTORY (1955-1995)

<u>Year</u>	<u>Acres</u>	<u>Location</u>
1957	5,400(est.)	West Field, East Field (Mapped from CDF&G records)
1958	190	Signal Butte
1964	800	Signal Butte
1968	370	S. Tablelands, Pasture II
1971	40	N. Tablelands, Pasture I
1978	1,310	East Field
1981	1,160	N. Tablelands, Pasture I
1990	60	N. Tablelands, Pasture I
1994	1,550	West Field, East Field
1994	2,570	West Field, East Field, S. Tablelands, Pasture II & III
1995	810	N. Tablelands, Pasture I
1995	400	N. Tablelands, Pasture II

The North and South Tablelands Allotments both have large areas that are devoid of native shrubs. This could be due to old wildfires that predate wildfire record keeping. Rodney Flournoy says he has read/heard that a couple of fires occurred along the NCO rail line and burned onto the Tablelands (Personal Communication). Aroga moth (Aroga websteri), a sagebrush defoliator, could be responsible, but some dead sagebrush skeletons would still be expected to be on site.

FIRE REHABILITATION

Approximately one-third of the acres burned have received funding and treatment for fire rehabilitation. The 800 acre fire in the Signal Butte Pasture was aeriaily seeded by fixed wing aircraft in October 1964. Crested wheatgrass was applied at 6 lbs/acre and this was a successful seeding. It is still a successful seeding and has a good frequency of crested wheatgrass plants 30 years after rehabilitation.

The 1,550 acre Table Fire and 2,570 acre Nelson Fire of 1994 also received Fire Rehabilitation funding and treatment. The Table Fire was chained one time to remove some of the medusahead litter layer and to scarify the ground. It was aeriaily seeded by helicopter with a mix of "Hycrest" crested wheatgrass, "Snake River" bluebunch wheatgrass, "Magnar" basin wildrye and "Arriba" western wheatgrass. This seeding was a failure, with only a few spots of grass seedlings occurring across the site.

The Nelson Fire was treated several ways. Portions were chained to remove the medusahead litter and portions were not treated because it was felt there was sufficient bare ground for a seedbed or just too rocky. These areas were aeriaily seeded by helicopter. Additionally, 172 acres has seed drilled into the ground with a rangeland drill. The Nelson Fire rehabilitation seed mix consisted mainly of "Hycrest" crested wheatgrass, "Snake River" bluebunch wheatgrass, yellow sweetclover and "Apar" lewis flax. "Magnar" basin wildrye, fourwing saltbush, annual sunflower and Wyoming big sagebrush were spot seeded on selected sites. Low sagebrush seed was called for on both projects, but was unavailable that particular year. There was not sufficient seed production locally to collect a significant amount of low sagebrush seed.

Generally, the drilled areas were successful and the aerial seeding was unsuccessful. One thing learned is that seeding in the fall is critical. Winter seeding does not appear to work in this locale.

Fire Rehabilitation Plans were developed, but not funded for the following fires: Weber Fire in 1981 - 1,160 acres, Table Fire in 1995 - 400 acres and Payne Fire in 1995 - 810 acres.

PART 2: GOALS, OBJECTIVES AND PROPOSED ACTIONS

The Steering Committee and the Alturas Field Office staff identified thirteen management issues with corresponding goals for the Tablelands Planning Area. Yankee Jim Ranch is included as a separate discussion in Part, 3 due to its unique circumstances and resource values.

Within each issue and goal discussion is the rationale for that goal and specific objectives to achieve that goal. Each issue is further divided into the land types that are relevant to achieving the goals and objectives. This part of the document is the heart of the Plan. The land type discussion is further stratified by Existing Condition, Desired Future Condition (DFC) and the Planned Actions to achieve that the DFC.

The objectives are specific, measurable expressions of plan goals. The proposed actions are management measures designed to achieve *DFC and Plan* objectives.

The Plan objectives and proposed actions are subject to refinement or modification as experience is gained and new information becomes available.

ISSUE 1: UPLAND PERENNIAL VEGETATION MANAGEMENT

GOAL

Where feasible enhance perennial vegetation so as to increase the proportion of desirable species within the vegetative composition.

RATIONALE

This will provide for soil stabilization and greater forage production for wildlife and livestock. Large reductions in livestock numbers (>40%) since 1966 and the acquisition of Yankee Jim Ranch have created opportunities for more flexible grazing management strategies that can be implemented to achieve this goal.

OBJECTIVES

1. Utilization of desirable species will average less than 50% at the end of the growing season.
2. Maintain or increase the frequency of perennial plants.
3. Maintain or increase vegetative cover.
4. Increase or improve deer fawning/winter habitat on the upper benches.

LOAMY/PERENNIAL

EXISTING

The present plant community is dominated by big sagebrush with a perennial grass understory. Squawapple is scattered through areas of big sagebrush. Western juniper occurs as scattered individuals and in concentrations along some of the drainages.

Exotic plants, including medusahead and Mediterranean sagebrush are encroaching into this land type.

DESIRED FUTURE CONDITION

The appearance of the plant community would be characterized by a diversity of vegetation. Perennial grasses and forbs would dominate, with a mosaic of shrub patches and scattered individual shrubs. Junipers would be scattered in volcanic rock outcrops and rims.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Upland Perennial Vegetation Management by resulting in the DFC for the Loamy/Perennial land type:

1. Graze the Loamy/Perennial land type for a short period outside the critical growing season to maintain high vigor and increase abundance of perennial vegetation.
2. Target areas in this land type will be planted or seeded with fire resistant vegetation (green stripping) to reduce loss of native shrubs in wildfires. Target areas will be along US Highway 395 and around large sagebrush patches.
3. Leave isolated older juniper trees at a density of approximately 2 trees/acre. Removal of younger junipers will be done on an opportunity basis. Current densities are very low.
4. Junipers will be removed from within 1 mile of sage grouse leks. Trees supporting Swainson's hawk nests will be maintained.
5. Remove livestock from the Dannhauser and Signal Butte Fields when fall use exceeds 40% on squawapple.

Other actions affecting this land type are described under Livestock Management and Land Tenure Adjustment.

STONY/PERENNIAL

EXISTING

The present appearance of the plant community is dominated by a perennial grass, forb and low sagebrush community with isolated areas of big sagebrush and scattered junipers. There are small areas of dense juniper, sagebrush and bitterbrush.

Medusahead has invaded the western portion of this land type and continues to spread.

DESIRED FUTURE CONDITION

The appearance of the stony perennial land type would be dominated by a perennial grass, forb and low sagebrush community with isolated areas of big sagebrush and scattered junipers. A diversity of age classes of vegetation will improve wildlife habitat, increase forage availability and promote high vigor of grazed species.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals and objectives for Upland Perennial Vegetation Management by resulting in the DFC for the Stony/Perennial land type:

1. Provide rest from grazing every other year on the Mary Hall and Juniper Hill Pastures (North Tablelands) and East Field and Rock Springs Pastures (South Tablelands) to maintain high vigor of perennial plant species.
2. The adjacent Mary Hall and Rock Springs Pastures will not be used in the same year, except for trailing, to affect vegetation utilization class diversity.
3. Juniper felling and/or fencing in mountain brush areas to enhance deer fawning habitat.

Other actions affecting this land type are described under Woodlands, Livestock Management and Land Tenure Adjustment.

ISSUE 2: MEDUSAHEAD MANAGEMENT

GOAL

Replace medusahead with vigorous populations of perennial fire-tolerant plant species which are palatable to deer, pronghorn and livestock. Maintain and restore the native shrub component within areas dominated by medusahead.

RATIONALE

This will provide a multi-species plant community capable of utilizing water and nutrients from the entire rooting depth (Karcac mapping unit, Table 3), thus providing a more productive ecosystem and forage for deer, pronghorn, livestock and habitat for other wildlife species.

At the time of this writing, there are no reliable techniques for the reduction of large areas of medusahead. Therefore, accomplishment of this goal in the near future is not

expected. As information becomes available, new techniques will be implemented to achieve this goal. The Plan will be amended, if necessary, to incorporate these techniques.

CLAY/ANNUAL

EXISTING

The present appearance of the plant community is dominated by vast areas of annual grasses (medusahead and cheatgrass). Some areas are nearly pure stands of annual grasses with some perennial and annual forbs being present. Some areas of annual grass have patches of low sagebrush and big sagebrush. Juniper can be found as isolated trees or small groves of trees across this land type.

DESIRED FUTURE CONDITION

The appearance of the Clay/Annual land type will be dominated by vast expanses of annual grasses with scattered patches of shrubs and isolated junipers interspersed with volcanic rock outcrops and rims. This DFC recognizes current budget and technology limitations. As information and funding becomes available, new techniques will be implemented to restore these areas to natural vegetative communities occurring on similar range sites (i.e., perennial grasses, forbs, and shrubs).

PLANNED ACTIONS

1. Graze the Clay/Annual pastures for extended periods during the growing season to provide rest for native perennial vegetation on other land types. This will increase the vigor and abundance of upland perennial vegetation in other areas.
2. Western juniper will be maintained as scattered individuals and open stands. Leave isolated older juniper trees at a density of approximately 1 tree/acre. Removal of younger junipers will be done on an opportunity basis. Current densities are very low. Junipers will be removed from within 1 mile of sage grouse leks. Trees supporting Swainson's hawk nests will be maintained.
3. Conduct research into the reduction of exotic annual species, including but not limited to plant material seeding trials, soil carbon/nitrogen ratio manipulation and burning or other vegetation/land manipulation practices.

Other actions affecting this land type are described under Livestock Management.

ISSUE 3: WOODLAND MANAGEMENT

GOAL

Maintain juniper in sites historically occupied by juniper, i.e., rim rock areas and areas with juniper over 150 years of age. Reduce numbers and densities of juniper elsewhere, particularly in stands of bitterbrush, mountain mahogany and other key shrubs.

RATIONALE

Juniper competes successfully with other plant species for water, light and nutrients. The resulting loss of bitterbrush and other shrubs species in the vegetative complex due to juniper expansion has decreased essential browse for wintering deer and pronghorn antelope, as well as impacted deer fawning habitat.

OBJECTIVES

1. The primary objective for the juniper management is to enhance other resource values.
2. Reduce overall existing juniper cover on upper tablelands by 10-50% to release the understory mountain brush component.
3. Maintain overall existing juniper cover on lower tablelands.

All proposed juniper cuts will be inspected by a Wildlife Biologist to meet plan objectives and for values important or critical to wildlife. Species such as the Swainson's hawk will be monitored by BLM biologists and volunteers on a yearly basis in conjunction with CDF&G.

The following discussion pertains only to areas identified as being of the Woodlands Land Type (Figure 3) and classified as juniper woodland ecological sites by Natural Resource Conservation Service. In these areas, crown closure of juniper exceeds 10%. Treatment of juniper trees where they occur at other range sites and lower crown closures are described under the appropriate land types.

WOODLANDS

EXISTING

The western juniper woodland found on the most of the Tablelands is found in the basalt rims and rocky knobs. These areas were historically fire safe due to low density of the shrub and grass/forb component. With the increases in livestock use and fire control efforts, juniper woodlands have begun to expand in to other areas of the Tablelands.

Most of this expansion has occurred in the last 100 years and the density of young juniper is such that it is not classified as juniper woodlands yet. Along the forest boundary, the juniper increases both in size and density to the point that the associated shrub component, bitterbrush and sagebrush is being lost. At this location, the woodlands are also transitioning to a pine and juniper mix, with pine being predominant in the wetter sites and northern aspects.

As of the 1980 inventory, 1,297 acres of juniper woodlands are in the Tablelands planning area, exclusive of the Yankee Jim Parcel.

The inventory totals by density are as follows:

	% Crown Closure (CC)	acreage
	J-	967
	J=	<u>330</u>
Total		1297

J- is 10-39% CC, J= is 40-69% CC, J≡ is 70%+ CC

The acreage of less than 10% CC is unknown at this time, but is thought to be increasing.

Commercial use of the juniper resource is limited in this area due to the lack of a good road system, low density of the juniper, poor market, high cost of utilization and other resource constraints.

DESIRED FUTURE CONDITION

In the majority of the woodland type, the DFC will be a mosaic of vigorous shrub communities with scattered older junipers (1-2 per acre) and areas of juniper with canopies >30%. The patch size of the mosaic would be 5-10 acres and boundaries would be irregular. The emphasis for management in the juniper woodland type would be to produce a vigorous understory of desirable shrubs for forage, areas of thermal cover, "edge effect" for wildlife and releasing commercial and desirable tree species where they are found.

Rimrock areas of the North Tablelands and South Tablelands are characterized by scattered older junipers. These areas are currently at DFC.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Woodland Management:

1. Within 3 years, inventory all juniper areas for age, size and density.

2. Conduct the following juniper cuts:
 - a. Cut younger juniper stands in a mosaic pattern on Juniper Hill; approximately 30-50% of the 600 acre area would be treated.
 - b. Cut juniper in mosaics of 5-10 acres patches in the East and West Holding Fields. The current density is low to moderate (10-20%).
 - c. Reduce juniper densities in the denser stands along the Forest Service boundary.
3. Broadcast the seed of critical deer browse species under felled juniper.

ISSUE 4: WILDLIFE HABITAT MANAGEMENT

GOAL

Maintain and enhance a complex and diverse mosaic of upland and riparian habitats within the capabilities of the Tablelands ecosystem. Promote native perennial vegetation species in the habitats.

RATIONALE

Maintenance and enhancement of diverse, complex vegetative communities will provide the habitat necessary to support thriving, diverse native wildlife populations on the Tablelands.

OBJECTIVES

The BLM manages wildlife habitat rather than wildlife populations. This means that management of vegetative communities to provide suitable habitats for viable populations of diverse native species is the most effective means of achieving wildlife goals.

Therefore, objectives and planned actions from other issue sections which benefit wildlife and wildlife habitat are compiled at the end of this section.

Maximize the potential in high use wildlife areas, i.e., deer fawning and winter areas, sage grouse leks and antelope kidding and winter areas.

EXISTING

Upland game, mule deer, pronghorn and coldwater fisheries are the species of focus on the Tablelands. Coldwater fisheries is discussed under Issue 8: Fitzhugh Creek Canyon.

Pronghorn

Pronghorn antelope were historically the most abundant big game animal in the state of California, occurring throughout the state except the highest mountains and the north coast. Pronghorn numbers began to decline during the Gold Rush of 1849. The influx of people to the state resulted in heavy losses due to market hunting of pronghorn. Subsequent agricultural and urban development resulted in the reduction and fragmentation of habitat and contributed to the decline. Estimates of the state pronghorn population decreased from a high of 500,000 to approximately 1,000 by 1923. By 1940, pronghorn had been extirpated from all of their original range in California, except for the northeast corner of the state (Pyshora 1982).

Northeastern California is home to over 95% of the free-roaming pronghorn in California (Pyshora 1982). The Likely Tables herd is the largest wintering herd in California (Pyshora 1982) and includes approximately 25-30% of all pronghorn in the state (Thayer 1996). The Tablelands Planning Area provides important yearlong and winter habitat for the Likely Tables herd. This herd also ranges beyond the Tablelands to the west (Rocky Prairie) and north (Devil's Garden).

Although still at a fraction of their original numbers statewide, pronghorn populations have been increasing since the 1950's. The Likely Tables herd has increased from a low winter count of 291 in 1953 to a high of 2,297 in 1990. The reasons for this increase are not known, although the positive correlation with alfalfa production is suggestive. An objective of the Pronghorn Antelope Management Plan (Pyshora 1982) for the Likely Tables herd is a population of 1,700. This objective was met in the years 1980 through 1984, and 1989 through 1993 (Thayer 1996). Numbers have decreased since 1993 to a count of 1,312 in 1996 (Thayer 1996). It is not known at this time if this decline is the short-term result from mortality incurred during two severe winters in the early 1990's or the start of a long-term decline.

Pronghorn were captured on the Tablelands in 1984 and 1985, and relocated to Mono County to supplement existing herds. In 1988, 170 pronghorn from the Tablelands were captured and used to reintroduce pronghorn to the Carrizo Plains in Eastern San Luis Obispo County.

Legislation was passed in 1942 which allowed special pronghorn hunts, which were held intermittently until 1964. Since 1964, the hunts have been held annually (Pyshora 1982). The Department collects information on population age structure by issuing a minimum of 100 doe tags annually.

In addition to a substantial resident population that uses the Planning Area year-round, the Likely Tables herd also includes some migratory pronghorn that winter on the Tablelands and summer on the Devil's Garden and at Davis Creek. The timing of the migration to and from the Tablelands is highly variable, with most winter use occurring

between November 1st and March 31st (Thayer 1996). Movement towards the Tablelands in the fall is usually precipitated by the first significant snowfall (Pyshora 1982). Pronghorn may stay on summer and transition ranges during mild winters. The return to summer ranges in the spring is usually more gradual (Pyshora 1982).

Migration routes are restricted to specific paths, particularly during severe winters and the pronghorn rarely stray from these migration corridors. Fences that do not allow the pronghorn to move through them can be extremely detrimental to pronghorn, especially if located along a migration corridor (Oakley 1973). The enclosure fence along Fitzhugh Creek runs perpendicular to an important migration corridor, however, there is a gap in the fence where the corridor crosses the creek. Fences also can increase the risk of predation of kids (McNay and O'Gara 1982). There are hogwire fences in a few locations in the Planning Area; these should be removed or replaced with antelope passable fences.

Likewise, the placement of Highway 395 has also undoubtedly had an impact on pronghorn migration between the Tablelands and Rocky Prairie to the west. This could ultimately be detrimental to the herd by fragmenting habitat and by reducing the genetic heterogeneity of the herd and thereby its ability to adapt to changing conditions.

Most of the Tablelands Planning Area provides winter range for the Likely Tables, Devils Garden and Davis Creek herds. The winter diet of pronghorn consists primarily of browse species (sagebrush and bitterbrush). When it is available, green cheatgrass is also consumed (Salwasser 1980) along with cool season perennial grasses. The introduction and expansion of exotic annuals has reduced the amount of sagebrush and other browse and degraded the quality of the winter range. Likewise, loss of sagebrush has reduced the quality of the kidding habitat on several kidding grounds. Kidding usually takes place during mid-May through mid-June. Pronghorn prefer areas with higher than average canopy cover, total cover and vegetation height for kidding and kid bedding sites. Loss

of shrub cover on kidding grounds may result in increased vulnerability to predators and reduced kid survival.

During the spring, pronghorn graze on early grasses until forbs become available. Forbs comprise the bulk of the diet through mid-summer. Browse is the predominant forage from mid-summer through winter (Salwasser 1980). Here again the presence of introduced annuals (other than lactuca) has reduced the amount of perennial grasses and native forbs and degraded the summer range on the Tablelands.

Mule Deer

Deer populations in California have fluctuated greatly in response to human influences. Before the immigration of white settlers to the Planning Area, deer populations were low.

The predominant bunchgrass communities could not support large populations of mule deer. In 1832, trappers for the Hudson's Bay Company had to eat horses as they travelled down the Pit River Valley, because of scarcity of deer in the area.

With settlement came heavy livestock grazing, logging and wildfires. These influences resulted in the establishment of desirable browse species in areas where grasses historically predominated, improving the habitat for mule deer. However, heavy hunting pressure, grazing competition with livestock and severe winters kept deer populations low. Effective enforcement of hunting regulations (1907), predator control (1915), reduction in grazing pressure due to the Taylor Grazing Act (1934) and a trend toward mild winters allowed deer populations to increase in the 1950's and 1960's (BLM 1989). Mule deer populations throughout the western United States have declined since the 1960's. The major factors influencing deer populations, habitat loss and deterioration, predation, livestock grazing and hunting were implicated in this decline, but do not fully explain it across the entire western United States (CDF&G 1992).

Deer occurring in the Tablelands are of the Warner Mountain herd. The population of this herd peaked in 1965 at 32,330. Since then the population has shown a steady decline to an estimated 4,900 in 1996 (Moore 1996). This decline is due to loss of quality habitat due to fire suppression, agricultural development, timber reforestation (BLM 1989) and invasion of exotic annuals (Thayer 1996). If current trends continue, the CDF&G objective of returning the population to the levels of the 1960's seems unlikely.

The Warner Mountains herd is hunted seasonally. Since 1956 there have been four antlerless hunts (Thayer 1984). Hunter harvest of deer has decreased as the population has declined.

Coyotes are the major predator of deer in the Planning Area. In recent years, due to the passage of the Mountain Lion Bill, the Mountain Lion is also becoming a significant predator of deer in the area. Predator control activities may have contributed to the peak populations in the 1960's (Thayer 1984). However, continued predator control operations have not been sufficient to maintain the high populations. Deer numbers were on the decline prior to the removal of compound 1080 from Federal lands in 1968. The high numbers of deer observed in the 1950's and 1960's exceeded the capacity of the range, resulting in damage to the range and subsequent declines in the population (Thayer 1984).

The Tablelands Planning Area provides winter and spring range and critical winter range for migratory members of the Warner Mountain mule deer herd. The area also supports a small number of resident deer that occupy the Planning Area year-round. The Tablelands Planning Area represents a small portion of the Warner Mountain herd's range. Most of the summer range for this herd is in the Warner Mountains on lands managed by the USFS. The winter range extends along the base of the Warner Mountains on both the east and west sides.

Browse is the major component of the winter diet of the Warner Mountain herd. Winter range on the Tablelands is located along the eastern edge of the Planning Area, at the base of the Warner Mountains (Thayer 1984). Bitterbrush, mountain mahogany and sagebrush are the predominant browse species. The decadence and lack of successful reproduction exhibited by bitterbrush and mountain mahogany may be diminishing the area's value as winter habitat. There are many potential factors influencing survival of browse species in this area, including heavy grazing by livestock and wildlife, competition from a rapidly expanding juniper population, changing fire regimes, insect damage and changes in seed-caching small mammal populations. Although there is direct evidence of heavy grazing, it is unclear at this time what influence other factors are having.

Deer graze grasses and forbs as they become available in the spring. The presence of introduced annuals has reduced the amount of perennial grasses and native forbs and degraded the spring and summer range on the Tablelands.

The creek canyons provide excellent deer summer range. Green herbaceous vegetation is available along the creeksides through most of the summer. Browse species such as prunus, snowberry, serviceberry, bitterbrush and aspen also provide forage through the summer, as well as hiding and thermal cover. This cover also serves as deer fawning and fawn rearing habitat.

As herbaceous plants dry up during the summer, the proportion of browse species in the diet increases. By autumn, browse predominates the diet, although the deer will graze on fall green-up when it occurs (Thayer 1984).

Sage Grouse

Prior to 1850, sage grouse were distributed throughout the west wherever sagebrush occurred (Call and Maser 1985, Klebenow 1985). Sage grouse declines were reported in the early 1900's in Oregon (Crawford and Lutz 1985) and range-wide by 1936 (Klebenow 1972). Habitat has been lost to settlement, agricultural conversion, sagebrush removal, depletion of native understory and heavy livestock grazing within sagebrush stands. By 1950 it was estimated more than 50 percent of original sage grouse habitat had been eliminated (Call and Maser 1985).

Sage grouse has been designated a "species of concern" by the CDF&G.

Sage grouse in the Tablelands Planning Area have been declining since the early 1960's. There has been no sage grouse hunting in Modoc County since the early 1980's (Thayer 1996). The Alturas Resource Management Plan (RMP 1984) identified 14 leks in the Planning Area. Three of these leks were active at that time. In 1996, strutting was observed at only one of the leks described as active in the RMP. Although strutting surveys were incomplete (only one visit to each lek rather than the recommended four),

these data suggest that the decline in sage grouse populations on the Tablelands is continuing.

Current distribution of sage grouse on the Tablelands is unknown. Small numbers of grouse (<10) have been observed south of Payne Reservoir during the early 1990's and as recently as July 1996. This location is near a historic lek, but strutting was not observed here in 1996. The reproductive status of these grouse is unknown.

The only active lek observed in 1996 was near the eastern edge of the Planning Area. Leks are important locations for grouse. All breeding occurs at these traditional locations and most nests are located within a few miles (BLM 1996).

Sage grouse require a diversity of vegetation types and components within the vegetation types. Big sagebrush, low sagebrush, mixed shrub, meadows and lakebeds are among several important vegetation types. Sagebrush is vital to sage grouse for food and cover throughout the year, but insects and forbs also provide food and grasses may help provide cover (BLM 1996).

In winter, sage grouse are found on wind-swept ridges and where big sagebrush is available above the snow. During the winter, sage grouse primarily eat sagebrush. Forbs are an important food in summer for adults and young grouse eat insects and forbs. A herbaceous understory, or small openings in sagebrush stands, provide the forbs and insects needed for food. Meadows, lakeshores and other areas with green forbs become important as forbs desiccate during the summer in the uplands (BLM 1996).

Sage grouse nest in big sagebrush and low sagebrush stands. Perennial grass cover in the understory helps hide the nest from predators, which increases nesting success (BLM 1996).

Although most of the Tablelands Planning Area is highly important for sage grouse, current habitat conditions are less than desired in many locations. Sagebrush densities have declined and the understory of perennial grasses and forbs has been replaced by weedy annuals such as cheatgrass and medusahead. This loss of sagebrush and the perennial herbaceous understory decreases the habitat value for grouse. Heavy utilization of meadows by livestock lowers the value of these important feeding areas for sage grouse.

Elk

Elk have not been sighted on the Tablelands but are expected to move into the area over the next several years.

Wildlife Diversity

Wildlife diversity concerns the variety of wildlife species in a given area. It can be considered a subset of biodiversity, which includes all living organisms. Biodiversity is defined as:

"...the diversity of life and its processes. It includes the variety of living organisms, the genetic differences among them, the communities and ecosystems in which they occur and the ecological and evolutionary processes that keep them functioning, yet ever changing and adapting" (Keystone Center 1991).

Historic changes to the total wildlife diversity of the planning area cannot be quantified because historic data are not available. It is known that thirteen exotic species were introduced into the area since the settlement by the pioneers. Two native species, the gray wolf and the sharp-tailed grouse are known to have been extirpated.

Settlement of the region by the pioneers affected the wildlife diversity in many ways. Development of areas for housing, agriculture, mining and other uses fragmented continuous blocks of wildlife habitat, resulting in an overall decrease in habitat as well as changes in the patterns of habitat on the landscape. The fragmentation resulted in habitat patches too small to support some wider ranging animals. The fragmentation also isolated populations of species, effectively reducing the genetic diversity of these species.

Livestock grazing has affected wildlife diversity over most of the Planning Area. Factors influencing wildlife diversity that can be attributed to livestock include direct competition for forage, water and space. Intensity and timing of grazing are both important considerations (Noss and Cooperrider 1994).

Other factors include the introduction of exotic species such as brown trout, coastal and McCloud rainbows, largemouth bass, green sunfish, bluegill, brown bullhead, bullfrog, European starling, house sparrow, Norway rat and house mouse.

Measurement of the total wildlife diversity in the Planning Area has not been performed because it would take considerable time and effort to estimate wildlife diversity over such a large area. Wildlife diversity is a multi-faceted concept not easily measured in the field and therefore has been broken down into more easily measured components. One component of wildlife diversity is species richness (the number of species occurring in a given area). Three hundred and seventy three species of wildlife are expected to occur within the Planning Area.

Another component of wildlife diversity is the ratio of specialist to generalist species. A generalist species is one that can survive in a wide variety of habitat types and usually has an extensive range. These species can be quite common, even in degraded habitats.

Specialist species require a more narrowly defined habitat type. If this habitat, or a structural element within the habitat, is not present, then this species will not be present. Specialist species tend to be more vulnerable to habitat degradation. Thus the species richness of an area can be high due to the presence of numerous generalist species, but the wildlife diversity may be lacking because of a fewer numbers of specialist species. The ratio of specialists to generalist wildlife species potentially occurring in the planning area is 227/91 (the status of 55 species is unknown); 61% of the total species are considered specialists.

Frequently, species that are considered threatened or endangered are specialist species. Species designated as federal threatened or endangered are protected by the Endangered Species Act and the BLM must insure that any action authorized, funded or carried out is not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of designated critical habitat. There is no critical habitat designated in the Planning Area. Actions affecting federal candidate species and BLM sensitive species are subject to the BLM policy that the action may not contribute to the need to list the species. Actions affecting State of California threatened, endangered and species of special concern, are subject to the BLM policy that actions will further the purposes of the State's rare, threatened and endangered species laws.

For a complete list of all special status species found on the Tablelands, see Appendix C.

DESIRED FUTURE CONDITION

Wildlife will be able to move freely throughout the Tablelands, unimpeded by improper fences or other developments. Water developments will be made safely available for all species of wildlife. Juniper trees that provide nesting habitat for wildlife species will be maintained.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Wildlife Habitat Management by resulting in the DFC for wildlife:

1. All fences on the Tablelands will meet BLM requirements for pronghorn and deer passage (BLM Manual 1741 -1). The potential need to facilitate elk movement should be considered in new fence construction. Fences will be located so that risk to passing deer and pronghorn is minimized. Any existing fences that do not meet these standards will be replaced or modified to do so. Unnecessary fences will be removed.
2. New fences in sage grouse habitat will be marked with flagging when first constructed to minimize collision risk.

3. Gates at important pronghorn crossings on Fitzhugh Creek will be left open during the period October 15th to April 15th.
4. New water troughs will be accessible to wildlife and have escape ramps. Old water troughs will be retrofitted, if necessary, to provide access and escape.
5. Juniper cuts in deer winter range will be located and sized to maintain cover for deer. Trees with woodrat or bird's nests will be maintained.
6. Utilize green stripping to protect areas of critical sagebrush around sage grouse leks from fire.

The following planned actions, which benefit various wildlife species, have been compiled here from elsewhere in the plan to emphasize BLM's commitment to habitat management.

UPLAND PERENNIAL VEGETATION MANAGEMENT (ISSUE 1)

OBJECTIVE

Increase or improve deer fawning/winter habitat on the upper benches.

PLANNED ACTIONS

Loamy/Perennial

Leave isolated older juniper trees, at a density of approximately 2 trees/acre. Removal of younger junipers will be done on an opportunity basis. Current densities are very low. Junipers will be removed from within 1 mile of sage grouse leks. Trees supporting Swainson's hawk nests will be maintained.

Remove livestock from the Dannhauser and Signal Butte Fields when fall use exceeds 40% on squawapple.

Stony/Perennial

The adjacent Mary Hall and Rock Springs Pastures will not be used in the same year, except for trailing, to affect vegetation utilization class diversity.

Juniper felling and/or fencing in mountain brush areas to enhance deer fawning habitat.

MEDUSAHEAD MANAGEMENT (ISSUE 2)

PLANNED ACTIONS

Junipers will be removed from within 1 mile of sage grouse leks. Trees supporting Swainson's hawk nests will be maintained.

WOODLAND MANAGEMENT (ISSUE 3)

OBJECTIVES

The primary objective for the juniper management is to enhance other resource values such as deep fawning habitat, deer winter range, watershed and deer/livestock forage.

Reduce overall existing juniper cover on upper Tablelands by 10-50%, to release the understory mountain brush component.

PLANNED ACTIONS

Conduct the following juniper cuts:

1. Cut younger juniper stands in a mosaic pattern on Juniper Hill, approximately 30-50% of the 600 acre area would be treated.
2. Cut juniper in mosaics of 5-10 acres patches in the East and West Holding Fields. The current density is low to moderate (10-20%).
3. Reduce juniper densities in the denser stands along the Forest Service boundary.

Broadcast the seed of critical deer browse species under felled juniper.

Part 3: Yankee Jim Ranch

OBJECTIVES

Manage the woodlands and forest lands found on Yankee Jim Ranch for the benefit of other resources, while still providing economically harvestable wood products. Resource values include deer winter range, deer fawning habitat, recreation watershed and deer, antelope and livestock forage.

RIPARIAN COMMUNITIES (ISSUE 7)

OBJECTIVE

Maintain riparian areas in proper functioning hydrological condition.

PLANNED ACTIONS

Split the water source at Prospect Spring/Meadow (Little Juniper Pasture) to create two riparian systems. Fence to exclude livestock and provide water for livestock outside the enclosure.

Modify/build fences to protect wet meadows and spring source while providing livestock water at Rock Spring (Mary Hall Pasture).

Livestock Ponds

In the future, consider constructing 2-part stockponds where it is desirable to provide use for both wildlife and livestock. These ponds would be divided by a dike with a culvert that allows water to flow between the two halves. Half of the pond would be fenced to exclude livestock, with the fence crossing the dike.

Part 3: Yankee Jim Ranch

OBJECTIVES

Maintain or increase deciduous riparian vegetation on Jim Creek with conditions moving toward advanced ecological status.

FITZHUGH CREEK CANYON (ISSUE 8)

Fitzhugh Creek

Location of gaps (gaps will provide for cattle movement and emergency water). See Figure 5.

Conduct the following juniper cuts:

1. Cut the juniper to release the understory of grasses, forbs, and deciduous shrubs in areas where juniper is moving into riparian communities.
2. On the terraces adjacent to the creek, select areas of juniper may be cut to improve the understories.

3. Cut all juniper in the aspen and cottonwood stands.
4. Remove a portion of the younger juniper from the Hershey Springs enclosure.
5. Remove juniper from the aspen stand on the south side of Fitzhugh Creek in the Sheep Bridge gap.

Conduct prescribed burn in Fitzhugh Creek Canyon meadow areas and selected deciduous tree and shrub stands.

Plant riparian woody species in areas where willows are not recruiting naturally.

WATERFOWL HABITAT (ISSUE 9)

OBJECTIVES

Maintain or increase duck productivity.

PLANNED ACTIONS

Experiment with seedings on islands and selected areas of the shoreline to promote more residual growth.

At Dobe Swale Reservoir:

1. Reconstruct enclosure fence.
2. Construct a cement sill at the outlet about a foot high to raise the water level for wildlife and livestock.
3. Use the culvert/dike system or large rocks to separate wildlife/livestock water.

Evaluate nesting islands:

1. Repair/rebuild islands that have deteriorated.
2. Fence nesting islands to protect vegetation where necessary.

Part 3: Yankee Jim Ranch

OBJECTIVES

Increase duck, goose, and crane habitat, and nesting success.

PLANNED ACTIONS

Repair system of ditches in the Yankee Jim Meadow to conduct vegetation/water management activities in the meadow, to enhance wet meadow vegetation, improve waterfowl and sandhill crane habitat and provide livestock water.

Yankee Jim Reservoir #2 (SW Corner of YJ Meadow) - Develop a (100'X100'X10') pit reservoir in the meadow for livestock and a (300'X500'X10') for wildlife to be within the realigned Hershey Spring enclosure fence.

Yankee Jim Reservoir #3 (NE Corner of YJ Meadow - Develop a (100'X100'X10') pit reservoir to be filled with water from the YJ irrigation ditch system on the edge of the meadow and a (300'X500'X10') pit for wildlife to be fenced out of the meadow.

Construct eight small shallow pits in the water courses of the lower meadow to enhance waterfowl habitat.

Construct a fence to provide a recreation, riparian and wildlife enhancement area in the southeastern portion of the south lower meadow.

LIVESTOCK MANAGEMENT (ISSUE 10)

PLANNED ACTIONS

Construct reservoir and build a protection fence to enhance wildlife and fisheries values, and to protect cultural and riparian areas around the Millward Spring system. The rim areas can provide quality deer fawning habitat because of the unique combination of cover, food, water and landform.

Reconstruct and modify Rock Springs spring development and fence.

PINE CREEK MESA

Remove woven wire from California Department of Fish and Game boundary fence (Section 36), reconstruct the fence where necessary.

LAND TENURE ADJUSTMENT (ISSUE 11)

PLANNED ACTIONS

Direct land tenure adjustment activities to accomplish the goals of enhanced rangeland and riparian health, improved coldwater fisheries and wildlife habitat and consolidation of federal land into contiguous blocks. Dispose of unmanageable or difficult to manage lands which do not facilitate achievement of these goals and objectives.

Exchange the 200 acre Corbie Allotment and the 240 acre Stevens Allotment with the State of California or USFS or acquire the CDF&G portion. Numerous opportunities exist with the State of California to exchange lands across the Resource Area.

RECREATION MANAGEMENT (ISSUE 12)

PLANNED ACTIONS

Re-construct the fence around the marsh and reservoir.

Construct a one foot sill on the existing spillway to provide additional water for wildlife, fisheries and livestock.

Cut or burn junipers and aspen at the Sheep Bridge Crossing to rejuvenate the decadent aspen grove, to promote more diverse wildlife viewing.

Cut out pockets of juniper along the slopes of the creek to promote more diverse wildlife viewing opportunities.

Part 3: Yankee Jim Ranch

OBJECTIVES

Restrict OHV use in the meadows to prevent damage to vegetation and potential harassment of wildlife and livestock.

YANKEE JIM RANCH WILDLIFE HABITAT MANAGEMENT

OBJECTIVES

Maintain and enhance a complex and diverse mosaic of upland and riparian habitats. Promote native perennial vegetation species in the habitat.

Increase and enhance duck and goose productivity on viable pond impoundments.

Increase and enhance sandhill crane productivity on meadow systems.

Improve and enhance deer fawning habitat, particularly Jim Creek and Indian and Roberts Springs.

Improve and enhance deer winter range.

PLANNED ACTIONS

Seed with wetland vegetation, meadow grasses and forbs in the meadow fields where needed, to improve wildlife habitat.

Construct livestock exclusion fencing for the spring sources and saturated areas at Willow Spring.

Construct ponds for wildlife habitat and livestock water. All water rights and wetland issues will be addressed prior to any construction activity.

At Yankee Jim Reservoir #4 (NW Corner of YJ Meadow), develop (100'X100'X10') pit reservoir in/near existing depression and breached dam. (This could also be a two pit livestock/wildlife project).

Construct fences to separate meadow from uplands and provide pastures within meadow.

Construct pasture fence to divide Jim Creek between the two upland pastures to develop deer fawning habitat and provide riparian protection.

At West Spring (Yankee Jim Uplands Pasture), construct livestock exclusion fence around the upper third of the riparian meadow system along with a trough system outside the fence for livestock watering.

At East Spring (Yankee Jim Uplands Pasture), construct livestock exclusion fence around the wettest areas (spring sources and saturated areas) so that most of the meadow can be used for livestock forage. Develop a trough system outside the fence and away from the meadow for livestock watering.

At Indian and Roberts Springs, construct livestock exclusion fencing for the spring sources and saturated areas. Develop trough systems outside the fence and away from the meadow for livestock watering in the Yankee Jim Uplands Pasture and the East Holding Field.

Juniper Cutting on Yankee Jim:

1. In bitterbrush areas to stimulate growth.
2. In Jim Creek drainage to release curlleaf mountain mahogany and other brush/herbaceous to improve deer fawning habitat. Along the creek, arrange downed wood to discourage cattle access.
3. Cut younger juniper stands in a mosaic pattern in the Yankee Jim uplands, approximately 30-50% of the 1,000 acre area would be treated. Primary focus would be in areas with desirable shrub understories or springs and riparian areas.
4. Cut juniper out of pine and shrubs at Indian/Roberts Spring to enhance deer fawning habitat.

Construct a livestock exclusion fence around the Yankee Jim Ranch house and area that will provide wildlife viewing opportunities.

Cut juniper in strategic patterns to provide mosaic in the vegetation mixture to add to the watchable wildlife of the area.

ISSUE 5: FIRE MANAGEMENT

GOAL

Utilize sound fire management principles, including fire prevention, fire suppression and fire use, to achieve DFC of vegetation and habitats on the Tablelands. Allow fire to function as a natural process in areas where fire will not degrade resources or threaten life or property.

RATIONALE

Fire is a critical ecosystem process that can both enhance and degrade vegetation types and habitats on the Tablelands. Fire, as an ecosystem process, has and will continue to be a major influence on the Tablelands.

OBJECTIVES

1. Keep all wildfire ignitions to 10 acres or less, 90% of the time.
2. Prescribed fire will be used in limited situations to meet resource objectives.

EXISTING

In areas of the Tablelands where non-native annual grasses (such as cheat grass and medusa-head) have invaded and become a significant component in the plant communities, large wildland fires can be frequent. In some of these areas, frequent fire and non-native annuals may virtually eliminate shrub components such as Wyoming big sagebrush, low sagebrush or antelope bitterbrush. Annual grasses may dominate these sites for many years with fire return intervals as short as 3 to 5 years. On the upper tables, where the vegetation is mostly perennial grasses and shrubs, fire spread is generally limited due to the sparse nature of the fuel bed and large fires (exceeding 100 acres) are rare.

Lightning fires do not occur as often on the Tablelands as they do in the more mountainous terrain of the local area. When lightning fires occur on the Tablelands, they tend to grow rapidly in size due to the abundance of fine fuels (exotic annual grasses). An exception is when the lightning storms are accompanied by heavy rains. In these cases, the rain can extinguish the fires before they grow to significant size.

An average of about one human caused fire occurs on the Tablelands per year, usually along Highway 395. Because of quick access for ground suppression units in these areas, these fires are usually suppressed at less than 10 acres.

Four large fires (over 100 acres in size) have occurred on the Tablelands in the last four years (1994-1997). Three of these have been lightning caused. These fires have grown rapidly due to dry, windy weather conditions that typify summer and early fall months in the region and the abundance of exotic annual grasses.

In the Fire Management Plan for the Alturas Field Office, the Tablelands area is identified as a Fire Management Zone 4. This Fire Management Zone (FMZ) calls for keeping all wildfire ignitions to 10 acres or less 90% of the time. Because of the sensitivity of cultural resources in the area, use of heavy equipment (bulldozers) is discouraged. Fire retardant chemicals are also discouraged within 300 feet of reservoirs and streams.

DESIRED FUTURE CONDITION

Aggressive fire suppression will continue to play an important role in management of the Tablelands. Some fires, in some parts of the management area, will not pose great risk to resources or property and appropriate fire management responses, such as simply monitoring the fire will be utilized. This will mean that suppression actions will be directed to keep all fires at 10 acres or less, 90% of the time. Fires in sparse fuels may be monitored if they are not predicted to exceed 10 acres.

Planned ignitions, or prescribed fire, will be used as a management tool to enhance or protect vegetation and habitats where possible.

PLANNED ACTIONS

Management of wildland fires on the Tablelands will be accomplished with high regard to firefighter safety, cost effectiveness, protection of property and resource values and accomplishment of land management objectives. Management of unplanned ignitions of natural origin (lightning) will receive the most appropriate management response, considering a full range of suppression strategies, including simply monitoring fires. Monitoring strategies should be especially considered where fire spread potential is low due to season of year or greenness of fuels, sparse ground fuels, etc.

1. To reduce fire risk, do the following:
 - a. Greenstrip with less flammable vegetation, such as crested wheatgrass, along US Highway 395 to prevent wildfires from spreading onto the Tablelands.
 - b. Greenstrip around selected shrub communities to reduce the fire risk to these communities.
2. Conduct the following planned ignitions:
 - a. Conduct prescribed fire in selected areas to ascertain if fire is a viable tool to achieve vegetation DFCs (i.e., repeated experimental burning of small areas of medusahead).
 - b. Use management ignited fire to protect and enhance critical wildlife habitats by reducing hazardous fuel loads, promoting new growth of desirable browse species, etc.
3. When suppressing unplanned ignitions, do the following:
 - a. Use appropriate suppression responses to prevent the spread of exotic annual grasses and maintain existing shrub communities that are currently at risk from the spread of exotic plants in association with unplanned wildland fire.
 - b. Use appropriate fire suppression techniques and hazardous fuel reduction planning to protect developments and urban interface areas.
4. In all facets of fire management, managers will utilize strategies and techniques that protect historic and prehistoric cultural resources from damage.

Other actions affecting fire management are described under Livestock Management and Woodlands.

ISSUE 6: FIRE REHABILITATION

GOAL

Utilize fire rehabilitation opportunities to achieve the DFC of vegetation and habitats on the Tablelands. Development of a programmatic fire management rehabilitation plan for the Tablelands is critical to the achievement of this goal.

RATIONALE

The frequency and occurrence of wildfire on the Tablelands is increasing. BLM has not been able to take advantage of vegetative treatment opportunities on the Tablelands after wildfires have occurred due to time and funding constraints. Having a fire rehabilitation plan for the Tablelands will accelerate the planning and funding processes, allowing post-fire treatments to occur in a timely fashion.

OBJECTIVES

1. Complete wildfire rehabilitation planning and implementation in a timely manner during each event.
2. Utilize fire rehabilitation to achieve the vegetation objectives for the other land/vegetation types.

EXISTING

On sites dominated by exotic annuals, especially medusahead, fires are frequent and rehabilitation is dependent on each site. Medusahead has invaded Wyoming sagebrush/perennial grass and low sagebrush/perennial grass communities. As a result, fires have occurred with increased frequency and severity which reduces or eliminates the native vegetation and thus allows for further medusahead invasion. The cycle repeats and native vegetation, especially shrubs and perennial grasses is replaced by exotic annuals.

Because a programmatic Fire Rehabilitation Plan does not exist, planning for and implementing an Emergency Fire Rehabilitation (EFR) or a Burned Area Emergency Rehabilitation (BAER) Plan can not be done in a timely fashion and conducting vegetation treatments will usually be delayed.

The BLM Emergency Fire Rehabilitation Handbook, H-1742, July 1998, lays out the policy, process and standards for implementing EFR practices on Public Lands managed by the

BLM. National policy states that "...it is in the best interest of the nation to take swift action to rehabilitate burned forests... and public lands" (P. L. 101-286). Appropriate use of EFR funds includes implementing practices to:

1. Protect life, property, soil and water, including water-dependent resources and/or vegetation resources.
2. Prevent unacceptable on-site or off-site damage.
3. Facilitate meeting Land Use Plan objectives (per the Federal Land Policy and Management Act of 1976) and other Federal laws.
4. Reduce the invasion and establishment of undesirable or invasive species of vegetation.

The following three types of activity plans are used to implement EFR practices on lands managed by the Bureau of Land Management:

1. Normal Fire Rehabilitation Plan (NFRP)
2. Emergency Fire Rehabilitation Plan (EFRP)
3. Burned Area Emergency Rehabilitation (BAER) Plan

The NFRP is a programmatic Fire Rehabilitation Plan/Environmental Assessment (EA) developed at the landscape level prior to wildland fire occurrence. It should be prepared on an eco-region/watershed basis at the Field Office level by an interdisciplinary team with public input. The decision to prepare an NFRP is based on the size and diversity of the ecosystems involved, fire history (wildland fire occurrence and size), resource values and resource management objectives and decisions in Land Use Plans.

A site-specific EFRP is developed by the local or designated interdisciplinary rehabilitation team for wildland fires requiring rehabilitation in those areas not covered by an NFRP. The development of this plan is based upon the same factors as for NFRP. The EFRP contains a site-specific EA with opportunity for public input and generally is the preferred EFR procedure where wildland fire size and frequency do not warrant the time or effort to prepare a comprehensive NFRP.

The BAER plan approach is generally employed after a wildland fire that includes multiple agency ownerships or on large complex wildfires where preparation of an EFR plan is beyond the capability of the local staff. A preselected team of interagency specialists identified prior to the wildland fire (members may be outside the local office area) is brought in to evaluate fire effects and prepare a rehabilitation plan. A BAER team may be requested through the Incident Command System prior to wildland fire control or later

through the appropriate line management decision process. The usual rehabilitation approach for Bureau wildland fires is the use of a local interdisciplinary rehabilitation team to evaluate wildland fire effects and prepare the appropriate EFR plan.

DESIRED FUTURE CONDITION

This DFC is general in nature and will cover the entire Tablelands until a Normal Fire Rehabilitation Plan (NFRP)/Programmatic EA can be developed. This section is closely tied with the Fire Management Section and as stated there, the DFC for vegetation on the Tablelands will drive the fire rehabilitation strategies and direction.

When a wildfire occurs, the Field Manager, Fire Management Officer, Environmental Specialist assigned to that incident and the designated EFR/BAER team leader will coordinate and decide if rehabilitation measures are to be implemented and what level of plan needs to be written, if one is to be written at all.

The DFC would be to maintain native shrub/perennial grass communities at present levels and implement rehabilitation measures to prevent exotic annuals from invading after fire. This is especially critical where communities are ecotonal with exotic annual dominated communities. Maintain vigor of perennial species allowing them to compete with exotic annuals.

The use of herbicides to control post-fire noxious weeds is appropriate and may be funded through the EFR program if:

1. The herbicides proposed are approved for use on public lands per the Record of Decision for the Vegetation Treatment EIS. All other applicable label and environmental restrictions must be followed.
2. The application of herbicides is necessary to keep noxious weeds from invading and dominating the post-fire environment.
3. The use of herbicides funded by the EFR program is limited to two growing seasons following fire control.

Vegetative fuel breaks, e.g., greenstrips, are strips or blocks of fire-resistant vegetation placed at strategic locations within burned areas to reduce the size or frequency of future wildland fires. Vegetative fuel breaks may be installed with EFR funds if approved in an NFRP or EFRP. The plant species seeded in a vegetative fuel break should provide protection for the soil, water, and other resource values in addition to being fire-resistant.

Vegetative fuel breaks may be planted outside the burned area for short distances (no more than 1 mile) to link existing fuel breaks, including green strips, natural barriers, roads, irrigated fields, etc. Vegetative fuel breaks may be planted across unburned "fingers"

within the fire perimeter to increase their effectiveness in slowing or stopping future wildland fires.

PLANNED ACTIONS

1. Develop a NFRP/Programmatic EA for the Alturas Field Office with emphasis on areas that have a fire history, such as the Tablelands.
2. Reseed areas with appropriate shrub species on better condition sites (including but not exclusive of, loam and clay loam sites) where the natives have been destroyed by fire. Work with the BLM Boise Seed Warehouse to have a seed bank of shrubs seeds collected from Northeastern California.
3. Sites with loamy and deeper soils that are fairly cobble free can be drilled and seeding can be successful. Very clayey and stony sites with nearly 90% medusahead have very little chance of rehabilitation with present technology.
4. Develop an EA to plant greenstrips of Immigrant Forage Kochia inside of and adjacent to medusahead dominated communities. Kochia will provide for a fire resistant buffer which will: 1) help keep fire out of low sage communities, 2) reduce fire intensities where exotic annuals are dominant and 3) slow or help stop spread of fire and allow for fire suppression forces to quickly control fires and reduce costs of the fire suppression activities.
5. Drill native and approved non-native forb and grass species into burned areas that are dominated by exotic annuals.
6. The Loamy/Perennial and Stony/Perennial land types will be identified as a high priority for rehabilitation efforts in the Fire Rehabilitation Plan due to its low risk/high potential for success.
7. Target areas in this land type will be planted or seeded with fire resistant vegetation (green stripping) to reduce loss of native shrubs in wildfires. Target areas will be along US Highway 395 and around large sagebrush patches.
8. The Fire Rehabilitation Plan will specify that shrubs be included in rehabilitation efforts. Fire tolerant shrubs, such as *Atriplex*, *Grayia* or *Kochia prostrata* are preferred. Low sagebrush will be utilized, if available, on the Stony/Perennial sites.
9. Although overall the Clay/Annual land type has higher risk and lower success potential for fire rehabilitation, the Fire Rehabilitation Plan will identify opportunities to re-establish perennials on soils where success is probable.

10. The Fire Rehabilitation Plan will specify that seeding in the Clay/Annual type will be conducted in early fall following the wildfire. (Do not attempt seeding in the winter or spring on these sites).
11. Grazing use restrictions will be considered for all burned areas on a case-by-case basis primarily to protect perennial vegetation that has been affected by fire. Areas may be excluded from grazing for two full growing seasons until vegetation has a chance to reestablish itself with healthy, vigorous root systems and above ground growth.

ISSUE 7: RIPARIAN COMMUNITIES

Riparian communities included in this section are springs, meadows and livestock ponds. Perennial streams and large reservoirs are treated in the discussions of Fitzhugh Creek Canyon and Waterfowl Management respectively.

GOAL

Riparian communities will be managed in a healthy condition for fisheries and wildlife habitat, compatible recreation opportunities and compatible livestock grazing.

RATIONALE

BLM's national riparian goal to restore and maintain riparian areas in proper functioning condition as well as the major objective of achieving advanced ecological status was approved in 1991. Proper functioning hydrological condition is necessary for maintaining water quality, supporting diverse riparian-dependent vegetative communities and providing habitat for wildlife and fisheries.

OBJECTIVE

Maintain riparian areas in proper functioning hydrological condition.

SPRINGS/MEADOWS

EXISTING

The majority of the springs and meadows are in properly functioning condition, but records are incomplete. The vegetation community is dominated by wetland grass and grass-like species (appropriate for the site) which have created a sod layer. There is also a small component of forbs and shrubs in the semi-wet meadows.

DESIRED FUTURE CONDITION

The DFC would be that of properly functioning condition with a vegetative community consisting of vigorous, perennial herbaceous wetland species and willows appropriate to the site. These species would create a sod mat that would result in little exposed soil.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for riparian communities by resulting in the DFC for the Springs/Meadows land type:

1. Split the water source at Prospect Spring/Meadow (Little Juniper Pasture) to create two riparian systems. Fence to exclude livestock and provide water for livestock outside the enclosure.
2. Modify/build fences to protect wet meadows and spring source, while providing livestock water at Rock Spring (Mary Hall Pasture).

LIVESTOCK PONDS

EXISTING

The primary purpose of these ponds is to provide water for livestock, however, these waters may be managed for additional resource objectives such as amphibian habitat, waterfowl production and watchable wildlife. Some of the ponds are in disrepair. Typically, the vegetation receives heavy use and trampling of the shoreline when livestock are in the pasture.

DESIRED FUTURE CONDITION

The primary use of livestock ponds will be for livestock watering. During livestock use years, the shoreline vegetation will be subject to heavy use and trampling. In rested pastures, fairly tall herbaceous vegetation may develop. Ponds in disrepair will be brought up to construction standards. Where opportunities arise, additional resource values may be developed.

PLANNED ACTIONS

The following action would contribute to the achievement of the goals for riparian communities by resulting in the DFC for the Livestock Pond land type:

1. In the future, consider constructing 2-part stockponds where it is desirable to provide use for both wildlife and livestock. These ponds would be divided

by a dike with a culvert that allows water to flow between the two halves. Half of the pond would be fenced to exclude livestock with the fence crossing the dike.

ISSUE 8: FITZHUGH CREEK CANYON

GOAL

Maintain and enhance the creek as a coldwater fishery and provide a mosaic of native riparian vegetation types within the canyon system. Most vegetation will be trending towards an advanced ecological status, characterized by multi-aged stands of riparian deciduous trees and shrubs and vigorous grasses and grass-like plants. Areas may be maintained in an earlier successional status where resource management objectives, including properly functioning condition, require it.

RATIONALE

Mature riparian trees and shrubs will help provide optimal conditions for coldwater fisheries by shading the creek. Diverse, multi-aged stands of trees and shrubs will contribute to the maintenance of mature stands and maximize the diversity of wildlife habitats.

OBJECTIVES

1. Maintain Fitzhugh Creek in proper functioning hydrological condition.
2. Maintain or decrease overall stream width/depth ratio.
3. Maintain or increase overall stream sinuosity.
4. Maintain or increase deciduous riparian vegetation.

A goal was specifically identified for Fitzhugh Creek Canyon, but not for Pine Creek. During the analysis of the current situation and determination of DFC, it was recognized that Fitzhugh Creek and Pine Creek were similar riparian systems. Therefore, both creeks were evaluated under the Canyon Systems land type discussed below.

CANYON SYSTEMS

EXISTING - Physical, Geologic and Vegetative

The Canyon Systems land type consists of two perennial creek canyons, Fitzhugh Creek and Pine Creek, that drain portions of the west side of the Warner Mountains moving water westerly out of the Warner's, across the Likely Tables and into the South Fork of the Pit River.

Fitzhugh Creek

The North and South Forks of Fitzhugh Creek originate on Forest Service lands in the Warner Mountains at approximately 7,500' elevation. The two forks intersect to form Fitzhugh Creek, at an elevation of 5,200'. The BLM portion extends from 5,100' - 4,500'. There is a diversion structure midway along the BLM portion of the creek. This diverts most of the winter flow to Payne Reservoir, although there are minimal flow requirements of 3 cubic feet per second from November 1st - March 31st.

Riparian Ribbon: The riparian ribbon consists of the creek and its current floodplain. Approximately 6 miles of the BLM portion of the creek are fenced to exclude livestock and are in an upward ecological trend. These areas exhibit vegetated banks, narrowing stream channels, overhanging banks, expanding thickets of willows and other riparian deciduous shrubs, lush herbaceous growth and accumulations of woody debris. There are four gaps along the creek where livestock are allowed access to the creek. Altogether, these gaps constitute about one mile of the creek's length. Conditions in two of the gaps (Lower Gap and Sheep Bridge Gap) appear to be static. Here the creek generally exhibits few overhanging banks, reduced willow numbers, herbaceous growth of lower height and density, greater lengths of exposed banks and greater width/depth ratios than in the fenced portions. The other two gaps (Willow Gap and Diversion Gap) are rocky and well vegetated with woody riparian species and receive relatively little grazing use.

Stream Terraces: Stream terraces consist of the relatively level benches, adjacent to the riparian ribbon, that historically functioned as floodplain. In the fenced areas the appearance varies according to the site capability. In the more narrow sections of the creek corridor, the vegetative community on the terraces consists of expanding thickets of riparian deciduous shrubs, primarily willow, *Prunus* and dogwood, with an overstory of junipers, mature pine trees and an understory of herbaceous vegetation. In the more open sections of canyon, the terraces are covered by perennial herbaceous vegetation with a buildup of vestigial dead matter with scattered trees and shrubs. The vegetative community in the gaps exhibits scattered individual riparian deciduous shrubs, with an overstory of junipers, scattered mature pine trees and an understory of herbaceous vegetation. In the open areas of the gaps, the terraces are covered by a sparse cover of shorter herbaceous vegetation with reduced accumulation of litter and scattered juniper.

Canyon Slopes and Walls: The canyon slopes and walls consist of the steep slopes that extend from the stream terraces to the top of the canyon. In the steepest, rockiest sections of the canyon slopes and walls, the vegetative community is dominated by deciduous shrub species such as *Prunus* and *Ribes* with scattered pines and junipers. In areas where the slopes are less steep and soils are deeper, the vegetative community consists of an herbaceous understory with scattered shrubs and an overstory of juniper and pine in places.

Pine Creek

The North, Middle and South Forks of Pine Creek originate on Forest Service lands in the Warner Mountains at approximately 6,200', 7,500' and 8,400' elevations respectively. The South Fork joins the Middle Fork at 6,100' and they join with the North Fork at 5,600' to form Pine Creek. The BLM portion is approximately 0.65 mile in length and extends from 5,200' - 5,300' elevation. Near the western end of the BLM portion of the creek, is a structure that diverts part of the creeks flow to Pine Creek Reservoir.

Riparian Ribbon: The vegetative community along much of the riparian ribbon is dominated by riparian deciduous shrubs, primarily willows. Along the upper reach shrubs are fewer, due to shading by the overstory of white fir that exists on the terraces. The perennial herbaceous understory vegetation is lawn-like in appearance subsequent to annual grazing. There are areas of undercut and exposed banks. There are abundant snags, logs and coarse woody debris. There is no evidence of increases in overhanging banks, decreasing width/depth ratios or expansion of riparian deciduous shrubs.

Stream Terraces: The vegetative community on the terraces is dominated by an overstory of mature pine trees with some white fir and aspen. Below this is a layer dominated by willows, dogwoods and other shrubs. There are browse lines evident on some of the shrubs. Along the upper reach of the creek the white fir form a dense canopy and densities of shrubs are lower. The herbaceous understory consists of perennial grasses, grass-like and forbs, and is lawn-like in appearance. There are abundant snags and logs.

Canyon Slopes and Walls: The steepest, rockiest sections of the canyon slopes and walls the vegetative community is dominated by deciduous shrub species such as *Prunus* and *Ribes* with scattered pines and junipers. In areas where the slopes are less steep and soils are deeper, the vegetative community consists of an herbaceous understory, with scattered shrubs and an overstory of juniper, pine and white fir.

EXISTING - Coldwater Fisheries

The Tablelands Planning Area provides two coldwater fisheries - Fitzhugh Creek and Pine Creek. Both creeks may support populations of native redband trout (Behnke 1979).

Fitzhugh Creek

Although Fitzhugh Creek historically supported an excellent trout population, monitoring in 1955 and 1976 indicated small unhealthy populations of trout with much larger populations of non-game fish. This was attributed to degraded conditions, including eroded stream banks and a broad, shallow stream channel, resulting from decades of severe grazing. A Habitat Management Plan (HMP) was prepared and finalized for Fitzhugh Creek in 1977.

The HMP called for a variety of projects to improve the fish habitat, including fencing to exclude cattle, stocking of trout, placement of habitat structures in the creek and the planting of willows and aspen. Two and three fourths miles of creek were fenced in 1978 to exclude cattle. An additional 2 miles were fenced in 1987. The Jochim parcel (0.75 mile) and Hershey Springs (0.25 mile) acquired in 1989 and 1991 respectively, have also been fenced and excluded from grazing.

In 1979, the lower half of the creek on BLM was rotenoned killing all species of fish. The upper sections of the creek were not treated in an effort to preserve native trout that might occur above a natural waterfall barrier upstream from the Breiner ditch diversion. In 1980, fingerling and catchable rainbow and brown trout were planted at two locations below the natural barrier.

A 1981 fish survey, which was a follow-up to the 1979 rotenone treatment, identified a creek population of Sacramento squawfish, rainbow and brown trout, pit sculpin, green sunfish and brook lamprey.

During the period from 1979 through 1988, numerous structures were placed in the creek, including log weirs, trash catchers, rock dams, boulder wings, chutes and single rock placements. Single rock placements seem to provide the most consistently successful improvement with the least risk, creating pool habitat that monitoring indicates is used by trout. Rip-rap and willow balls were also successful (Platou 1984). Log weirs and trashcatchers were subject to being blownout by the current or causing scouring around the structure supports. Similar scouring problems are affecting some of the rock jack supporting structures for the suspended portions of the cross-fences.

Considerable improvement in riparian habitat and fisheries quality has resulted from the implementation of the HMP (GAO 1988, Babcock 1992, Platou 1984).

The most recent fish population monitoring estimated 1,056 trout/mile, for the uppermost section, meeting the HMP objective of 1,000 trout/mile. The middle and lower sections showed improvement but did not meet the HMP objectives of 1,000 trout/mile and 500 trout/mile respectively. The middle section was estimated at 633 trout/mile and the lower section was estimated to have 196 trout/mile (Babcock 1992).

The fenced portions of Fitzhugh Creek are characterized by woody riparian vegetation in the more narrow portions of the canyon, with dense herbaceous vegetation in the more open, meadow areas. Willows are growing in lower densities in the open areas.

The four Fitzhugh Creek water gaps are in place to facilitate livestock movement and provide emergency livestock water when needed. The gaps between fenced portions are characterized by wider, more shallow channels and fewer woody riparian species. This results in less shading and habitat with more water surface exposed to solar radiation and therefore higher stream temperatures, reducing the quality of the fish habitat.

Pine Creek

Limited information is available regarding the history of the fishery in Pine Creek on BLM lands. Stream surveys completed in August 1980 indicate that the stream provided good trout habitat, with substrates dominated by rubble and gravel, shading ranging from 50 to 65% and water temperatures of 48 degrees F.

No current information is available for BLM portion of Pine Creek, but the portion of the creek immediately downstream (now owned by the State of California and managed by CDF&G) was surveyed in 1993. This portion of the creek averaged 1,831 trout/mile of rainbow redband series and brown trout.

DESIRED FUTURE CONDITIONS

Given the similarities in potential for the two perennial creeks, the DFC is the same.

Fitzhugh Creek and Pine Creek

Riparian Ribbon: The DFC for riparian ribbon would be that of Proper Functioning Condition (PFC) with the vegetation trending towards advanced ecological status, except where resource management objectives, including PFC, would require an earlier successional stage. As limited by site capabilities, this would be characterized by the presence of multi-aged stands of riparian deciduous trees and shrubs such as aspens, cottonwoods, willows, dogwoods and grasses and grass-like plants such as carexes and rushes with vigorous healthy root systems. Stream channels would be approaching natural stream sinuosity and width/depth ratios by narrowing, deepening, developing overhanging banks and accumulating large and coarse woody debris.

The water gaps are not expected to achieve the DFC as described for the rest of the riparian ribbon. The water gaps will be in PFC, however, the vegetation may not achieve advanced ecological status.

Stream Terraces: Within the natural capability of the terraces the vegetative community would be characterized by vigorous perennial grasses and grass-like plants, perennial forbs, and multi-age stands of trees and shrubs such as willows, cottonwoods, aspen, dogwood, *Prunus*, pines, white fir (Pine Creek only) and scattered junipers. Large snags, logs, and coarse woody debris would be scattered across the terraces.

Canyon Slopes and Walls: Within the capability of this site, the vegetative community would be characterized by perennial shrubs, forbs and grasses with scattered individual and small multi-aged patches of pines, junipers, white fir (Pine Creek only) and aspens. Large snags, logs and coarse woody debris would be scattered across the canyon slopes and walls.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Fitzhugh Creek Canyon by resulting in the DFC for the Canyon Systems land type.

Fitzhugh Creek

Location of gaps (gaps will provide for cattle movement and emergency water). See Figure 5.

1. Lower Gap - Neck-down the gap to between the upstream end of the headcut and the existing fence forming the lower end of the 1978 enclosure. The south side of the Lower Gap will be fenced along the rim. A locked powder river gate will block the road at the rim. Barbed wire gates will be strategically located to facilitate livestock and wildlife movement. Remove old gap fences where no longer necessary at narrowed gaps. Survey and design will be coordinated with grazing permittees and other affected interests.

Sheep Bridge Gap - Fence both rims and install barbed wire gates. Reduce gap width to approximately 400' near where the existing trails come down to the creek (near the sheep bridge). Retain old gap fences until impacts of the new gaps can be monitored. Survey and design will be coordinated with grazing permittees and other affected interests.

Willow Gap - No neck-down is needed. The south side of the gap will be fenced along the rim and a barbed wire gate will be installed. Survey and design will be coordinated with grazing permittees and other affected interests.

Diversion Gap - Maintain the existing fence configuration.

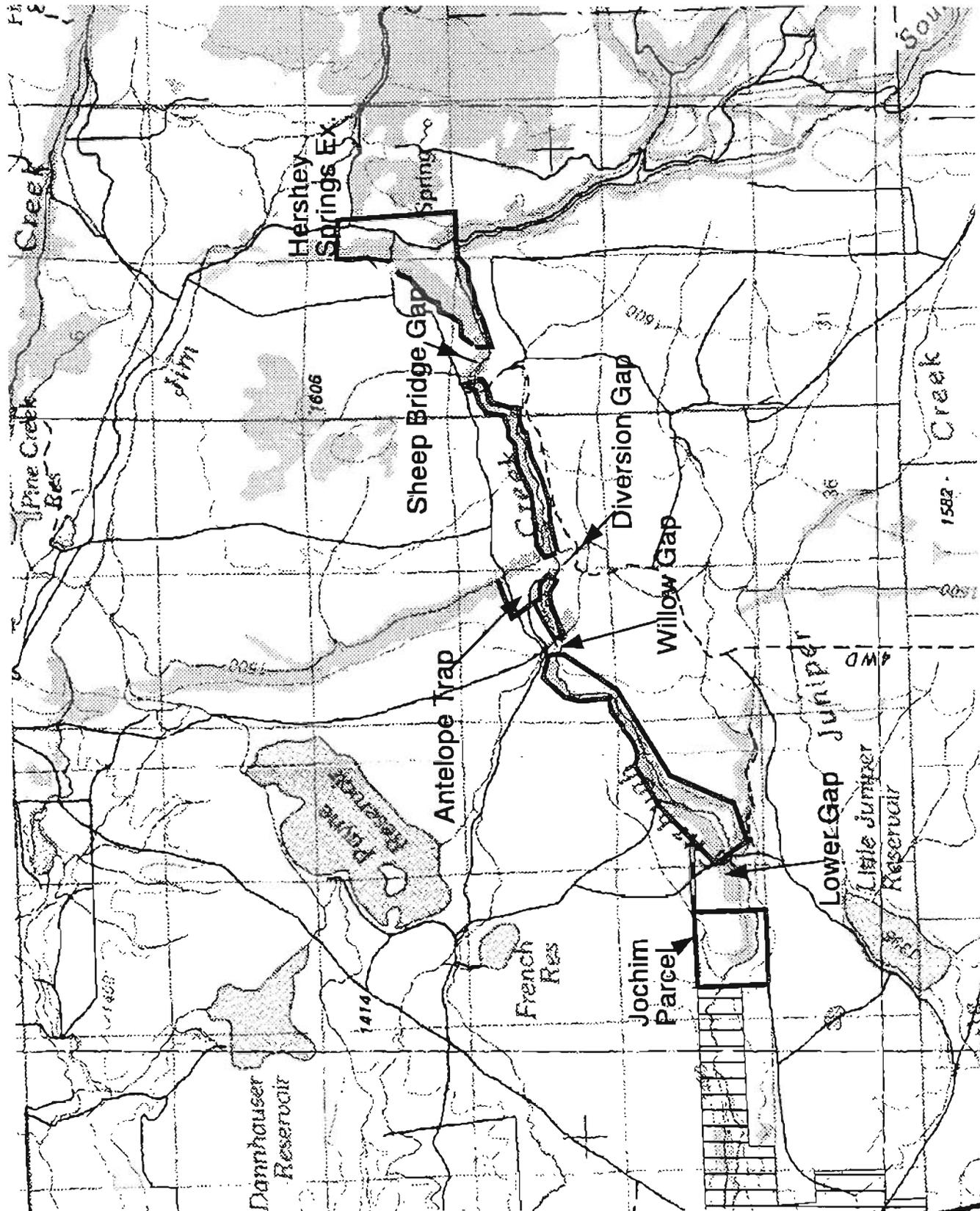
2. Conduct the following juniper cuts:
 - a. Cut the juniper to release the understory of grasses, forbs and deciduous shrubs in areas where juniper is moving into riparian communities.
 - b. On the terraces adjacent to the creek, select areas of juniper may be cut to improve the understories.
 - c. Cut all juniper in the aspen and cottonwood stands.
 - d. Remove a portion of the younger juniper from the Hershey Springs enclosure.

- e. Remove juniper from the aspen stand on the south side of Fitzhugh Creek in the Sheep Bridge gap.
- 3. Conduct prescribed burn in Fitzhugh Creek Canyon meadow areas and selected deciduous tree and shrub stands.
- 4. Rock armor the head cut just below the 1978 enclosure.
- 5. Plant riparian woody species in areas where willows are not recruiting naturally.
- 6. Conduct study in cooperation with CDF&G to determine when to close the North Fork/Jim Creek diversion.
- 7. Prepare feasibility study of mineral withdrawal on lands in Fitzhugh Creek corridor.
- 8. BLM has maintenance responsibility for Fitzhugh Creek Canyon corridor fencing.

Pine Creek

Exchange BLM portion of Pine Creek to State of California to be managed by CDF&G.

Figure 5 - Fitzhugh Creek



ISSUE 9: WATERFOWL HABITAT

GOAL

Maintain and improve waterfowl habitat on viable ponds, reservoirs or new impoundments on the Tablelands.

RATIONALE

Enhancements in waterfowl habitat will maintain or increase waterfowl populations. This will provide hunting and other recreational opportunities and improve biodiversity.

OBJECTIVE

Maintain or increase duck productivity.

RESERVOIRS

EXISTING

The Reservoirs land type consists of five large reservoirs on the Lower Tablelands: Payne, Dannhauser, French, Little Juniper and Dobe Swale. With the exception of Dobe Swale, all of the reservoirs were developed for the purpose of providing irrigation water for agricultural uses on adjacent private lands. BLM does not control the water rights for the irrigation reservoirs. Although the reservoirs usually hold water year-round, there are no minimum pool requirements to ensure presence of water in the reservoirs throughout the year. The reservoirs also provide livestock water, forage, wildlife habitat and coldwater and warmwater fishing opportunities.

DESIRED FUTURE CONDITION

The appearance of the large reservoir shorelines and adjacent areas will be that of new growth and close-cropped vegetation. In the enclosure around Dobe Swale Reservoir and on the nesting islands and the Payne Reservoir peninsula, the vegetation will include taller vegetation and residual standing vegetation that will provide vertical structure for waterfowl nesting and island stability. BLM does not control the water rights to these reservoirs and therefore is unable to manipulate water levels.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Fish and Waterfowl Habitat resulting in the DFC for the Reservoirs land type:

1. BLM complies with state of California laws for the acquisition of water rights. One of the requirements in the water right application is to specify the beneficial use(s) for the water, which may include, wholly or partly, uses for fish and wildlife. BLM will designate beneficial uses for all water rights acquisitions which reflect the objectives for the particular project in question. If a pond is enlarged for the sole objective of a fish or wildlife conservation pool, the additional water right secured by the BLM would reflect this objective in the beneficial use designation.

For ponds identified as important water sources and habitat for fish and wildlife, BLM will incorporate the conservation pool concept into the design for both new and re-designed ponds so that reliability of the ponds will be a primary objective. The amount of water needed to meet these objectives will be specific to each pond and will be reflected in the beneficial use designations in the water right application.

2. Experiment with seedings on islands and selected areas of the shoreline to promote more residual growth.
3. At Dobe Swale Reservoir:
 - a. Reconstruct enclosure fence.
 - b. Construct a cement sill at the outlet about a foot high to raise the water level for wildlife and livestock.
 - c. Use the culvert/dike system or large rocks to separate wildlife/livestock water.

If federal funds are used in the development of a recreational resource at Dobe Swale Reservoir, *compatible graveled trail/pad access will be included.*

4. Evaluate nesting islands:
 - a. Repair/rebuild islands that have deteriorated.
 - b. Fence nesting islands to protect vegetation where necessary.

Additional planned actions that contribute to the goal for Waterfowl Habitat are described in the discussions of the Riparian Communities, Fitzhugh Creek Canyon and Yankee Jim Ranch.

ISSUE 10: LIVESTOCK MANAGEMENT

GOAL

Maintain a stable livestock industry on the Tablelands.

RATIONALE

A viable livestock industry will assist with the economic stability of Modoc County and provide viable family livestock enterprises and provide food and other products for the American public.

OBJECTIVES

Maintain current levels of the existing authorized grazing use while promoting healthy rangelands.

Management of livestock is one of the most effective ways to change vegetation. As such, the cornerstone of this Plan is the modification of the grazing systems on the Tablelands.

Described below are the previous and proposed grazing systems for the North Tablelands Allotment, South Tablelands Allotment, Pine Creek Mesa and several smaller fields. See Figure 6 for the boundaries of the allotments, pastures and fields discussed below.

Also described, are the projects that must be completed to implement the proposed grazing systems.

NORTH TABLELANDS

Existing Grazing System

Most recently, the North Tablelands Allotment has been used by two permittees - Nelson Ranch and Wilson Ranch. The previous grazing system was a three pasture rest rotation grazing system.

Pasture 1 consisted of the proposed Payne and Dannhauser Pastures.

Pasture 2 consisted of the proposed Juniper Ditch and Little Juniper Pastures.

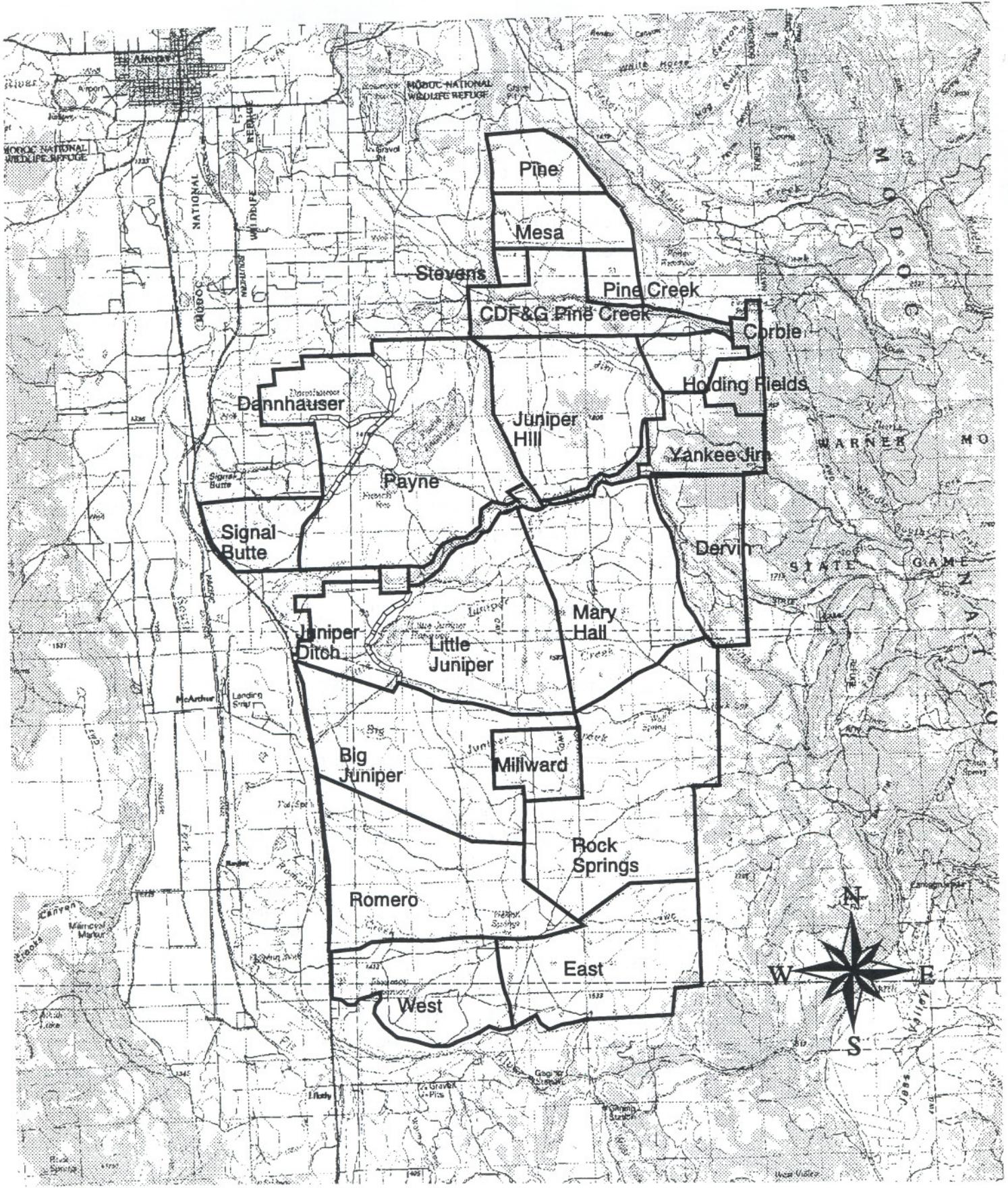
Pasture 3 consisted of the proposed Juniper Hill and Mary Hall Pastures.

Two pastures were grazed from 04/16 to 06/30. The third pasture was rested at this time. On a rotation basis each pasture was grazed two out of three years and rested for one year in the three year cycle.

The Signal Butte Pasture was used as either an early use (04/16 to 05/01) area or as a fall use area (October or November) for approximately 300 AUM's. The two Holding Fields were used as a place to hold cattle prior to going to the Forest Service allotment (06/22 to 06/30). Cattle were also trailed through the Holding Fields (9/20-10/02) as they moved from the USFS allotment back to private fields.

<u>Name</u>	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
Nelson Ranch	525 C	4/16-6/22	1174
	151 C	6/23-6/30	<u>40</u>
			1214
Wilson Ranch	1032 C	4/16-6/22	2307
	281 C	6/23-6/30	<u>74</u>
			2381

Figure 6 - Allotment/Pasture Boundaries



Proposed Grazing System

In the proposed system, the North Tablelands will consist of the following pastures: Payne, Dannhauser, Signal Butte, Juniper Ditch, Little Juniper, Mary Hall, Juniper Hill, West Holding Field and East Holding Field (Figure 6).

Nelson Ranch and Wilson Ranch will be the two permittees in the allotment.

Nelson Ranch will use the same pastures every year in the North Tablelands Allotment. Juniper Ditch Pasture will be used first from 04/16 to 05/01, then the Little Juniper Pasture will be used from 05/02 to 06/30. The Nelson Ranch will also use the Dannhauser Pasture for summer or fall grazing. The Dannhauser Field will include between 1,723 and 2,418 acres. The Nelson Ranch is also recognized as holding a 40 AUM grazing preference in the East and West Holding Fields.

Wilson Ranch will use some pastures every year and rotate use in other pastures. The Payne Pasture will be used from 04/16 to 05/30 every year. The Wilson Ranch will then rotate grazing use every other year between the Mary Hall Pasture and the Juniper Hill Pasture from 06/01 to 06/22. The two Holding Fields will be used from 06/23 to 06/30 and be used for trailing cattle from the USFS (Yankee Jim Allotment) for a two to three day period between 09/20-10/01 (USFS flexibility period). The Wilson Ranch will use the Signal Butte Pasture from 09/15 to 11/15 each year.

Crossing/water gaps on Fitzhugh Creek are exempt from the properly functioning riparian standard. Livestock use of the crossing/water gaps (Figure 5) will be as follows:

1. Timing of livestock trailing use will be at the discretion of the permittee. The permittee will notify the BLM within two business days if trailing use exceeds two days. This notification is for informational purposes. The permittees will not be denied use of the gaps for livestock trailing.
2. Emergency water use will be at the discretion of the permittee. The permittee will notify the BLM within two business days if gaps are used for emergency water. This notification is for informational purposes.

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- Once BLM receives notification of gap use exceeding two days, gap use impact monitoring will be scheduled. If BLM determines that grazing use in any of the gaps is adversely affecting a large portion of the stream reach, the permittee will lose the discretion to exceed two day's use in the gap without prior authorization. Use in the gap will not be further restricted until an alternative water source is developed. *as well as the water developed by the BLM.*
4. The standard for "adversely affecting a large portion of the stream reach" is elevated levels of turbidity or sediment deposition, as defined in the Basin

Plan. Turbidity will be measured ½ mile below Lower Gap, Willow Gap or Sheep bridge Gap. Sediment deposition will be measured in a series of transects below the gap in question.

NORMAL WATER GAP USE

Antelope Trap

Both Wilson Ranch and Nelson Ranch make limited use of the Antelope Trap while making pasture moves. The Antelope Trap is approximately 35 acres in size with unfenced access to Fitzhugh Creek at the Diversion Gap.

The Nelson Ranch may use the Antelope Trap for 2 days, when they move cattle from the Little Juniper Pasture. This move will normally occur approximately June 30th-July 1st. This crossing will be made at the Willow Gap.

The Wilson Ranch may use the Antelope Trap every year for 2 days when they move cattle from the Payne Pasture to the Mary Hall Pasture or Juniper Hill. Wilson Ranch normally moves to the Mary Hall Pasture approximately May 30th-June 1st, using the Diversion Gap. The cattle returning to the Home Ranch from the Mary Hall Pasture may be moved through the Antelope Trap/Diversion Gap approximately June 22nd-23rd, but this would not be the normal yearly operation.

If monitoring indicates that use in the Antelope Trap is adversely affecting a large portion of the stream reach, an alternative water source will be developed and the Diversion Gap may be fenced. Possible alternative water sources include a flow-through water trough a short distance from the Creek, or a stockpond located within the Antelope Trap.

Sheep Bridge Gap

Wilson Ranch may use the the Sheep Bridge Gap for 2 days every other year on approximately June 22nd-23rd for their normal movement from the Mary Hall Pasture to the Holding Fields and the Home Ranch.

If monitoring indicates that use in the Sheep Bridge Gap is adversely affecting a large portion of the stream reach, an alternative water source will be developed and use of the Sheep Bridge Gap may be restricted. Possible alternative water sources include a flow-through water trough a short distance from the Creek, or a stockpond.

Lower Gap

The Nelson Ranch may use this gap to move cattle from the Home Ranch to the Juniper Ditch Pasture. Use will be for 2 days and would normally occur between April 16th-May 30th. If Nelson Ranch does not move cattle into Juniper Ditch Pasture by April 25th, they may move the cattle directly into the Little Juniper Pasture.

Nelson Ranch may move cattle from the Little Juniper Pasture to the Home Ranch through the Lower Gap on approximately June 30th-July 1st.

If monitoring indicates that use in the Lower Gap is adversely affecting a large portion of the stream reach, an alternative water source will be developed and use of the Lower Gap may be restricted. Possible alternative water sources include a flow-through water trough a short distance from the Creek, or a stockpond.

Total authorized grazing use in the North Tablelands Allotment will remain at previous existing levels for both permittees.

Flexibility

Flexibility in the grazing use of North Tablelands Allotment is desirable due to the annual fluctuations in weather, forage plant phenology, soil moisture and permittee's livestock numbers. The terms listed below define the allowable flexibility in grazing use:

1. Livestock cannot be turned out prior to April 16th.
2. Most pastures move dates are flexible plus or minus 7 days at the livestock permittee's discretion. For instance, if livestock are moved on to a pasture seven days late, they can remain on the pasture seven days beyond the normal move date. Any pasture use beyond the 7 day limit of flexibility must have prior approval of the Field Manager.
3. The pasture move to leave Juniper Ditch Pasture on 05/01 is not subject to the 7 day flexibility. Use in excess of 7 days in East and West Holding Fields must have prior approval of the Field Manager.
4. The amount of grazing use in the Dannhauser and Signal Butte Pastures could vary year by year. The total yearly grazing use could exceed the permittees' total active AUM's with the approval of the Field Manager. Yearly grazing use in these pastures will be determined by subtracting the actual use for 04/16 to 06/30 from the total active AUM's.
5. During drought emergencies, the livestock permittees can make spring use in the Signal Butte and Dannhauser (fall use) Pastures. Spring use in these pastures will mean that they can not be utilized in the fall during the same grazing season.
6. If there is adequate livestock forage, as determined by a BLM interdisciplinary team in consultation with permittees, rested fields will be available for either permittee's use during emergencies, such as wildland fires.

7. Additional flexibility proposals must receive prior approval from the Field Manager.

PLANNED ACTIONS

1. A portion of the western side of the Little Juniper Pasture will be fenced to create the Juniper Ditch Pasture (Figure 6). This pasture will be used for early use and short duration grazing.
2. Fence the northwestern portion of Payne Pasture to create the Dannhauser Pasture (Figure 6). Dannhauser Pasture acreage will be between 1,723 acres and 2,418 acres. This pasture will be used for summer or fall grazing.
3. Repair Signal Butte well (replace windmill with either solar submersible pump or a gasoline powered pumpjack). This water is used by livestock and pronghorn.
4. Install cattleguards on the north and east boundaries of the Signal Butte Pasture to improve livestock management and recreation access.
5. Reconstruct private/BLM or USFS/BLM boundary fence on east side of allotment where needed.
6. Reconstruct Holding Field fences if necessary.
7. Develop new water sources to replace Fitzhugh Creek water during normal years. Proposed developments include:
 - a. Construct a small pit in the sink in Juniper Ditch Pasture.
 - b. Construct 2 to 4 reservoirs in the middle of Little Juniper Pasture, including a reservoir in the drainage between Prospect Spring and Little Juniper Reservoir.
 - c. Construct 2 to 4 reservoirs in Juniper Hill Pasture.
8. BLM has maintenance responsibility for enclosure fencing unless otherwise assigned.

SOUTH TABLELANDS / EAST FIELD / WEST FIELD

Existing Grazing System

The South Tablelands Allotment presently consists of three pastures (Figure 6) grazed by two permittees.

Presently the Big Juniper Pasture is used by DePaoli Land and Livestock from 04/16 to 06/30. These cattle then go to private land. The Romero Pasture is used by Rodney Flournoy from 04/16 to 05/30, and then the cattle are moved to the Rock Springs Pasture from 06/1 to 06/30. These cattle then go to the Forest Service.

Presently, the East Field and the West Field are used as separate allotments by Rodney Flournoy. The West Field is eighty percent private land and has five pastures in it, in which Flournoy rotates his grazing use.

Alturas Farms recently purchased the Depaoli Land and Livestock base property. Alturas Farms has executed a three year base property lease with Denny Land and Cattle.

	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
DePaoli Land & Livestock	345	4/16-6/30	862
Rodney Flournoy	656	4/16-6/30	1640

Proposed Grazing System

Denny Land and Cattle and Rodney Flournoy are the two permittees in the allotment.

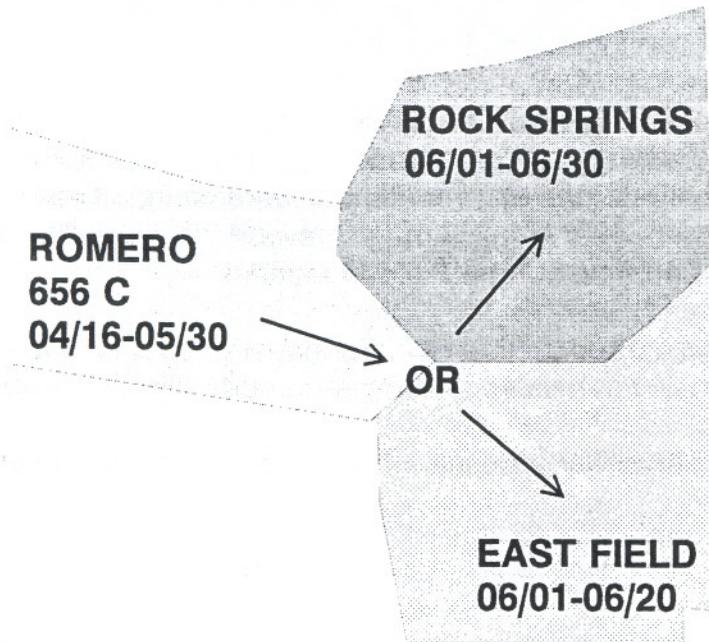
The South Tablelands will consist of the existing Big Juniper, Romero and Rock Springs Pastures (Figure 6). Additionally the East Field and West Field will be added to Rodney Flournoy's portion of the South Tablelands grazing system. The permittees have agreed to split the Millward Field's grazing use between the Big Juniper and Rock Springs Pasture with a new fence.

Denny Land and Cattle will use the Big Juniper Pasture from 04/16 to 06/30 every year. Alturas Farms controls the water right from Little Juniper Reservoir and the ditch flows through this pasture. They also own about 80 acres of private land on the west side of this pasture.

Flournoy's grazing preference is as follows:

- 2504 active AUMs in South Tablelands
- 467 active AUMs in East Field
- 80 exchange-of-use AUMs in West Field

For the purposes of this plan, Flournoy has agreed to graze livestock in a rotational system similar to that depicted below:



1,640 AUM's

When, in Flournoy's estimation, range conditions can support additional grazing, use may be taken up to his specified levels of active grazing use. Flournoy's use will be documented in actual use reports.

SOUTH TABLELANDS

<u>Name</u>	<u># Of Cattle</u>	<u>Season</u>	<u>AUMs</u>
Denny Land	345	4/16-6/30	862
Rodney Flournoy	656	4/16-6/30	1640
<u>East Field</u>			
Rodney Flournoy	656	6/1-6/20	437
<u>West Field</u>			
Rodney Flournoy	32	4/16-6/30	25 (active)
	32	4/16-6/30	80 (exchange of use)

Flexibility

Flexibility in the grazing use of South Tablelands Allotment is desirable due to the annual fluctuations in weather, forage plant phenology, soil moisture and permittee's livestock numbers. The terms listed below define the allowable flexibility in grazing use:

1. Livestock cannot be turned out prior to April 16th.
2. Most pastures move dates are flexible plus or minus 7 days at the livestock permittees discretion. For instance, if livestock are moved on to a pasture seven days late, they can remain on the pasture seven days beyond the normal move date. Any pasture use beyond the 7 day limit of flexibility must have prior approval of the Field Manager.
3. Trailing use through the Rock Springs Pasture to the USFS allotment (Flournoy) will not exceed 10 days and normally will be about 5 days.
4. Additional flexibility proposals must receive prior approval from the Field Manager.

PLANNED ACTIONS

1. Construct new fence on the north side of Cab Field (part of West Field). This will place all of the fire rehabilitation seeding into the Cab Field for management.
2. Construct new Millward fence, cattleguard and remove old Millward fence. This fence is needed to set up new pasture division fence between Big Juniper and Rock Springs Pastures.
3. Replace gate on US Highway 395 at Big Juniper Creek with a cattleguard.
4. Reconstruct pond in NE of SE of section 11 for livestock at Millward Field. This will supplement another existing pond which is 1/2 mile north, as well as the surface water flowing west from the spring system.
5. Construct reservoir, build a protection fence to enhance wildlife and fisheries values and protect cultural and riparian areas around the Millward Spring system. The rim areas can provide quality deer fawning habitat because of the unique combination of cover, food, water and landform.
6. Reconstruct and modify Rock Springs spring development and fence.
7. BLM has maintenance responsibility for enclosure fencing unless otherwise assigned.

PINE CREEK FIELD

Existing Grazing System

This allotment (Figure 6) is grazed from 04/16 to 05/31 in conjunction with adjoining private land.

<u>Name</u>	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
Keith Brown	12	4/16 to 5/31	18

PINE CREEK MESA

Existing Grazing System

The Pine Creek Mesa Allotment (Figure 6) currently has two pastures grazed by one permittee. The permittee has used both pastures the last few years on a rotational basis for a duration of about three weeks each. The season of use is from 04/16 to 05/31. The soils are usually wet in April and the permittee has requested a later turn out date with an equal extension on the removal date, which has been approved.

<u>Name</u>	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
Howard Knuepel	170	4/16-5/31	252

Proposed Grazing System

Implement the original Allotment Management Plan grazing system. This system calls for grazing one pasture from 04/16 to 05/31 for two years and resting the other pasture. This use would be reversed the following two years.

Flexibility

Flexibility in the grazing use of Pine Creek Mesa Allotment is desirable due to the annual fluctuations in weather, forage plant phenology, soil moisture and permittee's livestock numbers. The terms listed below define the allowable flexibility in grazing use:

1. Livestock cannot be turned out prior to April 16th.
2. Additional flexibility proposals must receive prior approval from the Field Manager.

PLANNED ACTIONS

Improve/repair fencing in the Pine Creek Mesa Allotment.

1. Reconstruction of north boundary fence is needed to assure that the north allotment boundary fence is intact between land ownerships.
2. Reconstruction of the SE corner of pasture division fence (this is on private land; an easement may be required or possibly Resource Conservation District funding).
3. Improve east side gap fencing (again on private land).
4. Remove woven wire from CDF&G boundary fence (Section 36) and reconstruct the fence where necessary. Section 36 has a pretty good cattle trail that leads down to Pine Creek, this situation needs to be controlled.

CORBIE FIELD

Existing and Proposed Grazing System

This allotment (Figure 6) is grazed from 04/16 to 08/31, in conjunction with adjoining private land.

<u>Name</u>	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
Keith Brown	6	4/16 to 8/31	27

STEVENS FIELD/WEST FITZHUGH FIELD/DERVIN FIELD

Existing Grazing System

These allotments (Figure 6) are not licensed.

ITEMS COMMON TO ALL ALLOTMENTS

Actual Use Reports and Billings

The users agree to submit an Actual Use Report within 15 days after livestock are removed from the allotment, in accordance with BLM regulation 43 CFR 4130.3-2(d). This report should note the number of livestock that go onto or come off of the allotment and the dates of livestock movements between pastures. The Actual Use Report will be used

for monitoring purposes and also to prepare the post-season (actual use) grazing bill. Should the range user habitually delay or refuse to submit an actual grazing use report in a timely manner, post-season (actual use) billing may be replaced by pre-season (advanced) billing.

Adjustment

Utilization, condition, trend, allotment inspection and actual use reports will be the basic criteria for adjustments in season of use or stocking rates. Future adjustments will be based on the results of these and other appropriate monitoring and inventory studies to insure that IRMP objectives or rangeland health standards are being met.

Trespass

Any livestock found outside the limits of flexibility contained in this IRMP without prior authorization, will be subject to trespass procedures. Grazing use exceeding authorized Animals/Units under the active preference as written in this IRMP will be subject to trespass actions if prior permission has not been obtained. Any livestock found in any pasture or enclosure not scheduled for use without prior approval will be subject to trespass action. If deviations from grazing use as stated in this plan occur, the livestock operator will be given an opportunity to correct it. Normally 5 days will be allowed for compliance. Under special circumstances, alternate arrangements may be worked out with the Alturas Field Manager.

Additional planned actions that contribute to the goal for Livestock Management are described in the discussions of the Loamy/Perennial, Clay/Annual, Stony/Perennial, Livestock Pond, Canyon Systems, Springs/Meadows and Yankee Jim Meadow land types.

ISSUE 11: LAND TENURE ADJUSTMENT

GOAL

Adjust land ownership patterns to facilitate the achievement of Plan goals.

RATIONALE

Effective management of the Tablelands will be simpler when land ownership patterns are in contiguous blocks and not scattered parcels.

OBJECTIVE

Where opportunities arise, consolidate public land ownership on the Tablelands.

EXISTING

The public ownership patterns on the Tablelands are composed of 3 public agencies, BLM, USFS and CDF&G. The BLM manages most of the Tablelands. USFS manages lands along the eastern most edge of the Tablelands at the base of the Warner Mountains. CDF&G manages the majority of the lower reaches of Pine Creek.

The BLM is also responsible for several small parcels west of US Highway 395, a few small inholdings within the Eckland Ranch and a small portion of Pine Creek between the USFS and State of California. The small BLM parcels west of US Highway 395 are custodial allotments and are unlicensed at this time, but are grazed and receive little or no federal attention. The West Fitzhugh Field is 50% federal. This field contains 1 mile of Fitzhugh Creek, and the federal portion on the uplands is unlicensed at this time, but does receive livestock use. Within the Tablelands are several private inholdings: Eckland Ranch, portions of West Fitzhugh Creek, Wall Spring and various lands on the south end adjacent to the South Fork of the Pit River.

DESIRED FUTURE CONDITION

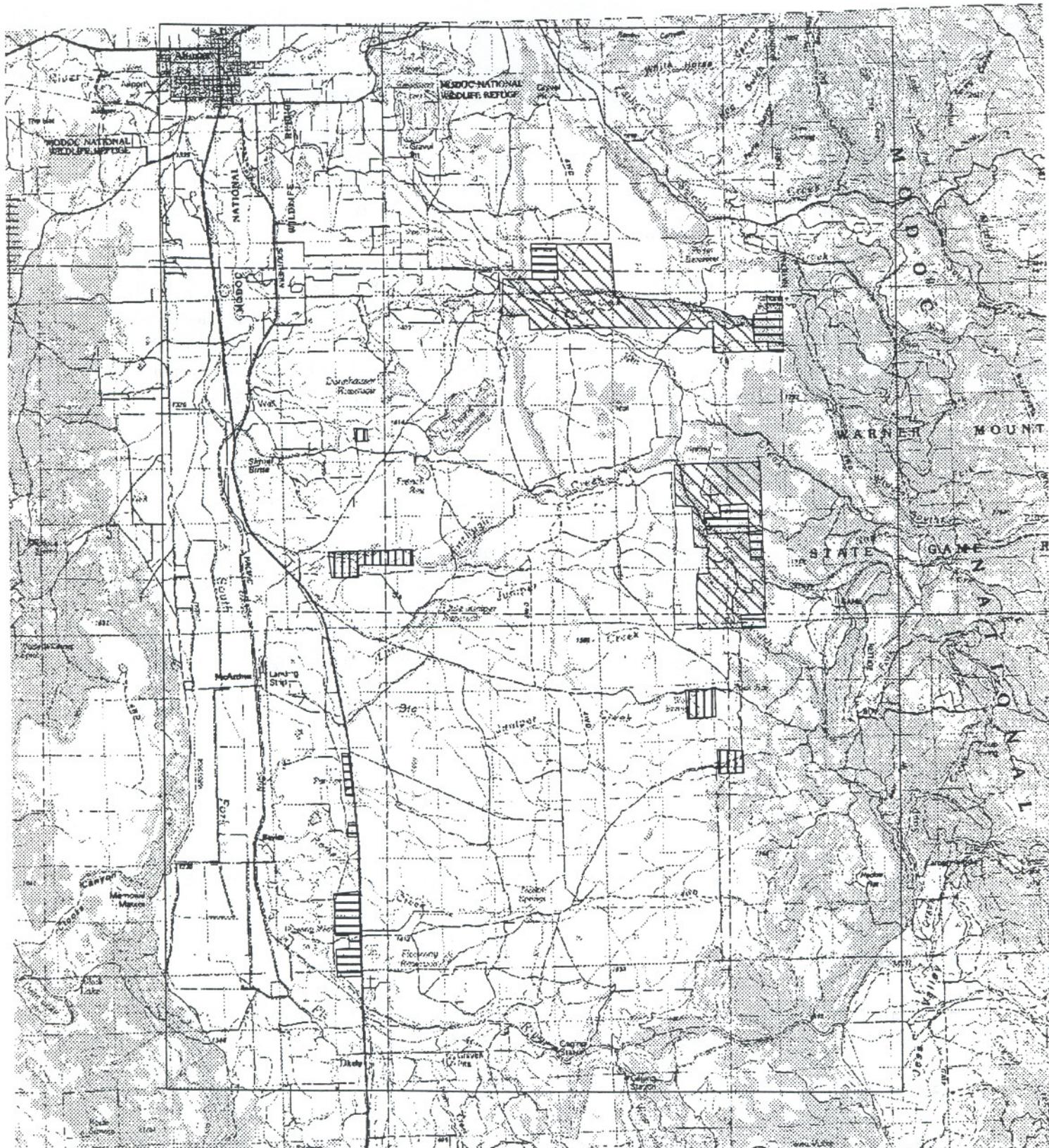
BLM administered lands within the Tablelands Planning Area will be consolidated in large manageable units to facilitate achievement of Plan goals. Smaller parcels may retained where needed to achieve Plan goals.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Land Tenure Adjustment resulting in the DFC for Land Tenure (Figure 7):

1. Direct Land Tenure Adjustment activities to accomplish the goals of enhanced rangeland and riparian health, improved coldwater fisheries and wildlife habitat and consolidation of federal land into contiguous blocks. Dispose of unmanageable or difficult to manage lands which do not facilitate achievement of these goals and objectives.
2. Rangeland Health - Within the South Tablelands Allotment are several inholdings. Sections 16 and 36 have little potential for improvement but Wall and Rock Springs may provide opportunities for riparian improvements. The DFC would be to reduce private inholding to improve riparian or range health.

Figure 7 - Land Tenure Map



Land Tenure
 **Acquire**
 **Disposal**
 **Exchange**

3. Coldwater Fisheries and Habitat - As the majority of the lower reach of Pine Creek is managed by CDF&G and the upper portion is managed by the USFS and BLM has only a small portion of the creek, it would make coordination efforts easier if only 2 agencies managed Pine creek.

Exchange the 200 acre Corbie Allotment and the 240 acre Stevens Allotment with the State of California or USFS or acquire the CDF&G portion. Numerous opportunities exist with the state of California to exchange lands across the Resource Area.

4. Contiguous Blocks - Within the Eckland Ranch are several parcels which are unlicensed but do provide valuable fisheries habitat. Realignment of the boundary would be beneficial to all parties. The small BLM parcels west of US 395 are unlicensed. To this date, they are not being officially used to provide relief for other portions of the tablelands. These lands may be better off in private hands.

Exchange the inholdings on the Eckland Ranch to either adjust the boundary, acquire the Eckland Ranch or dispose to the Ecklands.

Dispose or exchange the small BLM parcels west of US 395 for Wall and Rock Springs or just dispose of the parcels and add the value to the Pit River Hat Creek acquisition.

5. Approach the owners of the Fitzhugh Ranch to exchange for the private land within the West Fitzhugh Field.

ISSUE 12: RECREATION MANAGEMENT

GOAL

Maintain recreational use of the Tablelands at existing levels to prevent resource degradation.

RATIONALE

Recreational use above current levels may inhibit the accomplishment of the goals for wildlife habitat and damage cultural resource sites.

OBJECTIVE

Limit recreational impacts such as littering, camping and road degradation, to at or below current levels.

EXISTING

Hunting and fishing are the dominant recreational uses occurring on the Tablelands. These activities are regulated by the CDF&G and are restricted to specific seasons during the year.

Hunting is one of the most common uses within the area. Species hunted include pronghorn, mule deer, upland game and waterfowl. Seasons for these species occur from August through January. Hunting is dispersed throughout the area, but some sites receive concentrated use such as selected reservoirs and ponds for waterfowl hunting.

Fishing, both warmwater and coldwater, is the other dominant use, and has longer seasons of use. Regardless of season, both types of fishing are most popular during late spring through summer.

Warmwater fishing is legal year round, although road conditions effectively limit this activity to spring through fall. This activity is centered on large reservoirs and a few of the larger ponds.

Coldwater fishing is restricted to a season extending from the late April to November 15th. The cold water fishing is limited to the two perennial creeks within the Planning Area. Observations by livestock permittees, fishermen and BLM staff indicate that fishing use of Fitzhugh Creek is increasing.

Camping activities are generally associated with hunting and fishing uses and dispersed throughout the area. Usually camping does not significantly affect the area. Some impacts do occur in riparian areas where fire rings in meadows have burned out pockets of riparian vegetation and grass. Debris and residue left from these camping activities require some maintenance.

Off-Highway Vehicle (OHV) use is also generally associated with hunting and fishing activities. The rough terrain on the Tablelands limits most use to existing roads and jeep trails. Wet season OHV use can damage the landscape by creating new trails in wet soils and through rutting and widening of existing roads and trails. Impacts such as these may be caused by early spring fishing and late fall hunting activities, when the soils and road systems are wet.

DESIRED FUTURE CONDITION

The Tablelands Steering Committee recommended that recreational use of the Tablelands be maintained at the existing levels. The Committee specifically recommended against the construction of campgrounds and upgrading of the roads. Road maintenance as needed would be continued. The Tablelands would be managed for dispersed use with primitive recreation facilities. This semi-primitive recreation will complement the more

concentrated and developed recreational opportunities available on adjacent USFS and National Wildlife Refuge lands.

PLANNED ACTIONS

The following actions would contribute to the achievement of the goals for Recreation Management resulting in the DFC for Recreation:

1. Close roads in sensitive areas or where damage occurs due to early or late use.
 - a. Close the Fitzhugh Creek/Little Juniper Reservoir road at the top of the rim overlooking Fitzhugh Creek. By preventing road access to the creek/meadow, camping will be deterred in the meadow system along the creek, and erosion impacts will be reduced. Use a powder river gate with a lock and provide the permittee with a key or combination for cattle crossing and emergency water.
 - b. Provide a "primitive" parking area on the south rim of the creek to compensate for loss of parking at the creek. This site on the rim will need gravel for a solid footing at the parking area, due to the soft clay soils on the rim.
 - c. At the westerly access to Fitzhugh Creek, one-quarter mile east of Hershey Springs, place rocks just north of the meadow, to prevent access onto the meadow system.
2. Install interpretive, informative, partnership and "pack it in/pack it out" signs where needed.
 - a. Install a "Pack it in/pack it out" sign at the parking area at the south rim above Fitzhugh Creek.
 - b. Install a "Partnership" sign at Fitzhugh Creek, below the parking area. This sign will depict the project elements of the Plan and promote individuals, agencies and special interest groups that were responsible for completion of the Plan.
 - c. At the three major entry/access points into the Tablelands, install a sign which promotes the Tablelands Plan, projects, agencies, individuals and special interest groups responsible for the completion of the Plan. Signs will indicate that public access is allowed.

Sign Locations: Little Juniper access - On public land, off US Highway 395

right-of-way, Nelson Springs access - On public land, off US Highway 395 right-of way and on Signal Butte access - Jones Lane/Allotment boundary.

3. Prohibit camping in areas where resource damage is occurring.
 - a. Close the meadow area along Fitzhugh Creek to camping to prevent resource damage. No camping or fires within 100' of the meadows along the stream corridor.
4. Acquire the John Eckland property on the north and south forks of Fitzhugh Creek for recreation values. This property was also identified for acquisition in the Fitzhugh Creek Aquatic Habitat Management Plan.
5. Provide watchable wildlife opportunities at Dobe Swale Reservoir.
 - a. An interpretative sign will be erected at Dobe Swale Reservoir for waterfowl/shorebird viewing opportunities.
 - b. Re-construct the fence around the marsh and reservoir.
 - c. Construct a one foot sill on the existing spillway to provide additional water for wildlife, fisheries and livestock.
 - d. Construct a dike and culvert system on the north end of the reservoir to meet wildlife and livestock needs. Large rocks may also be used instead of a dike, culvert and fence.
6. Provide watchable wildlife opportunities at Fitzhugh Creek.
 - a. Provide watchable wildlife viewing opportunities on the creek by identifying them on the interpretative sign at the parking area near Little Juniper Reservoir road.
 - b. Cut or burn junipers and aspen at the Sheep Bridge crossing to rejuvenate the decadent aspen grove and to promote more diverse wildlife viewing. This should also be done at other locations as identified.
 - c. Cut out pockets of juniper along the slopes of the creek to promote more diverse wildlife viewing opportunities.
7. Close Fitzhugh Creek to OHV use.

ISSUE 13: CULTURAL RESOURCES

GOAL

Ensure that historic and prehistoric resources are preserved for future generations.

RATIONALE

Laws and regulations require BLM to manage and protect cultural resources from vandalism, theft, and site degradation.

OBJECTIVE

Protect significant prehistoric and historic cultural resources from negative impacts.

EXISTING

The existing condition of cultural resources varies. Areas in "good" condition are usually areas that have been fenced from livestock or where management actions stopped vehicle traffic. In general, site conditions vary from poor to fair dependent on the site type and proximity to water for livestock, roads for vehicle access, artifact collecting and site vandalism. In the past, vandalism and looting have rendered some of the sites virtually useless for information for the archaeological record, as well as destroyed the aesthetics of the sites and the adjacent area. In some cases badgers, squirrels and natural forces have caused considerable impacts to sites.

Rock art sites are generally free of vandalism and impacts from human sources. A few petroglyphs have bullet impacts from high caliber guns on or around the petroglyph.

The 1906 Antiquities Act and the 1979 Archaeological Resources Protection Act provide laws and regulations for protection of cultural resources. Present BLM policy mandates that cultural resources be addressed in land use decisions as well as all surface disturbing activities.

DESIRED FUTURE CONDITION

The DFC of the archaeological sites is to have areas that have a dense cover of grasses and shrubs to protect the soil, site integrity, stratigraphy and the components of the sites.

The DFC of rock art sites is to maintain and protect them in a condition that allows for interpretation and research.

PLANNED ACTIONS

The following actions will contribute to the achievement of the goals for Cultural Resources resulting in the DFC:

1. Block roads that create impacts to significant resources.
 - a. At site one, block off the road to prevent access by vehicles. The existing road runs through an archaeological site that can qualify for the National Register.
2. Reroute roads that create impacts to significant cultural resources.
 - a. At site two, reroute the road around the site. Inmate labor can be used for this project, as it is a short segment of road on a jeep trail. The existing jeep trail goes over the top a site that can qualify for the National Register.
3. Identify and submit National Register Sites/Districts to the State of California for inclusion into the National Register of Historic Places.
4. Fence National Register sites.
5. Place large rocks on sites for protection from livestock and vehicles.
6. Use cut juniper trees on sites for protection and site stabilization. If this method proves feasible it will be more economical and easier to construct than metal fences, and can be used on a number of other sites.
7. Use tall wheatgrass on sensitive archaeological sites to deter livestock use and activity. Use some of the sites identified above to provide a comparison of site protection provided by tall wheatgrass and cut juniper limbs and trees.
8. Utilize alternate grazing systems to reduce duration of use and season of use. Due to the reduced season of use, a denser and more vigorous vegetation component will be established on the sites to provide for protection and stabilization.

The absence of livestock one out of two years will physically reduce the direct impacts of trampling on the soft midden soils of National Register quality archaeological sites.
9. Provide interpretation where applicable and feasible.

PART 3: YANKEE JIM RANCH

Title to Yankee Jim Ranch was vested to the BLM by order of Final Judgement of Forfeiture on October 25, 1990. The forfeiture arose from an earlier Drug Enforcement Agency raid of a methamphetamine laboratory at the ranch headquarters. In the Final Judgement, the United States was directed to pay outstanding principal and accrued interest on two deeds of trust. The Trust for Public Land assumed these liabilities, at a cost of \$233,912 in exchange for selected public land in Modoc County.

GOAL

Enhance wildlife habitat while providing livestock forage, recreational use, cultural and watershed integrity.

RATIONALE

The purpose of the acquisition was to bring critical deer and antelope range and wetland meadows into public ownership. Several springs and a biologically significant intermittent stream were also acquired. The area could be managed to relieve grazing pressures on adjacent allotments, provide for recreation activities including hunting and hiking, and protect cultural and historic sites from vandalism and exploitation.

ISSUE 1: UPLAND PERENNIAL VEGETATION MANAGEMENT

OBJECTIVES

1. Maintain or increase upland diversity for wildlife, livestock and recreation.
2. Protect significant cultural resource sites.

STONY/PERENNIAL

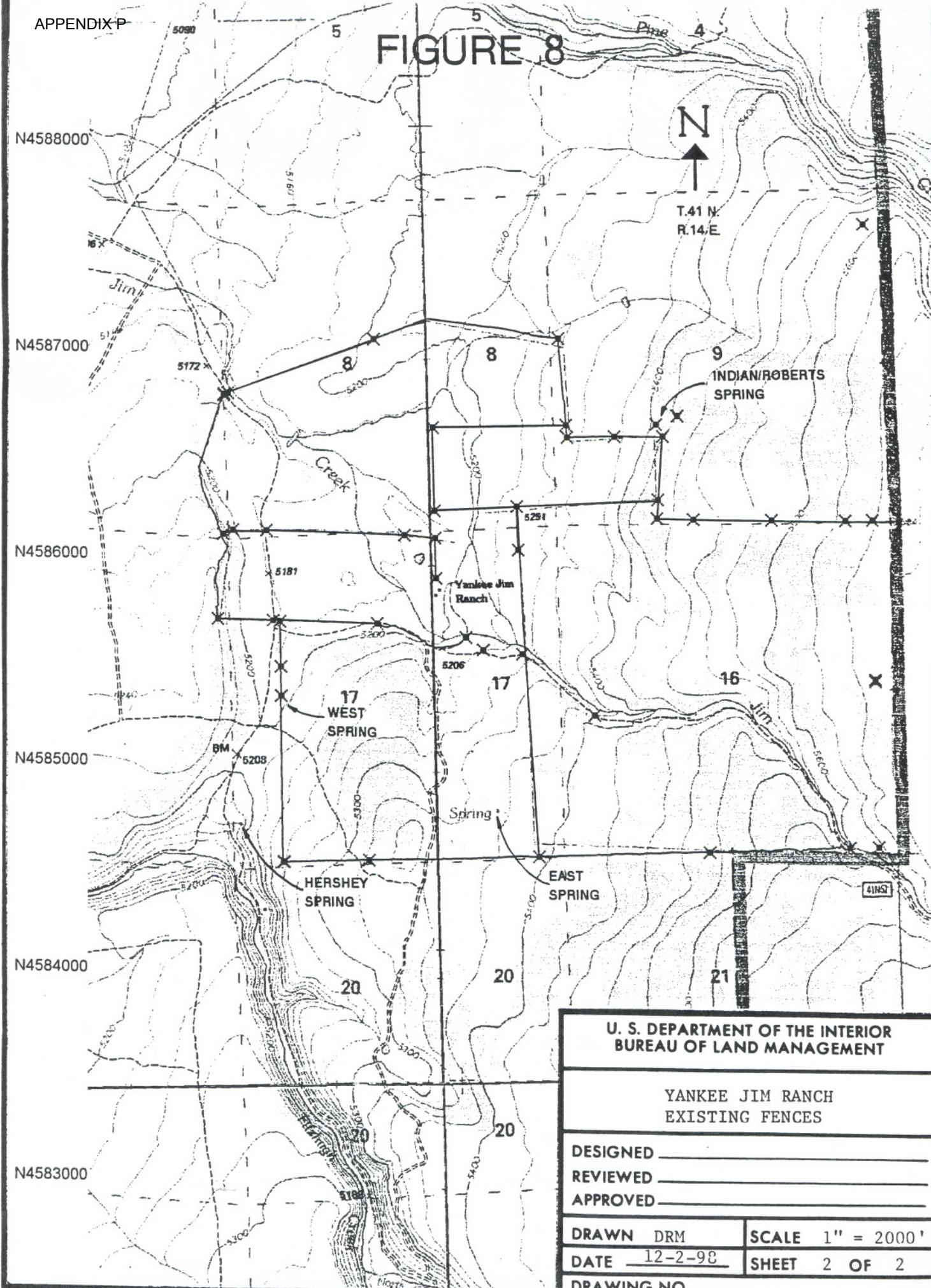
EXISTING

The existing situation in the uplands has an encroachment of juniper into critical wildlife habitats and archaeological sites. The invasion of juniper reduces the quality of fawning and wintering areas for deer, by elimination or reduction of the mountain brush species needed for food and cover. This same scenario also reduces or eliminates forage for livestock. In general, the perennial grasses are in good condition in the uplands, due to past livestock use focusing on the meadow systems, rather than on the stoney upland areas. However, key bitterbrush areas are being invaded by juniper and have been impacted by past livestock grazing practices. The bitterbrush area just to the north of Hershey Springs was fenced four years ago and is responding quite well to no grazing. The present appearance of the plant community is dominated by perennial grasses, forbs and low sagebrush, with isolated areas of big sagebrush and junipers.

DESIRED FUTURE CONDITION

The appearance of the the Stoney/Perennial land type would be dominated by a grass, forb and low sagebrush community, with isolated areas of big sagebrush and scattered junipers. A diversity of age classes of vegetation and a vegetative mosaic will provide high quality food, cover and reproductive areas for wildlife, enhanced forage for livestock and diversity in setting for recreation.

FIGURE 8



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

YANKEE JIM RANCH
EXISTING FENCES

DESIGNED _____
REVIEWED _____
APPROVED _____

DRAWN	DRM	SCALE	1" = 2000'
DATE	12-2-98	SHEET	2 OF 2
DRAWING NO.		_____	

ISSUE 3: WOODLAND MANAGEMENT

OBJECTIVE

Manage the woodlands and forest lands found on Yankee Jim Ranch for the benefit of other resources, while still providing economically harvestable wood products.

FORESTRY

EXISTING

24 acres of ponderosa and jeffrey pine are located on the eastern edge of Yankee Jim in Jim Creek. The pine site is a fairly productive site and was logged around 1900. Most of the stand is about 100 years old with few older trees.

DESIRED FUTURE CONDITION

All forest land on the Yankee Jim parcel should be managed in a way which promotes the full range of healthy forest resources. In this situation, commercial forest products are a byproduct of promoting the other resources.

WOODLANDS

EXISTING

The juniper on Yankee Jim is quite extensive. At this time, there are approximately 500 acres of 10-39% crown closure density, 40 acres of 40-69% crown closure density and 40 acres of 70%+ crown closure density juniper stands. This estimate was derived by aerial photo. Much of the juniper is topping desirable shrubs such as bitter brush, mountain mahogany and other deciduous shrubs.

DESIRED FUTURE CONDITION

Manage the woodland resources to enhance the non-consumptive resources of wildlife, riparian and wetlands and enhance the forage production in these woodlands. This would produce a mosaic of open areas with healthy shrub communities and cover areas.

ISSUE 4. WILDLIFE HABITAT MANAGEMENT

OBJECTIVES

1. Maintain and enhance a complex and diverse mosaic of upland and riparian habitats. Promote native perennial vegetation species in the habitat.

2. Increase and enhance duck and goose productivity on viable pond impoundments.
3. Increase and enhance sandhill crane productivity on meadow systems.
4. Improve and enhance deer fawning habitat, particularly at Jim Creek, Indian and Roberts Springs.
5. Improve and enhance deer winter range.

EXISTING

The Yankee Jim Ranch has many different critical habitats for wildlife species. The location of the ranch at the edge of the timber and upland plateau, with meadows, springs and mountain brush communities, plays an important part in the wildlife resources of the area. Mountain brush sites have been heavily impacted by livestock grazing in the past and now are being over shadowed or are dying out from the encroachment of juniper. The forbs, grass and brush species are disappearing in the high density juniper areas, resulting in the loss of critical habitats such as deer fawning sites and deer winter range.

Waterfowl habitat is minimal and occurs primarily around two small reservoirs on the ranch.

DESIRED FUTURE CONDITION

The DFC should be diverse vegetation in the uplands providing high quality deer fawning habitat and deer winter range. The meadows should provide areas and vegetation differing in height and levels of use to provide a mosaic of vegetation attractive to waterfowl, cranes and other related species.

ISSUE 7. RIPARIAN COMMUNITIES

OBJECTIVES

1. Meet rangeland health standards.
2. Maintain or increase deciduous riparian vegetation on Jim Creek with conditions moving toward advanced ecological status.
3. Manage the road system on Yankee Jim to minimize impacts to watershed values.
4. Develop the irrigation control system to prevent ditch system degradation, due to uncontrolled flows from Jim Creek.

LOWER MEADOWS

EXISTING

The largest meadow community found on Yankee Jim is a wet meadow with a diverse mix of forbs, grasses, sedges and rushes just west of the ranch house. The dominants are yellow monkey-flower "*Mimulus guttatus*", Baltic rush "*Juncus balticus*", Nevada rush "*J. nevadensis*" and meadow barley "*Hordeum brachyantherum*". Subdominants include spike bentgrass "*Agrostis exarata*", common timothy "*Phleum pratense*", Nebraska sedge "*Carex nebrascensis*" and clovers "*Trifolium spp*".

Located within the wet meadow is a 15 to 20 acre site with a fen bog in the middle. The dominant herbaceous plants include Nebraska sedge, Baltic rush, bulrush, "*Scirpus sp*" and lesser-panicled sedge "*Carex diandra*". Weedy species are also present, such as self-heal "*Prunella vulgaris var. vulgaris*", nettle "*Urtica sp*" and bull thistle "*Cirsium vulgare*". These forbs and the Baltic rush are increasers and indicate a disturbed condition.

The third meadow, north and west of the ranch house, is dominated by Nebraska sedge, meadow barley, Baltic rush and Nevada bluegrass "*Poa nevadensis*". Subdominants include Nevada rush and annual hairgrass "*Deschampsia danthonioides*".

DESIRED FUTURE CONDITION

The lower meadow plant community would be composed of dense, vigorous meadow grasses, forbs and other wetland vegetation appropriate to the site. The height of the herbaceous vegetation would vary between the two pastures in the meadow, creating the diverse habitats needed for the production of sandhill cranes and waterfowl. This could be accomplished with fencing, irrigation, seedings and livestock use.

UPLAND SPRINGS AND MEADOWS

EXISTING

The eastern upper meadow is on a bench on the slope to the east of the lower meadows. There are at least four spring heads on the east side of the eastern upper meadow complex. There appears to be a fault line running north-south which is forming the contact with an underground water table; springs originate out of this contact zone.

The plant communities on the upper bench are more diverse with a mix of sedges, perennial grasses and perennial forbs. Plant associations include clover-monkey flower and meadow barley communities, lesser-panicled sedge communities and mixed sedge, grass and forbs communities. The area has a mosaic of these different communities

probably due to subtle water regimes and locations of seeps. Other sites are dominated by various bent grasses, or Baltic rush, Queen Anne's Lace or yampah, "*Perideridia parishii*", lesser-panicled sedge or meadow barley depending on microsite conditions. Common forbs throughout these communities are common monkey-flower, cow clover, whitetip clover "*Trifolium variegatum*" and white hyacinth "*Tritli hyacinthina*" communities. Sedges and swordleaf rush "*Juncus ensifolius*" are common in the very wet springs. Clovers extend out from the edges of the sedge communities.

Below and north of where the flowing water empties into the meadow, the plants found indicate a lower seral stage than the sedge, grass and forb type. The species seen were Timothy, common monkey-flower, Kentucky bluegrass "*Poa pratensis*", curly dock "*Rumex crispus*", hairy owl clover "*Castilleja tenuis*, and Japanese brome "*Bromus japonicus*". The brome and dock indicate that the site has been disturbed and the Kentucky bluegrass indicates that the community is below it's site potential.

Located in the vicinity of the upper meadow area is a population of 15 plants of sweet marsh ragwort "*Senecio hydrophiloides*". This is a California Native Plant Society list 3 plant.

Additional upland springs and meadows are located on the slope to the south of the lower meadows. These areas are designated as East and West spring.

DESIRED FUTURE CONDITION

The upland springs and meadows would be comprised of dense vigorous wetlands species of forbs, grasses and sedges. Willows and prunus species should also be abundant around the edges of the meadow complexes. These upland systems will add healthy and vigorous vegetation to the deer fawning habitats.

JIM CREEK SPRINGS AND MEADOWS

EXISTING

Jim Creek is an intermittent stream flowing through the ranch. Along with the springs, it is the main natural source of water for the lower meadow system. Water which is diverted from the North Fork Fitzhugh Creek is also delivered to the ranch by means of Jim Creek. Portions of Jim Creek are also spring-fed, resulting in pooled surface water in the channel after the intermittent/diversion flows have ended.

Above the lower meadow, Jim Creek is confined to a small canyon and supports a narrow riparian area with remnant populations of willow, chokecherry and other mountain brush species. Juniper and pines are also present along the channel.

DESIRED FUTURE CONDITION

The springs and meadows in Jim Creek would be comprised of dense vigorous wetlands species of forbs, grasses and sedges. The upland shrub community of willows and prunus species will also be abundant around the edges of the meadow complexes. The forested portion of the creek would be in a healthy state with all the components of a complex forest system. These upland systems will add healthy and vigorous vegetation to the deer fawning habitats.

ISSUE 9. WATERFOWL HABITAT

OBJECTIVE

Increase duck, goose and crane habitat and nesting success.

RESERVOIRS

At present, there are two reservoirs on the ranch. One is at the north end of the ranch and lower meadow system, where the ditches and meadow funnel into a confined channel with a stringer meadow. This reservoir has a breached dam and does not hold much water, but there are usually ducks on this reservoir. The second reservoir is located to the north of the old ranch house and is a small pit type reservoir with a dam. Ducks also use this pond. Both reservoirs generally have fairly heavy livestock use, as they are the only water in the lower meadows later in the summer.

EXISTING

When the meadows are grazed at the present level of use, the carex and wet meadow species receive heavy use, while the baltic/spike rush is left relatively ungrazed, providing a variety in vegetative structure. The mounds to the west of the ranch house have upland species, with basin rye being the dominant species present.

DESIRED FUTURE CONDITION

Vegetation of the meadows will vary in height and diversity to provide habitats for the key species. To attract cranes in the early spring, a portion of the meadows need to be fairly short to encourage invertebrate growth, which is an important element in the crane food requirements. Vegetation on the mounds will provide nesting and cover requirements for ducks. Additional open water and impoundments of various sizes and associated vegetation could provide loafing, food and cover for waterfowl, cranes and related species.

ISSUE 10. LIVESTOCK MANAGEMENT

OBJECTIVE

Initially provide 400 AUMs of livestock use. Use livestock grazing to produce a mosaic of vegetative patches of differing heights needed for sandhill crane and waterfowl habitat on the lower meadow.

EXISTING

The Yankee Jim Ranch was recently acquired by BLM and has not been grazed previously as a public land allotment. According to the previous owner and other anecdotal information and professional judgement, the vegetation should reliably support a minimum of 400 AUMs of managed livestock use.

DESIRED FUTURE CONDITION

A healthy system of upland and meadow pastures which is resilient to grazing and produces a minimum of 400 AUMs of quality livestock forage.

ISSUE 12. RECREATION MANAGEMENT

OBJECTIVES

1. Limit recreational impacts such as littering, camping and road degradation, to at or below current levels.
2. Provide fishing opportunities where feasible.
3. Interpret historic and prehistoric resources.
4. Provide Watchable Wildlife opportunities.
5. Restrict OHV use in the meadows to prevent damage to vegetation and potential harassment of wildlife and livestock.

EXISTING

The existing use on Yankee Jim is primarily from hunting pronghorn, deer or upland game. Fishing activities are associated with Fitzhugh Creek and its coldwater fishery. Some camping does occur in the area, but there are no identified campgrounds.

The historic buildings attract an undetermined number of visitors, but this use is probably associated with hunting or fishing activities. There is a lot of debris from past ranching activities and visitors over the years.

DESIRED FUTURE CONDITION

The DFC will be a mosaic of vegetation to provide for a diversity of wildlife habitat. Develop ponds where feasible that provide habitat for Watchable Wildlife and quality fishing opportunities. Provide interpretation of the historic ranching activities and history of the the ranch. Have an area clean of miscellaneous debris, so as not to invite more littering at the ranch.

ISSUE 13. CULTURAL RESOURCES MANAGEMENT

OBJECTIVES

1. Protect significant prehistoric and historic cultural resources on Yankee Jim Ranch.
2. Provide interpretation of the historical and prehistoric components of the ranch.

EXISTING

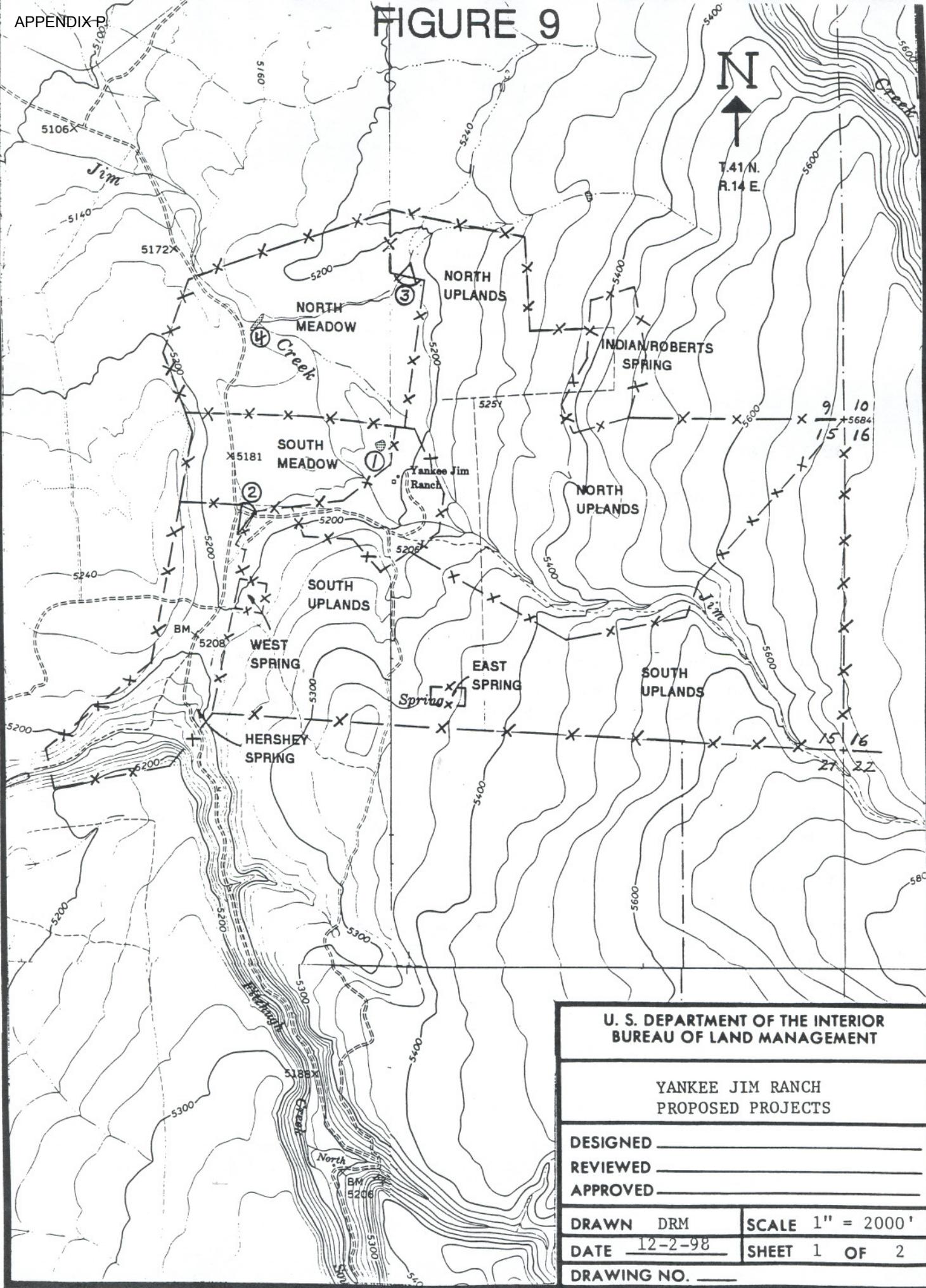
At present, the ranch has been neglected for a number of years and the buildings reflect the lack of maintenance and their age. The two out buildings are both in a state of disrepair and one has already fallen. The ranch house, built in the 1890's, is at a point where a great deal of money would be required to upgrade it to a safe condition. The building used as a drug lab is probably from the 1940's and should be destroyed after proper inventory.

The prehistoric resources have been impacted by livestock grazing. The sites that potentially qualify for the National Register of Historic Places need to be stabilized.

DESIRED FUTURE CONDITION

Stabilized historic structures. Protect prehistoric sites with a mat of vegetation to protect them from livestock or climatic related impacts.

FIGURE 9



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BUREAU OF LAND MANAGEMENT

YANKEE JIM RANCH
PROPOSED PROJECTS

DESIGNED _____
REVIEWED _____
APPROVED _____

DRAWN	DRM	SCALE	1" = 2000'	
DATE	12-2-98	SHEET	1	OF 2
DRAWING NO. _____				

PLANNED ACTIONS

1. Grazing System:

Yankee Jim Ranch livestock grazing will initially be offered on a temporary nonrenewable basis, until projects are completed and carrying capacity is better documented. Issuance of a 10-year permit will be assessed in the 6th year evaluation.

<u>Year</u>	<u>Field</u>	<u># of Cattle</u>	<u>Season</u>	<u>AUMs</u>
1	North Uplands	200	7/01-7/15	100
	North Meadow	200	7/15-7/31	100
	South Meadow	200	8/01-8/30	<u>200</u>
				400
2	South Uplands	200	7/01-7/15	100
	North Meadow	200	8/01-8/30	200
	South Meadow	200	7/15-7/31	<u>100</u>
				400

Flexibility in the grazing use of Yankee Jim Ranch Allotment is desirable due to the annual fluctuations in weather, forage plant phenology, soil moisture and permittee's livestock numbers. The terms listed below define the allowable flexibility in grazing use:

- a. Livestock cannot be turned out prior to July 1st, without prior approval of the Field Manager.
 - b. Additional flexibility proposals must receive approval of the Field Manager.
2. Repair the Yankee Jim irrigation system:
- a. Repair system of ditches in the Yankee Jim Meadow to conduct vegetation and water management activities in the meadow, to enhance wet meadow vegetation, improve waterfowl and sandhill crane habitat and provide livestock water.
 - b. Install North Fitzhugh/Jim Creek diversion pipe; this is the primary source of additional water to conduct vegetation/water management activities in the Yankee Jim Meadow. This is the primary conveyance for the adjudicated water right needed to conduct irrigation water to the ranch. Ideally, the pipe should be buried. If not feasible, there is a need to coordinate with USFS to remove dead fir trees.

3. Seed with wetland vegetation, meadow grasses and forbs in the meadow fields where needed to improve wildlife habitat.
4. Construct livestock exclusion fencing for the spring sources and saturated areas at Willow Spring.
5. Construct ponds for wildlife habitat and livestock water. All water rights and wetland issues will be addressed prior to any construction activity. If federal funds are used in the development of recreational type ponds, compatible graveled trail or pad access will be included with the project at the SW corner of Yankee Jim Meadow.

At Yankee Jim Reservoir #1 (north of house), develop a larger (100'X100'X10') pit reservoir.

At Yankee Jim Reservoir #2 (SW corner of Yankee Jim Meadow), develop a (100'X100'X10') pit reservoir in the meadow for livestock and a (300'X500'X10') for wildlife to be within the realigned Hershey Spring enclosure fence.

At Yankee Jim Reservoir #3 (NE corner of Yankee Jim Meadow), develop a (100'X100'X10') pit reservoir to be filled with water from the YJ irrigation ditch system on the edge of the meadow and a (300'X500'X10') pit for wildlife to be fenced out of the meadow .

At Yankee Jim Reservoir #4 (NW corner of Yankee Jim Meadow), develop a (100'X100'X10') pit reservoir in or near the existing depression and breached dam. This could also be a two pit livestock/wildlife project.

6. Yankee Jim well is a fallback project to only be developed if Yankee Jim Reservoirs # 3 and #4 do not provide adequate livestock water for the North Yankee Jim Meadow.
7. Construct fences to separate meadow from uplands and provide pastures within meadow.
8. Reconstruct the boundary fence on the north and west sides of Yankee Jim Meadow and Holding Fields and Juniper Hill Pastures.
9. Construct pasture fence to divide Jim Creek between the two upland pastures, to develop deer fawning habitat and provide riparian protection.
10. At West Spring (Yankee Jim Uplands Pasture), construct livestock exclusion fence around the upper third of the riparian meadow system, along with a trough system outside the fence for livestock watering.

11. At East Spring (Yankee Jim Uplands Pasture), construct livestock exclusion fence around the wettest areas (spring sources and saturated areas) so that most of the meadow can be used for livestock forage. Develop a trough system outside the fence and away from the meadow for livestock watering.
12. At Indian and Roberts Springs, construct livestock exclusion fencing for the spring sources and saturated areas. Develop trough systems outside the fence and away from the meadow for livestock watering in the Yankee Jim Uplands Pasture and the East Holding Field.
13. Juniper Cutting on Yankee Jim:
 - a. In bitterbrush areas to stimulate growth.
 - b. In Jim Creek drainage to release curleaf mountain mahogany and other brush/herbaceous to improve deer fawning habitat. Along the Creek, arrange downed wood to discourage cattle access.
 - c. Cut younger juniper stands in a mosaic pattern in the Yankee Jim uplands, approximately 30-50% of the 1,000 acre area would be treated. Primary focus would be in areas with desirable shrub understories or springs and riparian areas.
 - d. Cut juniper that are competing with pine and aspen stands in Jim Creek and the Yankee Jim upland areas.
14. Solicit public input on the disposition of the Yankee Jim Ranch house. Concerns are primarily related to safety and structural integrity.
 - a. Preliminary Steering Committee proposals have included constructing a 6' chain link fence with barbed wire extensions between 10' and 30' from the house. This action will deter access to the house and reduce hazards for visitors. By fencing the structure, it also preserves the existing integrity of the old house, which has been a concern to many people in the community.
 - b. In addition to the fence, conduct a historical evaluation of the house and site, complete with a write-up and photographs.
 - c. Place a "No Admittance-Unsafe Structure" sign at the ranch house to inform visitors of the possible hazard.
15. Install an interpretive sign at Yankee Jim Ranch to depict historic ranching activities.
16. Provide watchable wildlife opportunities at Yankee Jim Ranch.

- a. Construct a dike and culvert system in the existing reservoir north of the ranch house for use by wildlife and livestock.
 - b. Cut juniper in strategic patterns to provide mosaic in the vegetation mixture, to add to the watchable wildlife of the area.
17. Place large rocks on access road adjacent to the meadow at Hershey Springs.
 18. To prevent meadow damage, install a "Locked Gate" sign one-quarter mile north of Fitzhugh Creek, near Hershey Spring. No turn arounds are available at the Eckland locked gate, so vehicles either turn around in the wet meadow area or back out for 1300'. Place large rocks on the west side of the road to prevent access to the meadow.
 19. Realign road in southwest corner of the meadow to move out of the wet areas.
 20. Burn the old drug lab after the proper inventory has been conducted.
 21. Protect four National Register quality sites by placing large juniper limbs or junipers on the sites.
 22. Construct eight small shallow pits in the water courses of the lower meadow to enhance waterfowl habitat.
 23. Construct a fence to provide a recreation, riparian and wildlife enhancement area in the southeastern portion of the south lower meadow.
 24. Clean up the miscellaneous debris around the ranch which is not associated with interpretative values.
 25. Conduct an inventory on all historical buildings and associated features. Record sites, structures etc. and make a determination as to cleanup, retention or removal to a transfer facility.
 26. Prepare feasibility study of mineral withdrawal on lands in Yankee Jim Ranch.

PART 4: MONITORING PLAN

Information gathered from monitoring should be analyzed and incorporated into a interim report at the end of each three year monitoring cycle. Field data for this interim report should be collected by November 1st at the end of the monitoring cycle and the report completed by February 1st, prior to livestock turnout the following year. Adjustments can be incorporated into management plans to meet our objectives. This report will enable BLM and the interested parties to follow the progress of the Tablelands Plan.

Some monitoring will take place annually, but most of it will occur on a three year cycle. Monitoring schedules should be coordinated to focus monitoring needs in one year, rather than unscheduled events. This will allow planned monitoring schedules to be established for the responsible parties, similar to the schedules for Rangeland Assessments.

Monitoring will be conducted in careful and considered consultation, cooperation, and coordination with affected permittees, landowners, CDF&G, and the interested public.

WILDLIFE

DEER

Objective	Where	When/Time Frame	How	Who	Comments
Inventory key sites for deer fawning habitat	See map	After livestock are gone, prior to deer 8/1 Two seasons for baseline Every six years thereafter	Aerial photos Cole browse transects Cover boards Crown closure Pace frequency transects - coordinate with range transects Permanent photo points Photo trend coordinate with range transects	Wildlife bio.	After sites are inventoried for condition, set objective for improvement
Inventory key winter use areas for deer	See map	After livestock leave the area, prior to deer 8/1 Two years baseline. Every six years thereafter	Cole browse transects Permanent photo points Photo trend coordinate with range transects	Wildlife bio.	Explore options for new transects Read existing transects Set objectives for improvements

ANTELOPE

Objective	Where	When/Time Frame	How	Who	Comments
Monitor critical winter/spring migration corridors	See map	After cattle leave, prior to winter migration - approx. 8/1 Annual	On the ground Data from photo trend Data from pace frequency	Wildlife bio. Range CDF&G	Monitor for hazards Insure that the antelope trap fence is down

WATER FOWL

Objective	Where	When/Time Frame	How	Who	Comments
Monitor duck use and numbers	Yankee Jim Ranch ponds and meadows	5/15-7/5-8/5 Annual	On the ground	Wildlife bio.	Start monitoring FY99
Monitor Goose nesting use on nesting islands	Payne Dannhauser Doble Swale Little Juniper French	Approx. 4/1 8/1 Every 3 years	Observation use On the ground/ islands	Wildlife bio.	FY99 Inspect island maintenance needs

SENSITIVE SPECIES

Objective	Where	When/Time Frame	How	Who	Comments
Inventory for plants	Tablelands/ Yankee Jim Ranch	Range - Yankee Jim	Range	Range Botanist	
Monitor for Swainsons hawk	Sensitivity species map	6/1 Annual	Observation Use standard form	Wildlife bio. Pete Bloom CDF&G	Coordinated effort
Golden Eagle	Sensitivity species map	6/1 Annual	Observation Standard form	Wildlife bio. CDF&G	
Monitor for Sandhill crane early use	Yankee Jim Ranch	5/1	On the ground observation, form	Wildlife bio.	Establish baseline data
Monitor for Crane nesting success	Yankee Jim Ranch	7/1	On the ground observation Standard technique and form	Wildlife bio. USF&WS	USF&WS On the ground Use standard nest survey
Monitor sagegrouse leks for activity	See map	March/April Annual inspections	On the ground observations	Wildlife bio.	Use existing information for monitoring

SENSITIVE SPECIES CONTINUED. . .

Objective	Where	When/Time Frame	How	Who	Comments
Monitor vegetation on active/inactive leks	See map	After grouse leave site/prior to cattle, approx. 5/1 Two years baseline, then every six years	Pace frequency transects Aerial photos Compare size, openings of old leks to existing openings	Wildlife bio.	Use one active, one inactive

RANGE

Objective	Where	When/Time Frame	How	Who	Comments
Monitor rangeland vegetation	Tablelands/ Yankee Jim Ranch See map	According to existing schedule	Pace frequency transects Residual dry matter or annuals Photo trend	Range	Analyze previous transects, are new ones needed to monitor for vegetation? Collect climate data Vigor and spread of medusahead
Monitor Fitzhugh Creek corridor fences	See map	Annually	On the ground inspection	Range/ wildlife	Start FY99
Monitor fence exclosures for maintenance needs	Tablelands See map	Every 3 years	On the ground inspection	Range	Start FY99

STREAMS / SPRINGS

Objective	Where	When/Time Frame	How	Who	Comments
Monitor response of old gaps	Fitzhugh Creek gaps	7/1-8/1 FY99, then every 3 years	Permanent photo points, cross-sections	Hydrologist	2 cross-sections and photo points in each gap
Inventory woody shrub component	Fitzhugh Creek gaps	7/1-8/1 FY99, then every 3 years	Aerial photos 300' Creek transects, form Photo points	Rec Plnr Wildlife bio.	Canopy closure measurements Count individual plants on stream banks Coordinate with other photo point needs
Monitor sediment in gaps	Fitzhugh Creek gaps above and below	Baseline FY99, then every 3 years in the fall	Quantify benthic layer embededness at permanent transects	Hydrologist CDF&G	
Monitor water quality	Fitzhugh Creek gaps and exclosures <u>Yankee Jim Ranch</u> - Indian and Roberts spring · West spring · East spring · Jim Creek · New fish ponds <u>South Table</u> · Millward field pond	Annually, June-September Baseline FY99, then annually	Continuous thermal record Continuous thermal record of ponds and tributaries	Hydrologist Hydrologist Rec Plnr CDF&G	Establish thermal relationships between wildlife ponds and tributaries
Monitor original exclosure transects	Fitzhugh Creek - Original exclosures	Start FY99	Transects Photo points	Wildlife bio. Rec Plnr	Continue monitoring of original photo points, and transects

CULTURAL RESOURCES

Objective	Where	When/Time Frame	How	Who	Comments
Monitor 5 sites for vandalism In FY2001, start monitoring 10 sites	Tablelands	4/1	Use site surveillance form	Rec Plnr Arch Tech Ranger	Compare past site survey forms for impacts
Establish 10 new photo point transects - 5 new photo point transects in FY99 and 5 in FY2000	Tablelands	8/1, read for two years, then every 3 years	Use permanent photo points Modified Daubenmire frame	Rec Plnr Arch Tech	Use existing and new transects to note impacts or change
Monitor impacts to Yankee Jim Ranch House	Yankee Jim Ranch House	Annually during the summer	Photographs	Rec Plnr	

RECREATION

Objective	Where	When/Time Frame	How	Who	Comments
Monitor meadow and high use areas for impacts to riparian resources	Fitzhugh Creek lower gap Hershey springs meadow/creek	5/1-10/1 2 per year, once in the spring and once in the fall	Photo documentation Documentation on visitor use form	Rec Plnr	Fishing, camping and OHV activity
Roads	Little Juniper Payne Yankee Jim	Once a year	Photo documentation	Engineer Staff	Fishing and hunting activity
Ranch house and recreation site	Yankee Jim Ranch	5/1-10/1 Spring and fall	Photos Visitor use forms	Rec Plnr Range	

PART 5: PROJECT PRIORITIZATION LIST

1. North Fitzhugh diversion pipe
2. Little Juniper and Juniper Hill stockponds
3. Neckdown/close gaps
4. Rim fence maintenance
5. Antelope Trap fence replacement
6. Yankee Jim ponds/ditch system/duck ponds
7. Indian/Roberts Spring development and fencing
8. East/West Spring development and fencing
9. Yankee Jim Pasture and perimeter fencing
10. Millward fence removal/division fencing/spring enclosure/pond
11. Dobe Swale Reservoir/fencing/division rocks
12. Prospect Spring development and fencing
13. Rock Spring development and fencing
14. Ranch House disposition (based on public input)
15. Tablelands signing
16. Cab Field fence realignment
17. Signal Butte Well repair
18. Yankee Jim juniper cuts
19. Yankee Jim road closure/reroute:
 - a. Near pond 2
 - b. South side of Yankee Jim meadow

- c. Road crossing on W. Spring
 - d. Eckland boundary gate culvert
 - e. Jim Creek/Ranch House crossing
 - f. East Spring crossing
 - g. Hershey Spring/Fitzhugh Creek
20. Rock armor headcut below '78 enclosure
 21. Fitzhugh Creek juniper cuts
 22. Feasibility study on mineral withdrawals
 23. Install cattleguards at Signal Butte and Big Juniper Creek
 24. Millward Field stockpond
 25. Pine Creek Mesa north boundary fence
 26. Pine Creek Mesa CDF&G boundary fence
 27. Corbie Field exchange
 28. Stevens Allotment exchange
 29. Dispose of land west of highway 395
 30. Clean up debris around ranch
 31. Burn drug lab
 32. Repair/rebuild nesting islands
 33. Fence nesting islands
 34. North Fork/Jim Creek diversion study
 35. Riparian planting at Fitzhugh Creek
 36. Fitzhugh Creek Canyon prescribed burn

PART 6: REFERENCES AND APPENDICES

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APPENDIX A: EXISTING PLANS

The Tablelands area is subject to several planning documents. With the exception of the Alturas RMP, most of the documents listed below focus on a single natural resource of interest. The Alturas RMP is a Land Use Plan which is intended to integrate and direct all other BLM plans.

A. BUREAU OF LAND MANAGEMENT PLANS

1. Plan Name: Alturas RMP

Date: 8/24/1984 Type: Land Use Plan

Focus of the plan: Integrating and allocation of use of the natural resource.

Summary: Management Area 1 - Tablelands, "The primary management emphasis is to protect riparian habitat, enhance fisheries potential, improve watershed conditions, and allocate forage for livestock to attain optimum production levels while maintaining antelope and sage grouse forage and habitat". Page 27, RMP.

2. Plan Name: North Tablelands AMP

Date: 1960, amended in 1972 & 1976 Type: Activity Plan

Focus of the plan: Administration for the North Tablelands Allotment

Summary: Objectives of the North Tablelands AMP are: improve watershed conditions, stabilize forage, intensive management of livestock grazing, improve wildlife habitat conditions and support the Fitzhugh Creek HMP and the Eight Sites Wetland Project.

3. Plan Name: South Tablelands AMP

Date: 1972 Type: Activity Plan

Focus of the plan: Administration for South Tablelands Allotment

Summary: Objectives of the South Tablelands AMP are: maintain water and forage for livestock, increase perennial, stabilize forage production, reduce soil erosion, maintain low sage, increase capacity for antelope, enhance springs and minimize interference to sage grouse.

4. Plan Name: Pine Creek Mesa AMP

Date: 1970's Type: Activity Plan

Focus of the plan: Administration for Pine Creek Mesa Allotment

Summary: Objectives of the Pine Creek Mesa AMP are: to increase perennial grasses, reduce soil erosion, reserve winter feed for deer and antelope, suitable habitat for sage grouse and have a grazing system and season of use designed to accommodate the operators summer use on the National Forest and retain and maintain suitable browse for deer winter range.

5. Plan Name: Integrated Weed Management on BLM Lands in Susanville District
 Date: 5/3/1993 Type: Action Plan
 Focus of the plan: Noxious weed control on BLM public lands

Summary: To control noxious weeds in the Susanville District through a variety of methods. The main method would be pesticide use.

6. Plan Name: Fitzhugh Creek HMP
 Date: 9/30/1977 Type: Activity Plan
 Focus of the plan: Habitat Mat. for cold water fisheries

Summary: The Fitzhugh Creek HMP covers 6 1/2 miles of Fitzhugh Creek and approximately 660 acres. The goal of the HMP is to rehabilitate the creek and trout fishery through the use of instream structures, planting willows and aspens and fencing the stream course to eliminate livestock use.

7. Plan Name: Sustained Yield Unit (SYU) 15 Timber Management Plan
 Date: 9/3/1981 Type: Activity Plan
 Focus of the plan: Forest Management Plan

Summary: Continue intensive management of 57 acres of commercial timber base land. Allow timber harvest in Corbie allotment (18 acres), maximizing soil protection along Pine Creek. Not included in SYU 15 is the forested area on the Yankee Jim Ranch or the forested areas of Fitzhugh Creek. Inventory showed that there is 24 acres of Ponderosa/Jeffrey Pine on the eastern edge of Yankee Jim. This would bring the total acreage of forest to 81 acres.

B. Other Agency Plans

1. Plan Name: The Water Quality Control Plan (Basin Plan) for the Central Valley Regional Water Quality Control Board (Region 5), Second Edition
 Date: 1991 Type: Regulatory Plan
 Focus of Plan: Water Quality for the Sacramento Basin

Summary: Water quality control plans (basin plans) are supported by the Federal Clean Water Act and required by the State's Porter-Cologne Water Quality Control Act. The basin plans are regulatory references for meeting the State and federal requirements for water quality control in California. The basin plans establish water quality standards.

2. Plan Name: Report: Best Management Practices for Fitzhugh Creek
 Date: 1984

Summary: Issued as a "final draft" for a 30 day comment period in 1984. The cover letter states that the report follows the guidelines and recommendations of the Fitzhugh

Creek Habitat Management Plan which was approved by the Susanville District Manager in 1977. There is no record of further action on this report.

3. Plan Name: Report: Best Management Practices for Payne Reservoir (Tablelands).
Date: 1984

Summary: Issued as a "final draft" for a 30 day comment period in 1984. The report addressed only the management of roads on the Tablelands to decrease the sediment loads delivered to streams and reservoirs; the methods to be used were roadway modifications and access limitations. There is no record of management approval or further action on this proposal.

4. Plan Name: California Fish and Game Pronghorn Antelope Management Plan
Date: 1990 Type: Herd Plan
Focus of the plan: Herd management for the Likely Tables Antelope herd

Summary: Maintain wintering populations of 1700 pronghorn on the Likely Tables winter range and maintain herd ratios of 35 bucks and 50 kids per 100 does at the time of the summer herd counts.

3. Plan Name: California Fish & Game Warner Mountains Deer Herd Management Plan
Date: 1984 Type: Herd Plan
Focus of the plan: Herd management for the Warner Mountains Deer Herd

Summary: Range and Habitat Goals - Work with public and private land managers to develop tactical action plans to increase and maintain the quality and quantity of range and habitat which will achieve and support the herd population goals. Herd goals #4 - Attain an April deer population of 12,000 animals by 1993 (interim goal). It is anticipated that the long term goal population could approximate mid-1960 population levels (32,000).

APPENDIX B: WILDLIFE RESOURCES BY LAND TYPE

LOAMY/PERENNIAL

The Loamy/Perennial land type provides winter range for pronghorn antelope, as well as kidding areas.

Scattered juniper provide nest sites for raptors, including red-tail hawks and Swainsons hawks. Burrowing owls have nested in the Signal Butte area in the past.

One historic sage grouse lek is located in this planning compartment. It was not active as of the writing of the Alturas RMP (1984).

CLAY/ANNUAL

The Clay/Annual land type provides winter and spring range for pronghorn antelope, as well as kidding areas. Replacement of native perennial grasses and sagebrush by introduced annual species may be reducing the suitability of this planning compartment for pronghorn.

This area provides winter range for mule deer during mild winters.

Six historic sage grouse leks are located in this land type, none of which were active as of the writing of the Alturas RMP (1984). Replacement of native perennial grasses and sagebrush by introduced annual species are reducing the suitability of this land type for sage grouse. However, small groups of sage grouse have been observed in the vicinity of Payne Reservoir as recently as July 1996. The reproductive status of these grouse is unknown. No grouse were observed during a single visit to the historic lek near Payne Reservoir during the strutting season in 1996.

The opportunities to improve pronghorn and sage grouse habitat in this land type is limited by our inability to control the spread of introduced annual species.

There are several known red-tailed hawk and Swainsons hawk nests in this planning compartment, as well as two golden eagle nests and two American kestrel nests.

STONY/PERENNIAL

The Sandy/Perennial land type provides winter range for pronghorn antelope, as well as kidding areas. The entire land type provides winter range for mule deer during mild winters; deer concentrate on the eastern side of the land type during more severe

winters. The decadence and lack of reproduction exhibited by bitterbrush in these concentration areas is diminishing the area's value as winter habitat. There are many potential factors influencing survival of bitterbrush in this land type, including heavy grazing by livestock and wildlife, competition with rapidly expanding juniper populations, changing fire regimes, insect damage and changes in seed-caching small mammal populations. Although there is evidence of heavy grazing, it is unclear at this time what influence other factors are having.

There are a few known raptor nests in this land type including red-tail hawk, kestrel and prairie falcon. The woodlands above Yankee Jim ranch have not been inventoried for raptors. There are records of goshawk nests on USFS lands within three miles of the ranch house, and the potential sites for goshawks on BLM.

There are seven sage grouse lek sites in this land type. Three of these were inactive as of the writing of the Alturas RMP in 1984 and three were active at this time. Of the three leks active in 1984, one was active with 14 strutting male grouse in 1996. No grouse were observed during single visits to the other two leks.

WOODLAND

The entire land type provides winter range for mule deer during mild winters and deer concentrate on the eastern side of the land type during more severe winters. The decadence and lack of reproduction exhibited by bitterbrush in these concentration areas is diminishing the area's value as winter habitat. There are many potential factors influencing survival of bitterbrush in this land type, including heavy grazing by livestock and wildlife, competition with rapidly expanding juniper populations, changing fire regimes, insect damage and changes in seed-caching small mammal populations. Although there is evidence of heavy grazing, it is unclear at this time what influence other factors are having.

Protection of bitterbrush from livestock grazing and reduction of juniper competition may improve the land type for mule deer.

There are no known raptor nests in this land type, however, the woodlands above Yankee Jim ranch have not been inventoried for raptors. There are records of goshawk nests on USFS lands within three miles of the ranch house and the potential exists for goshawks on BLM.

CANYON SYSTEM

The canyon systems in the Planning Area include Fitzhugh Creek and Pine Creek. Both of these creeks are located in rocky canyons, with areas of meadow, coniferous trees and

deciduous shrubs along the stream course in the bottom of the canyons. This land type is the most biologically diverse due to this juxtaposition of habitat types and the structural diversity created by the rocky canyon walls, coniferous trees and deciduous shrubs. Canyon systems support a unique assemblage of wildlife species, as well as providing water, forage, shade, thermal and escape cover, breeding, and rearing habitat for animals that also occur in other land types.

Neotropical migratory birds (birds that nest in North America and winter in Central and South America) nest in the deciduous shrubs and pine trees in the creek bottoms. There is potential willow flycatcher (*Empidonax traillii adastus*) habitat, although inventories conducted in 1996 did not locate any occurrences of this species. Creek canyons may also function as a bird migration corridor between the South Fork of the Pit River and the Warner Mountains.

Rocky cliffs above the creeks and trees with cavities and loose bark may provide bat roost sites. The suitability of these potential roost sites is enhanced by the proximity to foraging sites along the creeks.

Creek canyons provide the best deer fawning and fawn rearing habitat in the Planning Area. Deciduous shrubs provide excellent hiding cover and forage. Green herbaceous forage is available along the creek long after grasses on the uplands have dried up.

Waterfowl nest along the creeks. In the exclosures the herbaceous vegetation is dense and tall enough for duck nests. A duck nest was observed along the Breiner diversion ditch in 1996. Broods of mallards and teal have been observed on Fitzhugh Creek.

Both Fitzhugh and Pine Creeks may support fisheries of native redband trout and both creeks have been stocked with rainbow and brown trout.

There is potential for enhancement of all of the above by completely protecting the creeks from livestock impacts. This will increase deciduous shrubs and herbaceous vegetation along the streambanks, creating more habitat for nesting songbirds, waterfowl and fawning deer. The increased vegetation will protect the streambanks and shade the creeks, improving the water quality for fish.

SPRING/MEADOWS

Springs and meadows act as oases of water and lush green vegetation among the drier upland vegetation. As such they attract wildlife from surrounding land types in addition to supporting species unique to the springs and meadows.

Sandhill cranes and waterfowl nest in the tall herbaceous vegetation. Pairs of sandhill cranes have been observed at the Yankee Jim meadow during the breeding season on

two occasions, although no nests have been located. Numerous ducks were observed nesting on the Yankee Jim meadow in 1996. Sandhill cranes forage in meadows where the herbaceous vegetation is shorter. Management of grazing on meadows to protect springheads and moist soils, and to create areas of herbaceous vegetation of varying heights would benefit cranes and nesting waterfowl.

Springs and meadows are important foraging areas for pronghorn and sage grouse because of the availability of green forbs, particularly later in the summer when forbs in the uplands have dried up. Meadows are often used by sage grouse as leks.

Riparian deciduous shrubs associated with springs are used by neotropical migratory birds for nesting. Protecting these areas from livestock grazing would enhance the nesting habitat.

Springs and meadows are used by bats and insectivorous birds as foraging areas.

Some raptors, such as short-eared owls and northern harriers, will nest in meadows. Meadows support a unique rodent population that is preferred by some raptors. Protecting meadows from grazing so that tall, dense vegetation develops would improve nesting and foraging for these raptors.

Frogs, primarily Pacific chorus frogs, are common in the springs and meadows on the Tablelands. Other less common species of frog have not been observed, although inventories have not been completed. Protecting springs and meadows from grazing to maintain water quality and emergent vegetation would improve frog habitat.

RESERVOIRS/PONDS

Reservoirs and ponds provide nesting and foraging habitat for waterfowl. Nesting islands have been constructed on Payne, Dannhauser, French, Little Juniper and Dobe Swale reservoirs. Waterfowl, particularly Canada geese, have shown good success using these islands. Ducks prefer to nest in vegetation along the shoreline. Management of grazing would increase shoreline vegetation and improve duck nesting habitat.

Sandhill cranes will nest near reservoirs and ponds. Sandhill cranes have nested repeatedly at Dobe Swale Reservoir. Repair of the enclosure fence around this reservoir would improve this habitat for cranes.

Shorebirds forage and nest along the shoreline of reservoirs and ponds.

Some of the larger reservoirs have been stocked with fish and provide a warmwater fishery. Little Juniper reservoirs have been stocked with bass and bluegill.

As water levels decline, the forbs that sprout in the moist soils around the shorelines of reservoirs provide forage for antelope and sage grouse. Protection of the shoreline from grazing would increase forage for these species.

Reservoirs and stockponds are important foraging areas for bats. Bats have been observed foraging over a small pond near the Yankee Jim ranch house.

Frogs, primarily Pacific chorus frogs, are common in the reservoirs and ponds on the Tablelands. Other less common species of frog have not been observed, although inventories have not been completed. Protecting the shorelines of reservoirs and ponds from grazing to maintain water quality and emergent vegetation would improve frog habitat.

APPENDIX C: SPECIAL STATUS SPECIES

Special Status Species potentially occurring within the Tablelands Planning Area.

BLM = BLM Sensitive; FT = Federal Threatened; FE = Federal Endangered; FC = Federal Candidate; ST = State of Cal. Threatened; SE = State of Cal. Endangered; CSC = Cal. Species of Special Concern	
SPECIES	STATUS
Redband Trout	BLMS, CSC
Leopard Frog	CSC
Spotted Frog	FC, CSC
Northern Sagebrush Lizard	BLMS
Northwestern Pond Turtle	BLMS, CSC
Aleutian Canada Goose	FT
American White Pelican	CSC
Double-crested Cormorant	CSC
Black Tern	BLMS, CSC
California Gull	CSC
White-faced Ibis	BLMS, CSC
Long-billed Curlew	CSC
Western Least Bittern	BLMS, CSC
Western Snowy Plover	CSC
Sandhill Crane	ST
Bald Eagle	FT, SE
Golden Eagle	CSC
Northern Goshawk	BLMS, CSC
Coopers Hawk	CSC
Sharp-shinned Hawk	CSC
Northern Harrier	CSC
Swainsons Hawk	ST
Ferruginous Hawk	BLMS, CSC
Prairie Falcon	CSC
Peregrine Falcon	FE, SE
Merlin	CSC

BLM = BLM Sensitive; FT = Federal Threatened; FE = Federal Endangered; FC = Federal Candidate; ST = State of Cal. Threatened; SE = State of Cal. Endangered; CSC = Cal. Species of Special Concern

SPECIES	STATUS
Osprey	CSC
Sage Grouse	CSC
Columbian Sharp-tailed Grouse	BLMS, CSC
Great Grey Owl	SE
California Spotted Owl	BLMS, CSC
Short-eared Owl	CSC
Long-eared Owl	CSC
Burrowing Owl	CSC
Vauxs Swift	CSC
Bank Swallow	ST
Willow Flycatcher	SE
Yellow-bellied Cuckoo	SE
Yellow Warbler	CSC
Yellow-breasted Chat	CSC
Tricolored Blackbird	BLMS, CSC
Yuma Myotis	BLMS
Fringed Myotis	BLMS
Western Small-footed Bat	BLMS
Long-eared Myotis	BLMS
Long-legged Myotis	BLMS
Spotted Bat	BLMS, CSC
Western Big-eared Bat	BLMS, CSC
Pallid Bat	CSC
Western Matiff Bat	BLMS
Big Free-tailed Bat	BLMS, CSC
Pygmy Rabbit	BLMS, CSC
White-tailed Jackrabbit	CSC
Sierra Nevada Snowshoe Hare	BLMS, CSC

Appendix Q

List of Range Improvements in the Alturas Field Office Area

Appendix Q. List of Range Improvements in the Alturas Field office

Allot No.	Allotment Name	Improvement Name	Units	Unit Description	Year
101	South Tablelands	Juniper Flat Drift F	10.5	Length in miles to the tenth	1936
101		Dobie Swale Res	1	Number of Reservoirs	1937
101		Dobie Swale Res	1	Number of Reservoirs	2003
101		Pat Sp Res	1	Number of Reservoirs	1961
101		Likely Table Prot F	7.2	Length in miles to the tenth	1964
101		Pit River Res #6	1	Number of Reservoirs	1967
101		Pit River Res #7	1	Number of Reservoirs	1967
101		Puzzle Res	1	Number of Reservoirs	1968
101		Mtn View Res	1	Number of Reservoirs	1952
101		Coyote Draw Res	1	Number of Reservoirs	1938
101		Ramsey Res	1	Number of Reservoirs	1952
101		Big Jun Res	1	Number of Reservoirs	1952
101		Ramsey Res Ditch	3560	Number of Ditches	1959
101		Juniper Creek Ditch	674	Number of Ditches	1959
101		Wf-Kvl Res	1	Number of Reservoirs	1959
101		Rock Springs	1	Number of Springs	1969
101		Juniper Canal Res	1	Number of Reservoirs	1971
101		Bum Steer Res	1	Number of Reservoirs	1970
101		Jacket Res	1	Number of Reservoirs	1973
101		Rock Canyon Res	1	Number of Reservoirs	1952
101		Bowman Res	1	Number of Reservoirs	1965
101		Little Juniper Cg	1	Number of cattleguards	1983
101		Dobe Swale Fence	1	Length in miles to the tenth	1983
101		Dobe Swale Fence	0.5	Length in miles to the tenth	2003
101		Nelson Spr#2 Exclou	0.1	Length in miles to the tenth	1987
101		Mary Hall Spr Fence	0.3	Length in miles to the tenth	1987
101		Fitzhugh Aspen Plant	1	Acres treated to the tenth	1987
101		Lower Gap Fence	1	Length in miles to the tenth	2002
101		Millward Cattlegrd 1	1	Number of cattleguards	2002
101		Millward Cg 2	1	Number of cattleguards	2002
101		Millward Field Fence	1.5	Length in miles to the tenth	2004
101		Rock Springs Enclosure Fence	1	Length in miles to the tenth	2004
101		Rock Springs Maintenance	26	Acres treated to the tenth	2004
101		Meja Spring Enclosure Fence	0.3	Length in miles to the tenth	2004
101		Meja Spring Development	7	Acres treated to the tenth	2004
105	Russell Slough/Capik	Russell Slough	1.7	Length in miles to the tenth	1969
105		Russell Well	1	Number of Wells	1977
105		Pose Reservoir	1	Number of Reservoirs	1977
105		Russell Capik Fence	1	Length in miles to the tenth	1977
106	Strip	Strip Allot Fence	2	Length in miles to the tenth	1940
106		Modoc Plum Res	1	Number of Reservoirs	1958
106		Bishop Res	1	Number of Reservoirs	1958
106		Comrie Es	1	Number of Reservoirs	1958
106		Russell Slough Fence	1	Length in miles to the tenth	1977
108	Ryegrass Swale	Sherlock Spring	1	Number of Springs	1940

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108		Sherlock Spring P L	0	Number of Watering Points	1940
108		Wade William Drift F	5.3	Length in miles to the tenth	1942
108		Mesa Lake Reservoir	1	Number of Reservoirs	1941
108		Sherlock Ddrift Fenc	0.4	Length in miles to the tenth	1941
108		Mcgarva Res #2	1	Number of Reservoirs	1958
108		Mcgrava Res #1	1	Number of Reservoirs	1958
108		Rye Seep Reservoir	1	Number of Reservoirs	1960
108		Oompah Reservoir	1	Number of Reservoirs	1975
108		Mcgarva Res #3	1	Number of Reservoirs	1977
108		Section Nine Pit	1	Number of Reservoirs	1987
108		Holmes Pit	1	Number of Reservoirs	1988
108		Watson Pit	1	Number of Reservoirs	1988
108		Rocky Rim Pit	1	Number of Reservoirs	1988
109	Portuguese Flat	Portuguese Flat Drif	2	Length in miles to the tenth	1954
109		Portuguese Fence	3	Length in miles to the tenth	1981
112	South Graves	Delta Drift Fence	1.5	Length in miles to the tenth	1960
112		Graven Cross Fence	1.3	Length in miles to the tenth	1961
112		Clark-Christenson Dr	4.5	Length in miles to the tenth	1949
112		Pioneer Res	1	Number of Reservoirs	1968
112		Rye Grass Swale Res	1	Number of Reservoirs	1968
112		West Williams Res	1	Number of Reservoirs	1967
112		East Williams Res	1	Number of Reservoirs	1967
112		Clark-Christensen Dr	0.5	Length in miles to the tenth	1955
112		Wade Williams Water	1	Number of Watering Points	1970
112		July Reservoir	1	Number of Reservoirs	1968
112		Sheep Spring	1	Number of Springs	1977
112		Dead Juniper Res	1	Number of Reservoirs	1968
112		Pioneer Pit Res	1	Number of Reservoirs	1977
112		Higgins Spring	1	Number of Springs	1976
112		Rocky Prairie Res	1	Number of Reservoirs	1976
112		Sheep Gulch Res	1	Number of Reservoirs	1977
112		Canyon Cr Spr Exclos	1	Length in miles to the tenth	1988
114	West Field	Warren Flournoy Fnce	0.3	Length in miles to the tenth	1981
114		Nelson Sp Rd C Guard	1	Number of cattleguards	1984
115	East Field	No Name Res	1	Number of Reservoirs	1937
115		Flournoy Swale Res	1	Number of Reservoirs	1952
115		Rim Rock Reservoir	1	Number of Reservoirs	1940
116	Gardner #1	Gardner Fence	0.3	Length in miles to the tenth	1943
117	Crowder	Jogar Drift Fence	1.8	Length in miles to the tenth	1961
117		Crowder Res #1	1	Number of Reservoirs	1985
117		Crowder Res #2	1	Number of Reservoirs	1985
117		Crowder Fence	3.5	Length in miles to the tenth	1986
118	North Graves/Mackey	118 Division Fence	0.5	Length in miles to the tenth	1938
118		Mackey Fence	1.5	Length in miles to the tenth	1955
118		G M Spring	1	Number of Springs	1970
118		Valhalla Reservoir	1	Number of Reservoirs	1971
118		North Graves Spg Res	1	Number of Reservoirs	1971
118		Boston Pete Fence	0.2	Length in miles to the tenth	1983
118		Gm Electric Fence	0.9	Length in miles to the tenth	1984
119	Lakeshore	Lake Shore Allot Fe	1.8	Length in miles to the tenth	1940
120	Hagge	Hagge-Yeck Fence	0.3	Length in miles to the tenth	1943
121	Hughes	Hughes Fence	0.3	Length in miles to the tenth	1957
123	Rimrock	Noble Fish Spr Excl	0.3	Length in miles to the tenth	1988

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124	Portuguese Flat	Oatgrass Reservoir	1	Number of Reservoirs	1984
127	Blacks Canyon Rim	Caldwell Ditch	5000	Number of Ditches	1967
131	Neer	Signal Res	1	Number of Reservoirs	1958
133	XL	X L Res	1	Number of Reservoirs	1966
133		Pitt Res	1	Number of Reservoirs	1958
133		Indian Res	1	Number of Reservoirs	1958
134	Prock	Hiway 28 Fence	2.3	Length in miles to the tenth	1964
135	Pine Creek Mesa	Leland Res #1	1	Number of Reservoirs	1958
135		Leland Res #2	1	Number of Reservoirs	1958
135		Pine Crk Mesa	2.5	Length in miles to the tenth	1969
135		Upper Pine Creek Res	1	Number of Reservoirs	1985
137	North Tablelands	Bubble Sp Drift Fen	7.5	Length in miles to the tenth	1960
137		Signal Butte Fire R	1.5	Acres treated to the tenth	1965
137		Signal Butte Fire Re	700	Acres treated to the tenth	1965
137		Alturas Tablelands F	6.9	Length in miles to the tenth	1968
137		No Tablelands Stock	14.6	Number of trails	1968
137		Little Jun Cr Res	1	Number of Reservoirs	1968
137		3 1/2 Horse Res	1	Number of Reservoirs	1968
137		West Juniper Ridge E	1	Number of Reservoirs	1952
137		East Juniper Ridge R	1	Number of Reservoirs	1952
137		Bubble Sp Res	1	Number of Reservoirs	1952
137		C-Rock Res	1	Number of Reservoirs	1952
137		Burnt Hill Res #1	1	Number of Reservoirs	1952
137		Burnt Hill Res #2	1	Number of Reservoirs	1952
137		Rocky Res	1	Number of Reservoirs	1958
137		Horsebrush Res	1	Number of Reservoirs	1958
137		Millward Res	1	Number of Reservoirs	1958
137		Clark Res	1	Number of Reservoirs	1958
137		Kincaid Res	1	Number of Reservoirs	1958
137		Bill Res	1	Number of Reservoirs	1958
137		No Tablelands Fence	5	Length in miles to the tenth	1971
137		Prospect Spring	1	Number of Springs	1971
137		Lost Heel Reservoir	1	Number of Reservoirs	1977
137		Fitzhugh Creek Fence	2	Length in miles to the tenth	1977
137		Signal Butte Well	1	Number of Wells	1982
137		3 and 1/2 Horse Well	1	Number of Wells	1990
137		Yankee Jim Catgrd #2	1	Number of cattleguards	1999
137		Danhauser Fence	3.2	Length in miles to the tenth	1999
137		Little Juniper Fence	2.1	Length in miles to the tenth	2000
137		Little Juniper Cargd	1	Number of cattleguards	1999
137		Signal Butte Guard 1	1	Number of cattleguards	2002
137		West Juniper Ridge E	1	Number of Reservoirs	1968
137		Bill #2 Pit	0	Number of Dams	2000
137		Tee Pit	0	Number of	2000
137		Jim Ditch Pit	0	Number of	2000
137		Three Point Pit	0	Number of	2000
137		3 and 1/2 Horse Well	1	Number of Wells	2006
137		Signal Butte Well	1	Number of Wells	2006
138	Yankee Jim	Yankee Jim Catgrd #2	1	Number of cattleguards	2002
138		Yj Boundary Fence	4.4	Length in miles to the tenth	2002
138		Fitzhughcrkcattlegrd	1	Number of cattleguards	2002
138		Hershey Spring Ctgrd	1	Number of cattleguards	2002
138		Yankee Jim Exclosure	1	Length in miles to the tenth	2003

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138		Indian Spring	1	Number of Springs	2003
138		Roberts Spring	1	Number of Springs	2003
138		Yankee Jim Resv 1	1	Number of Reservoirs	2003
138		Yankee Jim Resv 4	1	Number of Reservoirs	2003
138		East Spring	1	Number of Springs	2004
138		West Spring	1	Number of Springs	2004
138		East Spring Exclosure	0.1	Length in miles to the tenth	2004
138		West Spring Exclosure	0.1	Length in miles to the tenth	2004
145	Highway	Jones Lane C G	0	Number of cattleguards	1939
146	Westside	West Side Res	1	Number of Reservoirs	1941
146		Burmister Res	1	Number of Reservoirs	1958
146		Dorris Allot Fence	3.4	Length in miles to the tenth	1970
146		Westside Corral	0	Number of corrals/chutes	1950
146		North Division Fenc	0.5	Length in miles to the tenth	1970
146		Bailey Dorris Alt Fn	9	Length in miles to the tenth	1941
146		Westside Fence	1	Length in miles to the tenth	1981
146		Hippy Dam	1	Number of Wells	1984
146		Armstrong Pit	1	Number of Reservoirs	1985
146		Westside Cattleguard	1	Number of cattleguards	1985
149	Bailey/Dorris (Westside)	W W Dam	1	Number of Reservoirs	1985
149		Brisko Reservoir	1	Number of Reservoirs	1977
149		Bayley Dorris Well	1	Number of Wells	1979
149		Office Troughs	1	Number of Watering Points	1982
149		Estates Pit	1	Number of Reservoirs	1985
200	Loomis	So Juniper Loomis D	3	Length in miles to the tenth	1960
201	Babcock	E G Babcock Fence	4.5	Length in miles to the tenth	1949
201		Thompson Res	1	Number of Reservoirs	1955
202	West Beaver Creek	Little Valley Seedi	90	Acres treated to the tenth	1965
202		Rocky Ridge Res	1	Number of Reservoirs	1955
202		Borrow Pit Res	1	Number of Reservoirs	1955
202		Rim Rock Res	1	Number of Reservoirs	1955
202		Plantation Res	1	Number of Reservoirs	1975
202		Campbell Bound Fenc	3.2	Length in miles to the tenth	1943
202		Beaver Crk Res Main	1	Number of Reservoirs	1958
202		Lauren Spring Dev	1	Number of Springs	1989
202		Liberty Pit	1	Number of Reservoirs	1994
202		Beaver Creek Fence	4.7	Length in miles to the tenth	1999
202		Campbell Bound Fenc	3.2	Length in miles to the tenth	2001
202		Lauren Spring Dev	1	Number of Springs	1995
205	Dixie Valley	Hayden Hill-Dixie Va	3	Length in miles to the tenth	1942
205		Mud Flat Res	1	Number of Reservoirs	1946
205		Dixie Silva Fence	5.7	Length in miles to the tenth	1967
205		Spaulding Res	1	Number of Reservoirs	1955
205		Deadhorse Res	1	Number of Reservoirs	1955
205		Little Coyote Res	1	Number of Reservoirs	1955
205		Cow-Lake Res	1	Number of Reservoirs	1955
205		Bognuda-Eldridge Ext	0.3	Length in miles to the tenth	1957
205		Hayden Hill Dixie Va	3.5	Length in miles to the tenth	1941
205		Big Bend Boundary Fe	9	Length in miles to the tenth	1957
205		Log Cabin Res No	1	Number of Reservoirs	1956
205		Log Cabin Res #2	1	Number of Reservoirs	1956
205		Tired Body Res	1	Number of Reservoirs	1970
205		Barnes Res	1	Number of Reservoirs	1961

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205		So Boundry Fence Res	1	Number of Reservoirs	1970
205		Larva Res	1	Number of Reservoirs	1957
205		Dry Flat Res	1	Number of Reservoirs	1958
205		By Pass Res	1	Number of Reservoirs	1947
205		Upper Mud Flat Res	1	Number of Reservoirs	1960
205		Lost Draw Res	1	Number of Reservoirs	1970
205		Dixie Division Fence	3.2	Length in miles to the tenth	1984
205		Davis Pit	1	Number of Reservoirs	1987
205		East Chico Pit	1	Number of Reservoirs	1987
205		Sheep Valley Fence	2.3	Length in miles to the tenth	1990
205		Horse Creek Pit Reservoir	1	Number of projects	1998
206	Bald Mountain	Bognuda Eldridge Fen	1	Length in miles to the tenth	1942
206		Bald Mtn Flat Re	1	Number of Reservoirs	1946
206		Hunter Sp	1	Number of Springs	1946
206		Loomis Cabin Res	1	Number of Reservoirs	1946
206		Bald Mtn Res	1	Number of Reservoirs	1955
206		Big Sage Res	1	Number of Reservoirs	1974
206		Big Flat Res	1	Number of Reservoirs	1952
206		East Homestead Res	1	Number of Reservoirs	1952
206		Inbetween Res	1	Number of Reservoirs	1959
206		Dead Pine Reservoir	1	Number of Reservoirs	1958
206		Railroad Res	1	Number of Reservoirs	1948
206		Afterthought Res	1	Number of Reservoirs	1974
208	Big Valley Mountain	Bear Sp Pipeline	1	Number of Watering Points	1964
208		Bear Sp Tree Plant	15	Acres treated to the tenth	1973
208		Big Valley Planting	7	Acres treated to the tenth	1914
208		Bear Spring Dev	1	Number of Springs	1975
208		Cinder Pit Px Burn	835	Acres treated to the tenth	1987
208		Widow Pk Mech Releas	116	Acres treated to the tenth	1986
208		Widow Pk Plant Thin	60	Acres treated to the tenth	1986
208		Widow Pk Scar Tplant	11	Acres treated to the tenth	1986
208		Cinderpitguzzlers 1	1	Number of Catchments	1988
208		Cinderpitguzzlers 2	1	Number of Catchments	1988
208		Bear Spring Fence	1	Length in miles to the tenth	1989
210	Turner Canyon	Butte #1 Fence	3.3	Length in miles to the tenth	1965
211	Haury	Parker Res #1	1	Number of Reservoirs	1949
211		Parker Res #2	1	Number of Reservoirs	1949
211		Adin Midusahead Stud	0	Length in miles to the tenth	1967
211		Haury Allot Res	1	Number of Reservoirs	1956
212	Hitchens	Auble Res	1	Number of Reservoirs	1949
212		Hitchens Res #2	1	Number of Reservoirs	1964
212		Hitchings Res 2	1	Number of Reservoirs	1964
212		Hitchings Res #2	1	Number of Reservoirs	1964
215	Avery	Hollenbeck Fence	1.3	Length in miles to the tenth	1943
218	Silva Flat	Juniper Creek Res	1	Number of Reservoirs	1947
218		Deer Horn Res	1	Number of Reservoirs	1947
218		Hayden Hill Boundry	5.6	Length in miles to the tenth	1954
218		Juniper Creek Res	1	Number of Reservoirs	1955
218		Rocky Flat Rs	1	Number of Reservoirs	1955
218		Dobe Flat Res	1	Number of Reservoirs	1955
218		Indian Es	1	Number of Reservoirs	1955
218		Drift Fence Res	1	Number of Reservoirs	1955
218		Corral Valley Res	1	Number of Reservoirs	1955

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218		Mud Spring Res	1	Number of Reservoirs	1955
218		North Silva Fence	2	Length in miles to the tenth	1974
218		Bald Ridge Reservoir	1	Number of Reservoirs	1974
218		Clay Flat Reservoir	1	Number of Reservoirs	1974
218		Corral Valley Res	1	Number of Reservoirs	1973
218		Apaw Pit	1	Number of Reservoirs	1985
218		Medusa Pit	1	Number of Reservoirs	1985
218		Junegrass Pit	1	Number of Reservoirs	1985
218		Lost Pit	1	Number of Reservoirs	1985
219	Knudson	Daisy Dean Sp	1	Number of Springs	1952
220	Kramer	Kramer Allot Res #2	1	Number of Reservoirs	1959
220		Kramer Res #3	1	Number of Reservoirs	1959
220		Kramer Allot Res	1	Number of Reservoirs	1950
223	North Dibble	Barrow Dibble Fence	1	Length in miles to the tenth	1974
224	Harper Hill	Harper Hill Fence	0.5	Length in miles to the tenth	2002
229	Indian Peak	Indian Pk Drift Fence	3.8	Length in miles to the tenth	1950
232	North Juniper	Iverson Res #1 #2	3	Number of Reservoirs	1955
232		South Juniper Res	1	Number of Reservoirs	1956
232		No So Juniper Di	2	Length in miles to the tenth	1946
232		N. Juniper Bndy Fen	1.2	Length in miles to the tenth	1946
235	Barrows	Barrow Reservoir	1	Number of Reservoirs	1975
236	Butte Creek	Butte Creek Fence	2.2	Length in miles to the tenth	1970
237	Daisy Dean Spring	Hayden Hill Drift Fe	1	Length in miles to the tenth	1955
239	Piper	Campbell Barrow Pit	1	Number of Reservoirs	1946
239		Juniper Dam Re	1	Number of Reservoirs	1946
239		Cinder Pit Res	1	Number of Reservoirs	1955
239		Rattlesnake Gulch Re	1	Number of Reservoirs	1955
239		Bluff Res	1	Number of Reservoirs	1955
239		Beaver Creek Res	1	Number of Reservoirs	1955
239		Windrow Res	1	Number of Reservoirs	1969
244	Thompson	North Gulch Res	1	Number of Reservoirs	1955
244		Spring Gulch Res	1	Number of Reservoirs	1955
244		Loomis Cabin Ditch	533	Number of Ditches	1955
244		Littlevalley-Big Val	2.5	Length in miles to the tenth	1956
244		B-T Drift Fence	1.5	Length in miles to the tenth	1959
244		Bald Mtn Pct	65	Acres treated to the tenth	1986
245	Round Barn	Round Barn Res	1	Number of Reservoirs	1955
246	Muck Valley	Fourth Butte Drift F	0.8	Length in miles to the tenth	1965
246		Muck Valley Res	1	Number of Reservoirs	1967
246		Middle Lake Res	1	Number of Reservoirs	1930
246		Cone Res	1	Number of Reservoirs	1955
246		Chrysler Res	1	Number of Reservoirs	1955
246		Bend Res	1	Number of Reservoirs	1955
246		Big Mtn Drift Fence	2.8	Length in miles to the tenth	1959
246		Muck Valley Fence	2.5	Length in miles to the tenth	1971
246		Collett Reservoir	1	Number of Reservoirs	1970
246		Deer Fly Reservoir	1	Number of Reservoirs	1974
246		Collett Watergap Fen	1	Length in miles to the tenth	1970
299	North Mitchell Hill	Lower Clarks Valley Cattleguard	1	Number of cattleguards	1998
299		Mitchell Hill Cattleguards 1 & 2	2	Number of cattleguards	2001
299		Dump Reservoir	1	Number of Reservoirs	1995
299		Mitchell Field Reservoir	1	Number of Reservoirs	1995

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300	North Ash Valley	J R Bath Est Fence	2.3	Length in miles to the tenth	1940	
300		Saddle Res	1	Number of Reservoirs	1968	
300		No Ash Valley Res	1	Number of Reservoirs	1968	
300		So Hallbrook Res	1	Number of Reservoirs	1968	
300		Fleming Res	1	Number of Reservoirs	1968	
300		Ash Valley Drift Fen	2.5	Length in miles to the tenth	1956	
300		Portuguese Camp Dri	0.8	Length in miles to the tenth	1959	
300		Clover Swale Res	1	Number of Reservoirs	1970	
300		Slate Spring	1	Number of Springs	1970	
300		Knox Mt Res	1	Number of Reservoirs	1970	
300		Mud Valley Reservoir	1	Number of Reservoirs	1970	
300		Lil Abner Spring	1	Number of Springs	1970	
300		Horse Shoe Res	1	Number of Reservoirs	1956	
300		Bbd Reservoir	1	Number of Reservoirs	1976	
300		Shrew Reservoir	1	Number of Reservoirs	1984	
300		Skunk Reservoir	1	Number of Reservoirs	1984	
300		Job Spring	1	Number of Springs	1976	
300		Portuguese Res	1	Number of Reservoirs	1965	
300		Ash Vly Cattle Grd	1	Number of cattleguards	2002	
300		Job Exclosure Fence	2	Length in miles to the tenth	2004	
300		Ash Creek Cattleguard	1	Number of Improvements	2005	
300		Ash Creek Riparian Fence	1	Number of Improvements	2005	
302		Cold Springs	Cold Sp Brush Spray	1320 0	Acres treated to the tenth	1963
302			Red Rock Res	1	Number of Reservoirs	1947
302			Bark Beetle Res	1	Number of Reservoirs	1964
302			Cold Sp Exclosure	0	Length in miles to the tenth	1964
302			Cold Sp Fire Rehab	373	Acres treated to the tenth	1967
302			Cold Sp Fire Prot F	3.2	Acres treated to the tenth	1967
302			Cold Sp Fire Detent	4653	Number of Dams	1968
302			Drift Fence Sp	1	Number of Springs	1959
302			Marr Drift Fence	1.3	Length in miles to the tenth	1957
302			Two Mile Res	1	Number of Reservoirs	1957
302			Marr Res	1	Number of Reservoirs	1959
302	Cold Springs Btrbr		200	Acres treated to the tenth	1969	
302	Cold Spgs Bitter		1000	Acres treated to the tenth	1969	
302	Spaulding Reservoir		1	Number of Reservoirs	1971	
302	Colo Spg Ck Res		1	Number of Reservoirs	1971	
302	Dodge Reservoir		1	Number of Reservoirs	1971	
302	Coyote Flat Spg		2	Number of Springs	1971	
302	Cold Spr Fence & Cat		5	Number of cattleguards	1970	
302	Madeline Spg		1	Number of Springs	1971	
302	Dorsey Reservoir		1	Number of Reservoirs	1958	
302	Roland Spring		1	Number of Springs	1977	
302	E Cold Springs Fence		2.6	Length in miles to the tenth	1982	
302	Nort Spring Res		1	Number of Reservoirs	1987	
302	Buzzard Reservoir		1	Number of Reservoirs	1987	
302	Turkey Pit		1	Number of Reservoirs	1989	
302	Dill Pit		1	Number of Reservoirs	1989	
305	South McDonald		Juniper Ridge Fence	4	Length in miles to the tenth	1963
305			Kilby Res	1	Number of Reservoirs	1957
305		Two Fork Res	1	Number of Reservoirs	1957	
305		Upper Two Fork Res	1	Number of Reservoirs	1959	

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305		Long Canyon Reser	1	Number of Reservoirs	1958
305		Kibby Creek Res	1	Number of Reservoirs	1963
306	Dry Cow	Dry Cow Allot Brush	4013	Acres treated to the tenth	1961
306		Cat Res	1	Number of Reservoirs	1944
306		Dry Cow Drift Fence	2.7	Length in miles to the tenth	1965
306		Big Meadws Drift Fen	4.5	Length in miles to the tenth	1952
306		Dry Cow Res Dev #1	1	Number of Reservoirs	1960
306		Dry Cow Res Dev #2	1	Number of Reservoirs	1960
306		Dry Cow Res Dev #3	1	Number of Reservoirs	1960
306		Dry Cow Res Dev #4	1	Number of Reservoirs	1960
306		Dry Cow Res Dev #5	1	Number of Reservoirs	1960
306		Dry Cow Res Dev #6	1	Number of Reservoirs	1960
306		Burn Pit	1	Number of Reservoirs	1987
307	Marr	Whitinger Mtn Res	0	Number of Reservoirs	1977
307		Rocky Top Res	1	Number of Reservoirs	1977
307		Stock Res	1	Number of Reservoirs	1977
310	Tule Mountain	Holding Corral	0	Length in miles to the tenth	1938
310		Cold Spr Res	1	Number of Reservoirs	1942
310		Stage Coach Flat	4.8	Length in miles to the tenth	1962
310		Stagecoach Flat Bru	5000	Acres treated to the tenth	1962
310		Spring Res	1	Number of Reservoirs	1944
310		Mccabe Spring	1	Number of Springs	1937
310		Res #122	1	Number of Reservoirs	1953
310		Blue Door Reservoir	1	Number of Reservoirs	1937
310		Quaking Aspen Res	1	Number of Reservoirs	1947
310		Meadow Res	1	Number of Reservoirs	1947
310		Stagecoach Flat Sto	0	Length in miles to the tenth	1964
310		Likely Range Co Drif	4.5	Length in miles to the tenth	1949
310		Christenson Coral	0	Length in miles to the tenth	1958
310		Home Stead Res	1	Number of Reservoirs	1950
310		Wash Out Res	1	Number of Reservoirs	1960
310		Box Sp Res	1	Number of Reservoirs	1955
310		Todd Res	1	Number of Reservoirs	1955
310		Stage Coach Res	1	Number of Reservoirs	1955
310		Desert Flat Water H	1	Number of Reservoirs	1939
310		Name Tag Res	1	Number of Reservoirs	1960
310		Likely Range Co Wate	11	Number of Reservoirs	1955
310		Ives Res	1	Number of Reservoirs	1955
310		Montgomery Res	1	Number of Reservoirs	1955
310		Williams Res	1	Number of Reservoirs	1955
310		D"Gridley Allot Fenc	2	Length in miles to the tenth	1957
310		Rockwall Res	1	Number of Reservoirs	1957
310		North Point Tule Res	1	Number of Reservoirs	1957
310		So Tule Mtn Res	1	Number of Reservoirs	1957
310		Spur Line Res	1	Number of Reservoirs	1957
310		Tule Mtn Burn Seedin	3500	Acres treated to the tenth	1957
310		Tule Mtn Fence Ext	1.2	Length in miles to the tenth	1971
310		Des Flt Waterhole Sp	1	Number of Springs	1970
310		Tule Res Fence	5.2	Length in miles to the tenth	1971
310		D C Gridley Brush Sp	160	Acres treated to the tenth	1967
310		Mccabe Flat Res #2	1	Number of Reservoirs	1955
310		Obrian Basin Res #1	1	Number of Reservoirs	1955
310		Obrian Basin Res #2	1	Number of Reservoirs	1955

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310		Christensen Res #1	1	Number of Reservoirs	1955
310		Christensen Res #2	1	Number of Reservoirs	1955
310		Upper Sagehen Res Re	1	Number of Reservoirs	1971
310		Cold Sp Mt Res Recon	1	Number of Reservoirs	1971
310		Washout Res Reconst	1	Number of Reservoirs	1971
310		Dead Horse Flat Res	1	Number of Reservoirs	1955
310		Sheep Corral Res	1	Number of Reservoirs	1971
310		Tule Mtn Water D #2	1	Number of Reservoirs	1960
310		Tule Mtn Water D #3	1	Number of Reservoirs	1960
310		Tule Mtn Water D #5	1	Number of Reservoirs	1960
310		Tule Mtn Water D #6	1	Number of Reservoirs	1960
310		Tule Mtn Water D #7	1	Number of Reservoirs	1960
310		Tule Mtn Water D #8	1	Number of Reservoirs	1960
310		Warner View Reservoir	1	Number of Reservoirs	1955
310		Lakeside Res	1	Number of Reservoirs	1955
310		Desert Flat Res	1	Number of Reservoirs	1955
310		Big Meadows Res	1	Number of Reservoirs	1955
310		Poplar Res	1	Number of Reservoirs	1955
310		Sp Reservoir	1	Number of Reservoirs	1976
310		South Shore Res	1	Number of Reservoirs	1976
310		Jeep Trail Res	1	Number of Reservoirs	1976
310		Three Forks Resv	1	Number of Reservoirs	1976
310		Cow Skull Res	1	Number of Reservoirs	1976
310		Meadow Res 2	1	Number of Reservoirs	1976
310		North Side Res	1	Number of Reservoirs	1976
310		Freeburn Res.	1	Number of Reservoirs	1976
310		County Line Res	1	Number of Reservoirs	1976
310		Tule Stock Trail	1	Number of trails	1977
310		Lucky 13 Res	1	Number of Reservoirs	1976
310		Rhinestone Reservoir	1	Number of Reservoirs	1977
310		Sage Grouse Fence	3.5	Length in miles to the tenth	1977
310		Homestead Spring	1	Number of Springs	1977
310		Big Buck Spring	1	Number of Springs	1977
310		Big Buck Spring	1	Number of Springs	1998
310		Indian Spring	1	Number of Springs	1977
310		Little Buck Spring	1	Number of Springs	1977
310		Little Buck Spring	1	Number of Springs	1998
310		Blackies Water Hole	1	Number of Reservoirs	1977
310		Christenson Res. #3	1	Number of Reservoirs	1977
310		Little Spr Enclosure	0.1	Length in miles to the tenth	1987
310		Four Spr #1 Enclosur	0.1	Length in miles to the tenth	1987
310		Four Spr #2 Enclosur	0.1	Length in miles to the tenth	1987
310		Pipe Spring Enclosur	0.2	Length in miles to the tenth	1987
310		Desrt Flt Junper Rem	300	Acres treated to the tenth	1988
310		Tailgate Pit	1	Number of Reservoirs	1989
310		Rice Pit	1	Number of Reservoirs	1989
310		Meeks Juniper Cut	120	Acres treated to the tenth	1989
310		Cedar Creek Gates	0.1	Length in miles to the tenth	1990
310		Cedar Cr Hanging Xng	0.1	Length in miles to the tenth	1990
310		S Cedar Cr Ext Fence	0.7	Length in miles to the tenth	1990
310		S. Cedar Creek Fence	5.9	Length in miles to the tenth	1989
310		N Cedar Creek Fence	7.4	Length in miles to the tenth	1990
310		Desert Flat Fence	3.3	Length in miles to the tenth	1990

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310		Access Restrict Fnce	1	Length in miles to the tenth	1989
310		Camas Pit Reservoir	1	Number of Reservoirs	1991
310		Saltlickhorse Fence	3.3	Length in miles to the tenth	1992
310		Cedar Ck Spgs Exclos	1.4	Length in miles to the tenth	1992
310		Cedar Creek Spr Devl	1	Number of Springs	1992
310		Cedar Creek Spr Devl	1	Number of Springs	2002
310		Little Buck Spring	1	Number of Springs	1992
310		Little Buck Fence	2527	Length in miles to the tenth	1992
310		Big Buck Fence	4130	Length in miles to the tenth	1992
310		So. Tony Rager Fence	1	Length in miles to the tenth	1993
310		No. Tony Rager Fence	0.3	Length in miles to the tenth	1993
310		No. Tony Rager Fence	1	Length in miles to the tenth	2000
310		Sheep Spring Fence	2	Length in miles to the tenth	1993
310		Deadhorse Rx Burn	2700	Acres treated to the tenth	1992
310		Cold Spring Rx Burn	1896	Acres treated to the tenth	1993
310		Cedar Creek Rx Burn	720	Acres treated to the tenth	1995
310		Tony Rager Spr Dev	1	Number of Springs	2000
310		Tony Rager Spr Dev	1	Number of Springs	2002
310		Sheep Sp Modif	1	Number of Springs	2002
310		Sheep Sp Development	1	Number of Springs	2002
310		Blue Fire Fence	2.5	Length in miles to the tenth	2002
310		Cedar Creek Rock	1	Number of passes	2002
310		Cedar Creek Cattleguard	0	Number of cattleguards	1989
310		Cedar Creek Spring Fence	1.2	Length in miles to the tenth	2000
310		S. Cedar Creek Fence Removal	0	Length in miles to the tenth	1997
310		Dorthea Gridley Fence	0	Length in miles to the tenth	1993
311	Nelson Corral	Madeline Mtn Res	1	Number of Reservoirs	1943
311		Nelson Corral Brush	6000	Acres treated to the tenth	1962
311		K Flourney Post Fenc	1	Length in miles to the tenth	1963
311		George Reservoir	1	Number of Reservoirs	1937
311		Nelson Corral Sp	1	Number of Springs	1949
311		Wms. Summit Res. #1	1	Number of Reservoirs	1949
311		Wms. Summit Res. #2	1	Number of Reservoirs	1949
311		Dry Creek Res	1	Number of Reservoirs	1949
311		Monroe Res #1	1	Number of Reservoirs	1949
311		Monroe Res #2	1	Number of Reservoirs	1949
311		Monroe Res 3	1	Number of Reservoirs	1949
311		Harter Sp	1	Number of Springs	1967
311		Gully Wash Res	1	Number of Reservoirs	1960
311		West Nelson Res	1	Number of Reservoirs	1954
311		No Tanner Sp	1	Number of Springs	1968
311		Williams Fleming Bat	3.8	Length in miles to the tenth	1940
311		Paint Horse Reservoir	1	Number of Reservoirs	1941
311		Dry Lake Res	1	Number of Reservoirs	1955
311		Nelson Corral Res	1	Number of Reservoirs	1955
311		Harter Sp Res	1	Number of Reservoirs	1955
311		Sage Hen R/W Drift F	8.5	Length in miles to the tenth	1957
311		S E Likely Mtn Res	1	Number of Reservoirs	1957
311		N E Seep Rs	1	Number of Reservoirs	1957
311		George Res	1	Number of Reservoirs	1957
311		Madeline Brush Spray	5940	Acres treated to the tenth	1959

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311		Madeline Brush Spray	7.1	Length in miles to the tenth	1959
311		Dry Ck Spg Devel	2	Number of Springs	1970
311		9-Mile Seeding	3050	Acres treated to the tenth	1974
311		Mcgarva Dv Fences	8.9	Acres treated to the tenth	1975
311		Basin Reservoir	1	Number of Reservoirs	1975
311		Butte Reservoir	1	Number of Reservoirs	1974
311		Bunchgrass Reservoir	1	Number of Reservoirs	1975
311		Lush Grass Reservoir	1	Number of Reservoirs	1975
311		South Seep Reservoir	1	Number of Reservoirs	1975
311		Rutabaga Reservoir 1	1	Number of Reservoirs	1975
311		West Nelson Res	1	Number of Reservoirs	1975
311		Outcrop Reservoir	1	Number of Reservoirs	1975
311		Nelson Corral Guard	1	Length in miles to the tenth	1975
311		Centennial Reservoir	1	Number of Reservoirs	1977
311		Stipa Reservoir	1	Number of Reservoirs	1977
311		Capt Jack Reservoir	1	Number of Reservoirs	1977
311		Mcgarva Spring #2	1	Number of Springs	1983
311		Lower Nelson Corral Cg	1	Number of cattleguards	2002
311		Upper Nelson Corral Cgd	1	Number of cattleguards	2002
315	Termo/Lane	Lane Monroe Fence	3.3	Length in miles to the tenth	1942
315		Binkley Fence	1.3	Length in miles to the tenth	1943
315		Termo Fence	1.5	Length in miles to the tenth	1951
316	South Ash Valley	9 Mile Fence	1.8	Length in miles to the tenth	1975
316		9 Mile Seeding	32	Acres treated to the tenth	1974
316		9 Mile Planting	22	Acres treated to the tenth	1974
316		9-Mile Water Bars	6000	Acres treated to the tenth	1974
316		Whitinger Planting	60	Acres treated to the tenth	1975
319	Fillman-Diablo	Fillman Allot Fence	1.5	Length in miles to the tenth	1957
320	McDonald Mountain	Maiden Flat Reveg	1800	Acres treated to the tenth	1961
320		Maiden Flat Reveg P	2.5	Length in miles to the tenth	1961
320		Skeleton Flat Res	1	Number of Reservoirs	1944
320		Deer Sp Water Hole R	1	Number of Reservoirs	1944
320		Mendiboure Allot Fen	3	Length in miles to the tenth	1952
320		Maiden Flat Enclosur	0	Length in miles to the tenth	1956
320		Mcclean Allot Fence	5.5	Length in miles to the tenth	1958
320		Road End Res	1	Number of Reservoirs	1957
320		Allot Fence Dam	1	Number of Reservoirs	1957
320		Petes Res	1	Number of Reservoirs	1957
320		Salt Lick Res	1	Number of Reservoirs	1957
320		Railroad R/W Res	1	Number of Reservoirs	1957
320		Mcdonald Fence Res	1	Number of Reservoirs	1957
320		Mcdonald Mtn Drift	1.8	Length in miles to the tenth	1959
320		Deer Sp	1	Number of Springs	1958
320		Mcdonald Prot Fence	2	Length in miles to the tenth	1959
320		Evans Res	1	Number of Reservoirs	1959
320		Skeleton Res	1	Number of Reservoirs	1959
320		N E Mcdonald Res	1	Number of Reservoirs	1959
320		S W Mcdonald Res	1	Number of Reservoirs	1959
320		Mcclean Res	1	Number of Reservoirs	1959
320		Wilson Res	1	Number of Reservoirs	1959
320		Mcclean Allot Mcdon	1300	Acres treated to the tenth	1960
320		Maiden Burn Fence	0.5	Length in miles to the tenth	1960

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320		Etchapar Allot Brus	1800	Acres treated to the tenth	1960
320		Maiden Burn Ext Fen	0.3	Length in miles to the tenth	1960
320		Maiden Ridge Reservo	1	Number of Reservoirs	1971
320		Fenceline Reservoir	1	Number of Reservoirs	1977
320		Maiden Flat Res #3	1	Number of Reservoirs	1977
320		Rocky Base Reservoir	1	Number of Reservoirs	1977
321	South Mitchell Hill	Mitchell Hill Allot	3.3	Length in miles to the tenth	1967
321		Lane Res	1	Number of Reservoirs	1955
321		Mitchell Draw Res	1	Number of Reservoirs	1955
321		Upper Mitchell Draw	1	Number of Reservoirs	1950
321		Olsen Res	1	Number of Reservoirs	1959
321		Fish And Game Res	1	Number of Reservoirs	1959
321		Mahogany Ridge Fence	1.5	Length in miles to the tenth	1974
321		Moon View Reservoir	1	Number of Reservoirs	1958
321		Rosebud Reservoir	1	Number of Reservoirs	1964
321		Ratliff Reservoir	0	Number of Reservoirs	1977
321		Wool Reservoir	0	Number of Reservoirs	1977
321		Cochran Reservoir	1	Number of Reservoirs	1984
321		Mitchell Hill Spring	1	Number of Springs	2000
323	Said Valley	Said Valley Catgrd#2	0	Number of cattleguards	1949
323		Stratton Res	1	Number of Reservoirs	1949
323		Said Valley Catgrd#1	0	Number of cattleguards	1941
324	Dry Valley	Avilla Res	1	Number of Reservoirs	1945
324		South Knob Res	0	Number of Reservoirs	1977
325	South Fork	South Fork Res	1	Number of Reservoirs	1943
325		Flournoy Res	1	Number of Reservoirs	1944
325		South Fork Brush	3680	Acres treated to the tenth	1963
325		South Fork Stock Exc	0	Length in miles to the tenth	1964
325		Community Corral	0	Length in miles to the tenth	1937
325		Powerline Res	1	Number of Reservoirs	1950
325		Radio Road Res	1	Number of Reservoirs	1960
325		Ive Reservoir Ditchl	100	Number of Ditches	1940
325		South Fork Mtn Res	1	Number of Reservoirs	1955
325		Montgomery Seep Res	1	Number of Reservoirs	1957
325		Top Grade Reservoir	1	Number of Reservoirs	1975
325		Sagehen Exclosure Fence	1	Length in miles to the tenth	2001
326	Summit Field	Williams Ranch Cattleguards #1 And #2	0	Acres treated to the tenth	2005
328	Williams	Williams Rnch Cguard	1	Number of cattleguards	1991
328		Williams Gate	1	Number of Projects	1996
328		Williams Fence (Old Project #5844)	0	Length in miles to the tenth	1997
329	Brockman	Three Peak Fence	2	Length in miles to the tenth	1962
329		Forrest Spring	1	Number of Springs	1966
329		Half Round Spg	1	Number of Springs	1969
329		Three Peaks Res	1	Number of Reservoirs	1958
330	Coffin	Jones Dam Res	1	Number of Reservoirs	1957
1301	West Coyote	Homestd Bd Fence	0.5	Length in miles to the tenth	1965
1301		Allen Okeef Fence	0.5	Length in miles to the tenth	1966
1301		Coyote Sp Dev	1	Number of Springs	1968
1302	West Sheep Mountain	Sheep Mtn Res	1	Number of Reservoirs	1954
1302		Sheep Mt Veg Manipul	6.8	Acres treated to the tenth	1980

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1304	North Red Rock Lake	Sec 10 Reser	1	Number of Reservoirs	1958
1304		Padgett Stock Pond	1	Number of Reservoirs	1957
1304		Red Rock Fence	2	Length in miles to the tenth	1960
1304		Fogle Padgett Fence	2.2	Length in miles to the tenth	1954
1304		Padget Portfld Fence	0.8	Length in miles to the tenth	1954
1304		S Mahogany Mtn Water	0.1	Number of Watering Points	1969
1305	Mt. Hebron	Mt Hebron Fence	8.7	Length in miles to the tenth	1982
1306	West Dome	Hammond Boundry Fnc	1	Length in miles to the tenth	1957
1306		Hammond Bd Fence	3.2	Length in miles to the tenth	1944
1308	Bloody Point	Taylor Chanco	1	Number of Reservoirs	1944
1310	Mt. Dome	Porterfield Res 3	1	Number of Reservoirs	1982
1310		Porterfield Res 4	1	Number of Reservoirs	1982
1311	West Panhandle	Mt Dome Fence	1.5	Length in miles to the tenth	1955
1311		Fogle Allen Fence	2.2	Length in miles to the tenth	1954
1311		Fogle Okeef Fence	0.2	Length in miles to the tenth	1954
1314	Big Tablelands	Big Table Seed 1	320	Acres treated to the tenth	1965
1314		Big Table Drf Fence	2	Length in miles to the tenth	1967
1314		Big Table Res 1	1	Number of Reservoirs	1965
1314		Big Table Res 2	1	Number of Reservoirs	1965
1314		Big Table Res 3	1	Number of Reservoirs	1965
1314		Stenson Cabin Well	1	Number of Wells	1965
1314		Big Table Seed 2	300	Acres treated to the tenth	1966
1314		Little Table Res	1	Number of Reservoirs	1967
1314		Stenson Cab Stk Trl	0.2	Number of trails	1967
1314		Lava Flo Res Fence	8	Acres treated to the tenth	1967
1314		Lairds Camp Fnce	1	Length in miles to the tenth	1969
1314		Okeefe Drift Fen 1	0.3	Length in miles to the tenth	1970
1314		Okeefe Drift Fen 2	0.1	Length in miles to the tenth	1970
1314		B Tableland Crouse	1	Number of Catchments	1971
1314		L Tableland Grouse	1	Number of Catchments	1971
1314		Section 12 Reservoir	1	Number of Reservoirs	1969
1314		Parsons Reservoir	1	Number of Reservoirs	1969
1312	Modoc Gulch	Mahgny Trl Stk Pond	1	Number of Reservoirs	1957
1312		Mahogany Mt Fence	1	Length in miles to the tenth	1957
1312		Holbrook Res	1	Number of Reservoirs	1956
1312		Mahgny Flat Res	1	Number of Reservoirs	1958
1312		Mahgny Flat Fence	1	Length in miles to the tenth	1958
1312		Cedar Mt Drf Fence	2.2	Length in miles to the tenth	1962
1312		Mahgny Ridg Sprng	1	Number of Springs	1968
1314	Big Tablelands	Big Tableland Wet	2	Length in miles to the tenth	1969
1314		Big Tableland Wet L	25	Number of Projects	1969
1315	Lower Lake	Sec 28 Wild Veg Mani	5	Acres treated to the tenth	1981
1316	Mahogany Mountain	Fogle Portrfd Fenc	1.2	Length in miles to the tenth	1953
1316		Mahgny Mt Drf Fence	0.8	Length in miles to the tenth	1962
1316		Porterfeild Res I	1	Number of Reservoirs	1968
1316		Porterfeild Res li	1	Number of Reservoirs	1968
1317	Lava Flow	Lava Flo Bd Fence	1.7	Length in miles to the tenth	1966
1317		Lairds Land Fence	0.8	Length in miles to the tenth	1968
1317		Lava Flo Pro	1	Number of Reservoirs	1967
1317		R Fence	1.8	Length in miles to the tenth	1969
1318	Coyote Ridge	Ward Drift Fence	0.5	Length in miles to the tenth	1949
1318		Robison Clark Fence	1	Length in miles to the tenth	1953
1318		Robison Reseeding	125	Acres treated to the tenth	1955

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1318		Red Rock Well	1	Number of Wells	1953
1318		Sheep Mtn Road	0.5	Number of trails	1966
1318		Cattlgrd Seed 2	90	Acres treated to the tenth	1968
1318		No Project	58	Acres treated to the tenth	1968
1318		Mt Dome Wildlife Guz	7000	Number of Catchments	1977
1319	Windmill	Mahgny Ridge Res	1	Number of Reservoirs	1954
1319		Sheep Mtn Mahog Sed	80	Acres treated to the tenth	1962
1319		Sheep Mtn Res 2	1	Number of Reservoirs	1962
1319		Sheep Mt Res 4	1	Number of Reservoirs	1962
1319		Sheep Mt Res 6	1	Number of Reservoirs	1962
1319		Sheep Mt Bitt Fence	0.8	Length in miles to the tenth	1964
1319		Parson Beck Bd Fenc	1.3	Length in miles to the tenth	1964
1319		Tecnor Reservoir	1	Number of Reservoirs	1966
1320	Barntop	Okeef Bound Fen #1	1.5	Length in miles to the tenth	1943
1322	South Red Rock Lake	Red Rock Junip Fenc	1.2	Length in miles to the tenth	1962
1322		Red Rock Junip Seed	80	Acres treated to the tenth	1962
1322		Taylor Rge Seed	10	Acres treated to the tenth	1965
1322		Vall View Seed	60	Acres treated to the tenth	1968
1322		Vall View Reseed	60	Acres treated to the tenth	1966
1322		Lakeview Spr Dev	1	Number of Springs	1968
1322		Vly View Fnce	0.5	Length in miles to the tenth	1969
1322		Red Rock Rd Vegmanip	8.3	Acres treated to the tenth	1981
1322		Little Rock Lake Fen	2.5	Length in miles to the tenth	1959
1323	West Mahogany	Sec 21 Reser	1	Number of Reservoirs	1955
1323		Holbrook Fogle Fence	1	Length in miles to the tenth	1954
1323		S Fogle Res	1	Number of Reservoirs	1956
1323		Little Rck Stk Pond	1	Number of Reservoirs	1953
1323		Holbrook Fence	1	Length in miles to the tenth	1960
1323		Sheep Mtn Res #1	1	Number of Reservoirs	1962
1323		Padgett Pass Res	1	Number of Reservoirs	1957
1323		Upper Red Rock Fence	1.5	Length in miles to the tenth	1976
1323		Ericson Fence #1	0.5	Length in miles to the tenth	1981
1324	Red Rock Valley	Mt Hebron Seeding	620	Acres treated to the tenth	1982
1324		Red Rock Veg Manip	8.3	Acres treated to the tenth	1981
1324		Mt Hebron Pres Burn	185	Acres treated to the tenth	1983
1326	Loveness	Loveness Reservoir	1	Number of Reservoirs	1968
1401	Peterson	Peterson Ranch Sump	1	Number of Reservoirs	1962
1402	Moon Springs	S Bald Mtn Fence	2.5	Length in miles to the tenth	1957
1402		Cassel Stock Pond	1	Number of Reservoirs	1955
1402		Bidwell Fenc Proj	3	Length in miles to the tenth	1954
1402		Antelope Res	1	Number of Reservoirs	1959
1402		Antelope Seed Fence	2	Length in miles to the tenth	1959
1402		Proctor Divr Ditch	2000	Number of Ditches	1959
1402		Stjohn Drift Fence	1	Length in miles to the tenth	1961
1402		Bald Mtn Dam	1	Number of Reservoirs	1953
1402		North Pond	1	Number of Reservoirs	1953
1402		Love Pine Dam	1	Number of Reservoirs	1953
1402		Cinder Cone Seed #3	80	Acres treated to the tenth	1963
1402		Big Cave Drift Fence	2.5	Length in miles to the tenth	1965
1402		Cindr Cov Res Fence	1	Length in miles to the tenth	1966
1402		Rim Seed Pro	50	Acres treated to the tenth	1967
1402		Ind Mound Seed	77	Acres treated to the tenth	1968

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1402		Rock Fence Seed	35	Acres treated to the tenth	1968
1402		Moon Boundary Fence	0.8	Length in miles to the tenth	1971
1402		Moon Boundary Fence	0.8	Length in miles to the tenth	1992
1402		Antelope Fence	1.3	Length in miles to the tenth	1980
1402		St John Stock Pond	1	Number of Reservoirs	1954
1402		Antelope Res Cg/Rd	1	Number of cattleguards	1999
1402		Antelope Reservoir Fence	1.2	Length in miles to the tenth	1998
1402		S Bald Mtn Fence	2.2	Length in miles to the tenth	1997
1403	Cayton	Bosworth Fenc Proj	1	Length in miles to the tenth	1962
1404	Popcorn Cave	Knox Gulch Res	1	Number of Reservoirs	1983
1404		Popcorn Caves Fence	6	Length in miles to the tenth	1958
1404		Popcorn Res #1-2	1	Number of Reservoirs	1955
1404		Popcorn Res 3	1	Number of Reservoirs	1955
1404		Popcorn Res 4	1	Number of Reservoirs	1955
1404		Beaver Crk Fence	1	Length in miles to the tenth	1959
1404		Knox Gulch Pro Fenc	1.3	Length in miles to the tenth	1963
1404		Big Cave Drift Fence	2.5	Length in miles to the tenth	1965
1404		Popcorn Cave Guzzler	1	Number of Watering Points	1966
1404		Pit Seed	101	Acres treated to the tenth	1968
1404		Knox Flat Fence	0.5	Length in miles to the tenth	1970
1404		Cindercone Guzzler 2	1	Number of Catchments	1984
1404		Cindercone Guzzler 3	1	Number of Catchments	1984
1404		Cindercone Guzzler 4	1	Number of Catchments	1984
1404		Bald Eagle Fence	0.8	Length in miles to the tenth	1980
1405	Cinder Pit	Gravelly Valley Res	1	Number of Reservoirs	1958
1405		Beaver Crk Seed	82	Acres treated to the tenth	1960
1405		Gravell Vall Pro Fnc	3.5	Length in miles to the tenth	1961
1405		Rattlesnake Res	1	Number of Reservoirs	1964
1405		Lion Flat Res	1	Number of Reservoirs	1965
1405		Cinder Cone Tk & Tr	4	Number of Reservoirs	1977
1405		Gravell Vall Pro Fnc	2.5	Length in miles to the tenth	2000
1406	Six Mile Hill	Pole Line Flat Fnce	2	Length in miles to the tenth	1958
1406		Pole Line Flat Fnce	2	Length in miles to the tenth	1958
1406		Pole Line Pond	1	Number of Reservoirs	1954
1406		Cinder Cone Seed #1	160	Acres treated to the tenth	1964
1406		Cindr Pit Pipeline	2	Number of Watering Points	1964
1406		Rim Fence	0.5	Length in miles to the tenth	1973
1406		Moon Boundary Fence	0.8	Length in miles to the tenth	1992
1406		Six Mile Hill Fence	0.8	Length in miles to the tenth	1971
1408	Conrad	Conrad Flat Res	1	Number of Reservoirs	1954
1408		Rimrock Res	1	Number of Reservoirs	1961
1408		Conrad Flat Access	1	Number of trails	1961
1409	Starvation Gulch	Ingram Fence Maint	1.1	Length in miles to the tenth	1978
1410	Saddle Mountain	Saddle Mt Res 1	1	Number of Reservoirs	1954
1410		Saddle Mtn Fence	2.2	Length in miles to the tenth	1957
1410		Saddle Mtn Res 2	1	Number of Reservoirs	1958
1411	Hogback	Hogback Res Maint	1	Number of Reservoirs	1958
1411		Cindr Pit Seed #1-2	800	Acres treated to the tenth	1959
1411		County Rd Fence	2	Length in miles to the tenth	1960
1411		Hogback Fence	1.3	Length in miles to the tenth	1963
1411		Hogback Flat Seed	100	Acres treated to the tenth	1962
1411		Cinder Cone Seed #2	120	Acres treated to the tenth	1963
1411		Cindr Pit Pro Fence	0.6	Length in miles to the tenth	1963

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1411		Rock Flat Res	1	Number of Reservoirs	1965
1411		Manzan Seed #1	120	Acres treated to the tenth	1966
1411		Big Eddy Fence	0.6	Length in miles to the tenth	1980
1411		Hogback Chain & Seed	225	Acres treated to the tenth	1987
1412	Day	Gasaway Fence	1.3	Length in miles to the tenth	1971
1413	Archgate	Juniper Res	1	Number of Reservoirs	1964
1413		Popcrn Cov Brs Manip	120	Acres treated to the tenth	1966
1413		Peack Crk Guzzler	1	Number of Watering Points	1966
1413		Peack Crk Res	1	Number of Reservoirs	1965
1413		Arch Gate Res	1	Number of Reservoirs	1965
1413		Comptn Spr Seed	55	Acres treated to the tenth	1966
1413		Beaver Crk Seed #2	35	Acres treated to the tenth	1966
1413		Juniper Seed	15	Acres treated to the tenth	1966
1413		Compt Spr Pro Fence	1.4	Length in miles to the tenth	1966
1413		Popcorn Fence	2	Length in miles to the tenth	1973
1413		Peacock Reservoir	1	Number of Reservoirs	1973
1413		Lava Rock Fence	1.1	Length in miles to the tenth	1977
1413		Dead Cow Reservoir	1	Number of Reservoirs	1965
1413		Campbell Bndy Fence	2.6	Length in miles to the tenth	1999
10108	Ryegrass Swale	Rye Patch Cattle Grd	0	Number of cattleguards	1957
10112	South Graves	So Graves Allot Fenc	6	Number of cattleguards	1971
10112		South Graves/Rocky Prairie Fence	7.5	Length in miles to the tenth	2005
10118	North Graves/Mackey	North Graves Div Fn	2.6	Length in miles to the tenth	1970

Appendix R

Public Comment Responses

Section Listing for Appendix R

- 1.0 Editorial (including Maps, Figures, Tables; and Glossary)**
- 2.0 Purpose and Need**
- 3.0 Alternatives – General**
- 4.0 Air Quality**
- 5.0 Cultural and Paleontological Resources**
- 6.0 Energy and Minerals**
- 7.0 Fire and Fuels Management**
- 8.0 Forestry**
- 9.0 Lands and Realty**
- 10.0 Livestock Grazing**
- 11.0 Recreation and Visitor Services**
- 12.0 Social and Economic Conditions**
- 13.0 Soil Resources**
- 14.0 Special Designations – Areas of Critical Environmental Concern**
- 15.0 Special Designations – Wild and Scenic Rivers**
- 16.0 Special Designations – Wilderness Study Areas**
- 17.0 Travel Management**
- 18.0 Utilities, Telecommunications, and Transportation**
- 19.0 Vegetation**
- 20.0 Visual Resources Management**
- 21.0 Water Resources**
- 22.0 Wild Horses and Burros**
- 23.0 Wildlife and Fisheries**
- 24.0 Public Involvement / Coordination with other Agencies**

INTRODUCTION

This comment response appendix for the Bureau of Land Management (BLM) Alturas Field Office's (AFO's) Proposed Resource Management Plan / Final Environmental Impact Statement (PRMP/FEIS) identifies and provides responses to public comments that were received on the Draft RMP EIS. During the public comment period, which extended from April 28 to July 27, 2006, 5,030 comments were received from individuals, agencies, and organizations; approximately 4,997 of these were faxes and emails containing identical text that had been suggested by an environmental interest group. Each comment letter typically contained multiple individual comments on one or more of the topics addressed in the Draft RMP EIS. A full listing of commenters, including name, affiliation, and comment number is provided in Table R-1. Table R-1 also identifies the topics addressed in each individual's comment letter, to assist the commenter in locating his or her comments and responses within the appendix. Comments were received in letters, electronic mail messages, and facsimiles.

The commenters include federal, state, tribal, and local officials; public interest groups; and private citizens. The breakdown of respondents and number of comments is as follows:

- 14 comment submissions from public agencies and tribes, containing a total of 196 individual comments;
- 9 comment submissions from organizations, containing a total of 136 individual comments;
- 10 unique comment submissions from individuals, containing a total of 63 individual comments; and
- 4,997 submissions of a set of standard text, which contained a total of 7 comments.

A summary of major changes made in the PRMP, in response to public comment, is provided in Chapter 1.12. The comment letters are provided on a compact disc in the back flap of this volume (Volume 2). Individual comments within each letter are identified by numbers in the left-hand margin of the letter. A two-part reference number was used for each individual comment: the first number is the number assigned to each letter / commenter and the second number identifies the individual topic-specific comment.

Comment summaries, by topic, and responses to comments are provided in this appendix. The comment summaries provide a brief overview of the comments for the reader's convenience in reviewing the responses, and are not intended to provide a complete representation or interpretation of the comment's meaning. BLM's responses are based on the comments in the letters themselves.

Twelve of the Alturas commenters included comments on the Surprise and/or Eagle Lake Field Office Draft RMP EISs within a single comment letter. While all comments within the letter were numbered, only those relevant to Alturas are summarized and addressed in this appendix. Comments pertaining only to the Surprise or Eagle Lake Draft RMP EISs are summarized and addressed in the respective comment response appendices of the PRMPs for those field offices; commenter numbers may differ among the documents prepared for the three different field offices.

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The comment entries are organized according to comment categories, as listed in the Table of Contents for this appendix. Comment responses for topics under each category provide: (1) a list of the comment numbers addressed in that response, (2) a summary of the comments, and (3) the response. Frequently, more than one commenter submitted identical or similar comments; in those cases, comments were grouped together, summarized, and given a single response. Also, where a single response addressed several unique comments, these comments were summarized as a set. In compliance with the provisions of the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations, public comments on the Draft RMP EIS were assessed both individually and collectively by BLM. Some comments resulted in changes or modifications to the PRMP. Comments that were not associated with modifications to the PRMP may have generated responses to correct readers' misinterpretations, to explain or communicate government policy, to clarify the scope of the PRMP, to explain the relationship of the PRMP to other NEPA documents, to refer commenters to other information in the PRMP to answer technical questions, or to further explain technical issues.

The Record of Decision (ROD) will present the decisions made by BLM, and will reflect consideration of these public comments on the Draft RMP EIS.

**TABLE R-1
SUMMARY OF COMMENT LETTERS ON ALTURAS DRAFT RMP EIS**

Commenter Number	Commenter Name	Commenter Affiliation	Comment Categories
1	Form letter submitted by 4,997 different individuals		Alternatives-General, Energy and minerals, Forestry, Areas of critical environmental concern (ACECs), Wilderness study areas (WSAs), Utilities
2	Joe and Joan Becker		Recreation and visitor services
3	Ken Bickford		Air quality, Energy and minerals, Fire and fuels management
4	DeEllen Brasher	Navy Region Southwest	Public involvement/coordination with other agencies
5	Frank Cady	Lassen Municipal Utility District	Energy and minerals
6	Karen Coulter	League of Wilderness Defenders	Alternatives-General, Energy and minerals, Fire and fuels management, Forestry, Livestock grazing, Recreation and visitor services, ACECs, WSAs, Travel management, Vegetation, Water resources, Wild horses and burros, Wildlife and fisheries
7	Sean Curtis	Modoc County Farm Bureau	Editorial, Livestock grazing, Social and economic conditions, Vegetation
8	James Easton	Jas D. Easton Inc.	Wildlife and fisheries
9	Eric Eisenman	Pacific Gas & Electric Co.	Energy and minerals
10	Steven Evans	Friends of the River	Alternatives-general, Wild and scenic rivers (WSRs), Public involvement/coordination with other agencies
11	Steven Evans	Friends of the River	WSRs
12	Bryan Griess	Transmission Agency of Northern California	Energy and minerals
13	Clifford Harvey		Cultural and paleontological resources, Energy and minerals, Fire and fuels management, Lands and realty, Recreation and visitor services, Social and economic conditions, ACECs, WSRs, Water resources
14	Geary Hund et al.	Wilderness Society, CA; Wilderness Coalition, CA; Wild Legacy Project, Defenders of Wildlife, NRDC	Cultural and paleontological resources, Energy and minerals, Fire and fuels management, Livestock grazing, Recreation and visitor services, Soil resources, ACECs, WSRs, WSAs, Travel management, Visual resources management (VRM) , Wildlife and fisheries
15	Donald Koch	CA Department of Fish and Game	Lands and realty, Livestock grazing, Recreation and visitor services, Utilities, Vegetation
16	Dan Macsary	Modoc County Board of Supervisors	Editorial, Fire and fuels management, Lands and realty, Livestock grazing, Social and economic conditions, Travel management, Vegetation

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Committer Number	Committer Name	Committer Affiliation	Comment Categories
17	Paul Moore	SM Ranch	ACECs, WSAs, Travel management
18	Jen Nordstrom	Western Watersheds Project	Purpose and need, Livestock grazing, Soil resources, Vegetation, Wildlife and fisheries, Public involvement / coordination with other agencies
19	Bill Phillips		Editorial
20	Robert Pyle	Lassen County, Administrative Services	Alternatives-General, Livestock grazing, WSRs, WSAs, Travel management, Utilities, Vegetation, Water resources, Wild horses and burros, Wildlife and fisheries, Public involvement / coordination with other agencies
21	Mark Salvo	Sagebrush Sea Campaign	Alternatives-General, Livestock grazing, ACECs, Vegetation, Wildlife and fisheries
22	Gary Schoolcraft		ACECs
23	Linda Schreiber		Alternatives-General, Energy and minerals, Lands and realty, Recreation and visitor services, ACECs, WSAs, Travel management
24	Stanley Sylva	Modoc National Forest	Editorial, WSRs, Travel management, Wildlife and fisheries, Public involvement / coordination with other agencies
25	Duane James	EPA Region IX	Editorial, Livestock grazing, ACECs, Travel management
26	Penni Ericson	Diamond E. Ranch	Travel management
27	Tom Harris	Four Runners 4WD and High Rock Trekkers	Travel management
28	Delbert Craig	Modoc County Fish Game & Rec Comm	Travel management
29	John & Lani Estill	Estill Ranches	Livestock grazing, Vegetation, Water resources, Utilities
30	Kurt Mullis	Fish and Wildlife Service – Klamath Falls	Editorial, Energy and minerals, Fire and fuels management, Lands and realty, Livestock grazing, Travel management, Vegetation, Water resources, Wildlife and fisheries
31	Bruce Warden	Lahontan RWQCB	Editorial, Livestock grazing, Water resources, Public involvement / coordination with other agencies
32	Jessica Jim	Pit River Tribal Council	Cultural and paleontological resources, Energy and minerals
33	Sharon Elmore	Pit River Tribe	Cultural and paleontological resources, Fire and fuels management, Lands and realty, Livestock grazing, Public involvement / coordination with other agencies
34	Vi Riley	Alturas Rancheria	Energy and minerals, Fire and fuels management, Livestock grazing, Travel management, Vegetation, Wildlife and fisheries, Public involvement / coordination with other agencies

COMMENT RESPONSES

1.0 Editorial

This section is divided into the following subsections:

- 1.1 – Editorial Changes Incorporated into PRMP / FEIS
- 1.2 – Editorial Changes Not Made or Made with Qualification

1.1 Editorial Changes Incorporated into PRMP / FEIS

Editorial changes were made in the document in response to the following public comments:

#16-11	#19-7
#19-1	#19-8
#19-2	#19-9
#19-3	#24-2
#19-6	#31-4

These include changes to the text, maps, tables, figures, and glossary.

1.2 Editorial Changes Not Made or Made with Qualification

The following editorial comments, including comments on text, maps, tables, and figures, were reviewed but the suggested revisions were not incorporated or were made with a qualification. A summary of the comments and rationale for their final disposition is provided below.

Comment Number	Comment	Response
#7-1, #16-1	Give each chapter its own table of contents to improve readability	One comprehensive table of contents was determined to suffice.
#16-2	Add sufficient landmarks to maps so can recognize area and	The level of detail in the maps, combined with the text, should provide description adequate for this programmatic document.
#7-2, #16-3	Add page numbers to maps that reference text of same subject	As page numbers change throughout the document publication process, this suggestion was not implemented.
#16-4	Include in tables a reference to page number of text that contains same subject	See response to comment #16-3.
#19-4	Asks whether definition of climax condition allows for natural changes over time.	Yes.
#19-5	Revision to grammar in definition of Great Basin.	The definition was revised and the noted language no longer is included.
#24-4	Maps WILD-3 and WILD-4 depicting deer and antelope management on national forest system lands have not been fully coordinated with forest plans and designated areas.	Information in map is based on the most recent information from California Department of Fish and Game (CDFG) has been added as a reference to the map

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Comment Number	Comment	Response
#25-6	In FEIS include a map that more clearly delineates watersheds and includes the named waterways and reservoirs cited in the document.	The reader is referred to the following maps and tables which provide the requested information: WILD-2a shows reservoir locations and Table 2.24-4 lists the reservoir names. An additional map was added: WATER-1 depicts rivers and streams; labels for North and South Fork Pit River have been added to the map WATER-2, but there is not enough room to add any others.
#30-3	Include map that shows by category the acres proposed as open to mineral material development and those proposed as closed.	Most areas proposed for closure are already depicted on ACEC, WSA, and WSR maps. Most other areas would be considered open to mineral material development.

2.0 Purpose and Need

Comment Number: #18-3

Comment: Maintaining and improving wildlife habitat and restoring degraded range conditions should be reflected in Purpose and Need in compliance with Taylor Grazing Act of 1934, FLPMA of 1976, and other laws governing livestock management. This direction, based on laws and regulations, should be explicitly stated in Purpose and Need. Selection of any alternative that does not provide direction for meeting those goals violates intent of laws and regulations governing public land management. Correction of resource degradation caused by domestic livestock and prevention of future degradation should be driving force behind RMP and reflected in NEPA document and future agency decisions regarding livestock grazing.

Response: The purpose and need for the PRMP is to provide overall management and long-term direction for the public lands and resources administered by BLM's AFO, in accordance with the Federal Land Policy and Management Act (FLPMA), as stated in Section 1.1. The legislative, regulatory, and policy direction — which guided the development of the management alternatives for each resource — is clearly stated in each resource-specific subsection of Chapter 2 (which now includes reference to the Taylor Grazing Act for livestock management).

3.0 Alternatives – General

This section summarizes and addresses comments on the alternatives that are not specific to a particular program area (program area-specific comments are addressed in the subsequent sections). Only those comments considered very general in nature are included here.

Comment Numbers: #1-1, #6-1, #6-20, #10-2, #21-1, #23-6

Comment: These comments expressed a general preference for all or part of Alternative 2 over the preferred alternative, and several recommended further modification of Alternative 2 to provide more protection of wildlife, habitat, wild and scenic rivers, soils, water quality, and other natural values.

Response: We believe that the preferred alternative, with some additional modifications as identified in Section 1.12, best balances environmental protection and site access in accordance with Section 302(a) of FLPMA, which requires the Secretary to manage BLM lands under the principles of multiple use and sustained yield, and the other planning criteria that are described in Section 1.7.

Comment Number: #20-2

Comment: Draft RMPs reflect differences and inconsistencies between the three field offices.

Response: BLM acknowledges that the three RMPs contain differences. These reflect field office-specific issues, and also are reflective of authorship by different field office-specific resource specialists. However, each RMP follows BLM's guidelines for resource management planning. Editorial improvements to the PRMPs may address some of the specific differences that prompted this comment.

4.0 Air Quality

Comment Number: #3-4

Comments: Smoke will occur with either wildland fires or with the prescribed burns used to manage fuels.

Response: Prior to conducting any prescribed fire projects, BLM would prepare a project-level review (environmental assessment or categorical exclusion) that would analyze site-specific impacts (including impacts to areas downwind from smoke). Such projects would be coordinated with all potentially affected parties, including adjacent or nearby landowners, prior to implementation. Any prescribed fire project also would be carefully timed and managed in such a manner that federal (Clean Air Act), state, and local standards for particulate matter are not exceeded. Smoke management plans would continue to be written and implemented for all prescribed fires, and would include information and techniques used to reduce or alter smoke emission levels.

5.0 Cultural and Paleontological Resources

Comment Number: #13-2, #33-17

Comment: Regarding seeking partnerships with local and state museums (Section 2.2.5.4, economic development alternative), commenter notes that potential partners are in place, especially the River Center in Alturas, who should be involved in any resource education efforts. Request that the first paragraph on page 2-20 be removed.

Response: Thank you for your comment and for pointing out this existing alliance. Such relationships with local and state museums are important ones. The referenced paragraph has been removed from the PRMP.

Comment: #14-108

Comment: BLM must disclose and discuss the adverse ecological and social (especially recreational and cultural) impacts of road construction.

Response: The preferred alternative only allows for ten miles of new permanent roads and 50 miles of temporary roads to be authorized for timber management and harvesting activities. Motorized recreational access would be determined on a case-by-case basis for the new permanent roads. Any proposed new route would undergo a site-specific NEPA analysis and the location of these new roads would be carefully considered to avoid adverse impacts to cultural resources, recreational opportunities, and other resources. Because of this additional analysis, adverse impacts from the construction of 10 miles of new roads are not expected to be significant to resources or social conditions. Impacts from road construction are outlined in various sections of the Draft and PRMP, Chapter 4. Environmental Consequences, particularly in Section 4.2, Potential Effects on Cultural and Paleontological Resources.

Comment Number: #32-2

Comment: Pit River Tribe should be contacted when any type of archaeological inventory or evaluation is proposed and should be on site when it is conducted.

APPENDIX R

Response: We fully agree that the Tribe needs to be notified and allowed to observe any inventories or evaluations scheduled in the AFO planning area. As such, we will continue to notify the Tribe each year, in writing as we have done in past years, with information on upcoming projects, permit renewals, inventorying, and similar activities, and an invitation to participate.

Comment Numbers: #32-3, #33-1, #33-9

Comment: There should be no rock art brochure and guide developed by BLM that publishes the locations of known rock art. Pit River Tribe has serious concerns about cultural tourism in these sacred and prehistoric archaeological sites. Improved access to public land puts cultural resources and artifacts at risk.

Response: This was included in Alternative 1 in the Draft RMP EIS. This action is not part of the Preferred Alternative.

Comment Numbers: #32-4, #33-6

Comment: There should be no minerals and energy development allowed at the expense of archaeological sites. General opposition to economic development including mining, wind energy, timber production, and tourism

Response: We appreciate your comment and acknowledge your position; however, we believe that the preferred alternative includes management measures to adequately protect the unique and sensitive resources found in the AFO planning area from economic development, while also considering the relative significance of the public land products, services, and use to local economies. While we have not changed the preferred alternative with respect to the potential level of minerals, energy, or other economic development allowed, the proposed action includes a number of special management areas that would be closed or proposed for closure to energy and mineral development.

Comment Number: #32-5

Comment: A monitoring protocol should be developed with tribal input and put in place to protect cultural sites.

Response: BLM plans to develop such a monitoring protocol in coordination with the Indian tribes. See revised Section 2.2.3.2.

Comment Number: #33-4

Comment: If first paragraph on page 2-9 is carried forward into final RMP, request that it include more of a discussion of indigenous people in the area and mention Indian village sites.

Response: The requested wording has been added to the paragraph.

Comment Number: #33-5

Comment: On page 2-10, 3rd bullet under Common to All, need to define “regularly monitor and patrol.”

Response: This bullet has been revised in the PRMP to more clearly state that the officers would regularly patrol these areas and that site conditions would be monitored, with law enforcement efforts altered as necessary.

Comment Number: #33-8

Comment: The Pit River Tribal Councils requests to be included in Memorandum of Understanding (MOU) between Kinross Gold, Army Corps, and BLM to acquire mining mitigation land at Hayden Hill (page 2-45)

Response: BLM has determined that the subject MOU is not necessary and reference to it has been removed from the RMP. BLM proposes to manage the land proposed for acquisition in consultation with the Pit River Tribe. See revised Section 2.7.3.3.

Comment Number: #33-10

Comment: Suggested BLM hire Native Americans to help monitor sites if Economic Development Alternative is chosen.

Response: We appreciate your offer and will keep it in mind; however, at this time we do not anticipated selecting the economic development alternative.

Comment Number: #33-11

Comment: Livestock should not be allowed in archaeological sites of any kind.

Response: We are committed to providing protection to cultural resources within the AFO area, and have taken measures to mitigate effects to such resources from livestock grazing. The Tribe is welcome to provide input to permit renewal environmental assessments, tour sites or allotments, and assist us in protecting your Tribal heritage.

Comment Number: #33-12

Comment: In last paragraph on page 2-15, second sentence, add “with tribes” after “in consultation”.

Response: Reference to consultation with tribes has been added to the sentence regarding building exclosures.

Comment Number: #33-13

Comment: Add “Affected Tribes will be notified” to provisions outlined in first paragraph of page 2-16.

Response: The requested text has been added.

Comment Number: #33-14

Comment: Relative to second paragraph on page 2-16, request that no confidential information be included in educational programs.

Response: Confidentiality is an important element in the protection of cultural resources. It is standard BLM policy to provide no confidential information in any public educational programs.

Comment Numbers: #33-15, #33-16

Comment: The Pit River Tribal Council is interested in a juniper removal stewardship contract or in contracting with BLM to remove juniper from sensitive archaeological sites, and also in economic development opportunities related to renewable energy development.

Response: We appreciate your interest in assisting with juniper removal. Setting up such a contract is beyond the scope of this PRMP. However, we are interested in working with the Tribe further on this issue.

Comment Number: #33-18

Comment: Ask that artifacts not be removed from public land.

Response: We agree. It is standard BLM policy not to remove artifacts from public land.

Comment Number: #33-19

Comment: Request that Indian Trust Responsibilities be added under 2.2.2.

Response: Section 2.2.2 of the PRMP has been revised to include Indian Trust Responsibilities.

Comment Number: #33-20

Comment: What are the locations of the three ethnographic village sites?

Response: BLM has provided the requested information to the Tribe.

Comment Number: #33-21

Comment: Request that BLM flat rock policy include provisions for Tribal collection of lava rock because that is what is generally heated in sweat lodges. Also asked to be allowed to collect rock for personal use from areas identified through Tribal processes in addition to those areas designated by BLM. Wants BLM to map potential collection areas

Response: This discussion has been revised in the PRMP to address the commenter's requests. See Section 2.2.6.2. BLM has provided a map of collection areas.

Comment Number: #33-22

Comment: The Pit River Tribal Council asked for copies of larger scale maps than those available in RMP.

Response: Larger scale maps are not currently available.

6.0 Energy and Minerals

This section is divided into the following subsections:

- 6.1 – Transmission Corridors
- 6.2 – New Energy Development
- 6.3 – Energy and Minerals Development Restrictions

6.1 Transmission Corridors

Comment Numbers: #5-1, #5-2, #5-3, #5-4, #9-1, #12-2

Comments: Use of existing north-south high-voltage energy lines or corridors will not address need; real need is for east-west corridor north of Lassen National Park. Lassen County Community Development Department has identified potential routes north of Eagle Lake that would appear to facilitate significant segment of this line from Nevada border to the Lassen/Shasta County border. Lassen Municipal Utility District (LMUD) has adopted a policy to create Lassen Energy Zone to allow “clean and green” energy to be transmitted west directly to California load centers via east-west routes. Lassen County and LMUD are working together to implement LMUD’s “Lassen Energy Zone” through upgrade of energy element of County’s general plan, would also support east-west routes. BLM needs to consider preserving potential east-west utility corridors to meet state’s renewable energy resource goals. BLM’s preferred approach will not work as it would close off land that could provide crucial access to generation development. BLM needs to be more flexible in allowing transmission siting to assure development of renewable resources. In the West-wide Energy Corridor process, PG&E identified at least one general corridor with potential to access renewable resources that comes in from the Oregon border around Goose Lake and continues on down to Chico. While it seems that the distance between the Lava WSA and Pit River Canyon WSA is sufficient to accommodate such a corridor, the maps are not detailed enough to provide clarity. Need to support designation of east-west energy corridor between northern California and Nevada.

Response: BLM is aware of the ongoing study to identify east-west corridor routes and is a cooperating agency for preparation of a *West-wide Energy Corridor Programmatic EIS* (PEIS). The Draft PEIS is scheduled to be issued in winter 2007. As such, BLM will work with other agencies in designating appropriate energy corridors on federal lands in 11 western states, perform any environmental reviews required to complete corridor designation, and incorporate designated corridors into relevant agency land use plans. The *Preliminary Draft Map of Potential Energy Corridors on Federal Lands* (a document prepared in support of that PEIS) depicts an east-west transmission corridor between northern California and northern Nevada, which will potentially be routed through the AFO area. This corridor, when coupled with related renewable generation development, will create markets for renewable energy between California and Nevada and will augment California’s energy supplies by allowing additional energy to flow into the state at a northerly point other than the California-Oregon border. BLM will complete the necessary site-specific environmental reviews necessary to identify and evaluate proposed routes within the requisite time frames outlined in the *Programmatic EIS*. Section 2.3 of this PRMP has been revised to address the need for an east-west corridor transmission route.

Comment Number: #9-2, #9-3, #12-3

Comment: To balance environmental concerns with need for reliable, renewable energy, PG&E believes that corridor widths could be increased to a minimum of one mile to allow adequate room for avoidance of sensitive resources and to maintain sufficient separation of facilities within the corridor so as not to compromise safety, reliability, and national security concerns. BLM's preference to consolidate transmission ROWs does not give consideration to ROW separation for system reliability purposes. For example, ROW separation will typically need to be wider if the lines traverse forest land because a fast moving forest fire can cause outage of both lines if the ROW separation is not wide enough. PG&E urges to include due consideration of system reliability in addition efficient land resource utilization. Need to support objectives of Section 368(d) of Energy Policy Act of developing energy corridors that improve reliability, relieve congestion, and enhance delivery capabilities of national grid.

Response: We agree that factors such as reliability, congestion, and enhanced delivery capabilities are important considerations in the development and selection of energy corridor routes as well as in the determination of sufficient corridor widths. We take such considerations into account when we identify potential utility corridors and manage these corridors for right-of-way development. While a corridor width of up to one mile may be ideal with respect to reliability and sensitive resource avoidance concerns, it is not necessarily practical in terms of (1) the lack of contiguous public land to provide for corridor widths of one mile; and (2) the challenges in identifying one or more possible routes of this width that avoid exclusion areas or minimize impacts to other special management areas within the AFO, such as WSRs, WSAs, ACECs, CRMA, cultural resources, or important wildlife habitat.

Utility corridors included in the Western Regional Corridor Study (WRCS) will be available for right-of-way development, unless environmental analysis reveals the likelihood of significant adverse impacts on other resources. As stated in this PRMP, corridor width would be expanded up to 500 feet where practical.

6.2 New Energy Development

Comment Number: #12-1

Comment: Urges BLM to continue and expand support for and recognition of need to develop renewable energy resources (wind and geothermal)

Response: We agree with the comment and have included a discussion on wind energy in the PRMP that addresses how wind energy projects will be designated and developed in accordance with the 2005 Final PEIS on *Wind Energy Development on BLM-Administered Lands in the Western United States* (see Section 2.3.7). Management actions regarding the development of leasable minerals include geothermal energy, and Section 3.4.1 includes a discussion of past geothermal activities in the AFO. Appendix D addresses the potential for geothermal power plant development in the AFO planning area.

Comment Number: #14-121

Comment: RMPs should incorporate BMPs for oil and gas development activities, and make them mandatory, especially in sensitive areas. Commenter specifies BMPs to include.

Response: Potential for commercially viable oil and gas deposits is low throughout the management area. Existing oil and gas leases have resulted in no development to date and a lease application received in the Upper Pit River area in the early 1970s was never issued or pursued further; see Section 3.4. Further interest in oil and gas leasing is not expected unless technological advances reduce the cost and financial risk of exploring beneath the volcanic overlay. However, if oil and gas development were to take place in the future, BMPs would be prescribed and implemented based upon project-specific and site-specific conditions and requirements, including those necessary to protect sensitive resources from oil and gas development. Once implemented, BMPs would be monitored, evaluated, and modified as necessary through an iterative process to ensure the protection of sensitive resources and compliance with other resource management objectives.

Comment Number: #30-4

Comment: Need to display impacts of renewable energy development on other resources.

Response: Impacts of potential renewable energy developments are discussed by program area in Chapter 4 of the Final EIS. Site-specific impacts will be addressed in subsequent environmental reviews when actual proposals are received.

Comment Number: #32-1

Comment: The book [EIS] opens the area up to more mining of geothermal and minerals like obsidian, lava rock, and pumice stone, which we do not want. Less of the minerals taken the better off the landscape will be.

Response: We appreciate your comment and acknowledge your position; however, we believe that the preferred alternative includes management measures to adequately protect the unique and sensitive resources found in the AFO planning area from minerals development, while also considering the relative significance of the public land products, services, and use to local economies. While we have not changed the preferred alternative with respect to the potential level of minerals and energy development allowed, the proposed action includes a number of special management areas that are closed or recommended for closure to energy and mineral development.

6.3 Energy and Minerals Development Restrictions

Comment Numbers: #1-3, #6-17, #6-22, #13-4, #23-9

Comments: Close primitive and non-motorized management areas to mineral leasing to protect wild character. Allow less mineral extraction / leasing and more “no surface occupancy” restrictions. Oppose non-essential rock removal and ask for fewer acres to be open to sand, cinder, gravel extraction. One commenter supported the ecosystem restoration alternative for energy and minerals.

Response: We believe that the preferred alternative includes the most appropriate mix of management measures to adequately protect the unique and sensitive resources found in the AFO planning area from minerals development, while also considering the relative significance of the public land products, services, and use to local economies. These measures, as described in Sections 2.3, 3.4.4, and Appendix K of the PRMP, include closure, no surface occupancy (NSO) restrictions, or other types of restrictions (such as seasonal restrictions).

Specific minerals or energy project proposals will be considered on a project-specific basis in accordance with FLPMA, regulations, and BLM policy. This would include conducting site-specific botanical/ecological and archaeological evaluations, as well as a separate environmental review of each proposal prior to development to evaluate (and minimize) potential site-specific impacts. Additional restriction stipulations would be applied as needed and appropriate. Finally, it should also be noted that, with respect to leasable and locatable mineral development in the AFO, the potential for discovering commercially-viable oil, natural gas, or geothermal energy reserves is low to non-existent throughout the planning area; and locatable mineral activity has largely been confined to sporadic exploration.

Prior to issuance of decorative rock permits, applicants must comply with a number of environmental requirements. Section 2.3.6.3 lists these requirements.

Comment Number: #3-5

Comment: Regarding saleable minerals, prefers Alternative 1.

Response: We believe that the preferred alternative includes the most appropriate mix of management measures to adequately protect the sensitive and unique resources found in the AFO planning area from minerals development, while also considering the relative significance of the public land products, services, and use to local economies.

Comment Number: #5-5

Comment: Agrees that NEPA would need to be followed for location-specific energy projects.

Response: We appreciate your support for the need to conduct separate site-specific NEPA reviews on energy projects in response to specific energy proposals.

Comment Number: #14-107

Comment: Need to reconcile conflicting Ch 4 estimates of mileage of new roads (permanent and temporary) that will be built in the AFO under preferred alternative. Section 4.4.5.5 (p. 4-40) of Ch. 4 Energy and Minerals discussion states that proposals to build up to 130 miles of new roads could facilitate mineral development.

Response: All references to mileage of new roads in the PRMP-FEIS have been changed to 60 miles for consistency.

Comment Numbers: #30-2, #14-112

Comment: Consider limiting mineral development in following areas: important habitat for protected species, riparian and wetland habitat, areas within 2 miles of sage-grouse lek sites. Regarding Appendix K, Energy and Minerals Surface Use and Occupancy Requirements: the failure to make a significant closure of lands to leasing in any but Ecosystem Restoration alternative indicates BLM has not met its obligation to consider a true range of alternatives and improperly skews balance of values in the RMP. BLM should consider closing additional acreage in Alturas RMP to oil and gas leasing in order to protect sage-grouse habitat.

Response: We believe that we have considered an adequate range of alternatives – from maximum to minimum / limited levels of energy and minerals development. The proposed action does include provisions for oil and gas development relating to the protection of sage-grouse populations and their habitat, including those identified in Appendix K (Energy and Minerals Surface Use and Occupancy Requirements), such as the application of permanent NSO restrictions within 0.25 mile of sage-grouse leks and potential application for permanent NSO restrictions to other sensitive wildlife habitats, where needed. The proposed action also includes management of oil and gas development activities in accordance with the “*Conservation Strategies for Sage-Grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil’s Garden/Clear Lake Population Management Units.*”

We are confident that our management approach under the proposed action for sage- grouse and sagebrush ecosystems and riparian areas will provide an effective level of protection in the AFO planning area. Section 2.17 addresses the treatment options for slowing or reducing the spread of annuals: tightly controlled livestock grazing, prescribed fire, and seeding of native plants—coupled with full suppression of high-intensity wildfires—can slow, and in some cases reverse, type-conversion to exotic annual grasslands. Grazing management techniques would include short duration, high intensity grazing. This would be accomplished with the construction of small pastures, viable livestock watering facilities, and close monitoring by BLM staff.

Furthermore, as noted in response to comments above, specific minerals or energy project proposals will be considered on a project-specific basis in accordance with FLPMA, regulations, and BLM policy. This would include conducting a separate environmental review of each proposal prior to development to evaluate (and minimize or avoid) potential site-specific impacts on sensitive resources. Additional restriction stipulations would be applied as needed and appropriate.

Finally, it should also be noted that the potential for discovering commercially viable oil, natural gas, or geothermal energy reserves is low to non-existent throughout the planning area.

Comment Number: #30-5

Comment: Recommends that AFO integrate all appropriate guidelines and BMPs from list of guidance documents provided into all future energy developments. Similar recommendation to include one of the guidelines for preferred alternative for rights-of-way (avian protection plan and FWS siting guidelines) and recommendation that AFO reference the California Wildlife Action Plan (CWAP) and support it at some level.

Response: BMPs would be prescribed and implemented based upon project-specific and site-specific conditions and requirements, including those necessary to protect sensitive resources from future energy developments. BLM will require adherence to BMPs for wildlife and avian protection. Once implemented, BMPs would be monitored, evaluated, and modified as necessary through an iterative process to ensure the protection of sensitive resources and compliance with other resource management objectives. Proposed ROW development would adhere to site-specific BMPs, and utilities proposing any new ROW are required to comply with FWS siting guidelines to protect avian and wildlife habitat.

Chapter 2.7.6.4 [lands and realty section] has been revised to state: “All land use authorizations will be evaluated for their impact to sensitive resources, including critical and/or important wildlife habitat. Any new rights-of-way, including utility corridors and communication sites, would be consistent with USFWS guidance to minimize effects to migratory birds.”

Comment Number: #34-1

Comment: Concerned about siting communication sites and wind energy farms on mountain peaks.

Response: We appreciate your comment and acknowledge your position; however, we believe that the preferred alternative includes management measures to adequately protect the unique and sensitive resources found in the AFO planning area. For example, we have proposed over 5,000 acres of ACECs specifically to protect mountain peak resources. Any new project proposals for communication sites or wind energy would undergo additional site-specific NEPA analysis, and would need to be consistent with PRMP objectives for visual resource management.

7.0 Fire and Fuels Management

Comment Number #30-7

Comment: Hazardous fuels in form of overstocked stands, needle accumulation, etc. are a concern. Also would support some timber management in Mount Dome bald eagle roosting area to reduce risk of insect outbreaks, disease and catastrophic wildfire.

Response: BLM has completed shrub thinning for fire protection in the Mount Dome area. In the event of a fire, access has been provided for fire fighting activities, and a helipad and fire break are also available. Timber harvesting would be prohibited on Mount Dome to preserve the area as a bald eagle roosting site. In addition, we will develop and implement a management plan for the Mount Dome ACEC, as well as a habitat management plan for the bald eagle to provide further protection to sensitive resources in the area.

Comment Numbers: #6-15, #14-125

Comment: Other tree removal should focus on smallest trees (most flammable) and leave mature trees. Disturbed to find that preferred alternative proposes to target over-mature forest to reduce fire danger (page 2-43). Submit that 30" DBH is too large. Request BLM to change preferred alternative in final to include provision that largest and oldest trees in each stand be retained as well as all trees over 30" DBH so that late successional habitat can be restored over time and more fire resistant forests can be forested.

Response: In general we are trying to do this as our timber management program provides for protection of old growth and late succession forests; however, there are other factors to consider besides upper tree diameter, and these factors vary depending on specific needs of a given area. The 30" DBH limit refers to low site forest lands. Therefore, BLM prefers to maintain flexibility in the RMP to consider all the relevant issues. Section 2.6 has been revised to remove the reference to "over mature".

Comment Number: #3-1, #3-2, #3-3, #13-9,

Comment: Commenter 3 prefers Alternative 1 for fire management, which also includes timber salvaging, and prefers Alternative 2 for fuels management because it is more aggressive and included information on chemical and biological fuels treatments. Commenter 13 expressed general support for ecosystem restoration alternative in terms of fire rehabilitation – in many cases natural recovery is desirable after wildland fire, but goals can be met without blanket prohibition of salvage logging.

Response: We appreciate your comments and acknowledge your preferences for a different alternative. However, we believe that the preferred alternative includes the most appropriate mix of fire and fuels management measures to adequately meet human safety needs and achieve resource objectives of the AFO. Note that the preferred alternative for fuels management includes some chemical and biological fuels treatment measures. Under the preferred alternative, hazardous fuels reduction plans would be developed in coordination with resource specialists, and would identify the appropriate treatment method for a specific site. The salvage of burned timber will be completed consistent with NEPA and BLM regulations.

Comment Number: #6-13, #14-124, #34-2

Comment: Fire needs to be returned to the ecosystem. Fire management should be with the goal of returning to a natural fire regime, meaning that too much fire suppression should be avoided. Aggressive fire suppression should only occur within or near wildland-urban interface zones. The use of fire retardant chemicals and new fuel break clearing should be avoided as much as possible. A larger portion of the AFO should be managed for WFU. Draft RMP fails to fully analyze the ecological consequences of allowing fuels to accumulate to a potentially catastrophic extent under a partial or full-suppression regime.

Response: We believe the preferred alternative provides the appropriate balance of fire management strategies. When severe fire intensity levels exist, aggressive, initial attack and full suppression would be the appropriate management response (AMR) for all areas, especially in the WUI. When fire intensity is low, the AMR would be much less aggressive. Actions would be determined by resource management objectives for the area, the typical response being containment.

Wildland fire use would be developed for 3% (16,998 acres) of the management area. We feel that this is an appropriate use of WFU. However, when it is apparent that a wildland fire is achieving resource benefits (e.g., reducing fuels or improving wildlife habitats), it would be managed under a contain-and-confine strategy and allowed to burn to natural or man-made barriers. The flexibility provided by these options would allow fire to play a significant and natural role in many vegetation types, given existing constraints.

Suppression efforts may employ fire engines and heavy equipment, aircraft, retardant, and hand crews, according to what is appropriate for the particular fire situation. However, use of heavy equipment would be avoided in ACECs, RNAs, WSAs, known NRHP-eligible sites, and other sensitive areas—unless deemed essential by the (fire) line officer.

BLM will continue to identify areas with excessive fuel accumulation and develop mitigation strategies in cooperation with local agency fuel reduction programs. Planned fuel reduction treatments under the preferred alternative would be approximately 75 to 20,000 acres per year. Fuel treatment plans will emphasize prescribed fire as the primary means of restoring and

maintaining fire-dependent ecosystems. Section 4.6 of the Draft RMP outlines environmental consequences of the varying levels of fuels management within the five alternatives. Section 4.6 of the PRMP outlines environmental consequences of fuels management under the preferred alternative.

Comment Number #13-3

Comment: Recommend expansion of firewood cutting areas to help with juniper management. Adopt rules for juniper cutting similar to those in place for Lassen National Forest-Hat Creek Ranger District.

Response: Section 2.16.1.5 has been revised as follows to include more information on firewood cutting areas:

Woodcutting areas: These areas are generally adjacent to or near communities to provide fuel wood for home heating needs. All areas have class III archaeological surveys; recorded sites are excluded from woodcutting or mitigated at the proper level with SHPO concurrence. Threatened and endangered plant and animal document searches and field surveys are conducted at the appropriate level. Boundary and fuel wood cutting signs are posted at entrance and exit points of the cutting units. Most woodcutting areas have been used historically for fuelwood and ranching needs for the last 60-70 years.

Comment Number #14-107

Comment: Need to reconcile conflicting Chapter 4 estimates of mileage of new roads (permanent and temporary) that will be built in the AFO under preferred alternative. Ch. 4 discussion of Fire and Fuels states that up to 30 miles of new roads would be built for forestry and woodcutting alone.

Response: All references to mileage of new roads in the PRMP have been changed to 60 miles for consistency. Thank you for pointing out this inconsistency.

Comment Number: #16-6

Comment: Commenter urges a determined effort to overcome CDF's insistence on full suppression.

Response: BLM will continue to coordinate efforts with CDF to return fire to its natural role in the ecosystem where appropriate.

Comment Number: #30-6

Comment: Supports fire and fuel treatment program with understanding that impacts of specific actions will be individually assessed for their impacts to wildlife and those impacts will be mitigated to the extent feasible to accomplish both fire and wildfire objectives.

Response: Thank you for your support. As you understood, the impacts of specific actions would be individually assessed for their impacts to sensitive resources and mitigation measures would be identified and implemented where appropriate; please see Section 2.4.

Comment Number: #33-23

Comment: Asked that fire rehab activities be undertaken in consultation with the Pit River Tribe.

Response: The text in Section 2.4 has been revised to address this comment

8.0 Forestry

Comment Number: #1-6

Comment: Eliminate construction of 60 miles of new roads to facilitate logging.

Response: New roads will be constructed as needed to facilitate logging and juniper removal. Under the proposed action, up to 50 miles of temporary roads, some of which will be actively rehabilitated after use is completed (and the rest would be left to return to a natural state) and up to 10 miles of permanent roads could be constructed.

Comment Number: #6-16

Comment: No logging in roadless areas

Response: In accordance with the Interim Management Policy (IMP), no logging is allowed in WSAs. Prescribed fire and biological treatments would be used as tools for vegetation restoration according to the IMP.

9.0 Lands and Realty

Comment Number: #13-5

Comment: Access acquisition – supports objective to acquire access where possible. .

Response: Thank you for your comment. We appreciate your support of our approach to prioritize access acquisition under the proposed action.

Comment Number: #13-6

Comment: In many cases, private landowners are locking up traditional, if lightly used, access routes that cross private land to reach many areas of public land. To date, BLM has done little to stop this trend. RMP should stipulate that BLM will work to protect all existing access from arbitrary private closure except where overriding resource protection concerns are involved, in which case public involvement should be mandated before closure is permitted.

Response: Our intent is to provide public access to public land, however, when that access is across private land it necessitates the cooperation of the private landowner and cannot be guaranteed by BLM.

Comment Number: #15-15

Comment: Draft RMP states that BLM-administered parcels that provide habitat for a sensitive species (sage-grouse) and are best managed as part of the adjacent DFG Ash Creek Wildlife Area would be transferred to DFG through an exchange or other action. In the area surrounding McArthur Swamp, DFG requests that BLM retain public ownership or transfer to an agency of the State of California for the same purpose.

Response: As indicated in Appendix L, the Alturas Land Tenure Adjustment Plan, we would be receptive to a proposal from the CDFG to transfer the Pilot Butte parcel to their administration. The area around McArthur Swamp is within a retention area and will continue to be managed by BLM.

Comment Number: #16-9

Comment: Modoc County wishes to reiterate their “no net loss” policy and encourage BLM efforts to comply with it.

Response: BLM will continue to work closely with the Modoc County Board of Supervisors regarding public land acquisitions and disposals within the County.

Comment Number: #23-3

Comment: Acquire public ROWs along abandoned railroad grades for non-motorized trails.

Response: Thank you for your comment supporting the proposed action in Section 2.16.2.5 which proposes to “...work with the (BLM) Eagle Lake Field Office, Lassen and Modoc Counties and the Union Pacific Railroad to acquire 85 miles (40 miles in the AFO management area) of the abandoned Modoc Line right-of-way. If acquired, it would be managed on an interim basis as a trail resource pending restoration of rail service.”

Comment Numbers: #30-8, #30-9

Comments: Recommend BLM include in lands and realty section a stipulation that states that lands with habitat that may be important for protection of federally protected species, or that contain critical habitat, not be exchanged or disposed unless habitat for species can be protected. Would like to see BLM identify and acquire important wildlife habitats where those opportunities exist.

Response: Retaining or acquiring important wildlife habitats is consistent with the Alturas Land Tenure Adjustment Plan (LTAP), which is included in its entirety in Appendix L of the PRMP. Section 2.3A and 2.3C of Appendix L address planning decisions specifically relating to the protection of important wildlife habitats. In addition, any BLM land disposal would require preparation of a site-specific environmental assessment to evaluate potential impacts prior to disposal, including impacts to T&E species and their habitat. If T&E species or critical habitat has the potential to be affected, BLM would prepare a biological assessment and conduct any required consultation in accordance with Section 7 of the Endangered Species Act.

Comment Number: #33-2

Comment: The Pit River Tribal Council is interested in purchasing sensitive lands including Yankee Jim Ranch.

Response: This particular parcel of land is not available for disposal, but AFO has provided the Tribe with a map of lands that are available for disposal.

Comment Number: #33-7

Comment: The Pit River Tribal Council is interested in acquiring the same PG&E land in which BLM is interested. If the Tribe cannot acquire it, they prefer that BLM does.

Response: BLM will continue to work with the Tribal Council as the Stewardship Council land disposal process moves forward.

10.0 Livestock Grazing

This section is divided into the following subsections:

- 10.1 – Rangeland / Land Health Assessments and Permitted Use Levels
- 10.2 – Permittee Maintenance Responsibilities
- 10.3 – Sheep
- 10.4 – Allotment-Specific Decisions
- 10.5 – Forage Allocation/Production
- 10.6 – Impacts on Livestock Grazing
- 10.7 – Impacts from Livestock Grazing
- 10.8 – Alternatives
- 10.9 – Affected Environment – Livestock Grazing
- 10.10 – General

10.1 Rangeland / Land Health Assessments and Permitted Use Levels

Comment Number: #18-4

Comment: Correction of resource degradation caused by domestic livestock and prevention of future degradation should be driving force behind RMP and reflected in NEPA document and future agency decisions regarding livestock grazing. Alternative 2 is the best alternative for meeting these requirements, yet even that alternative falls short of restoring degraded conditions and meeting the mandates described above. Specific livestock grazing levels that will be used to meet standards are lacking in all alternatives and must be included in Final EIS; stating that specific standards will be developed at site-specific level violates law and allows degradation to continue. Need to include allowable use standards and guidelines and/or objectives paramount to achieving or maintaining standards. By not stating minimum livestock utilization standards in RMP, public has no recourse if BLM fails to improve habitat conditions and resources.

Response: The purpose and need for the RMP is to provide overall management and long-term direction for the public lands and resources administered by BLM’s AFO, in accordance with FLPMA, as stated in Section 1.1. BLM appreciates the importance of environmental protection and acknowledges the challenges of balancing environmental protection with site access for public use. We believe that the preferred alternative, with some additional modifications as identified in Section 1.11, best balances environmental protection and site access in accordance with Section 302(a) of FLPMA, which requires the Secretary to manage BLM lands under the principles of multiple use and sustained yield, and the other planning criteria that are described in Section 1.7.

Adjustments in grazing use levels are made in response to specific allotment issues. There is not a “one size fits all” adjustment to be made at the RMP level.

We will continue to implement necessary grazing use adjustments at the allotment level. These adjustments are made through grazing decisions or agreements and, at a minimum, require consultation, cooperation, and coordination with individual grazing permittees, landowners, and state agencies involved with resource management on the allotment.

Standards for Land Health and Guidelines for Livestock Grazing Management are identified in Appendix B of the PRMP.

Comment Number: #18-22

Comment: Stating that stricter standards will improve range in declining conditions is a failure to disclose impacts and ignores real problem (may need to remove the cause). Restoration of degraded riparian areas is often ignored goal in land use plans and should have been considered in RMP. GAO study showed that restoring riparian areas was best accomplished by removal of livestock. Rest (in rest rotation strategies) may not compensate for the increased use during grazing until sufficient recovery is achieved.

Response: Restoration of degraded riparian areas is an important goal of this RMP, as stated in Chapter 2.17.3 Riparian and Wetland Plant Communities. Riparian assessments within the AFO are done on a site-specific basis, which allows BLM to carefully examine the causes of any degraded areas, and also work with the permittees towards restoring those areas. To address impacts from grazing, emphasis will be on adjusting existing grazing strategies where livestock grazing is limiting progress toward land health goals, PFC, and DFC – that is, ‘At Risk’ or Category 1 sites. Once the ecological potential of the riparian community is determined, site-specific riparian management objectives and management actions would be established. In the meantime, based on short-term monitoring, changes have been made to the allotment terms and conditions to improve rangeland health. Rangeland improvement projects have also been made to minimize unacceptable livestock grazing impacts to riparian and spring areas and to improve livestock distribution (See also Appendix Q for existing range improvements for the AFO planning area). The AFO will focus first on the Category 1 allotments to maximize and reduce pressure on riparian areas ‘Functioning at Risk’.

Comment Number: #25-3

Comment: BLM should consider the sustainability of range resources in planning in Alturas where 91% of land is in grazing allotments. Understand importance of economic considerations but BLM must have a longer term vision towards sustainability of resources upon which ranchers and local communities depend. BLM should consider some reduction in actual AUM in the AFO, focusing on Category 1 allotments and other allotments where land health standards are not being met due to unknown or other causes.

Response: We fully agree with the commenter and this is our approach under the proposed management actions, where the focus is on Category 1 allotments where grazing levels would be further adjusted or reduced as needed through continuous monitoring and observation. The Tule Mountain Allotment is the largest allotment in the AFO. Although not assessed as a Category 1 allotment, the permittees are taking a voluntary 40% cut to improve range condition. The new drought policy also will impose mandatory reductions in numbers during years of drought (Appendix N which includes “BLM Drought Management Policy for Alturas and Surprise Field Offices”).

10.2 Permittee Maintenance Responsibilities

Comment Number: #7-3, #16-5

Comment: Preferred alternative includes many proposals that will require increased level of protection that, in many cases, will take form of fenced enclosures. Unfair for grazers to be burdened with increased workload of fence maintenance. Need to develop fence maintenance strategy that utilizes resources other than grazers (offers suggestions such as use of fire crews).

Response: We acknowledge that grazing permits place responsibility for fence repair and maintenance on the permittees, although BLM does maintain some fences in the AFO. We agree that some of the proposed protection measures (specifically additional exclosures) would place an added burden on the livestock operators/permittees, and BLM would work with the permittees to determine, on a site-specific basis, how much additional fencing maintenance would be needed and reasonable to require. The suggestion to use other resources is a good one and we note that BLM does use fire crews as well as the CDC Devil’s Garden Inmate Crew, in certain areas for fence work when they are available.

10.3 Sheep

Comment Number: #15-6

Comment: The Draft RMP does not indicate there are permits for sheep grazing or if sheep grazing permits will be allowed in the future. DFG requests no permits be issued for sheep grazing in AFO. If allowed, permits issued near bighorn sheep habitat should adhere to grazing policies set forth and adopted by BLM in 1995 mountain sheep ecosystem management strategy.

Response: AFO has two sheep allotments that include a total of 2,083 sheep (see Section 3.9.3 and Appendix I). There are currently no bighorn sheep in the AFO planning area. However, California bighorn sheep (a species native to the planning area) may naturally re-occupy former habitats. Reintroduction—natural or artificial—is favored. We have included management actions under the preferred alternative to help control grazing and limit its impacts on wildlife, including using the biodiversity standard for wildlife habitat in land health assessments. The currently proposed management actions for bighorn sheep are addressed in Chapter 2.21.4.

Comment Number: #18-18

Comment: RMP fails to take action that would eliminate domestic sheep in areas used by bighorn sheep.

Response: Taking such action is not applicable to AFO since there are no bighorn sheep in the AFO planning area at this time.

Comment Number: #31-3

Comment: Sheep require different management—location of the base camp is more important. Sensitive areas should be excluded from grazing by locating the base camps at least ¼ mile from these areas, and herding to avoid. Watering of sheep directly in surface waters is not as much of a problem as with cattle.

Response: BLM regulates trailing areas and would provide specific provisions when issuing permits about camping on watering holes. Currently, there are only two sheep allotments within the AFO. We will continue to monitor water quality and consider the implementation of additional measures, as needed and appropriate, should problems arise in the future or the numbers of sheep or allotments increase.

10.4 Allotment-Specific Decisions

Comment Number: #6-11

Comment: Permanently cancel all livestock allotments not currently in use or that have been vacant for over a year.

Response: This proposal would not be allowed under BLM regulations. There have been occasions where we have taken away permits for non-use, but there has to be a sufficient justification to allow us to take such action.

Comment Number: #15-2

Comment: Correction and remediation should be required of leasees if negative consequences are detected. Allotments should be suspended if monitoring and evaluations show allotment is operating outside prescribed allotment conditions.

Response: Suspension of allotments is one option available to BLM and this has in fact been done in one instance in 2006. We would apply terms and conditions as needed to assure compliance with rangeland health standards.

Comment Number: #15-5

Comment: New adequate allotment management plans (AMPs) need to be completed on all 17 grazing allotments assessed as Category 1 before grazing can be allowed to continue.

Response: BLM policy allows continued grazing while we annually update the terms and conditions on all Category 1 allotments. As time allows, allotment management plans (AMPs) are completed on these priority allotments; that is, AMPs will be completed or revised for all priority (Category 1) allotments, followed by lower category allotments as budget and time constraints allow.

We are presently completing Environmental Assessments as part of the process of renewing our grazing permits. Once our grazing permits have been renewed, we will set up a time table for AMPs on all Category 1 allotments. The evaluation done in the EA to renew grazing permits will assist us in develop the AMPs which is a much longer process. We currently have one Allotment Management Plan completed for the North Ash Allotment, a Category 1 allotment. See also response to Comment #18-4.

Comment Number: #16-10

Comment: Include a statement in the Preferred Alternative that acknowledges that suspended use is present and that when appropriate conditions exist in individual allotments, full consideration will be given for dedicating the resources necessary for completing the analysis to restore these numbers.

Response: There are currently 53,167 Active AUMs and 34,815 suspended AUMs in the AFO. The permittee could request reinstatement of some suspended AUMs based on several years of improved range condition including an increase in forage production; however, these changes would need to be supported by monitoring, field observations, ecological site inventory, or other data acceptable to the AFO. Once the authorized officer determines that rangeland health has satisfactorily recovered the suspended permitted use shall be apportioned to the Permittee(s) or lessee(s) authorized to graze in the allotment in which the forage is available (this is in accordance with 43 CFR 4110.3-1(b)).

Comment Number: #18-1

Comment: Request that RMP include provision to allow BLM and/or permittees to permanently retire grazing allotments when conditions permit.

Response: This is not an option available to us under BLM regulations. However, we do occasionally get a voluntary relinquishment. The PRMP, under the proposed action, also provides for the potential to use them as grass banks: when a grazing permit is voluntarily retired, the allotment will be considered for use as a forage reserve (Section 2.8.5).

Comment Number: #21-3

Comment: Recommend that RMP include a grazing allotment management decision matrix for planning area similar to that recently adopted by BLM Prineville District in Oregon for Upper Deschutes Resource Area.

Response: We have seen the particular matrix referenced by the commenter, and it addresses livestock grazing and public (recreational) conflict issues, which have not been identified as significant issues in the AFO management area. While we acknowledge the value of such a matrix for use as a planning/decision tool, the issues it covers are not appropriate to our land use planning effort.

Comment Numbers: #29-1, #29-2, #29-3

Comment: Draft RMP does not contain discussions of alternatives, affected environment, or environmental consequences relative to specific allotments. Commenter can't discern where we are and intending to go. Need specific discussions of what standards were met or not met and the basis for the findings and where

Response: The identification and evaluation of individual allotments is not appropriate for the level of detail appropriate to an RMP and the level of decisions that it supports. Appendix I provides summary information relative to individual allotments and overall land health category acreages, however. The actions in this PRMP are designed to provide general management guidance in most cases. Decisions regarding specific allotments, such as changes to class of livestock authorized and future suitability of existing allotments for grazing, would be made at the activity plan level. This would be done when plan assessments reveal changes are necessary and compatible with RMP and activity plan goals and objectives. These plans and processes would address more precisely how a particular area or resource is to be managed, and additional NEPA analysis and documentation may be conducted as needed. Permittees would be notified in advance, and have the opportunity to participate in the environmental review process.

Comment Number: #34-3

Comment: Grazing can have beneficial effects and proposes a pilot program whereby ranchers would be allowed to manage allotments with little or no interference from BLM.

Response: As BLM has the ultimate responsibility for managing the lands within the AFO planning area for multiple uses and is accountable for the results of this management, the agency must retain control of the allotments to the extent described in the proposed management actions.

10.5 Forage Allocation / Production

Comment Number: #29-28

Comment: Reject concept that forage production and availability naturally fluctuate annually (page 3-43 in AFO Draft RMP).

Response: Thank you for your opinion. BLM believes there is ample evidence and research to support the fact that vegetation production, and hence, forage availability are dependent on the amount of annual (or seasonal) rainfall that an area receives. Also see Appendix N which includes "BLM Drought Management Policy for Alturas and Surprise Field Offices".

10.6 Impacts on Livestock Grazing

Comment Number: #7-6

Comment: Supports grass banking and working cooperatively with permittees. Sage Steppe Restoration EIS now under development suggests more aggressive juniper treatment program in future, and grass banks are one appropriate tool to help mitigate impacts during time when livestock will have to be removed from allotments. Small ranching operations could be hit hard without such mitigation.

Response: Thank you for your comment. Your position is consistent with our proposed action in the PRMP. As stated in Chapter 2.8.5, a livestock management objective is to work cooperatively with ranchers and other stakeholders to implement juniper treatments and reduce juniper encroachment in sagebrush/grassland communities, thereby restoring rangeland to health and economic viability. In addition, proposed management actions include establishing “forage reserves or ‘grass banks’ where feasible, in cooperation with federal, state, and private agencies, for conservation benefits and management flexibility, thus helping to maintain rangeland health standards. Forage reserves would facilitate juniper treatment and other rangeland improvements by providing alternative areas for livestock grazing. When a grazing permit is voluntarily retired, the allotment will be considered for use as a forage reserve

Comment Number: #25-4

Comment: Environmental resource conditions that are expensive or impossible to reverse should be actively prevented (gives examples). Suggests that long-term economic impacts to ranchers and local communities from permanent loss of rangelands be considered in RMP. Recommends that BLM ensure all retired allotments are used as forage reserves, focusing on relieving grazing pressure in Category 1 rangelands until rangeland health improves in these areas.

Response: The PRMP, under the proposed action, provides for the potential to use allotments, when a grazing permit is voluntarily retired, as a forage reserve (see Section 2.8.5) to help maintain economic viability to the community. Long-term economic impacts to ranchers and local communities from permanent loss of rangelands are considered under 4.9.10 Comparative Summary of Impacts, as part of the analysis of Alternative 2. Although this is not in the preferred alternative it does acknowledge the socio-economic impacts that reducing the availability of forage would be to ranchers and the surrounding communities.

Comment Number: #29-31

Comment: Reject concept on page 4-83 regarding impacts of wild horses on livestock grazing that season, duration, and frequency of wild horse use cannot be controlled. It can through timely census and removal of excess horses.

Response: The only means by which BLM manages the number of wild horses in Herd Management Areas (HMA) is by establishing Appropriate Management Levels (AML). Wild horse census is conducted each spring, and as budget permits, and decisions made regarding removal of excess horses that are above the AML. However, BLM does not control the season, frequency, and duration of use of those numbers left behind on the Herd Management Areas.

10.7 Impacts from Livestock Grazing

Comment Number: #15-1

Comment: Grazing in Great Basin and intermountain west is one of greatest threats to biodiversity in region. Proper monitoring, surveys and evaluations (using accepted methodologies and conducted by objective investigators) of grazing land will be needed to identify problems and properly implement adaptive management programs.

Response: The Standards and Guidelines for Rangeland Health in Northeastern California and Northwestern Nevada, signed in 2000, include a “biodiversity” standard which includes several indicators of indigenous animal habitats and populations that are indicators of a healthy rangeland ecosystem (see Appendix A, Standard 5). Guideline 9 states that “Grazing management practices must sustain biological diversity across the landscape. A mosaic of seral stages, vegetation corridors, and minimal habitat fragmentation must be maintained.” Monitoring would be used to determine progress towards maintaining biodiversity at the allotment level including annual meetings with the permittees. However, actions needed to improve grazing management in order to comply with the biodiversity standard need not be delayed because monitoring data is lacking.

Comment Number: #18-5

Comment: ELFO failed to take a “hard look” at impacts of domestic livestock grazing. DEIS fails to disclose any of the direct, indirect, or cumulative impacts associated with domestic livestock grazing from proposed management direction under any of analyzed alternatives. BLM fails to scientifically and accurately determine those lands which are capable and suitable for livestock grazing. Need to provide underlying data that are basis for professional opinions regarding impacts to resources from domestic livestock. BLM has failed to accurately and quantitatively determine how much forage capacity is currently available. RMP DEIS fails to properly allocate that forage to watershed and stream protection, wildlife habitat and food, then to livestock if available.

Response: BLM is taking additional steps to look at the impacts of domestic livestock grazing, and under the proposed action will have the ability to make additional changes/adjustments on a variety of fronts where it is determined that livestock grazing is causing adverse impacts on other resources in the AFO planning area. See revised Section 2.8.5 for additional discussion of the types of changes and when they can be made. Impacts from livestock grazing are addressed in Chapter 4 under each of the various resource areas that could be impacted by grazing (for example, vegetation or wildlife); see revised Chapter 4 of the PRMP for an improved discussion of direct, indirect, and cumulative impacts associated with domestic livestock grazing. Section 4.9 presents the evaluation of impacts on livestock grazing from the proposed management actions.

A rangeland inventory has not been conducted to specifically determine forage capacity for this RMP. Rather, we have carried forward existing permitted AUMs based on previous and ongoing assessments conducted to assess grazing allotment conditions and land health assessments. We will update / modify this information as we complete our standards evaluation and as land health conditions. In the meantime, we would observe and conduct photo monitoring to ensure that the guidelines are being followed and capacity is not being exceeded. Where impacts from livestock are identified, AFO would make the necessary adjustments to livestock grazing activities with which the permittees would have to comply. All grazing activities would have to follow the Standards and Guidelines contained in Appendix B of the PRMP. In particular, Guideline 17 of the Standards and Guidelines requires that rangeland monitoring be conducted to determine utilization of forage resources and trend of rangeland health in each allotment based on current accepted practices and techniques as directed in the Interagency Technical Reference: *Utilization Studies and Residual Measurements and Sampling Vegetation Attributes*.

Comment Number: #18-7

Comment: RMP fails to provide for long-term rest to facilitate recovery.

Response: In general, management focus since 2000 has been on meeting land health standards through development of grazing systems that allow vegetation to receive periodic rest, shortened periods of use, use deferment, and varied seasonal use. Specific prescriptions for rest would be provided on an allotment-specific basis based on site-specific issues

Comment Number: #18-8, #18-9

Comment: Any discussion of impacts should have addressed unwillingness of permittees to use peer-reviewed range science principles for management and their strong opposition to the most minimal standards of performance. Instead, rely on unfounded solutions such as time-controlled grazing and “holistic” management. Commenter cites other studies regarding effects of different livestock grazing intensities on forage plant production, use of quantitative ecology in range management, etc., to make point that grazing during different seasons was less important than grazing intensity. Additional studies referenced on long-term stocking rate appear to show that under actual field conditions, light grazing (25% or less by livestock) is most appropriate to meet BLM’s mandate for sustainable use. BLM should require at least minimum compliance with these standards in RMP until standards can be evaluated at site-specific level.

Response: We do not believe the first statement of this comment summary to be an accurate statement or relevant to the discussion of impacts. BLM considers a variety of grazing strategies and management options that comply with the Northeastern California and Northwestern Nevada Standards and Guidelines for Livestock Grazing; these guidelines offer both direction and flexibility for management and implementation. Management focus since 2000 has been on meeting land health standards through development of grazing systems that allow vegetation to receive periodic rest, shortened periods of use, use deferment, and varied seasonal use

We appreciate your comment and reference to additional studies. However, BLM will be implementing the Standards and Guidelines as directed by our grazing regulations (43 CFR 4180.2(c)). In accordance with these Standards and Guidelines, we would adjust livestock levels, as needed and appropriate, on a site-specific basis. As stated in the revised Section 2.8.5, review of existing permitted use-levels (AUMs) would be conducted on individual allotments through assessment of existing activity plans (allotment management plans or their functional equivalents, livestock grazing decisions, habitat management plans, watershed management plans, biological opinions, multiple-use decisions). Decisions regarding adjustments to existing levels of use, forage allocation, allotment boundaries, and changes to management level categories would be made at the activity plan level.

Comment Number: #18-10

Comment: BLM must show that benefits of domestic livestock grazing out-weigh the costs to comply with Multiple Use Sustained Yield Act (MUSYA).

Response: MUSYA does not apply to BLM; therefore, BLM is not required to include such a discussion in the RMP. Impacts from livestock grazing are addressed in Chapter 4 under each of the various resource areas that could be impacted by grazing (for example, vegetation or wildlife). Section 4.9 includes the evaluation of impacts on livestock grazing from the proposed management actions. See Chapter 4 of PRMP.

Comment Number: #18-11

Comment: The DEIS fails to disclose any of the direct, indirect, or cumulative impacts associated with domestic livestock grazing from the proposed management direction in any of the analyzed alternatives.

Response: Impacts from livestock grazing are addressed in Chapter 4 under each of the various resource areas that could be impacted by grazing (for example, vegetation or wildlife); see revised Chapter 4 of the PRMP for an improved discussion of direct, indirect, and cumulative impacts associated with domestic livestock grazing. Section 4.9 presents the evaluation of impacts on livestock grazing from the proposed management actions.

Comment Number: #25-1

Comment: Concerns regarding water quality/riparian impacts from livestock, especially in watershed of Pit River, an impaired water body under Section 303(d) of CWA. Because Pit River is in violation of livestock-related water quality, it is appropriate to extend protection to all riparian areas in the properly functioning condition (PFC) in greater Pit River watershed. Recommend livestock grazing be prohibited and exclosures constructed in riparian areas designated as “functioning at risk” until areas are reassessed as being in PFC. Inconsistency in DEIS statements on pages 2-141 and 2-223 regarding building exclosures in areas functioning at risk. Also not clear how BLM will determine that unimpeded progress is being made towards attaining PFC (page 2-229) – to allow riparian uses and activities to continue.

Response: Those streams that are ‘Functioning at Risk’ (FAR) are a high priority for BLM AFO. Emphasis will be on adjusting existing grazing strategies on a site by site basis where livestock grazing is limiting progress toward land health goals, PFC, and DFC – that is, ‘At Risk’ sites. BLM would coordinate with permittees to discuss problems and solutions where needed and as appropriate. Once the ecological potential of the riparian community is determined, site-specific riparian management objectives and management actions would be established. Monitoring *using the PFC Assessment Procedure would be used every 5 years* to determine progress towards attaining PFC, as well as the annual meetings held with the permittees. We believe that this approach, as proposed in the PRMP, will offer sufficient protection of wetland and riparian areas from livestock grazing. As stated in the Draft RMP and again in the PRMP, BLM’s preferred alternative includes enclosure fencing in riparian / wetland areas functioning at risk.

10.8 Alternatives

Comment Number: #6-12

Comment: Exclude livestock from sensitive riparian areas via fencing or allotment cancellation.

Response: BLM AFO currently uses riparian fencing to protect riparian areas from livestock, where deemed appropriate, and will continue to construct riparian fencing on a site-specific basis where needed under the proposed action. Allotment cancellation is not an option available under BLM regulations.

Comment Number: #14-4

Comment: In preferred alternative for grazing, majority of proposed and considered ACECs remain open with few, if any, restrictions. Recommend BLM adopt grazing prescriptions of Alternative 2 into preferred alternative and include additional modifications to protect sensitive resources. Should also incorporate free use grazing permits in place of traditional lease agreements where maximum management flexibility is needed.

Response: BLM believes that current grazing strategies in the ACECs are sufficient, with ongoing protection management strategies including the use of monitoring data, and that grazing does not have to be further limited to one in three years as in Alternative 2. After the RMP has been finalized, management plans will be developed for each ACEC to appropriately manage the resources; these plans may include additional grazing provisions to protect existing resources. Monitoring data for the Ash Valley ACEC have shown negligible impact from grazing on special status plants to date. BLM is currently working with the Pit River Tribe to develop a Historic Property Management Plan for the Yankee Jim ACEC which would identify acceptable limits of grazing use. Use is very light in the Mt. Dome ACEC since cattle can access only the lower elevations and water is restricted at the higher elevations. The Sheep Valley Old Growth Juniper ACEC has approximately 1000 acres excluded from livestock grazing. This includes Sheep Valley itself with one mile of perennial stream, 100 acres of meadow habitat, 12 spring sources, and sensitive soil resources. Additional riparian areas include another five spring sources and 60 acres of adjacent meadows. See Table 2.11-7, Management Summaries of Existing and Proposed ACECs for current grazing status.

Free use grazing permits are allowed only under specific conditions by BLM policy. AFO does not have any free use grazing permits at this time.

Comment Number #15-3

Comment: For lands being reseeded or affected by fire or mechanical treatment, support minimum land rest period from livestock grazing for two growing seasons. Recovery surveys should be completed and land should meet carrying capacity standards before grazing allowed back.

Response: In addition to the statement in the Draft RMP EIS that lands so affected would be rested for a minimum of two years, Section 2.8 has been revised to state that decisions to resume livestock grazing on these areas would be based on assessment of monitoring data.

Comment Number: #16-11

Comment: Strong opposition to Alt. 2 which is essentially a “no graze” proposal. Proposal is unacceptable with respect to livestock grazing.

Response: Your preference has been noted. Thank you for your comment. Livestock grazing management actions from Alternative 2 have not been included in the Preferred Alternative.

Comment Number: #18-27

Comment: Removal of livestock from sagebrush communities in less than satisfactory condition should be a seriously considered alternative in RMP.

Response: We believe that the alternatives identified and evaluated in the Draft EIS provided a reasonable range of management alternatives from which to make our decision. Under the preferred alternative / proposed action, we would prioritize adjustments to grazing strategies for allotments or areas where plant communities are at risk or show moderate departure from land health standards.

Comment Number: #29-15

Comment: We reject that the Draft RMP should specifically provide that “wild or prescribed fire would be rested from livestock grazing for a minimum of two growing seasons. It is possible that less time may be warranted. The RMP should leave it to the assessment process to decide the period of rest.

Response: Section 2.17.2.4 of the PRMP has been revised to state: Decisions to resume livestock grazing on areas that have been mechanically treated or burned by wild or prescribed fire would be based on assessment of monitoring data. Generally, grazing would not resume for a minimum of two growing seasons. However, mechanically treated areas may be assessed for potential resumption of livestock grazing following one growing season of rest.

Comment Number: #30-10

Comment: Concerned that levels of grazing in preferred alternative may not allow some of goals for fish and wildlife resources in RMP to be met. Suggest BLM consider reducing grazing pressure in areas providing important habitat for protected species, ACECs established to benefit biological resources or significantly contribute to their conservation, riparian and wetland habitat, and key habitat for BLM special status species where populations are impacted by grazing, and other areas with similar concerns.

Response: In association with Category 1 allotments, the areas identified by the commenter are the focus of BLM AFO's proposed management efforts relating to livestock reduction. The standards for rangeland health include a "biodiversity" standard. This standard also includes several indicators of animal habitats and populations that are attributes of a healthy rangeland ecosystem. Most allotment monitoring will evaluate the habitat capability for species of management concern (see page A-33 Wildlife Monitoring for Rangeland Health). The selection of the indicator species will depend on the allotment management objectives, land use plan objectives, and/or BLM commitments to regional plans such as the *Conservation Strategies for Sage-Grouse and Sagebrush Ecosystems within the Buffalo-Skedaddle Population Management Unit*.

10.9 Affected Environment – Livestock Grazing

Comment Number: #18-20

Comment: DEIS fails to disclose amount of existing range "improvements" in the planning area including cattle guards, miles of fence, acres of seeding, acres of land treatments, reservoirs and stock ponds, spring development, miles of pipeline, guzzlers, and wells. Yet DEIS claims more "improvements" are needed to alleviate impacts to riparian areas and other resources.

Response: The commenter is correct in that AFO has implemented a number of range improvements in the planning area, over the past 30 years, as necessary to facilitate improved grazing strategies. Many of the spring improvements are over 40 years old and have required reconstruction. With new standards for water quality, livestock water is required to be developed elsewhere. However, additional improvements or enhancements may still be necessary for those allotments exhibiting moderate departure from land health standards or those areas 'At Risk'. Specific improvements are more appropriately identified and implemented on a site-specific basis and would include additional site-specific NEPA analysis prior to construction. As stated in the objectives for livestock grazing in Section 2.8.3, range improvement will focus on optimizing forage utilization and livestock distribution to reduce grazing impacts and use available forage efficiently.

10.10 General

Comment Number: #15-4

Comment: Livestock salting sites should be at least 0.5 mile away from aspen groves, meadows, and riparian corridors so as not to encourage cattle use of these areas which could adversely affect the habitat.

Response: One of the proposed management actions in the PRMP (Section 2.17.3) is to locate livestock salting sites 0.25 to 0.50 mile from riparian areas to discourage damage by livestock. We believe that a minimum 0.25 mile buffer is sufficient for most salting sites since they are relatively small. This also helps to distribute livestock to improve forage utilization.

Comment Number: #15-7

Comment: Wildlife-friendly fences or enclosures should be constructed to protect streams, springs, riparian and other habitats from livestock grazing. Consideration of pronghorn and other wildlife in area need to be addressed. Fencing specifications also provided in comment.

Response: We agree with the commenter. BLM AFO currently uses, and will continue to use under the proposed action, wildlife-friendly fences and enclosures to protect streams, springs, riparian and other special habitats from livestock grazing. Any new or modified fencing would be constructed to BLM wildlife specifications.

Comment Number: #15-8

Comment: Request that large aspen stands be excluded from livestock grazing whether they've been studied for significant wildlife value or not.

Response: The need to exclude large aspen stands will be considered on a site-specific basis; such stands would be fenced, as appropriate. Section 2.17 Special Status Plants and Section 2.17.4 Rare and Unique Plant Communities: Quaking Aspen, Curlleaf Mountain Mahogany, and Oak Woodlands contain the following language: "Livestock would be excluded from non-regenerative aspen and selected curlleaf mountain mahogany stands. Stands would be protected from livestock and wildlife uses until aspen saplings are six feet tall."

Comment Number: #18-29

Comment: How will agencies and management plan provide resources to address apparent conflict between healthy sage grouse and livestock grazing in some areas of AFO? How will sage grouse, leks, brood rearing cover, and other resources be affected by proposed management direction? Recommend BLM follow recommendations for managing sage grouse that are found in A Blueprint for Sage-Grouse Conservation and Recovery.

Response: Grazing activities under the proposed action will comply with the Northeastern California and Northwestern Nevada Standards and Guidelines for Livestock Grazing (July 2000). Livestock grazing practices would be modified in selected allotments to improve sage-grouse habitat, based on guidelines set forth in BLM conservation strategies for Sage Grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units. These guidelines would be used to set goals and objectives for maintaining or restoring sage-grouse habitat elements at specific sites within allotments; they would not be used as threshold criteria for livestock management. Implementation of the Conservation Strategy, as described in Section 2.21.5, is a major component of our management approach for the protection of sage-grouse and sagebrush ecosystems under the proposed action. Essential components of the Conservation Strategy include protection, restoration, monitoring, research, and ongoing adaptive management for sage-grouse and sagebrush ecosystems within the management unit. See also responses to comments in Section 25 of this appendix relating to sage-grouse.

General Comment: #20-15

Comment: Are grazing strategies such as deferment, rotation, season of use, etc. considered to be sources of "rest"? Some may interpret "rest" as no livestock grazing on site at all. Language needs to be consistent throughout document and clarified under what conditions shrubs would be rested from grazing.

Response: In general, management focus since 2000 has been on meeting land health standards through development of grazing systems that allow vegetation to receive periodic rest, shortened periods of use, use deferment, and varied seasonal use. A definition of “rest”, as provided by the National Resources Conservation Service (NRCS), is provided in the Glossary, along with deferred grazing and rest-rotation grazing. See also revised Section 2.8.5 for additional clarification of livestock grazing strategies regarding rest and deferment.

General Comment: #21-2

Comment: BLM can and should close additional areas to livestock grazing. Grazing closures recommended in preferred alternative are minimal.

Response: BLM’s management focus since 2000 has been on meeting land health standards through development of grazing systems that allow vegetation to receive periodic rest, shortened periods of use, use deferment, and varied season of use. We believe that continuation of this strategy, in combination with other resource management actions included in the proposed action (e.g., designation of ACECs, protection of winter habitat for wildlife, T&E species habitat, etc.) provides an optimal balance between economic use/livestock grazing and resource protection. Our proposed approach also includes sufficient flexibility to make future adjustments as and where needed to address land health concerns.

Comment Number: #21-4

Comment: Oppose making additional AUMs available to domestic livestock as vegetation treatments are accelerated under the juniper management plan.

Response: The primary objective of juniper management is to support ecosystem restoration of sagebrush communities, and to improve wildlife habitat. However, as a result of improved land health, and enhanced plant communities, additional vegetation biomass, hence additional forage for livestock grazing, may be an added benefit of these improvements. However, any adjustments to current grazing levels, including increases in AUMs, would occur under a specific, longer-term process outlined in the grazing regulations; see also revised Section 2.8.5 and Appendix B

Comment Number: #21-5

Comment: Generally oppose creation of grassbanks or forage reservoirs for grazing permittees, particularly in areas where grazing is already dominant use of landscape.

Response: Under the Preferred Alternative, grass banks or forage reservoirs would be established for conservation benefits and management flexibility, thereby helping to restore and maintain rangeland health standards on the landscape. This is consistent with BLM’s overall goal to improve rangeland health. Such would be the case where an allotment is rested in accordance with a particular prescribed range improvement such as juniper treatment or fire.

Comment Number: #21-9

Comment: BLM should adopt new and stricter management prescriptions for livestock grazing, and implement the “Blueprint” strategy for protecting and restoring sage-grouse populations (C.E. Braun document).

Response: We have a Conservation Strategy for Sage-Grouse that is specific to our planning area, and therefore directly applicable to the existing sage-grouse population and sagebrush ecosystem conditions and concerns facing us. We are adopting guidelines from BLM's own Conservation Strategy for Sage-Grouse as our management protection measures under the proposed action (Conservation Strategies for Sage Grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units; see Section 2.21.5 of the PRMP). However, we will continue to consider additional guidance such as the Blueprint, as appropriate and available, as we implement measures to bring us closer to full restoration, protection, and enhancement of this important species and its habitat.

Comment Number: #31-2

Comment: Monitoring has shown that livestock, especially cattle, must be excluded from surface waters if fecal coliform standards are to be met. Suggests that exclusion fencing be utilized extensively around surface waters, and that off-stream watering facilities be developed, rather than allowing direct access.

Response: We agree with the importance of excluding livestock from most surface waters for the protection of water quality and note that a significant number of areas within the AFO include fenced enclosures such as Bilecke Springs in the Rocky Prairie Allotment and J.O.B. Springs located in the North Ash Valley Allotment. In addition, we also use riparian pastures that have a reduced season of use such as the 3700 acre Cedar Creek riparian pasture and the 800 acre North Ash Valley riparian pasture. Additional fencing will continue to be installed if water quality assessments indicate a need to do so. Additional off-stream watering facilities are a useful protective measure, and may be developed as needed. In addition, Section 2.8.5 (Livestock Grazing) of the PRMP states that "BLM would consider expanding the size of currently-protected riparian areas and would protect additional areas where this is advisable (i.e. where unfenced seeps, springs, creeks, and other riparian/wetland habitats are not meeting land health standards). New or modified fencing (built to BLM wildlife specifications), and intensive (time-controlled) management of grazing, would be used to accelerate recovery. Decisions would be based on site-specific environmental assessments and identified needs."

Comment Number: #33-3

Comment: The Pit River Tribal Council requested information on the Yankee Jim Land Health Assessment.

Response: This information has been provided.

11.0 Recreation and Visitor Services

Comment Number: #2-1

Comment: Support for outdoor recreation and management (including wildlife and their habitat) that allows hunting and fishing; consider needs of hunters and fishermen.

Response: Thank you for your comment. We believe that the preferred alternative provides an optimal balance between public access for a multitude of recreational activities (including hunting and fishing) and resource protection.

Comment Number: #6-3

Comment: Request full protection of wilderness values for all additional roadless areas close to or greater than 1,000 acres.

Response: BLM believes the preferred alternative provides the optimal balance of motorized and non-motorized use in support of our multiple use objectives to accommodate the increasingly competitive recreational demands while ensuring the protection and long-term productivity of BLM-managed lands. Some routes are necessary within WSAs to allow BLM access to other areas to implement certain management activities. BLM also believes that the preferred alternative, under which 70% of the WSAs would be managed as primitive areas, offers a practical approach in terms of the Agency's ability to effectively manage the WSAs.

In accordance with BLM policy, only existing roads and ways (within WSAs) are allowed that were present at the time FLPMA was passed (1976) and later shown on, and/or described in, the 1979 Final Intensive Wilderness Inventory for Public Lands Administered by BLM-California outside the California Desert Conservation Area. BLM has not added any new routes to the WSAs. A route inventory was conducted in 2002 to identify all roads on BLM, which also included WSA lands. Unauthorized routes will be identified from the inventory and original WSA write-ups. After the ROD is signed an active program of closing and rehabbing these unauthorized routes will begin in the WSAs.

BLM rangers routinely monitor BLM lands as well as the WSAs for unauthorized routes to address route proliferation, and route closure is an ongoing process in terms of the need to physically place rocks, brush, and seed (in some instances) to close off access.

Comment Number: #13-8

Comment: Regarding recreation access (page 2-59), development of Nelson Corral Road into 2WD road is unnecessary. Maintenance should focus on drainage and erosion prevention with traffic restrictions in place during wet periods.

Response: We agree, and that is why development is not part of the Preferred Alternative (it is part of Alternative 1). Under the proposed action, the Nelson Corral Road leading to the dam would be maintained in its present condition (length of 1 mile).

Comment Number: #13-10

Comment: Desired future condition (page 2-67). Regarding continued availability of backcountry roads and tracks and OHV areas, commenter recommends including correction of erosion hazards in methods to manage impact of visitor concentration. This change would be consistent with wording on page 2-73

Response: We agree and have revised the language in Section 2.9.1 accordingly

Comment Number: #13-11

Comment: Recreation section (page 2-72): some mention or provision of outdoor recreation guide services should be included. The RMP should provide for administration of these services in all ROS classes. This would be consistent with wording of last bullet for management common to all alternatives on page 2-81.

Response: Any recreational use on BLM lands, including commercial and noncommercial uses authorized under special recreation permits, would be evaluated, modified, prohibited, or permitted as needed to protect recreational settings and ROS designations.

Comment Numbers: #14-99

Comment: Ask that Beaver Creek Rim/Beaver Creek area also be managed as semi-primitive non-motorized zone because of its interesting geology and Native American cultural and scenic values.

Response: BLM has analyzed this and has made an appropriate designation which we believe offers sufficient protection and provides the best balance between public and administrative access, a multitude of recreational activities, and resource protection. Under the preferred alternative, motor vehicles would be limited to designated routes in the Beaver Creek area (972 acres) to protect special status plants, sensitive wildlife and cultural resources.

Comment Number: #14-106

Comment: Please clarify confusion regarding vehicle use in primitive and SPNM ROS zones: the description of how motorized routes are to be managed in SPNM and Primitive ROS zones under Preferred Alternative is rather confusing. For example, on page 2-69 the Draft RMP states that existing roads would follow “corridors” through SPNM areas. This implies that these roads will remain open to the public and that they are authorized for vehicle use. On the other hand, on page 2-73 the Draft RMP states that routes within Primitive and SPNM areas will be closed or removed where continued “unauthorized” use warrants it. Does this mean that all use of existing roads and routes in SPNM areas is unauthorized?

Response: The statements on pages 2-69 and 2-73 relate to two separate issues. The bullet on page 2-73 indicates that routes within areas classified ‘Primitive’ (P) or ‘Semi-primitive Non-motorized’ (SPNM) would be closed or removed where continued unauthorized use (travel off of existing roads or trails) dictates aggressive management to maintain the ROS designation. The item on page 2-69 refers to establishing a small area off of an existing road that could be used for road maintenance, vehicle pull-offs, or camping; it does not say that existing roads would follow corridors. The largest total acreage identified with ‘Primitive’ ROS classifications are within WSAs; as such, prescribed by Congress and BLM policy for management of WSAs, motor vehicle travel in the Pit River Canyon (10,984), Tule Mountain (16,998) and Lava (10,750) WSAs would be ‘Limited to existing roads and ways’. Where roads exist in ‘Primitive’ or ‘SPNM’ areas, vehicle travel is acceptable as long as the vehicles stay on existing roads and ways. (See Section 2.9.6.5 for revised description of travel in ‘Primitive’ ROS areas.

Comment: #14-108

Comment: BLM must disclose and discuss the adverse ecological and social (especially recreational and cultural) impacts of road construction.

Response: The preferred alternative only allows for ten miles of new permanent roads and 50 miles of temporary roads to be authorized for timber management and harvesting activities. Motorized recreational access would be determined on a case-by-case basis for the new permanent roads. Any proposed new route would undergo a site-specific NEPA analysis and the location of these new roads would be carefully considered to avoid adverse impacts to cultural resources, recreational opportunities, and other resources. Because of this additional analysis, adverse impacts from the construction of 10 miles of new roads are not expected to be significant to resources or social conditions. Impacts from road construction are outlined in various sections of the Draft and PRMP, Chapter 4. Environmental Consequences, particularly in Section 4.2, Potential Effects on Cultural and Paleontological Resources.

Comment Number: #15-11, #23-1

Comment: OHV use should be limited to designated routes and all OHV events should be routed away from conflicts with wildlife habitat.

Response: OHV use would be limited to designated routes and OHV events would be restricted to approved locations and designated routes, away from sensitive wildlife habitat, or to areas suitable for unrestricted use (such as abandoned mineral material pits or rocky areas with non-friable soils). See discussion of OHV use in Section 2.15 on Travel Management.

Comment Number: #23-1

Comment: Continue to confine vehicles to designated routes and management of roadless areas for primitive recreation.

Response: Thank you for your support of the designated route system in the preferred alternative. We believe that our preferred alternative provides the best balance between public and administrative access and resource protection. Roadless areas will generally be managed for primitive recreation opportunities, although the ROS designation for a specific area will dictate the management prescription of that particular landscape. (See Chapter 2.9.6 for revision to include recreational permits).

Comment Numbers: #23-4

Comment: Build new non-motorized trails.

Response: Thank you for your comment. However, we believe that our preferred alternative provides the best balance between public and administrative access and resource protection.

Comment Numbers: #23-9

Comment: Close all primitive and non-motorized management areas to mineral leasing in order to protect these wild places from development.

Response: We believe that the preferred alternative includes the most appropriate mix of management measures to adequately protect the sensitive and unique resources found in various management areas within the planning area from minerals development, while also considering the relative significance of the public land products, services, and use to local economies. These measures, as described in Section 3.4 of the PRMP, include closure, no surface occupancy (NSO) restrictions, or other types of restrictions (such as seasonal restrictions). Specific minerals or energy project proposals will be considered on a project-specific basis in accordance with FLPMA, regulations, and BLM policy. This would include conducting a separate environmental review of each proposal prior to development to evaluate (and minimize) potential site-specific impacts and, and developing a detailed plan of operations that addresses how impacts to sensitive resources will be avoided. All ACECs, WSRs, and WSAs would have mineral closures, NSO stipulations, or WSA non-impairment criteria to protect sensitive resources of these special areas. (Please refer to Section 2.3 for additional restrictions and stipulations that would be applied as needed and appropriate.) Finally, it should also be noted that, with respect to leasable and locatable mineral development in the AFO, active mining is expected to be very low or nonexistent, with the primary focus on existing claims.

12.0 Social and Economic Conditions

Comment Number: #13-1

Comment: A clear comparison of the relative economic costs and benefits of low-impact, non-extractive uses (e.g., most recreational uses) vs. intensive/extractive uses is needed.

Response: Alternative 1 Economic Development was developed using a strong emphasis on the potential for more intensive, developed recreation management in the AFO. The management of low-impact, non-extractive resources, such as recreation and visitor services, are a large portion of the preferred alternative. The potential for increased employment and income to local communities from recreation resources was evaluated in Section 4.3 of the Draft RMP.

Comment Number: #16-14

Comment: While the county economic data displayed are accurate, more current socioeconomic data are available and should be used (2000-2001 used currently).

Response: The data that were used (which were the most readily available when the RMP / EIS process was started) are considered adequate for making decisions within the framework for this assessment, which covers a 15-20 year future planning period; therefore, the existing analysis was retained.

Comment Number: #16-15

Comment: The analysis does not address impacts on possessory interest tax levied on grazing permits. As it is collected on an “as used” basis, Alt 2 would directly impact county revenue.

Response: BLM acknowledges that Alternative 2 would have the impact on county revenue identified by the commenter. This impact has been added to the impact summary table at the end of Chapter 2.

Comment Number: #16-16

Comment: Alt 2 fails to capture true loss of grazing; it uses direct paper calculation of grazing 1 out of 3 years when in reality most grazers would cease to use their permit because of lack of forage the remaining two years.

Response: The analysis of Alternative 2 states that, “It is anticipated that a large portion of the smaller operations would become uneconomical and go out of business.” This statement acknowledges a more direct overall impact to livestock operators than just losing forage every 2 years. For this reason, BLM has not selected Alternative 2 as part of the preferred alternative.

Comment Number: #7-7

Comment: Consider use of “Greater Modoc Area – A Strategic Plan for Elk Management” to provide more accurate assessment of impacts of alternatives (in particular analysis of Alternative 2 grazing component needs to be corrected – it appears to lead to no grazing rather than 2/3 reduction in grazing). The Plan discusses method for analyzing impacts to grazing when federal forage supply is changed of alternatives. Addresses key issues and is preferred over IMPLAN model for analyzing socioeconomic impacts from grazing.

Response: Within the limitations of the IMPLAN model, the economic analysis as presented is believed to provide an appropriate and useful comparison of the economic impacts from each of the alternatives, and therefore the existing analysis has been retained.

Comment Number: #16-17

Comment: The IMPLAN model has flawed assumptions when used for estimating grazing impacts in NE California and NW Nevada; does not take into account that all available private forage is used every year. While County does not expect Alt 2 to be selected, a failure to accurately display true losses creates false impression that it would not be as economically devastating as it truly would be.

Response: Within the limitations of the IMPLAN model, the economic analysis as presented is believed to provide an appropriate and useful comparison of the economic impacts from each of the alternatives, and therefore the existing analysis has been retained. As clearly presented in the EIS, Alternative 2 stands in contrast to the other alternatives in that it is the only one resulting in a negative impact of any kind on employment and income. For these reasons, BLM has not selected Alternative 2 as part of the preferred alternative.

13.0 Soil Resources

Comment Number: #14-107

Comment: Need to reconcile conflicting Ch 4 estimates of mileage of new roads (permanent and temporary) that will be built in the AFO under preferred alternative. In Soil Resources section, it says 20 miles of new roads will be built along with an astounding 350 miles of temporary roads (page 4-135).

Response: The estimates of new road mileage in the Energy and Minerals, Fire and Fuels, Soil Resources, and Wildlife and Fisheries sections in Chapter 4 have been reconciled. The correct amounts are 10 miles of new permanent roads, and 50 miles of temporary roads, for a total of 60 miles.

Comment Number: #18-21

Comment: DEIS fails to disclose any impacts that have resulted from already existing range improvements and impacts that will result from constructing even more (cites examples of impact to vegetation and soils).

Response: The Chapter 3 discussions referenced in response to the previous comment identify the soil conditions within each watershed and describe the factors (including, where appropriate, livestock use) that are associated with any degraded conditions. Chapter 4.12 includes disclosure of the potential for soil compaction around range improvements, including water developments for livestock. Site-specific impacts from improvements are examined on an allotment basis, and are not included specifically in this PRMP. However, all improvements are monitored to ensure that they are improving resource conditions, as intended. Chapter 4 examines impacts from range improvements in general on vegetation, soils, and other resources. Chapter 4 states that livestock exclosures would have beneficial effects on riparian areas and temporary adverse effects on vegetation communities during construction, and that water developments would have minor and short-term effects during construction and cattle use. All range improvement projects must go through a site-specific environmental analysis prior to implementation.

14.0 Special Designations – Areas of Critical Environmental Concern

This section is divided into the following subsections:

- 14.1 – Support for ACECs Recommended in Preferred Alternative
- 14.2 – Support for Additional ACECs Not Identified in RMP
- 14.3 – Land Use Restrictions in ACECs
- 14.4 – Fire Management in ACECs

14.1 Support for ACECs Recommended in Preferred Alternative

Comment Numbers: #6-2, #14-18, #14-24, #21-20, #23-2

Comment: Support all proposed ACECs and full protection of wilderness values in WSAs.

Response: BLM appreciates your support of the ACECs recommended in the preferred alternative.

14.2 Support for Additional ACECs Not Identified in RMP

Comment Numbers: #1-7, #13-12, #14-1, #14-2, #14-3, #14-5, #14-11, #14-12, #14-13, #14-15, #14-16, #14-20, #14-22, #14-23, #14-57, #17-3, #25-5

Comment: Some commenters requested that the acreage of the proposed ACECs be expanded and that other ACECs not identified in the Draft RMP EIS be considered, including the Pit River Canyon (which should be closed to grazing with limited exception), Lava, Beaver Creek, and Juniper Creek (Alternative 2, Ecosystem Restoration) and those nominated by other groups during scoping (such as aspen ACEC, sage-grouse and sagebrush ecosystem ACEC including the Likely Tablelands PMU, a riparian areas ACEC which included Horse Creek and Fitzhugh Creek). Some commenters also requested additional data and a complete analysis that documents the decision not to designate those ACECs nominated (including external nominations) but not recommended for designation.

Response: In general, ACEC designation is based on whether or not a potential ACEC requires special management attention to protect unique resources in the selected plan alternative. ACEC designation requires a closer look at activities that occur in the area to ensure that they do not impact the primary values of the area. Management decisions are based on the most current information available, BLM policy, and existing laws. Areas that contain high-value resources or critical natural systems, processes, or hazards are eligible for consideration, if certain relevance and importance criteria are fulfilled. In order to meet these criteria, an area must contain significant historical, cultural, scenic, wildlife habitat, or other natural values. Furthermore, the site's importance--and potential for adverse effects on the protected resource--must extend beyond the local level. The suggested areas were not recommended for ACEC designation for the following reasons:

Pit River Canyon would continue to be managed for the most part according to the wilderness IMP because most of the area falls within the Pit River Canyon WSA. WSR designation is also recommended for approximately 16 miles of the Pit River (13 miles of Upper and 2.5 miles of Lower). We believe that the WSA and WSR designations will provide adequate protection for this valuable resource. Grazing use is limited to rims and uplands, and we are taking measures to protect sensitive archaeological sites, primarily through a proposed enclosure. As additional sites are identified, further protective measures would be developed and implemented. See revised Chapter 2.2 Cultural Resources and Paleontology, and Impacts Summary Table.

The Lava area would continue to be managed for the most part according to the wilderness IMP because most of the area falls within the Pit River Canyon WSA. We believe that the WSA designation will provide adequate protection for this valuable resource. Another source of protection for this particular area is its natural geography, which renders much of the area inaccessible to the public. See revised Chapter 2.15 and Impacts Summary Table-Special Designations-Wilderness Study Areas Chapter 2.

We believe that existing and proposed management measures under the proposed action for Beaver Creek and Juniper Creek would provide sufficient protection to important resources in these, respectively, VRM Class II and Class III areas, without the need for ACEC designation. These include limiting OHV travel to designated routes and using appropriate management response for wildfires. In addition, greater emphasis would be placed on land health standards and protection of sensitive resources from adverse grazing effects to minimize impacts. In Juniper Creek, this would include use of small exclosures, as well as BLM consideration of group exclosures to protect archaeological resources, similar to those used at Beaver Creek, where BLM will also consider the use of additional exclosures to address any identified impacts to cultural resources. Finally, Juniper Creek is proposed for a Bald eagle Habitat Management Plan (HMP), to be developed in coordination with the Fish and Wildlife Service. Eagle protection and habitat considerations would be part of the HMP (see revised Chapter 2.24.2, and See Impacts Summary Table-Areas of Critical Environmental Concern-Beaver Creek/Juniper Creek, and Wildlife and Fisheries Chapter 2.

Fitzhugh Creek was evaluated for eligibility for designation as a wild and scenic river, but was not recommended due to determination of not having outstanding remarkable values (see Appendix J). Fitzhugh Creek was recommended as part of a larger ACEC in Alternative 2, but not in the preferred. BLM felt that it was adequately protected in the Tablelands Integrated Resource Management Plan which has been brought forward and is now included as Appendix P to this PRMP/FEIS.

Aspen groves were not proposed for designation as an ACEC because the aspen resource is scattered across 200 locations throughout the field office area, with some stands less than one quarter of an acre and others larger than 40 acres, but most less than 5 acres. Managing each aspen stand as an ACEC is not practical, effective, or efficient. However, BLM agrees that the management of aspen is a high priority. Aspen is a unique vegetative community and BLM is taking specific steps for their protection and recovery. The AFO has an active aspen fencing and juniper reduction program, as well as rest from livestock after wildfire.

Like aspen stands, riparian/wetlands areas are numerous (there are hundreds within the field office area), of varying size (many are small), and scattered throughout the field office lands. Every riparian area does not have relevant or important, or regionally unique resources to qualify as an ACEC. These areas are considered important habitat, but because they are numerous, they do not qualify as being regionally unique resources. However, BLM agrees that protection of our major perennial river corridors is a high priority and has taken steps towards river corridor protection. Two recommended ACECs (Pit River and Horse Creek) are protected within the Pit River Canyon WSA, and both are recommended as suitable for Wild and Scenic River designation with a tentative classification of “wild”.

A large aspen grove in the AFO planning area is found on Tule Mountain, which in turn is included within both the Mountain Peaks ACEC and Tule Mountain WSA. The ACEC and WSA designations for this area would offer sufficient protection to our important aspen resources.

A sage-grouse and sage-grouse habitat ACEC was not recommended under the Preferred Alternative. Implementation of the Conservation Strategy (Chapter 2.24.5), *Conservation Strategies for Sage-grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units*, is a major component of our management approach for the protection of sage-grouse and sagebrush ecosystems under the proposed action. Essential components of the Conservation Strategy include protection, restoration, monitoring, research, and ongoing adaptive management for sage-grouse and sagebrush ecosystems within the management unit. The Buffalo-Skedaddle Population Management Unit alone encompasses almost 1.5 million acres, which is too large an area to effectively manage as an ACEC. Similarly, it would be difficult to designate which habitat(s) within the PMU should be set aside as an ACEC if it were to be broken down to a more manageable area, and whether to emphasize leks, nesting habitat, brood-rearing and/or late brood-rearing habitat. However, BLM agrees with the commenter that protection of this valuable habitat is important, and we will be managing sage-grouse and sagebrush ecosystems in accordance with the "Conservation Strategy for Sage-Grouse (*Centrocercus urophasianus*). This strategy outlines conservation goals, objectives, and associated actions to guide conservation and management actions for sage-grouse and sagebrush ecosystems within the PMUs. Telemetry work is ongoing to obtain further information on habitat usage areas, and a multi-year intensive study is being undertaken regarding sage-grouse in the AFO area. Implementation of the proposed *Sagebrush-Steppe Ecosystem Restoration EIS* will improve sage-grouse and other associated sage steppe species.

For currently recommended ACECs (Tablelands and Emigrant Trails), BLM believes that the ACEC acreages as proposed are sufficient to protect the unique resources they are intended to protect; additional reasoning is provided below.

The Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC has been reduced in area under the proposed action to be consistent with what we believe to be the most vulnerable area within the ACEC, Yankee Jim, which includes recent archaeological discoveries that require increased management constraints, as well as fencing of select sites to prevent impacts from grazing, while still allowing grazing within the general area. All management actions, current and new discoveries will assist in elevating this important area to NRHP status. In addition, management of this 1,400-acre VRM Class II area would continue to improve with implementation of the Tablelands Integrated Resource Management Plan (1998); the plan introduces additional management actions that would further protect the important resources in this area/ACEC. See revised Chapter 2.11, which lists management actions from the Tablelands Integrated Resource Management Plan that BLM believes will adequately protect the resource values associated with the Likely Tablelands.

For the Emigrant Trails ACEC (1,750 acres under the preferred alternative), our intent is to focus on the most identifiable trail traces for ACEC protection. The ACEC in the PRMP represents the highest concentration of trails, all of which would remain within a VRM Class I or II area (VRM Class I within WSA). As discussed in the revised Chapter 2.11.5, BLM would protect and manage significant historic trails or traces and locations associated with these sites for public edification and enjoyment. However, BLM would emphasize interpretation and suitable management actions at three exceptional historic trail locations: Lower Klamath Marsh, Goose Lake, and the upper Pit River Canyon area. VRM classes would emphasize retention of natural beauty along high-use travel routes and utility corridors. It would include prominent landforms and vistas, and highly visible community backdrops. It would also include popular recreational destinations such as streams and reservoirs with recreational fisheries, national historic trails and sites, as well as state, local, and federally-owned parks and interpretive sites (if appropriate).

Visual buffer zones would be established for a minimum distance of three miles on either side of all major travel routes and recreation use-areas in which developments, land alterations, and vegetative manipulations would be designed for minimum visual impact. However, within these zones, areas that are not visible from major roads would not be held to this standard. Protection from and/or mitigation of undesirable visual intrusions would be emphasized throughout the management area. See revised Section 2.11.5 for additional discussion regarding the Emigrant Trails ACEC.

Comment Numbers: #14-58

Comments: Commenter requested that BLM develop management prescriptions for sage grouse-sagebrush ACECs using the “Blueprint for Sage-Grouse Conservation and Recovery.”

Response: As described in the response above, a sage grouse-sagebrush ACEC was not recommended for ACEC designation and therefore no ACEC management approaches were developed. See also responses to comments on wildlife issues for sage grouse-sagebrush management prescriptions.

14.3 Land Use Restrictions in ACECs

These comments discuss restrictions in ACECs (both existing and proposed, selected and non-selected) related to grazing, oil and gas, locatable minerals, and OHV. Additional related comments and responses are included in comments on livestock grazing, energy and minerals, and travel management.

Comment Numbers: #14-9, #14-10, #14-17, #14-21, #14-25, #14-26, #22-1

Comment: Chapter 4 states that lands with ACEC potential have been adversely affected by grazing for years, yet each of the recommended ACECs is open to grazing with two limited exceptions: avoid or minimize these impacts by closing or restricting grazing in each recommended ACEC. Adopt Alternative 2 for grazing and OHV use in Ash Valley ACEC and for grazing in Juniper Creek, Beaver Creek, Yankee Jim, Mount Dome, and Old Growth Juniper ACECs.

Response: BLM believes that current grazing strategies in the ACECs are sufficient, with ongoing protection management strategies including the use of monitoring data, and that grazing does not have to be further limited to one in three years. After the RMP is final, management plans will be developed for each ACEC to appropriately manage resources; these plans may include additional grazing provisions to protect existing resources. Monitoring data for the Ash Valley ACEC have shown negligible impact from grazing on special status plants to date; in addition, special monitoring plots will be established to examine effects of existing grazing levels (AUMs) and OHV use on existing resources within the Ash Valley ACEC. In the Yankee Jim area, BLM is currently working with the Pit River Tribe to develop a Historic Property Management Plan which would identify acceptable limits of grazing use. Livestock use is very light to none in the Mount Dome ACEC since cattle have access to only the lower elevations due to lack of water resources higher on the mountain. The Sheep Valley Old Growth Juniper ACEC has approximately 1000 acres excluded from livestock grazing. This includes Sheep Valley itself with one mile of perennial stream, 100 acres of meadow habitats, 12 spring sources, and sensitive soil resources. Additional riparian that is also protected includes 5 spring sources and 60 acres of adjacent meadow.

Comment Numbers: #14-6

Comment: Close Pit River and Lava proposed ACECs to locatable mineral entry and Beaver and Juniper Creek proposed ACECs to leasable, saleable, and locatable mineral entry.

Response: Under the proposed action, the Pit River, Lava, Beaver Creek, and Juniper Creek areas would not be designated as ACECs (see response to comments in Section 14.2 of this appendix, above). While the Pit River and Lava ACEC areas would remain open to locatable mineral development under the proposed action, they are part of WSAs and would be protected under the wilderness interim management policy (IMP); they are closed to leasable and saleable minerals development, and any surface-disturbing activities relating to locatable minerals must meet the non-impairment criteria of the IMP for Lands Under Wilderness Review (H8550-1). We believe that the proposed management measures offer adequate protection from any minerals development of these valuable areas in the AFO planning area.

The major commodities of interest over the next 15 to 20 years will probably be gold/silver and zeolites. Over this time period, it is expected that two mines may be developed in the planning area (field-office-wide): one open-pit gold mine using chemical heap leaching, at least in part; and one mine of zeolites. In general the locatable development scenario is low within the AFO.

The Beaver and Juniper Creek areas would remain open to minerals development (locatable, leasable, and saleable) under the proposed action. However, the potential for locatable minerals development in these areas is very low, with a focus on existing active mines, and our existing policy for flat rock (saleable minerals; see Appendix M) and leasable (geothermal) development includes restrictions that offer additional protection. In all cases of mineral development, a separate NEPA review would be conducted (environmental assessment) at the site-specific level. Additional restrictive stipulations would be applied as needed and appropriate, according to a detailed plan of operations to protect sensitive resources prior to development. We believe that our proposed management strategies for Beaver and Juniper Creek also provide sufficient protection to the valuable resources found in these areas while considering the relative significance of the public land products, services, and use to local economies.

Comment Number: #14-8, #14-10, #14-19, #22-1

Comment: Adopt alternative for all ACECs which limits OHV use to designated routes versus existing routes where OHV use is allowed and close redundant and damaging routes. Adopt OHV management Alternative 2 as preferred alternative for Ash Valley and for Timbered Crater ACECs, maintaining vehicle closure, to provide full protection.

Response: Under the preferred alternative, all proposed ACECs would be limited to designated routes (LD) unless they are within WSAs which limit use to existing routes under wilderness IMP restrictions. Routine monitoring would also occur. We believe that the proposed OHV designations provide adequate protection and an optimal balance with recreational use. In the case of the Timbered Crater and Ash Valley ACECs, the LD designation provides a similar level of protection to road closure since no off-road use is allowed. In the case of Ash Valley ACEC, monitoring data show negligible impacts from past OHV use on special status plants, and OHV use has not been identified there currently. Finally, should monitoring identify routes that are damaging resources, additional measures would be taken, such as route closure, per RAC OHV guidelines.

Comment Number: #14-14

Comment: Incorporate measures into final alternative that provide increased protection to sensitive plants, uncommon plant associations, and fragile habitats found in Lava. At a minimum, adopt grazing Alternative 2 with flexibility to add additional measures as necessary.

Response: The Lava WSA is remote in character. Its physical and scenic integrity, and vulnerable plant, animal, and cultural resources, would be protected under the wilderness interim management policy until such time as Congress makes a determination. Three livestock ponds currently contain special status plants brought in by waterfowl. The ponds are currently not fenced. While in some years we have observed some damage to the plants, the overall impacts on the plants from grazing activities has been minimal. We will continue to monitor these plants to determine if additional protection measures are required. A special two-way enclosure has been constructed on one of the three ponds to determine the effects of grazing.

14.4 Fire Management in ACECs

Comment Numbers: #14-7

Comment: Incorporate wildfire use to maximum extent possible.

Response: Currently many areas within the ACECs are within the California Department of Forestry (CDF) Direct Protection Area (DPA), where wildland fire management is under their jurisdiction. In general, the CDF does not recognize wildland fire use. BLM recognizes that fire is an important component of the ecology of these areas, and proposes AMR for wildland fire management in all existing and proposed ACECs. As stated in Section 2.4, fire planning and decision making would be outlined in the NorCal Fire Management Plan. The Plan will provide sufficient detail for all levels of wildland fire response and presents an array of suppression options for specific ACECs. It also identifies potential locations and suitable conditions for wildland fire use, prescribed fire, and other fuel-reduction options.

In general, for ACECs, the appropriate response will be less than a full suppression action on wildland fire ignitions. AMR could have limitations on mechanical equipment (dozers), use of retardant in sensitive areas, etc.

15.0 Special Designations – Wild and Scenic Rivers

This section is divided into the following subsections:

- 15.1 – Support for Designation of Upper Pit River and Lower Horse Creek
- 15.2 – Rationale for Suitability Determinations
- 15.3 – Management of WSRs
- 15.4 – Interim Protection

15.1 Support for Designation of Upper Pit River and Lower Horse Creek

Comment Numbers: #10-1, #10-2, #10-4, #14-59, #14-60, #14-61

Comment: Support for recommendation of Upper and Lower Pit River and Lower Horse Creek as “suitable” for WSR designation. Since maximum river protection is best represented in the Ecosystem Restoration Alternative for all three plans, urge that it be adopted as the preferred alternative in regard to WSRs in the final plans.

Response: We appreciate your support for our recommendation of the Upper and Lower Pit River Canyon and Lower Horse Creek for potential designation as wild and scenic rivers with a tentative classification of “wild” for Upper Pit River Canyon and Lower Horse Creek, and a tentative classification of “scenic” for Lower Pit River Canyon. We also note, per comment # 10-2, that our recommendations under the preferred alternative and the ecosystem restoration alternative were identical in the Draft RMP, and remain so in the Final.

Comment Number: #13-7

Comment: Support preferred alternative for wild and scenic rivers; notes irony that this may be most viable economic alternative rather than that in economic development alternative. Why is recreational value of these river reaches not analyzed in economic alternative?

Response: We appreciate your support for our recommendation of Upper and Lower Pit River Canyon and Lower Horse Creek as suitable for WSR designation. The recreational value of the river is considered as part of the suitability determination process; that is why the economic development alternative included tentative “recreational” classification for Lower Pit River Canyon and Lower Horse Creek. A “recreational” classification allows for slightly more uses, such as recreational mining, which in turn may provide more recreational opportunities for a wider range of public land users.

15.2 Rationale for Suitability Determinations

Comment Numbers: #10-9

Comment: Each Draft should, at a minimum, list every stream evaluated and why specific streams were rejected as ineligible.

Response: We agree and have added the AFO WSR suitability rationale to the PRMP (Table J-1 in Appendix J)]. This rationale now includes the results of the evaluation of 20 streams for potential eligibility under the Wild and Scenic Rivers Act.

15.3 Management of WSRs

Comment Number: #20-9

Comment: County and BLM need to confirm and agree to the boundaries of the Pit River Canyon WSA and wild and scenic river designations. County will also need assurance that designation will not preclude potential development of off-stream impoundments and reservoir sites on the Pit River such as the proposed Allen Camp Dam project.

Response: BLM has coordinated with Lassen County and has clarified WSA boundaries. Wild and Scenic River designation will not preclude developments outside of the WSA.

Comment Number: #24-5

Comment: The FEIS should discuss designation of Wild and Scenic Rivers effects on upstream use and management by other agencies or land holders. Will this designation require or cause increased protection of water quality and quantity by upstream land managers?

Response: BLM only has authority on the public lands that it manages. The WSR suitability determinations for the BLM-administered lands of the Upper Pit River Canyon (13 miles), Lower Horse Creek Canyon (3 miles), and Lower Pit River Canyon WSR (2.5 miles) will not affect privately held water rights, as per BLM WSR Manual 8351. BLM has no authority over water quality conditions on lands outside of its jurisdiction. Land use restrictions for these WSR segments would apply only on BLM public lands, as outlined in Section 2.14.5 of the PRMP.

15.4 Interim Protection

Comment Numbers: #10-7, #11-1

Comment: Disagrees with statement that interim protection lapses after three years and recommends longer period (until political situation becomes more positive for designation). See also addendum to this comment submitted as #11-1. Support relating to interim protection of recommended river identified and found suitable 5(d) study process (i.e., process used in RMPs does not lapse no matter how long Congress takes to act on a recommendation).

Response: We stand corrected on this process. Rivers recommended as suitable remain under interim protection until Congress acts to designate or release the suitable river segment from the provisions of the Wild and Scenic Rivers Act. The text has been changed accordingly. [Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council, “ A Compendium of Questions & Answers Relating to Wild & Scenic Rivers, Section 5(d)(1). Revised January 1999.]

16.0 Special Designations – Wilderness Study Areas

This section is divided into the following subsections:

- 16.1 – WSA Designation
- 16.2 – WSA Management

16.1 WSA Designation

Comment Number: #14-69

Comment: Table 2.14-1, which displays overlap of ACECs and WSAs, was very helpful. Keep in final.

Response: Table 2.14-1 has table has been retained in the PRMP / FEIS. We are glad you found it useful.

Comment Number: #14-75

Comment: Appendix A (page A-57) states BLM recommended Lava WSA as suitable for wilderness; this is inconsistent with the agency's California Statewide Wilderness Study Report which recommended entire area as not-suitable and BLM's state wilderness status map shows entire area as unsuitable. Despite apparent error, commenter hopes this reflects a willingness to reconsider previous negative assessment.

Response: In 1992, the AFO was requested by the BLM State Office to conduct WSA reviews using updated or additional information; AFO staff also conducted an on-site field inspection. The field tour identified, isolated and undisturbed, some of the better-preserved stands of native oaks east of the Cascades, as well as distinct mixed chaparral communities, grey pine associations, old growth ponderosa pine, and untrammled lava fields associated with unique geologic features and formations. The outcome of the records review and field examination was a suitable recommendation for wilderness on 100% of the WSA, consisting of 10,770 acres.

Comment Number: #14-97

Comment: BLM should consider designating new WSAs including areas identified by CWC during scoping in light of recent ruling re Utah settlement as interpreted by commenter.

Response: No new lands with wilderness characteristics were identified by CWC in the AFO. We believe that we identified and evaluated an adequate range of management alternatives for protecting lands with qualities related to 'Primitive' ROS class, and many of these areas were included under the Preferred Alternative in Chapter 2.10 Recreation Opportunity Spectrum, and shown on Map ROS-5, in the Draft RMP. BLM believes our selection of the preferred alternative provides the best balance of public access and environmental protection, as well as an optimal balance of motorized and non-motorized use.

Comment Number: #20-9

Comment: County and BLM need to confirm and agree to the boundaries of the Upper Pit River Canyon and Lower Horse Creek WSAs and wild and scenic river designations. County will also need assurance that designation will not preclude potential development of off-stream impoundments and reservoir sites on the Pit River such as the proposed Allen Camp Dam project.

Response: Thank you for your comment. BLM has coordinated with Lassen County and has clarified WSA boundaries. Wild and Scenic River designation will not preclude developments outside of the WSA.

16.2 WSA Management

Comment Numbers: #1-2, #6-2, #14-72, #17-1, #23-7

Comment: Designate/manage all WSAs as primitive zones. Support full protection of all wilderness values in WSAs. Appropriate ROS classification for WSAs is primitive. Alternative 2 should be chosen for Timbered Crater WSA and Tule Mountain WSA. Alternative should be chosen that does not include a ROS classification of roaded natural for small portion of Lava WSA as appears to be case under preferred alternative. ROS classification of primitive described in preferred alternative should be applied to Pit River Canyon WSA.

Response: BLM believes the preferred alternative provides the optimal balance of motorized and non-motorized use in support of our multiple use objectives to accommodate the increasingly competitive recreational demands while ensuring the protection and long-term productivity of BLM-managed lands. Some routes are necessary within WSAs to allow BLM access to other areas to implement certain management activities. BLM also believes that the preferred alternative, under which approximately 70% of the WSAs would be managed as primitive areas, offers a practical approach in terms of the Agency's ability to effectively manage the WSAs.

In accordance with BLM policy, only existing roads and ways (within WSAs) are allowed that were present at the time FLPMA was passed (1976) and later shown on, and/or described in, the 1979 Final Intensive Wilderness Inventory for Public Lands Administered by BLM-California outside the California Desert Conservation Area. As prescribed by Congress and BLM policy for management of WSAs, motor vehicle travel in the Pit River Canyon (10,984), Tule Mountain (16,998) and Lava (10,750) WSAs would be 'Limited to Existing Roads and Ways', even with a 'Primitive' ROS classification. BLM has not added any new routes to the WSAs. Pit River Canyon WSA is close to 100% 'Primitive'. The majority of the area within the Lava and Timbered Crater WSAs is 'Primitive'. ROS classes in the Lava, Timbered Crater, and Tule Mountain WSAs are as follows:

Lava WSA: This WSA is almost 100% primitive. A small portion of roaded natural classification has several roads, fences, and small livestock watering facilities. This small area fits more appropriately with roaded natural rather than primitive. The adjacent lava fields limit uses in the roaded natural area, but provide the primitive experience a short distance away.

Timbered Crater WSA: This WSA is 90%-95% primitive. A small SPNM area (5-10%) of the Timbered Crater WSA has roads and fencelines, with additional areas of caterpillar/tractor impacts associated with past fire suppression activities. The designated roads and trails designation and the SPNM classification is more appropriate than primitive for this small area, but still provides the interior of the WSA with a wilderness like experience with a primitive classification.

Tule Mountain WSA: Due to the existing two track road system present within the WSA, this area offers the recreationist opportunities to experience the WSA attributes by vehicle on the existing roads. The SPNM classification still promotes a wilderness like setting and experience with very limited vehicle use.

Comment Number: #1-5

Comment: Expand amount of land where wildland fire is allowed, including all WSAs and primitive areas.

Response: The wildland fire management approach in the Tule Mountain WSA is wildland fire use (naturally-ignited fires that are allowed to burn in order to realize resource benefits). However, all of the other three WSAs are within the California Department of Forestry (CDF) Direct Protection Area (DPA), where wildland fire management is under their jurisdiction. In general, the CDF does not recognize wildland fire use. BLM recognizes that fire is an important component of the ecology of these areas, and proposes Appropriate Management Response (AMR) for wildland fire management to the extent possible.

Comment Number: #14-67

Comment: BLM should propose management of WSAs that complies with IMP and protects wilderness character by limiting potentially damaging activities, applying protective management prescriptions, and proactively restoring and protecting their naturalness.

Response: BLM's proposed management actions under the preferred alternative, as described in Section 2.14.5, are consistent with this recommendation.

Comment Number: #14-68

Comment: Provide more specific guidance on management prescriptions that would apply to release WSAs, commit to keeping updated inventory of wilderness characteristics, and commit to preservation of wilderness characteristics as a DFC.

Response: BLM believes that the stated desired future condition for WSAs, as slightly revised in this PRMP, relevantly and appropriately seeks to comply with the legislative, regulatory, and policy direction that governs WSA management. For areas that may be ultimately released from WSA status, continued management as ROS primitive areas would continue to protect the wilderness values that led to their study under the wilderness review program. Other management programs would be established to protect resource values other than wilderness like characteristics.

Comment Number: #14-70

Comment: Support language on page 2-101 regarding closure of illegal roads in WSAs. BLM should complete the inventories described and include these road closures in final document.

Response: This language from the Draft has been carried forward to the PRMP; however, conducting these inventories is too substantive and time-consuming an effort to be accomplished within the same timetable as going from the Draft RMP to PRMP. This effort has begun and we anticipate utilizing the new route inventory and original WSA write-ups to complete this important element within WSAs.

Comment Numbers: #14-71

Comment: Carry VRM classification (1) of all four WSAs through to the final.

Response: Management of WSAs under VRM Class I objectives has been carried through under the preferred alternative in accordance with the Wilderness IMP. VRM classes have been assigned by BLM using the VRM inventory process described in Chapter 2.18. Only designated WSAs can receive a VRM Class I rating. Within the AFO, the majority of special designations managed by BLM, such as ACECs, have been assigned VRM Class II. This is the highest level that can be applied outside of WSAs, and retains the character of the existing landscape. If a WSA is released from WSA status by Congress, the underlying VRM Class would apply.

Comment Number: #14-73

Comment: For Timbered Crater WSA, no action alternative (applies “closed” designation) should move forward; for Lava WSA, Alternative 2 (“closed” designation) should move forward; for Pit River Canyon, a “closed” alternative should be developed and moved forward; consistent with ROS category found in Alternative 2, BLM should develop and carry forward a “closed” alternative for Tule Mountain WSA.

Response: Routes shown on Map OHV-1 (preferred alternative in PRMP) are authorized routes. The routes that remain open within WSAs were identified by BLM through the wilderness inventory process in 1979. These routes continue to be managed for recreation access to WSA areas, and to allow access to private inholdings. The LE (limited to existing roads and trails) designation is the official minimum standard for WSAs. We believe that the proposed designations are appropriate, and that the use of these routes within designated WSAs, as specified under the preferred alternative, represents an optimal balance of motorized and non-motorized use. See also response to the first set of comments in Section 17.2 of this appendix, above.

Comment Number: #14-74

Comment: All WSAs are currently closed to mineral leasing and saleable mineral activities. Carry forward to Final the management prescriptions for energy and minerals described in preferred alternative.

Response: The management prescription to close WSAs to leasable and saleable mineral activities has been carried forward to the PRMP, as in accordance with wilderness IMP.

Comment Number: #14-76

Comment: Pleased that new utility lines or communication sites would avoid WSAs, ACECs, and proposed WSRs under preferred alternative. Hope final RMP/EIS mirrors the Eagle Lake draft RMP/EIS and proposes to make lands both in and adjacent to all WSA, ACECs, and WSRs other special management areas ROW avoidance areas. Support establishment of SRMAs in Pit River, Tule Mountain, and Lava WSAs, and development of non-motorized trails in these areas.

Response: Thank you for your support of the preferred alternative which would make lands in WSAs, ACECs, and WSRs rights-of-way (ROW) avoidance areas; establish SRMAs encompassing the Pit River, Tule Mountain and Lava WSAs; and construct a collection of non-motorized trails in the Pit River SRMA and in the Infernal Caverns/Rocky Prairie SRMA. ROW avoidance on adjacent lands to these special management areas would be evaluated on a case by case basis once a ROW action was received. These actions have been carried through to the preferred alternative in the PRMP and are discussed in Sections 2.9.5, 2.11 (see Table 2.11-4), and 2.15.3.

Comment Numbers: #14-98

Comment: BLM should consider other management alternatives for protecting lands with wilderness characteristics and analyze this issue thoroughly throughout planning process. BLM must inventory for lands with wilderness characteristics (including those proposed by others), consider alternatives for protecting such lands, and address wilderness as separate and unique issues in planning process in each section of RMP.

Response: Given no external recommendations and the fact that we did not acquire land with wilderness characteristics, we believe that we identified and evaluated an adequate range of management alternatives for protecting lands with wilderness characteristics in the Draft RMP EIS, and that the management actions included in the preferred alternative provide the best balance of public access and environmental protection. The AFO is committed to maintaining an ongoing inventory and will continue to consider wilderness characteristics as part of the land use planning process consistent with Sections 201 and 202 of FLPMA and guidance provided through BLM Washington Office direction.

17.0 Travel Management

This section is divided into the following subsections:

- 17.1 – Requests for Additional Closures and Restrictions
- 17.2 – Opposition to Proposed Closures and Restrictions
- 17.3 – Modoc Line
- 17.4 – General

17.1 Requests for Additional Closures and Restrictions

Comment Number: #6-23

Comment: Support Alternative 2 road closures or more and decommissioning of non-essential roads if possible.

Response: Thank you for your comment. We believe that our preferred alternative provides the best balance between public and administrative access and resource protection.

Where existing roads are having an adverse ecological impact, they may be closed through plan maintenance in accordance with Northeast California RAC Guidelines for OHV. (See RAC Guidelines for OHV, appendix C).

Comment Number: #17-2

Comment: Eliminate 60 miles of new road plans.

Response: We believe that some new roads are needed for timber management and harvesting activities, as well as to facilitate juniper removal. However, only 10 miles of permanent road would be constructed; the remaining 50 miles would be temporary road which would be rehabilitated after use is completed. No timber harvest would be allowed within ACECs unless forest health was an issue and the harvest was needed to meet the goals of the ACEC. All roads within ACECs would be closed and rehabilitated, unless a specific road was needed to facilitate management of relevant and important resources within the ACEC.

Comment Number: #24-1

Comment: Continued use, expansion, or designation of Barnes Grade area for unrestricted OHV use is a concern since it's next to Modoc National Forest and NF will soon be restricting OHV use to designated roads and trails. Concerned that this area would serve as gateway to continued unmanaged use on national forest lands. BLM should address its short and long term ability to restrict OHV use to BLM lands in Barnes Grade Area or restrict use to designated roads and trails and prevent expansion onto Forest Service lands.

Response: BLM agrees that unrestricted OHV use would violate new policy for OHVs, as well as impact resource values. The Barnes Grade/Crowder OHV Management Area would be 'Limited to Existing Roads and Trails', and unrestricted OHV use would not be allowed. This area has been used as a firewood cutting area for years, and like the adjacent USFS land has an abundance of woodcutting roads. BLM feels that this densely roaded area would provide a dual purpose (OHV and woodcutting) area near the population center of Alturas. Seasonal closures would also apply to protect critical winter deer populations. Seasonal closures would be from November 15th to April 1st, or coincide with closing and opening of the Barnes Grade fuelwood cutting area. Additionally, a four strand barbed wire fence separates BLM lands from USFS lands.

Comment Number: #25-7

Comment: Recommends additional road closures to protect resources from annual grasses and noxious weeds, such as mixed ceanothus chaparral communities of Fall River watershed and big sagebrush/desert peach associations near Alturas.

Response: We believe that management actions under the proposed action are consistent with this approach. As stated in Section 2.17.2, under the proposed action, closure to motor vehicles would be seriously considered in areas where off-highway vehicle traffic is responsible for significant increases in infestation by annual grasses and noxious weeds. Two such areas are the mixed ceanothus chaparral communities of the Fall River watershed and the big sagebrush/desert peach associations near Alturas, CA. The majority of routes in these areas are managed as LD (limited to designated routes), which should afford adequate protection, but some routes would be closed where conditions warrant to ensure protection of these sensitive plant communities.

Comment Number: #25-8

Comment: Recommend 600 acres of public land on the Williams Ranch be closed to OHV travel to protect riparian areas and fish habitat

Response: Under the preferred alternative the Williams Ranch would be 'Closed' to OHV use for the majority of the year. The area would be 'Limited to Designated Routes' between June 16 and November 14. We believe these restrictions to OHV use will provide sufficient protection to riparian areas and fish habitat.

Comment Number: #25-9

Comment: Concerned with implementation of OHV restrictions in the Day Bench area. Recommend this area's use be classified as designated roads and trails to avoid confusion and protect watershed resources.

Response: We believe the restrictions as described in Section 2.16.1.5 offer appropriate protection and have not been changed in the PRMP. The Day Cinder Pit Road remains open yearlong for public access.

Comment Number: #26-1, #26-2, #27-1

Comment: Regarding use of road up Padgett's Bluff for public and agency access: condition is very primitive and delicate in terms of habitat it provides for wildlife and plants, and rock slide blocks part of path. Designation as four-wheel drive would be misleading and unsafe much of the year; would be better served with hiking and horseback trails like proposed on Mahogany Peak. Hopes Final RMP will help clarify that BLM has access across their land to reach Padgett Bluff Road from Shady Dell Road for management uses but that it is closed to public access. Request for proofing of legality of approach and access to Mahogany Mountain.

Response: Regarding Padgett's Bluff and Mahogany Mountain access: after the Draft RMP EIS was published, a survey was conducted on Padgett Bluff to determine where the corner fell regarding the Padgett's Bluff road, as well as the appropriate property owner. The preliminary survey determined that the corner in question is on private property and prevents legal access to Padgett's Bluff and Mahogany Mountain. The private land owner has indicated they will fence their portion of the road, and allow only administrative access for BLM and no public access.

Comment Number: #30-14

Comment: Given concerns of BLM's limited budget to monitor and enforce patrols over large area, recommend BLM consider closing or limiting OHV travel to designated roads and trails on 22 areas identified in comment (suggests specific categories of areas for closure, in general to protect wildlife resources).

Response: In reviewing the 22 areas identified in the comment, we note that the areas match those included in Alternative 2 (Ecosystem Alternative) which we have evaluated. We believe that our preferred alternative provides the best balance between public and administrative access and resource protection. We believe that by going to a designated route system, there will be a huge reduction in the amount of off-road use that occurs on BLM administered lands. As far as closing routes related to other important wildlife habitat, we believe that our proposed management actions for wildlife, including incorporation of "*Conservation Strategies for Sage Grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units*" are sufficiently protective of wildlife resources. In addition, no routes within designated ACECs have been identified as needing closure to protect wildlife; however this issue will be examined as the individual ACEC management plans are developed; and no other important wildlife habitat areas were identified as needing route closures to protect habitat. However, Chapter 2.16.1.5 Travel Management has been revised to state "*Routes would be maintained, modified, created, or obliterated in order to meet land health standards, water quality standards, wildlife habitat needs, and changing public needs and desires.*"

Comment Number: #30-15

Comment: Would like to see following travel allocations/OHV travel designations to protect wildlife habitat: 80 acres open; 4,825 acres closed; 340,158 acres limited to existing roads and trails; and 157,982 acres limited to designated roads and trails.

Response: These acreages are consistent with those included in the proposed action.

17.2 Opposition to Proposed Closures and Restrictions

Comment Number: #28-1

Comment: Opposes language in preferred alternative Section 4.10 restricting Delta and Moon Lakes and Bayley Reservoir to four-cycle gasoline engines, electric trolling motors, and non-motorized boating, and Nelson Corral Reservoir to non-motorized boating. Believes restrictions unnecessary to protect fishery resource and too costly for lower income fishermen to replace two-cycle boat motors and would prohibit most handicapped fishermen from using these fisheries. At minimum, asks for transition period of several years before regulations become effective.

Response: Thank you for your comment. We acknowledge the hardship on lower income fishermen and have decided to change our original proposal as follows: use of Delta Lake and Nelson Corral Reservoir would be limited to electric trolling or non-motorized boating, due to their small size and wildlife and noise abatement concerns. Moon Lake would allow two- or four-cycle motorized boating. Bayley Reservoir would initially allow two or four-cycle motorized boating until 2012; thereafter only four-cycle motorized boating, electric trolling, or non-motorized use would be allowed. Section 2.16.3.5 of the PRMP has been revised accordingly.

Comment Number: #34-4

Comment: Does not feel that snowmobile use is an issue at Nelson Corral and BLM should not exclude it.

Response: As stated in Section 2.16.4.5 of the revised PRMP, there would be no restrictions on motorized snow travel in Nelson Corral high-country and the Dead Horse Loop.

17.3 Modoc Line

Comment Number: #16-13

Comment: Modoc County strongly supports the statements regarding rail banking of the abandoned Modoc line rail corridor, but the current language could be interpreted as meaning the permanent use of the corridor would be for recreational trails. It should be clearly stated that any use, other than return of rail, is merely temporary.

Response: Under BLM policy, use of the Modoc Line rail corridor as a historic or recreational trail would require that it be railbanked. As such, a railroad re-establishment would take precedent over all other uses.

Comment Number: #27-3

Comment: Motorized use could profit greatly from rails to trails conversion currently being considered by Lassen and Modoc Counties and the Union Pacific; there must be a way to include motorized recreation in such an endeavor.

Response: We agree that it may be possible to convert certain segments of the Modoc Line for motorized use and will consider this option under the rails to trails conversion program. Thank you for the suggestion.

17.4 General

Comment Number: #6-5

Comment: Need to clearly distinguish motorized and non-motorized use areas (blurring of “semi-primitive motorized” with “semi-primitive non-motorized” designations as “back country”) and ensure the latter will be enforced.

Response: “Semi-primitive motorized”, “semi-primitive non-motorized”, and “backcountry” are recreation opportunity spectrum (ROS) terms that generally describe the type of recreational experience for which BLM planners would manage in a particular area. It is the *Off-highway Vehicle (OHV) Use Designations* that clearly distinguish allowable uses as to motorized or non-motorized areas. OHV designations are defined as follows (see Glossary):

- **Open** – Designated areas and trails where OHVs may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 834I and 834J.
- **Limited** – Designated areas and trails where OHVs are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.
- **Closed** – Areas and trails where OHV use is permanently or temporarily prohibited. Emergency use is allowed.

BLM rangers will monitor motorized uses within the AFO to the maximum extent possible to ensure that use is restricted to designated areas. Within the PRMP the terms ‘Semi-primitive motorized’, and ‘Semi-primitive Non-motorized’ were used to describe ROS classes for a specific area. The term ‘Backcountry’ has not been used in this PRMP. We feel that the ROS definitions stand alone and adequately describe the motorized or non-motorized areas.

Comment Number: #6-7

Comment: Emphasize protection of roadless areas from road incursions

Response: We agree with the importance of protecting roadless areas from further incursions, and believe that our proposed management actions will provide such protection. Maps would be prepared for all areas with assigned OHV designations. ‘Closed’ routes would be posted according to management protocol. See Section 2.16.1.5 for additional protection measures proposed for roadless areas.

Comment Numbers: #14-128, #23-4

Comment: Support Alturas preferred alternative proposal to develop several new non-motorized trails as described on page 2-118 and 2-119 and request it be codified in final. Build new non-motorized trails.

Response: Thank you for your support of the preferred alternative regarding the development of new non-motorized trails. This proposal has been carried through to the PRMP; it includes the construction of more than 66 miles of new trails (including trail conversion on a 40-mile stretch of the abandoned Modoc Line railbed). See Section 2.16.2 of PRMP/FEIS for additional detail on proposed projects.

Comment Numbers: #16-12, #24-6

Comment: Concerned over possibilities of designating as scenic byways U.S. 395 (Alturas to NV state line), CA 139 (Canby to Susanville), and CA 299 (Adin to Redding). Similar existing designations have caused problems with proposals for development. Expand the discussion of Scenic Byway designation to more fully recognize County, Private, and Other Agency cooperation and working agreements to develop and manage this valuable resource activity. Designation and connection of Emigrant Trails Scenic Byway and State Highway 299 with the Volcanic Scenic Byway along State Route 89 is the highest priority.

Response: The Scenic Byway program assists the local communities and economies with low impact rural tourism. Northeastern California is the last area of the state to have byways linked to the rest of the state byway network for enhancement of economies through rural tourism. A representative from the Modoc County Board of Supervisors sits on the Modoc County Scenic byway committee and has been active in decisions affecting Modoc County. The Modoc National Forest has indicated their highest priority in Scenic Byway planning is connecting the Volcanic National Scenic Byway along State Route 89 to the Emigrant Trails Scenic Byway via State Route 299, which corresponds to one of the BLM preferred alternatives. The preferred alternative identifies three segments of proposed Scenic Byways which will require close coordination and planning with state, county, private, and other federal entities for designation and inclusion into the national scenic byway system. During the designation process, all agencies and individuals will have ample time for comments and discussion regarding the type of national scenic byway, uses of that byway, and impacts of proposed projects. See Chapter 2.13 for this information.

Comment Number: #20-5

Comment: Vehicle travel management provisions for off-road vehicle use is requested to be amended in all three RMPs to be consistent with the Alturas RMP to allow for motorized retrieval of harvested big game when authorized by state permitted tag as well as other permitted activities.

Response: Thank you for support of the Alturas RMP.

Comment Number: #25-2

Comment: Request additional information regarding monitoring for compliance with the Northeast California Resource Advisory Council Recommended OHV Management Guidelines – how compliance with guidelines (specifically Guidelines 2 and 4) will be determined and details of associated monitoring, including a timeline.

Response: BLM AFO law enforcement (as well as other staff) regularly monitor and conduct ongoing assessments of selected areas within the planning area for compliance with the OHV guidelines. For example, BLM checks key routes for seasonal conditions, closures and re-openings, and address site-specific problems as concerns are identified. New OHV regulations will reduce degradation to ecological status, archaeological sites, wildlife habitat, and a myriad of other resource concerns by limiting OHVs to existing or designated roads and trails.

Comment Number: #27-2

Comment: Regarding OHV management areas, still a need for longer trail opportunities. Need to plan for future to provide for growing need.

Response: The PRMP-FEIS currently identifies the following areas specifically for recreational driving: the Cinder Cone OHV Management Area (near Cassel), the Fall River Trail (near Fall River Mills), and the Barnes Grade/Crowder Flat OHV Management Area (near Alturas). We believe that this provides sufficient opportunity for current uses and have not expanded the preferred alternative to new areas at this time. However, we remain open to suggestions for possible areas for future use.

Comment Number: #30-11

Comment: Concerned about number of activities allowing motor vehicles to go off designated roads and trails, and would like to see exceptions more tightly controlled.

Response: Chapter 2.16.1.5 has been revised to address control measures available for the permitted off-road activities.

Comment Number: #30-12, #30-13

Comment: Encourage BLM to close and eliminate duplicate or parallel roads to greatest extent possible and restore closed roads to native habitat appropriate to site, to greatest extent possible.

Response: BLM agrees and believes that our preferred alternative is consistent with this approach. Also see Appendix C (Northeast California Resource Advisory Council Recommended Off-Highway-Vehicle Management Guidelines).

Comment Number: #30-77

Comment: Recommend establishing adaptive management procedures to authorized and unauthorized OHV use to allow effective and timely resource management changes when necessary.

Response: We believe that our proposed action includes management actions consistent with an adaptive management approach where changes in OHV use would occur in those areas problems were identified (including habitat degradation, use in closed areas, route proliferation).

Comment Number: #34-5

Comment: Third bullet under Travel Management in Executive Summary is poorly worded. Currently states that “Travel on Nelson Corral Reservoir Road would be expanded”, but limits on use would actually be expanded.

Response: Thank you for pointing out the confusion regarding this sentence. It has been clarified to read “Travel restrictions on Nelson Corral Reservoir Road would be expanded.” This is consistent with Section 2.15.1, which states that OHV restrictions on the Nelson Corral Reservoir Road would be “limited to existing routes” on a year-round basis (the current route limitation applies for six weeks only).

18.0 Utilities, Telecommunications, and Transportation

Comment Number: #1-4

Comment: Prohibit utility construction in all primitive and non-motorized management areas.

Response: As stated in Section 2.7.6.4, new utility corridors, pipelines or electrical transmission lines, or communication sites would not be permitted in any designated ACEC, WSA, or in the (proposed) Lower Pit River WSR corridor (excluded areas total 67,660 acres). To designate additional exclusion areas would unnecessarily limit BLM's ability to support various multiple uses of the public land. All proposed utility projects would undergo additional site-specific NEPA analysis, which would need to be consistent with ROS and travel objectives as outlined in this PRMP.

Comment Number: #15-12

Comment: Future overhead lines and towers should be sited along existing power lines to avoid potential impacts to sage grouse habitat. No new ROW would be established outside of existing corridors.

Response: We agree with this approach and have included a management action under the proposed action that, wherever feasible, new development would use existing utility corridors and communication sites. However, we also acknowledge the Department of Energy's ongoing study to identify a new east-west corridor route and are serving as a cooperating agency for preparation of a *West-wide Energy Corridor Programmatic EIS* (PEIS). The Draft PEIS is scheduled to be issued in winter 2007. As such, BLM will work with other agencies in designating appropriate energy corridors on Federal lands in 11 Western States, perform any environmental reviews required to complete corridor designation, and incorporate designated corridors into relevant agency land use plans. The *Preliminary Draft Map of Potential Energy Corridors on Federal Lands* (a document prepared in support of that PEIS) depicts an east-west transmission corridor between northern California and northern Nevada, which will potentially be routed through the AFO area. Section 2.7.6.4 of this PRMP has been revised to address the need for an east-west corridor transmission route.

Comment Number: #15-13

Comment: BLM should reconsider expanding pipeline corridor widths to a maximum of 250 feet.

Response: We believe that expansion corridor expansion of up to a 500 foot width, where feasible, provides an optimal balance between assuring maximum transmission reliability, congestion, and enhanced delivery capabilities, while minimizing impacts to sensitive resources and minimizing the amount of land to be withdrawn from other important public uses. In general, we believe that expansion of an existing corridor to accommodate new utility lines is preferable to constructing new lines in another location, with respect to the potential for environmental impact.

Comment Number: #15-14

Comment: Previously designated utility corridors that have not been built should not be used where placement of new lines adjacent to existing lines can fulfill need.

Response: We agree with this approach and have included a management action under the proposed action that, wherever feasible, new development would use existing utility corridors and communication sites. In addition, we are expanding existing pipeline and electrical transmission corridors to a width of up to 500 feet, offering further opportunity for development along the same corridor route.

Comment Number: #20-10

Comment: RMPs should be updated in light of the National Energy Act proposed Trans-Sierra Route alternatives and recognize that such energy transmission corridors and related facilities siting be coordinated and consistent with DOE together with policies and programs of Lassen County and Lassen Municipal Utility District.

Response: As indicated in Section 2.7.6.4, BLM is aware of the ongoing study to identify east-west corridor routes and is a cooperating agency for preparation of a *West-wide Energy Corridor Programmatic EIS* (PEIS). The Draft PEIS is scheduled to be issued in winter 2007. As such, BLM will work with other agencies in designating appropriate energy corridors on Federal lands in 11 western states, perform any environmental reviews required to complete corridor designation, and incorporate designated corridors into relevant agency land use plans.

Comment Number: #29-35

Comment: Encourages development of energy/utility corridors to develop additional domestic sources of energy.

Response: We will work with the appropriate agencies in the development of new energy / utility corridors as they are identified. BLM will complete the necessary site-specific environmental reviews necessary to identify and evaluate proposed routes, such as for the east-west corridor transmission route. Section 2.7.6.4 of this PRMP has been revised to address the need for an east-west corridor transmission route.

19.0 Vegetation

This section is divided into the following subsections:

- 19.1 – Special Status Plants
- 19.2 – Riparian - Wetlands Associations
- 19.3 – Noxious Weeds
- 19.4 – Seeding / Grass Banks
- 19.5 – Fire Use and Prescribed Fire
- 19.6 – Juniper
- 19.7 – Sagebrush
- 19.8 – Wheatgrass / Cheatgrass
- 19.9 – Livestock Grazing / Rest

19.1 Special Status Plants

Comment Number: #6-8

Comment: Fully protect all rare, federally listed, and state-listed T&E species.

Response: This is one of BLM's responsibilities by law and is included as a goal and objective of the PRMP. It is also consistent with the proposed management actions under our preferred alternative.

Comment Number: #30-16

Comment: BLM should pay special attention to management of *Orcuttia tenuis* and *Potentilla basaltica* and coordinate with Service and adjacent landowners in managing for their recovery.

Response: BLM pays special attention to the management of these two species. There is a joint Lassen National Forest and BLM plan for *Orcuttia tenuis* (habitat management plan). Management/monitoring plans for the candidate species *Potentilla basaltica* is discussed in Section 2.19 in the PRMP. The Draft RMP/EIS discusses slender Orcutt grass in Sec 2.18.5.5. The scientific name has been added to the text. Discussion has also been added to the Proposed Management Actions concerning grazing studies and coordination with the FWS on slender Orcutt grass.

19.2 Riparian-Wetlands Associations

Comment Number: #6-6

Comment: Prioritize protection of streams and riparian areas to protect biodiversity (chemical use, livestock, allotments, roads)

Response: BLM has a priority process that focuses management efforts on riparian sites, with an emphasis on recovering those sites assessed as 'Functioning at Risk' with either a static or downward trend (see Section 2.17.3). These sites are the highest management priority because, without management, these riparian resources are expected to decline. The preferred alternative emphasizes inventory, recovery, and establishing desired future condition and proper functioning condition on most riparian sites by using the measures listed in Section 2.17.3, including controlled livestock grazing; BLM has several riparian grazing exclosures. The preferred alternative allows for integrated weed management (see Section 2.17) under which, if herbicide use is indicated, protection measures include buffers and adherence to strict guidelines within riparian/wetland sites. In addition, roads adjacent to these sites will be re-routing, eliminated, or rehabilitated, if found to be causing adverse impacts to a riparian/wetland site.

Comment Number: #18-13

Comment: DEIS fails to disclose the condition of riparian areas in the project area. This is especially disturbing given the fact that the DEIS notes many streams in the planning area fail to meet water quality standards and objectives. This lack of disclosure is even more upsetting when considered in light of the direct and indirect impacts known to occur to these habitat types from livestock grazing. How many streams and riparian areas are in Properly Functioning Condition? How will the proposed management direction contained in the RMP affect those conditions?

Response: The proposed management actions in Chapter 2.17.3 include completing an assessment of riparian areas. Proposed management actions include conducting PFC assessments, as well as Ecological Site Inventories.

19.3 Noxious Weeds

Comment Number: #6-25

Comment: Reduce herbicide/toxic chemical use to zero over time, avoid specific herbicides, avoid aerial and boom application near water. In general, prioritize prevention of invasive plants. Don't use toxic pesticides, lethal gas, napalm equivalents, strychnine bait. Stop using federal animal damage control (APHIS). Make sure any biocontrols have been fully tested against representative native plants.

Response: BLM is committed to implementing an IWM approach that includes chemical use, as well as prevention, along with mechanical, manual, and biological controls. All control actions, including herbicide application, would be conducted under the guidelines specified in the legislative, regulatory, and policy direction documents listed in Section 2.17.6. At this time we have no scheduled reduction of herbicides. The AFO evaluates all weed infestations each year to determine if integrated pest management elements are providing expected results. All projects integrate the AFO Prevention Schedule in Appendix F of Volume 2. This document provides information that addresses the prevention program.

Of the chemicals addressed by your letter: Herbicides that are included in the CA Vegetation Management EIS (August 1988) and the Integrated Weed Management Program EA (Number CA350-04-01, BLM Alturas, Eagle Lake and Surprise Field Offices) include 2, 4-D, dicamba, chlorsulfuron, sulfometuron methyl, and triclopyr. Herbicides that are registered in CA but not included in the AFO EA at this time are imazapyr and diuron. Herbicides that are not registered in CA are picloram and metsulfuron methyl.

There would be no reason to use any of the following chemicals, nor are they addressed in any of our environmental documents: lethal gas, napalm equivalents or strychnine bate.

Three Federal statutes, the Plant Quarantine Act of 1912, the Federal Plant Pest Act of 1957, and the Federal Noxious Weed Act of 1994, provide authority for the Animal and Plant Health Inspection Service (APHIS) to regulate the movement of live plant pests into and through the United States. The U.S. Department of Agriculture and the California Department of Food and Agriculture are also required to comply with the regulations of other federal agencies. APHIS carefully weighs risk against expected benefits before making decisions to issue permits. All permits for biocontrol agents are held by our cooperator the California Department of Food and Agriculture, Plant Health and Pest Prevention Services, Integrated Pest Control Branch, Biological Control Branch, Biological Control Program.

Comment Number: #34-7, #34-8

Comment: Set up trial plots with natural chemicals to control noxious weeds. BLM should not use aerial herbicide treatments in riparian areas.

Response: Control methods for noxious weeds are determined on a programmatic basis; see response to previous comment. Aerial herbicide treatments are not used in riparian areas. The use of herbicides near water will be based on the buffer requirements established in the BLM Chemical Pest Control Manual, Handbook H-9011-1; distance from water (in horizontal feet) will be as follows: 10 ft--backpack, 25 ft--vehicle-mounted sprayer of granulars, 50 ft--vehicle-mounted sprayer of liquids, 100 ft--aerial, and only after consultation with a BLM Watershed Specialist and Field Office Staff (California ROD/FEIS; BLM Handbook H-9011 page II-24).

Some weeds – Canada thistle, tall whitetop, purple loosestrife—grow in or at the edge of water. In these cases only the Rodeo™ formulation of glyphosate would be used, as it is approved for use over water in California. Other herbicides will be applied to within 10' of waters edge at livestock reservoirs, non-sensitive waters and riparian areas by backpack type sprayers and vehicle mounted handguns for spot treatments only. Herbicides may be wiped on individual plants or squirt on cut stumps above the current water line. Granular formulations will be applied with broadcast spreaders within 3.5 feet above ground and no closer than 10 feet from the high water line of streams and other water bodies.

19.4 Seeding / Grass Banks

Comment Number: #6-9

Comment: Give preference to native species over non-native species.

Response: As stated in Section 2.17.6, proposed management actions under the preferred alternative include the use of locally gathered, native seed for all seeding or re-seeding projects whenever possible. The precise mixture would be determined on a site-specific basis in accordance with existing BLM policy (California Native Seed Policy). It would consider the probability of success, risks associated with failure, and other factors. However, if local native seed is not available or cannot be gathered in time, non-local native seed may be used, with the approval of BLM's state director.

Comment Numbers: #7-4, #16-7

Comment: Consider formation of a regional seed bank rather than local to make sure sufficient native seed supplies are available to reseed burned areas.

Response: We agree that regional native seed banks would be very useful for re-seeding efforts and would create a locally-gathered native seed cache to facilitate seeding projects. We will also continue efforts to identify other existing banks in the region; we are currently aware of regional seed banks in Boise, ID (the BLM National Seed Warehouse) and Bend, OR. In general, locally gathered, native seed or plants will usually be used for seeding and planting areas burned by wild or prescribed fire, juniper treatment areas, and other disturbed areas. However, non-local native seed may be used when local seed is unavailable. For some uses, under certain circumstances, non-native seed or plants may also be employed.

Comment Numbers: #7-5, #16-8, #29-16, #30-20

Comment: Develop pre-fire agreements to use certain non-native seed if sufficient native seed not available. Reject adoption of BLM policies regarding use of native plant materials in California when seeking to rehabilitate wild or prescribed burn areas or augment forage resources of an area, since cost or unavailability of native seed might allow noxious weeds or other undesirable plants to obtain a stronghold there instead. Rehabilitate juniper treatment areas, wildfire areas, and other disturbed areas with native and, only if absolutely necessary, non-native seed and plantings.

Response: As described in Section 2.17.2, seeding for emergency stabilization and rehabilitation following wildfires, rangeland improvement projects, and efforts to enhance livestock forage would be conducted with a suitable mixture of seed from locally evolved native forbs and grasses and desirable non-local and introduced species. The precise mixture would be determined on a site-specific basis in accordance with existing BLM policy (California Native Seed Policy). It would consider the probability of success, risks associated with failure, and other considerations. In general, locally gathered, native seed or plants will usually be used for seeding and planting areas burned by wild or prescribed fire, juniper treatment areas, and other disturbed areas. However, non-local native seed may be used when local seed is unavailable. For some uses, under certain circumstances, non-native seed or plants may also be employed. The use of non-native seed would be determined on a case-by-case and site-specific basis in accordance with existing BLM policy (see Section 2.17.2).

19.5 Fire Use and Prescribed Fire

Comment Number: #18-31

Comment: Extreme care should be exercised when planning use of prescribed fire or other vegetation treatments in sagebrush communities in planning area. The EIS should disclose areas where the future use of prescribed fire is proposed, how noxious weeds, livestock grazing, soils, vegetation, wildlife, and other resources will be affected by such management. One study recommends that sagebrush within 1.9 miles of a lek not be burned in order to protect nesting habitat. Fire on the nesting grounds is not recommended in any season if nesting habitat is limited.

Response: In general, we agree with this comment and currently do, and will continue to, exercise extreme care in planning use of prescribed fire or other vegetation treatments in sagebrush communities. Our management strategy is consistent with the protection of lek nesting habitat, as identified in the Buffalo-Skedaddle Conservation Strategy for Sage-Grouse, 2006. Potential impacts from prescribed fire and other vegetation treatments on environmental resources in the planning area are addressed in Chapter 4 of the PRMP. In addition, a separate NEPA analysis would be conducted prior to the use of any prescribed fire to evaluate and minimize site-specific impacts to vegetation communities in the AFO planning area.

Comment Number: #21-15

Comment: Fire (natural and prescribed) should be reintroduced only after livestock have been removed from area for sufficient period of time to allow for recovery of native vegetation and regeneration of soils.

Response: Most of the areas proposed for treatment with prescribed fire are within the sagebrush steppe ecosystem encroached by western juniper. Where additional fine fuels are needed to carry a prescribed fire, additional rest from livestock grazing would be implemented before use of fire management.

Comment Number: #21-16

Comment: Fire – both natural and prescribed – should be used to control western juniper once landscape is demonstrated to be capable of handling the disturbance. Where inadequate ground cover exists to carry fire sufficient to ignite the larger trees, those trees should be individually ignited. Prescribed fires should be small to avoid negative effects to greater sage-grouse.

Response: Under the proposed action, fire management would have a range of appropriate tools available for use in control of western juniper encroachment sagebrush ecosystems. An appropriate management response would be determined for every wildland fire. Specific treatments for each planned area to be burned are designed carefully, considering an array of site specific factors, including the ability of the fire to carry between vegetation types.

Comment Number: #21-17

Comment: Use of mechanical methods to treat western juniper are less effective over large tracts and fail to provide many ecological benefits of fire. Fire is preferable method.

Response: We acknowledge the important role of fire in juniper management, and are using this method currently in areas we believe are most appropriate. Our final selection of treatment methodology will depend upon a number of site-specific factors, including the vegetation type, and associated risks to sensitive resources or high-risk communities.

Comment Number: #15-9, #21-21

Comment: Aspen can be enhanced by judicious use of mechanical treatment (e.g., removal of encroaching juniper) and prescribed fire (if not too hot). Burning is preferable to mechanical treatments to restore quaking aspen.

Response: We appreciate commenter's preference but would continue to use AMR which could include a combination of treatments according to site-specific objectives (see Chapter 2.4.4). The NorCal Fire Management Plan would be used for fire management decision-making. The plan provides details at all activity levels for wildland fire management response and provides a variety of suppression options. It also identifies conditions and potential locations for wildland fire use, prescribed fire, and other fuel reduction treatment options. BLM would continue to implement cutting and burning, as appropriate, in aspen stands with conifer encroachment – separately or in combination – to create early succession conditions. Both methods along with other methods proposed, as described in Section 2.17.4, are beneficial because they promote “suckering” and create diverse, multi-aged stands. The Draft RMP says aspen stands would be treated using mechanical, chemical, and prescribed fire. However, manual treatments and methods are one of the primary tools for removing western juniper, white fir, and pine from quaking aspen stands. Methods include cutting by hand (chain saws) and use of heavy equipment which includes bull dozers. We have and will continue to use chain saws to remove conifers from aspen stands. Section 2.14.4.4 of the PRMP has been revised to reflect these changes.

19.6 Juniper

Comment Number: #6-14, #21-20

Comment: Juniper reduction should leave old growth juniper stands and also leave patches for wildlife use. Old growth western juniper must be protected. Support designation of ACECs to protect old growth juniper.

Response: Protection of old growth juniper stands is consistent with our management approach under the proposed action and we have proposed, as commenter notes, an Old Growth Juniper ACEC. We intend to protect old growth stands and would design vegetation treatments to maintain and enhance old-growth stands, as indicated in Section 2.17.2.

Comment Number: #15-10, #30-22

Comment: Supports BLM AFO on the removal of invasive western juniper, provides recommendations for removal decisions/methods. Post-juniper removal project land uses need to be evaluated for impact of livestock grazing on subsequent revegetation. Juniper cutting and burning activities should be closely evaluated on a site-by-site basis – would enable BLM to prioritize mechanical removal and burns on areas likely to respond favorably. Commenter references work done by Eastern Oregon Agricultural Research Center as valuable asset to help BLM in this area.

Response: Thank you for your comment and recommendations for removal decisions and methods. The proposed management actions include a combination of appropriate treatments based on site-specific conditions. Under the Preferred Alternative, additional treatments would be implemented in accordance with the “Restoration of the Sagebrush Steppe and Associated Ecosystems in Northeast California and Northwest Nevada through Improved Management of Western Juniper and Other Natural Resource (“Sagebrush EIS), which is currently in preparation. The AFO has worked closely with research scientists from the Eastern Oregon Agricultural Research Center and has obtained input from them in juniper ecology and juniper management since 1994. The AFO has made available to the Eastern Oregon Agricultural Research Center sites to establish research study sites and will continue to do so.

Comment Number: #18-6

Comment: Fails to provide scientific data indicating that native vegetation such as juniper is harmful to ecosystem processes and and/or wildlife and has failed to establish a need for the extensive juniper eradication proposed. Instead of protecting resources, seems to be encouraging more degradation and increased forage for domestic livestock

Response: Discussions relating to the ecological conditions of juniper woodland communities (distribution, density and encroachment into sagebrush steppe communities) are based on studies by Miller et al., as discussed in Chapter 3.16 of the PRMP. These studies indicate that sage-grouse habitat can be reduced due to encroachment by juniper. In addition, the habitat evaluation process used in the Sage-Grouse Conservation Strategy shows that up to 65% of sagebrush habitats within the AFO have been degraded due to the encroachment of western juniper.

Comment Number: #21-13

Comment: Before western juniper treatments occur on public lands, need to determine if goal is ecosystem restoration or production of forage for domestic livestock – only the former is ecologically sustainable.

Response: Ecosystem restoration is our main goal, as stated in Chapter 2. BLM's vegetation goal, as described in Section 2.17, is that vegetation would achieve and maintain its capacity to support natural function and biotic integrity within the context of normal variability. Under 43 CFR 4180, BLM is required to apply our standards for land health and to ensure that vegetation meets, or makes significant progress toward meeting, the standards for land health – including biotic integrity and associated standards – while simultaneously supporting “appropriate uses” of the land. Appropriate uses, as determined under NEPA, would include those that do not adversely affect conservation of terrestrial vegetation or would not compromise healthy lands, restoration of lands that are healthy but lacking key attributes, or protection of at-risk or restoration of unhealthy lands. While grazing by livestock and wild horses would continue under the preferred alternative, they would be controlled through a variety of site-specific measures to improve land health; see proposed management actions in Section 2.17.6.

Comment Number: #30-17

Comment: Service would like to make sure temporary roads for juniper treatment are closed and re-vegetated as described in roads section.

Response: Ninety percent of the new roads are temporary (50 miles) and would be closed and rehabilitated after use.

Comment Number: #30-18

Comment: Focus habitat improvement on reducing invasive western juniper to promote shrub health and provide a diversity of age classes in stands of aspen, oak, mountain shrubs, sagebrush steppe, bitterbrush, and mountain mahogany.

Response: This is consistent with our approach in the PRMP, as described in Chapter 2.17.

Comment Number: #30-19

Comment: Use combination of treatments, including prescribed fire, to achieve desired forage/cover ratios and canopy cover.

Response: This is consistent with our approach in the PRMP, as described in Chapter 2.17.

Comment Number: #30-21

Comment: Closely monitor effects of landscape-level juniper removal on habitats and populations of special status species and sagebrush-associated species. Look for habitat and population trends to be used in strategic planning for management of sagebrush obligate species.

Response: Our proposed action is consistent with this approach, as described in Chapter 2.21 on Wildlife and Fisheries (see, for example, discussions of sage grouse and pygmy rabbit).

Comment Number: #20-17, #20-18, #21-14, #21-18, #34-6

Comment: Supports simple straight-forward policy that clearly demonstrates an active and aggressive approach to controlling juniper invasion and does not include unnecessary limits on juniper removal. If quantitative targets are needed in RMP, ensure that they are consistent among sections. For rangeland, commenter prefers that proposed action state that juniper be removed instead of reduced. BLM should use most cost effective means of juniper control to maximize acres treated. New invasions where trees are still small and shrub and herbaceous plant community is still intact should be high priority for treatment. The solution to western juniper encroachment is reintroduction of fire and elimination of livestock grazing on sagebrush steppe. Concern that juniper management may lead to increased noxious weeds: any western juniper treatment and subsequent management must consider potential to exacerbate and take measures to minimize spread of invasive, non-native species. In some cases, treatment of individual juniper trees is preferable to large ground fire to prevent weed invasion onto treatment site (e.g., cheatgrass).

Response: We believe that our proposed management actions/restoration treatments for sagebrush-steppe communities thoughtfully and sufficiently address encroachment of these communities by western juniper as well as impacts from grazing. Juniper removal, where we believe it is required, would be conducted in an environmentally sensitive manner. Chapter 2.17 identifies a variety of treatment options and the conditions under which each method would be considered and selected. It also identifies the areas and range of acreages that would be targeted under the preferred alternative. Many of the areas targeted for juniper removal are those which still contain many smaller trees that are easily removed by prescribed fire. All restoration treatments would include measures to minimize the introduction or spread of noxious or invasive species. Weed prevention measures will be incorporated into all project proposals that involve manipulation of vegetation.

We will be removing juniper trees but will also be reducing juniper density. We will not be removing all the junipers and in any one site proposed for treatment; we will be removing a certain percentage of the target stand. Table 2.17.1 lists the proposed amount of acres to be treated each year.

Comment Number: #21-12

Comment: Sagebrush Sea Campaign has produced a position paper presenting an ecologically based program for removing expansion western juniper from sagebrush steppe (enclosed copy); offers several points of comparison between it and RMP (also considering Braun's "Blueprint"). First point is that historic and current livestock grazing (not just "overgrazing") contribute to conditions that favor juniper encroachment.

Response: Thank you for your comment. BLM realizes that there is much research regarding contributing factors to the encroachment of western juniper into sagebrush ecosystems. We appreciate the opportunity to review and consider additional guidelines in the development of management actions for sagebrush ecosystems and sage-grouse populations in the AFO planning area; we agree it is part of the updated standards and guidelines science. BLM staff make every effort to stay current with the various management strategies and prescriptions being implemented today, especially the more successful ones. We will consider adopting in the future some of the actions identified in the Blueprint that are appropriate for the AFO planning area. However, because we already have a Conservation Strategy for Sage-Grouse that is specific to our planning area, and therefore directly applicable to the existing sage-grouse population and sagebrush ecosystem conditions and concerns facing us, we are adopting guidelines from BLM's own Conservation Strategy for Sage-Grouse as our management protection measures under the proposed action (see Section 2.25.5 of the PRMP). We will continue to consider additional guidance, as appropriate and available, as we implement measures to bring us closer to full restoration, protection, and enhancement of this important species and its habitat.

Comment Number: #21-19

Comment: Commercial use of western juniper should not be allowed without assurance it will not exceed supply of encroachment juniper that is targeted for removal from landscape.

Response: BLM will manage native juniper woodlands in a manner designed to maintain them in a healthy condition (see Chapter 2.17 Vegetation). Treatments to remove western juniper that has encroached into sagebrush steppe ecosystems will occur, also outlined in Chapter 2.17. The main objective of these treatments is to restore sagebrush ecosystems to a healthy condition. The harvested trees or biomass may be used for commercial purposes, depending on the site-specific plan and environmental analysis of the site to be treated.

Comment Number: #21-23

Comment: Recommends that BLM develop a programmatic juniper management plan and EIS to help guide development of plans (in multiple western states), identify best management practices, and avoid duplication of effort.

Response: BLM believes that management of invasive juniper is best accomplished through decisions made at the field-office level, in consideration of all local factors. However, management would be accomplished in accordance with the requirements of appropriate programmatic documents and policies, including EISs for *Vegetation Treatment in 13 Western States* and the *Draft Sagebrush Steppe and Associated Ecosystem Restoration through Improved Resource and Western Juniper Management in Northeast California and Northwest Nevada (in progress)*.

19.7 Sagebrush

Comment Number: #18-25

Comment: DEIS claims livestock grazing is major influence on sagebrush and riparian habitat and discusses how livestock grazing impacts to wildlife will be minimized. However, it does not discuss expected impacts to sagebrush communities or the species that rely on them from these management activities, nor does it provide scale on which they will occur. To what type of vegetation does this statement refer? Exactly how will sagebrush communities be manipulated and to what extent? What are the expected impacts from treatment of these communities?

Response: Impacts from livestock grazing on sagebrush and riparian communities, as well as those associated with wildlife habitats are discussed in Chapters 4.19 Vegetation, and the revised Chapter 4.25 Wildlife and Fisheries.

Comment Number: #18-26

Comment: BLM has failed to disclose manipulation of activities and impacts that will occur to sagebrush communities. DEIS fails to disclose any of the threats that domestic livestock pose to these threatened communities. Big sagebrush canopy cover values on undisturbed relicts and kipukas does not support assertion by BLM that big sagebrush canopy cover increases due to livestock grazing. Studies indicate opposite. BLM should analyze impacts of long-term active management and its impacts on sagebrush communities to recover naturally.

Response: Impacts from livestock grazing on sagebrush and riparian communities, as well as those associated with wildlife habitats, are discussed in Chapters 4.16 Vegetation, and Chapter 4.22 Wildlife and Fisheries. BLM is not aware that any kipukas exist within the AFO management area.

19.8 Wheatgrass / Cheatgrass

Comment Number: #18-12

Comment: The DEIS fails to disclose how habitat conditions, and thus wildlife populations, have changed due to conversion of native vegetation to crested wheatgrass or other non-native species. How has such conversion influenced habitat? What are the impacts?

Response: Crested wheatgrass encompasses a very small acreage within the AFO management area; however, Chapter 4.24 has been expanded to address wildlife impacts from conversion to annuals and medusahead.

Comment Number: #21-6

Comment: Why is cheatgrass not included on list and map of noxious weeds?

Response: Noxious weeds are so designated by State or Federal regulation, with attendant restrictions on movement and control requirements. Cheatgrass is an invasive plant species, but is not listed as a noxious weed by CA, NV, or the Federal government.

Comment Number: #21-7

Comment: There is a misleading statement in the RMP that persistence of exotic annual grasses (primarily medusa-head and cheatgrass) is expected to continue, regardless of whether livestock grazing occurs. Scientific literature is clear that livestock grazing exacerbates the spread of weeds, so it follows that exotic annual grasses will never be controlled as long as grazing continues.

Response: As stated in Section 3.16.2, this persistence is attributable primarily to the ability of annual plants to produce seed every year, store many years of seed in surface litter and soil, and germinate earlier than the remaining perennial plants. The statement only indicates that the problem will persist, even if grazing were to be discontinued.

Literature infers that medusahead increases in the absence of livestock grazing (Wagner, J., R. Delmas, J. Young, 2001). Wagner, et al. (2001), further states that livestock exclusion for 30 years did not prevent the invasion of medusahead. Dr. Young predicted that medusahead would expand its range in the Big Valley area of Adin, CA, regardless of livestock grazing; the prediction was true. Once established medusahead is not sought after by livestock and this concentrates herbivory on other native species. This does imply that grazing influences the spread of this noxious weed (Young, 1992). However, the ability of medusahead to invade Vertisols (Blank, et. al. 1992; Young, et. al. 1999) the large production of seeds and the large buildup of thatch in plant communities not prone to short fire return intervals (such as low sagebrush) results in further spread of medusahead, especially as it relates to decreased fire return intervals and accepted concepts in state transition models of plant community change.

It is affirmed that livestock grazing exacerbates expansion of noxious weeds, but the literature also states that other disturbances, such as wildfire, global trading, escape from rights-of-way, and the mere competitive ability of noxious plant species will result in the spread of noxious weeds (Fremontia, Vol.26, No 4, 1998; Young, Clements, and Nader, 1999; Brooks & Pyke, 2001; McPherson, 2001).

Ungrazed medusahead can produce as much as 2,500 pounds per acre (residual dry matter monitoring by AFO staff). Once medusahead cures, it is un-utilized by livestock because of the high silica content and the sharp awns of the caryopses. Portions of the Likely Tablelands have between 4 and 6 million medusahead seeds per acre (Blank, personal comm., 1995). Medusahead's affinity for churning clays (Vertisols), the high seed production, the ability to compete with native perennial grasses, and the alteration of the normal fire regime (shortening of the fire return interval) in previously Wyoming sagebrush and low sagebrush dominated communities, is causing an expansion of medusahead within the AFO. Wildfires on rangelands infested with medusahead, which do and will occur with or without livestock grazing, will continue to push those plant communities 'At Risk' to communities dominated by medusahead.

19.9 Livestock Grazing / Rest**Comment Number: #18-14**

Comment: Grazing affects species composition of plant communities in two ways: active selection by herbivores for or against specific plant taxon; and different vulnerability of plant taxa to grazing. Decreases of density of native plant species and diversity of native plant communities as a result of livestock grazing activity has been observed in variety of western ecosystems.

Response: Thank you for your comment. The impacts of grazing are addressed in Chapter 4.16 Vegetation of the PRMP.

Comment Number: #18-21

Comment: The DEIS fails to disclose any impacts that have resulted from already existing range improvements and impacts that will result from constructing even more (cites examples of impacts to vegetation and soils).

Response: Impacts from existing range improvement projects, whether beneficial, or adverse, are reflected in the current land health assessment ratings. Site-specific impacts from improvements are examined on an allotment basis, and are not included specifically in this PRMP. Range improvements, in general, are prioritized for the distribution of livestock, such as to keep them out of certain areas. However, all improvements are monitored to ensure that they are improving resource conditions, as intended. Chapter 4 examines impacts from range improvements in general on vegetation, soils, and other resources. Chapter 4 states that livestock exclosures would have beneficial effects on riparian areas and temporary adverse effects on vegetation communities during construction, and that water developments would have minor and short-term effects during construction and cattle use. All range improvement projects must go through a site-specific environmental analysis prior to implementation.

Comment Number: #21-8

Comment: What are intensive grazing management techniques that can slow or reduce spread of annuals, as stated on page 3-81 of Draft RMP EIS?

Response: Section 2.17 addresses the treatment options for slowing or reducing the spread of annuals: tightly controlled livestock grazing, prescribed fire, and seeding of native plants—coupled with full suppression of high-intensity wildfires—can slow, and in some cases reverse, type-conversion to exotic annual grasslands. Grazing management techniques would include short duration, high intensity grazing. This would be accomplished with the construction of small pastures, viable livestock watering facilities, and close monitoring by BLM staff; this has been added to Chapter 3.

Comment Number: #21-22

Comment: Livestock grazing should be excluded from treated areas for up to ten years following juniper treatment to ensure recovery of native vegetation and avoid rapid introduction of invasive weeds onto the site.

Response: Where livestock rest is necessary after juniper treatment, the appropriate amount of time for rest will be determined on a site-specific basis.

20.0 Visual Resources Management

Comment Number: #14-100

Comment: Manage all primitive areas as VRM Class I and SPNM zones as VRM Class.

Response: Most ROS “primitive” areas as listed in the preferred alternative, and shown in Map ROS-5, occur within WSAs. VRM Class I objectives apply for all WSAs in the AFO management area (56,648 acres, or 11% of the total AFO management area). Class I objectives supersede other underlying class objectives. However, if a WSA is removed from wilderness study by Congress and returned to multiple-use management, the area will revert to its underlying VRM class. The balance of VRM classes under the proposed action has been categorized according to BLM policy (See Section 2.20 for a description of the process that was followed to arrive at VRM classifications). The preferred alternative lists management of BLM lands according to the following VRM Classes:

Class I – 56,648 acres, (11% of the total AFO management area)
Class II – 157,177 acres (31% of the total AFO management area)
Class III – 104,006 acres (21% of the total AFO management area)
Class IV – 185,214 acres (37% of the total AFO management area)

Select mountain peaks such as McDonald Peak and Mt. Dome were classified as VRM Class II, and will be managed as such, to protect the unique visual resources associated with them. However, most of the higher peaks in the AFO, and unique geological or historical areas, were assigned ROS ratings of ‘Primitive’ to help preserve their unique resource values. The tops of mountain peaks generally are roadless and fall more into a ‘Primitive’ classification; whereas the lower portions have well defined roads and road systems.

BLM believes that the preferred alternative includes the most appropriate mix of management measures to adequately protect visual resources, while also considering the relative significance of the public land products, services, and use to local economies.

21.0 Water Resources

This section is divided into the following subsections:

21.1 – Water Quality
21.2 – Water Supply

21.1 Water Quality

Comment Number: #13-13

Comment: Water quality objectives (page 2-165): in addition to working with specific objectives from standards for rangeland health and guidelines, BLM should also work with local stakeholder groups concerned with watershed management (e.g., Pit River Watershed Alliance, resource conservation districts). This participation should be recognized.

Response: We agree that this participation should be recognized and appreciate your comment. BLM has been an active member of the local Pit River Watershed Alliance and participated in collecting and providing water quality and hydrologic data over multiple years for the Upper Pit River Watershed Assessment of 2005. BLM is also a participant in conservation efforts lead by the local River Center and Central Modoc Resource Conservation District. Information regarding these partnerships has been added to Section 2.21.

Comment Number: #30-23, #30-24, #31-1

Comment: Recommend BLM include restorative measures to improve water quality and make significant progress toward achieving state standards and needs of beneficial users of streams not currently in compliance. Restoring measures should emphasize natural recovery processes, livestock exclosures, planting of woody riparian vegetation and construction of instream structures. Streams, wetlands, and springs not meeting PFC or DFC should be improved to meet standards. Another 30 miles of streams are in need of treatment to improve either riparian hydrologic function or water quality. All program and activities having potential to degrade water quality should include BMPs as integral part of activity plans. No plans are outlined for BMP implementation or other corrective actions for 303(d)-listed waters, endangered species, or sensitive areas—wetland and riparian areas. For example, if a water body is 303(d)-listed for pathogens or nutrients, what is the formal process to verify the impairment and/or correct the problem?

Response: Restorative measures would include best management practices (BMPs) that would be prescribed and implemented based upon site-specific conditions and requirements; this would include BMPs for corrective actions for Section 303(d) listed waters, endangered species, and other sensitive-wetland and riparian areas. As specific plans are developed, such as allotment management plans (AMPs), they would incorporate suitable BMPs. Section 2.19 does list some important BMPs which are also identified here. Important BMPs would include protection of streams, wetlands, spring sources, and uplands from overgrazing by livestock through everything from improvements to current grazing practices through complete livestock exclusion where this is advisable. Specifically, the construction and maintenance of 500 acres of additional exclosures are proposed; these would include exclosures that overlap with exclosures protecting wildlife habitat and archaeological sites. Also, bio-engineering projects would include intensive planting of woody vegetation along stream banks plus other forms of (riparian) vegetation manipulation and stream bank stabilization structures – such as placing downed juniper for erosion control.

Currently proposed and additional restorative measures identified in the future would emphasize those areas identified by the commenter. BMPs are discussed in general terms, relative to water quality, in Section 2.19; however, specific BMPs would be prescribed and implemented based upon site-specific conditions and requirements, including BMPs for corrective actions for Section 303(d)-listed waters, endangered species, and other sensitive-wetland and riparian areas. BMPs will be monitored, evaluated, and modified as necessary through an iterative process to meet water quality criteria and other resource management objectives. The iterative process relating to water quality, for example, would likely include design of BMPs based on site-specific conditions, technical, economic, and institutional feasibility, and the water quality standards of those water potentially impaired; monitoring to ensure practices are correctly designed and applied; monitoring to determine effectiveness and appropriateness; and adjustment of BMPs if level or protection is not at desired level. The Water Quality Management Plan and Management Agency Agreement (MAA) that is currently being developed by the BLM California State Office and the California State Resources Control Board will provide a standard set of best management practices for water resources.

Regarding the miles of streams in need of treatment, we have revised Section 2.21 to clarify the total miles identified as the highest priority to fix / for increased management action. In summary, a total of 15 miles of streams, 22 acres of springs, and 46 acres of meadows are currently identified for increased management actions. Please refer to this revised discussion.

Comment Number: #31-2

Comment: Monitoring has shown that livestock, especially cattle, must be excluded from surface waters if fecal coliform standards are to be met. Suggests that exclusion fencing be utilized extensively around surface waters, and that off-stream watering facilities be developed, rather than allowing direct access.

Response: We agree with the importance of excluding livestock from surface waters for the protection of water quality and note that a significant number of areas within the AFO include fenced enclosures where appropriate; an additional 500 acres of enclosures are included in the preferred alternative in the PRMP. In addition, we use riparian pastures that have a reduced season of use. More fencing will continue to be installed if water quality assessments indicate a need to do so. Additional off-stream watering facilities are a useful protective measure, and may be developed as needed.

Comment Number: #31-3

Comment: Sheep require different management—location of the base camp is more important. Sensitive areas should be excluded from grazing by locating the base camps at least ¼ mile from these areas, and herding to avoid. Watering of sheep directly in surface waters is not as much of a problem as with cattle.

Response: BLM regulates trailing areas and there are permit provisions for no camping on watering holes. Currently, there are only two sheep allotments within the AFO. We will continue to monitor water quality and consider the implementation of additional measures, as needed and appropriate, should problems arise in the future or the numbers of sheep or allotments increase.

Comment Number: #31-5

Comment: What sort of monitoring program will be used to verify compliance with State water quality standards? No monitoring program, protocol, or concrete process for developing monitoring plans is given.

Response: Section 3.23.8 of the PRMP has been revised to include a discussion of water quality monitoring data that was collected over two years under a pre-RMP Monitoring Plan. This data included measurements for nutrients, temperature, and sediment. Continuation of the water quality program will be addressed in the Water Quality Management Plan and Management Agency Agreement (MAA) that is currently being developed by the BLM California State Office and the California State Resources Control Board. BLM regularly monitors for compliance with the state water quality standard, and we will adapt the monitoring plan as soon as the MAA is completed.

Comment Number: #31-6

Comment: A number of waters are listed as being in violation of State standards, yet no formal process is in place to notify the Regional Board when monitoring results show that standards have been violated. BLM relies primarily on the Water Quality Control Board to identify impaired waters or high probability of impaired water. However, if BLM is sampling these waters and Lahontan staff does not receive the data, how is Lahontan staff to determine if waters are impaired or not? There clearly needs to be a formal process for sharing of monitoring data. Perhaps could be addressed in Statewide MAA being developed by BLM and State Water Resources Control Board. Need to set up meeting and coordinate further on data collection and sharing.

Response: We shared the Pit River watershed assessment with the California State Region 5 RWQCB in 2005, and will continue to share data on pertinent streams with the RWQCB. The issue of a formal process to verify the impairment and / or correct the problem will be addressed in the MAA that is currently being developed by the BLM California State Office and the California State Resources Control Board.

21.2 Water Supply

Comment Number: #6-24

Comment: Prioritize wildlife needs and natural hydrologic functioning over reservoirs, livestock ponds, and other water diversions.

Response: We agree and believe that this prioritization has occurred in the AFO and will continue to occur under the preferred alternative.

Comment Number: #20-6

Comment: Requested revision to Alternatives Summary table, under water resources: projects that involve inter-basin transfer of water would be coordinated and consistent with the local water resource policies and plans of local and regional governments.

Response: After careful consideration, we have decided not to change the language regarding interbasin transfer of water. All project proposals regarding the potential interbasin transfer of water would be evaluated under additional site-specific NEPA analysis.

Comment Number: #29-34

Comment: Rejects application by USDI or BLM to apply for any water rights that are not consistent with law or intend to subordinate water rights of Estill

Response: BLM would not apply for any water rights that are not consistent with law nor do we intend to subordinate the water rights of the commenter/permittee. We have not identified any water rights issues in this regard and note that the commenter still has permits in AFO planning area.

22.0 Wild Horses and Burros

Comment Number: #6-18

Comment: Maintain 50 minimum wild horse head to keep genetic diversity and no fertility control other than adoption.

Response: BLM's goal under the proposed action is to manage wild horses at appropriate management levels (AMLs) within the established herd management area. The only herd managed by BLM in the AFO planning area is the small Red Rock herd, with an AML of only 15-20 horses. This herd is regularly monitored (aerial surveys) and control of its animal numbers is the principal management action under the preferred alternative. The AFO area also contains a small portion of a second Herd Management Area (HMA), the Emigrant HMA. However, since the BLM portion contains only about 38 horses, it is managed – along with the rest of the Devil's Garden Wild Horse Territory – by the U.S. Forest Service (USFS) under a 1980 memorandum of understanding (MOU) between the USFS and BLM. BLM's only management involvement is to cooperate with USFS in periodic removal, adoption, and holding of animals from the Devil's Garden Wild Horse Territory to keep horse numbers within AMLs.

There are various opinions about the minimum number of animals necessary to maintain genetic diversity within a herd. In northeastern California and northwestern Nevada, separate herds may have AMLs lower than 50 head, but in reality, the HMAs are located adjacent to one another and horses from any of the HMAs intermingle / drift between adjacent HMAs, with natural mixing of genetic traits. Currently, horses from HMAs in this area are not exhibiting signs of in-breeding, the typical concern with decreased genetic diversity. (The Red Rock HMA is adjacent to the Modoc National Forest which includes the "Sisters" HMA. During the drought of the last several years, these horses have intermingled using the Lower Klamath Lake as their major water source.)

Comment Number: #6-19

Comment: Monitor adoption procedures to make sure followed in accordance with Wild Horses and Burro Protection Act.

Response: Thank you for your comment. Adoption procedures are clearly defined. BLM employees, friends, and family follow the same adoption procedures and requirements as all adopters.

Comment Numbers: #20-21

Comment: When horse and burro gathers are organized, we urge BLM to bring populations down to the low end of the AML range so that when population builds in succeeding years, it will still hopefully fall within AML range and not exceed it.

Response: Such an approach is part of BLM’s management strategy for wild horses (there are no burros within the AFO). As stated in Chapter 2.20 of the PRMP, gathering is generally scheduled every 3 to 5 years depending on reproductive rates, death rates, funding, public concern, and other management considerations. Schedules are adjusted when unexpected needs arise (such as wildfires or drought) that require emergency gathers of unscheduled HMAs. Events such as these will affect the interval between gathers on scheduled HMAs. Gathering is done outside the normal February-through-June breeding and foaling season. Usually, horses are gathered with the objective of reducing numbers to the lower end of the AML. This avoids the need for frequent and expensive gathers and the disruption of the herds. Excess horses are gathered to prevent resource degradation and to safeguard the health of individual herd members. Animals that are gathered are then assessed and either returned to the HMA or designated excess and placed into the adoption program or long-term holding.

23.0 Wildlife and Fisheries

This section is divided into the following subsections:

- 23.1 – Federally Listed Species
- 23.2 – State-Listed and BLM Sensitive Species
- 23.3 – Wild Ungulates
- 23.4 – Sagebrush Ecosystems and Sagebrush-Obligate Species
 - 23.4.1 – Sage-Grouse
 - 23.4.2 – Burrowing Owl
 - 23.4.3 – Pygmy Rabbit
- 23.5 – Other Native Wildlife Species
- 23.6 – General

23.1 Federally Listed Species

Comment Number: #24-3

Comment: BLM should consider and evaluate its impact to Lost River and short nose sucker in and around Clear Lake area; only the Modoc sucker is depicted on map WILD-1.

Response: BLM does not administer lands in the vicinity of Clear Lake and there are currently no known occupied habitats for the Lost River or short nose suckers on BLM-administered lands in the AFO area. Therefore, they are not depicted on map WILD-1, and a discussion of potential impacts is not an issue in the PRMP.

Comment Number: #30-25

Comment: Concerned about potential harassment of eagles at nest sites from increases in truck traffic and OHV use adjacent to the nests. Comment includes 5 specific recommendations for bald eagle management.

Response: As stated in Chapter 2.24.2, annual nesting surveys will be conducted to count birds and monitor reproductive success; monitoring efforts will be coordinated with the U.S. Fish and Wildlife Service. Seasonal protective measures and buffer zones will also be implemented. All bald eagle nesting sites (such as Conrad Ranch and Timbered Crater nesting areas, and the Juniper Creek roosting site) will have habitat management plans (HMPS) addressing potential impacts from motor vehicles. The proposed changes for motorized use across the AFO will benefit Threatened and Endangered species, as well as many other wildlife species. This will be accomplished by the transition of an ‘Open’ route network to one that is ‘Limited to Designated or Existing Routes’. Additional seasonal route closures in important wildlife habitats will also be implemented.

Comment Number: #30-26

Comment: BLM should manage lands in accordance with Modoc sucker recovery and action plans – manage habitat to achieve proper riparian function, continue to inventory for presence and abundance, remain active partner with state and Federal agencies and private landowners to manage habitat, acquire additional habitat on any adjacent, non-federal lands.

Response: Potential habitat for this species is managed under the Modoc Sucker recovery and action plans. All management actions identified in the comment are either currently being implemented or are proposed for implementation under the proposed action as described in the PRMP; see Section 2.24.2. Thank you for your support.

Comment Number: #30-27

Comment: Continue to inventory for presence and abundance of shortnose and Lost River suckers. If found, implement appropriate conservation measures and develop action plan. References 2001 Endangered Species Act consultation that indicated potential for impact on this species at Pit River campground.

Response: The identified management actions would be implemented under the proposed action; see Section 2.24.2. There are no Lost River or shortnose suckers and/or habitat presently at or near the Pit River campground. Thank you for your support.

Comment Number: #30-28

Comment: Cooperate with state and federal agencies to locate populations of Shasta crayfish, and identify habitat. Where habitat exists, implement conservation measures, develop action plan; update plan to include lands newly acquired for protection of species; maintain all current protective fencing at occupied springs and monitor site conditions.

Response: Each of the identified management actions would be implemented under the proposed action; see Section 2.24.2. Thank you for your support.

Comment Number: #30-29

Comment: Insufficient data to indicate a population trend or range expansion for northern spotted owl in AFO area, but may be found. Where there is potential habitat, BLM should assess whether management actions may affect owls or their habitat and consult with the Service if potential for impacts if identified.

Response: Periodic surveys for spotted owls are conducted to determine presence on the AFO. Currently, there are no known spotted owls on Widow Peak (an area where past observations were made). This area has marginal habitat for spotted owl, and lies outside their identified range. As noted in Section 2.24.2 of the PRMP-FEIS, if a population or suitable habitat is discovered, BLM would review present and future actions for ESA compliance and may seek consultation for *may effect* determinations.

23.2 State-Listed and BLM Sensitive Species

Comment Number: #30-34

Comment: Recommends BLM enhance habitat for tricolored blackbirds by protecting riparian and wetland areas and encouraging vegetation such as cattails and tules.

Response: We concur. Riparian and wetland improvement is a priority for BLM and this is a specific management measure under the proposed action (management goal 2) to preserve or restore habitats of special-status species; see Section 2.24.3.

23.3. Wild Ungulates

Comment Number: #18-15

Comment: Grazing can also adversely impact animal populations, usually due to indirect effects on habitat structure and prey availability. Bighorn sheep are highly susceptible to diseases which are spread by domestic sheep.

Response: Thank you for your comment. We agree that indirect effects of grazing can adversely affect animal populations and have addressed these impacts in Chapter 4.25 of this PRMP. We have also included management actions under the preferred alternative to help control grazing and limit its impacts on wildlife, including using the biodiversity standard for wildlife habitat in land health assessments. The currently proposed management actions for bighorn sheep are addressed in Chapter 2.24.4.

Comment Number: #18-17

Comment: DEIS does not indicate a reason for decline of bighorn sheep, sage-grouse, and other species populations in planning area.

Response: The reason for the decline of bighorn sheep is a complex matter, beginning with human encroachment and settlements. We appreciate your comment; however, we consider such a discussion to be beyond the scope of this document and no changes have been made to document in response to this comment. The decline in sage-grouse populations is discussed in Chapter 3.25.3. Further explanation of sage-grouse habitat concerns can be found in the local *Sage-Grouse Conservation Strategies*.

Comment Number: #24-4

Comment: Maps WILD-3 and WILD-4 depicting deer and antelope management on national forest system lands have not been fully coordinated with forest plans and designated areas.

Response: The big game management maps were developed from data provided by the California Department of Fish and Game, and is considered the most up-to-date data for big game in this area. The Modoc National Forest can obtain this information from the Redding Office of the Department of Fish and Game.

Comment Number: #30-62

Comment: Coordinate with other state wildlife agencies and other affected parties to develop a management plan for elk; reintroduction, translocation, and natural expansion of bighorn sheep would be allowed.

Response: When initiated by the California Department of Fish and Game (CDFG), BLM would coordinate with the CDFG, as stated in Section 2.24.4. Thank you for your support.

Comment Number: #30-63

Comment: Poor quality habitat in historic sheep range should be identified and improved where feasible. Coordinate with CDFG to develop management plan prior to reintroduction of California bighorn sheep.

Response: When initiated by the California Department of Fish and Game (CDFG), BLM would coordinate with the CDFG as stated in Section 2.24.4. Thank you for your support.

23.4 Sagebrush Ecosystems and Sagebrush-Obligate Species

23.4.1 Sage-Grouse

Comment Number: #6-10

Comment: Protect sage-grouse habitat from fragmentation and disturbance.

Response: Protection of sage-grouse habitat is one of our major goals for wildlife under the proposed action in the PRMP (see Category 4 in Chapter 2.25.5). Relevant objectives include the maintenance (or creation) of core areas of critical habitat in large contiguous blocks, and ensuring their interconnectedness in a variety of irregular arrangements (such as islands, corridors, and quasi-mosaic patterns) over extended areas to allow genetic exchange between populations. These concerns are also addressed in detail in the local *Sage-Grouse Conservation Strategies*.

Comment Numbers: #14-58, #21-9, #14-113

Comment: RMPs should incorporate management measures discussed in *A Blueprint for Sage-grouse Conservation and Recovery* (Dr. Clait Braun). BLM should adopt new and stricter management prescriptions for livestock grazing.

Response: We appreciate the opportunity to review and consider additional guidelines in the development of management actions for sagebrush ecosystems and sage-grouse populations in the AFO planning area; we agree it is part of the updated standards and guidelines science. BLM staff make every effort to stay current with the various management strategies and prescriptions being implemented today, especially the more successful ones. We will consider adopting in the future some of the actions identified in the Blueprint that are appropriate for the AFO planning area. However, because we already have a Conservation Strategy for Sage-Grouse that is specific to our planning area, and therefore directly applicable to the existing sage-grouse population and sagebrush ecosystem conditions and concerns facing us, we are adopting guidelines from BLM's own Conservation Strategy for Sage-Grouse as our management protection measures under the proposed action (see Section 2.25.5 of the PRMP). We will continue to consider additional guidance, as appropriate and available, as we implement measures to bring us closer to full restoration, protection, and enhancement of this important species and its habitat.

Comment Number: #14-111

Comment: Management prescriptions do not reflect “best available science” or provide sufficient protections for sage-grouse habitat. RMPs should incorporate management measures discussed in *Blueprint* (Dr. Clait Braun). Form of directive could be similar to Appendix K (Energy and Minerals – Surface Use and Occupancy Requirements), but must set out specific protective measures, be explicitly incorporated into appendix and be mandatory. Comment identifies some specific actions BLM should take. Specific analyses needed are identified for each RMP.

Response: Implementation of the Conservation Strategy (Chapter 2.24.5), *Conservation Strategies for Sage-grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units*, is a major component of our management approach for the protection of sage-grouse and sagebrush ecosystems under the proposed action. Essential components of the Conservation Strategy include protection, restoration, monitoring, research, and ongoing adaptive management for sage-grouse and sagebrush ecosystems within the management unit. We agree that the Braun document is part of the updated sage-grouse science; however, we are confident that our management approach under the proposed action for sage-grouse and sagebrush ecosystems will provide an effective level of protection for sage-grouse and sagebrush ecosystems in the AFO planning area. See also response to Comment #14-58 above relating to Braun's Blueprint report. Appendix K (Surface Use and Occupancy Requirements) identifies requirements for oil and gas development specific to sage-grouse; see appendix for details.

Comment Number: #18-19

Comment: RMP fails to disclose possible impacts of livestock grazing on sage-grouse.

Response: Chapter 4.24 has been revised to more fully address potential impacts from livestock grazing on sage-grouse.

Comment Numbers: #18-24, #18-28

Comment: There are numerous studies that show sagebrush obligates prefer living in big sagebrush canopy above the levels identified in the RMP DEIS. Literature indicates sage-grouse need higher levels of sagebrush canopy cover than RMP indicates and livestock reduce that cover.

Response: Thank you for your comment. We are aware of these studies and their findings, and have included measures in our proposed action that concentrate on enhanced sagebrush-steppe ecosystem health, such as by means of juniper reduction.

Comment Number: #18-26

Comment: BLM has failed to disclose manipulation of activities and impacts that will occur to sagebrush communities. DEIS fails to disclose any of the threats that domestic livestock pose to these threatened communities. Big sagebrush canopy cover values on undisturbed relicts and kipukas does not support assertion by BLM that big sagebrush canopy cover increases due to livestock grazing. Studies indicate opposite. BLM should analyze impacts of long-term active management and its impacts on sagebrush communities to recover naturally.

Response: Impacts from livestock grazing on sagebrush and riparian communities, as well as those associated with wildlife habitats, are discussed in the revised Chapters 4.19 Vegetation, and Chapter 4.25 Wildlife and Fisheries. BLM is not aware that any kipukas exist within the AFO management area.

Comment Number: #18-29

Comment: How will agencies and management plan provide resources to address apparent conflict between healthy sage-grouse and livestock grazing in some areas of AFO? How will sage-grouse, leks, brood rearing cover, and other resources be affected by proposed management direction? Recommend BLM follow recommendations for managing sage-grouse that are found in A Blueprint for Sage-Grouse Conservation and Recovery (full citation provided).

Response: As with all other objectives for which BLM manages, a balance will be sought between livestock grazing and sage-grouse protection, as provided for in the proposed management actions listed in Section 2.24.5.4. Section 4.24 has been revised to better describe the potential impacts of grazing on sage-grouse and sagebrush habitats. See response to Comment #14-58 above regarding the Blueprint document.

Comment Numbers: #18-30, #21-10

Comment: Draft RMP must also heed recommendations contained in BLM's Greater Sage-Grouse and Sagebrush Steppe Ecosystems Management Guidelines. FEIS should discuss whether or not proposed action complies with BLM National Sage-Grouse Habitat Conservation Strategy, USDI, and November 2004.

Response: As stated in Section 2.25.1 of the PRMP, our proposed management actions for sage-grouse are in compliance with the local *Conservation Strategies* for sage-grouse and sagebrush ecosystems, as well as BLM's *National Sage-Grouse Habitat Conservation Strategy* (2004).

Comment Number: #21-11

Comment: Could not find in document where BLM has mandated seasonal protective buffers around greater sage-grouse leks and key nesting habitat, as is usually prescribed in other BLM RMPs. Management buffers are key to protection during critical parts of the year.

Response: BLM is taking steps to protect sage-grouse leks and other important seasonal use areas through the local *Conservation Strategies* for sage-grouse (see Section 2.24.5) Seasonable protective buffers are in place for the Buffalo-Skedaddle plan. BLM is working on conservation strategies for Tablelands and Rocky Prairie. Seasonal OHV closures proposed in this PRMP will protect sage-grouse in the Likely Tablelands the Hayden Hill area.

Comment Number: #30-31

Comment: BLM should provide a sage-grouse conservation strategy that addresses 9 points included in comment. Particularly concerned with loss, degradation, and fragmentation of more sage-grouse habitat to agricultural conversion, herbicide and mechanical treatments, OHV use, excessive livestock grazing, juniper encroachment, exotic species, wildfire, prescribed fire, powerlines and recreational use.

Response: Our proposed management strategy, as described in our *Conservation Strategies for Sage-grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units*, addresses the nine points identified in the comment.

Comment Number: #30-32

Comment: BLM should consider cumulative effects of roads, motorized trails, and power lines which degrade sage-grouse habitat or alter use of these habitats by inhibiting movement, causing displacement, or avoidance during breeding season.

Response: Cumulative effects are addressed in Section 4.25 and within the local sage-grouse *Conservation Strategies*.

Comment Numbers: #30-36, #30-37, #30-38, #30-39, #30-40, #30-41, #30-42, #30-43, #30-44, #30-45, #30-46

Comment: Restore degraded and disturbed sagebrush habitats to healthy condition and collaborate with managing partners, private landowners, and other stakeholders to strategize and implement treatments. Management should be guided by 11 standards specified in comment letter.

Response: We appreciate these comments and fully support the implementation of these recommendations in the protection of sagebrush habitat and related ecological resources within the AFO management area. Please note that these measures are consistent with BLM's current policies and procedures, that all are consistent with our proposed management approach, and have been specifically identified in Chapter 2.25.5. We appreciate your support of our proposed management actions for wildlife and fisheries.

23.4.2 Burrowing Owl

Comment Number: #30-35

Comment: Service identifies 5 recommendations for burrowing owl inventory and management.

Response: As stated in Chapter 2.24.5, the planning area will be inventoried for suitable and occupied habitats, and population size will be estimated. (Habitat recognition and assessment parameters will also be refined and standardized for future use.) A conservation strategy will be developed to protect burrows and other seasonal habitats (occupied and potential) and a list of BMPs will be developed to guide resource management actions. Supportive measures such as artificial burrows, water developments, and prey enhancement schemes will also be considered. Thank you for your support of the proposed management actions for the burrowing owl.

23.4.3 Pygmy Rabbit

Comment Number: #30-33

Comment: Recommend BLM conduct surveys for pygmy rabbits within suitable habitat to determine if an existing population is extant within the AFO area. Four recommendations provided if new populations are found.

Response: As stated in Chapter 2.24.5, the planning area will be inventoried for suitable and occupied habitats, and population size will be estimated. (Habitat recognition and assessment parameters will also be refined and standardized for future use.) A conservation strategy will be developed to protect occupied and potential habitats and a list of BMPs developed to guide resource management actions.

23.5 Other Native Wildlife Species

Comment Number: #18-16

Comment: Studies show negative effect of grazing on abundances of neotropical migratory landbird species (1993 study cited), but impacts to these species are lacking in DEIS.

Response: BLM acknowledges that livestock grazing may affect habitats of various birds; however, no recent studies have shown this to be a significant problem in the AFO management area.

Comment Number: #18-23

Comment: Analysis of grazing impacts needs to include discussion of effect the practice has had on predators (i.e., eradication and management of wolves, bears and other predators of livestock is one of main reasons the species are now listed).

Response: A detailed account of the previous / historical indirect effects of livestock grazing on the population of natural predators is considered beyond the scope of this PRMP; however, effects of grazing on all wildlife species from the action proposed in this document are included in Section 4.25.

Comment Number: #20-7

Comment: RMP does not adequately address migration corridor locations or protective measures. Need extensive coordination and information sharing among four area offices (including Carson City, CA Dept of Fish and Game, and the Nevada Dept of Wildlife) regarding migration and corridor protection that should be included in RMPs.

Response: BLM has consulted, coordinated, and/or collaborated with a number of Federal, State, and county/local agencies in the ongoing management of lands in the AFO in development of the PRMP, as discussed in general terms (in Chapters 1 and 5 of the PRMP). In addition, BLM has worked diligently with the CDFG and NDOW to develop local sage-grouse *Conservation Strategies* that have become part of the *State Plans* for each participating State. These *State Plans* consider migration, corridors, and a multitude of protective measures and conservation actions.

23.6 General

Comment Number: #6-8

Comment: Fully protect all rare, federally, and state listed T&E species.

Response: Protection of listed T&E species is one of our major goals for fish and wildlife under the proposed action in the PRMP; see Chapter 2.24, Category 1.

Comment Number: #8-1

Comment: Support for Preferred Alternative with respect to management of wildlife and fisheries.

Response: Thank you for your support.

Comment Number: #14-107

Comment: Need to reconcile conflicting Chapter 4 estimates of mileage of new roads (permanent and temporary) that will be built in the AFO under preferred alternative. Ch. 4 discussion of Wildlife states that the network of permanent roads would be increased by 10 miles under this alternative.

Response: All references to mileage of new roads in the PRMP have been changed to reflect impacts to wildlife based on 10 miles of permanent road construction and 50 miles of potential temporary roads. Thank you for pointing out this inconsistency.

Comment Number: #18-12

Comment: The DEIS fails to disclose how habitat conditions, and thus wildlife populations, have changed due to conversion of native vegetation to crested wheatgrass or other non-native species. How has such conversion influenced habitat? What are the impacts?

Response: Crested wheatgrass encompasses a very small acreage within the AFO management area; however, Chapter 4.24 has been expanded to address wildlife impacts from conversion to annuals and medusahead.

Comment Number: #30-1

Comment: Recommends BLM fully evaluate current habitat conditions (e.g., habitat fragmentation), wildlife trends, and cumulative impacts of all activities within the planning area, and develop a focused management direction necessary to ensure ecosystem viability for the long term.

Response: Long-term ecosystem viability is one of the overall goals inherent in our PRMP. We believe that our proposed management approach and actions have taken all relevant information into consideration and represent a focused direction to ensure long-term ecosystem viability.

Comment Number: #30-30

Comment: BLM should consider effects of livestock management, wildland and prescribed fire, realty transactions, contaminants use, and exotic species control as they relate to Oregon spotted frogs and spotted frog habitat. May be potential sites within AFO where species may be reintroduced, so to assist in this opportunity, BLM should conserve wetlands, control non-native invasive plants, remove lodgepole pine (encroaching on wetlands), and adopt measures to contain or eradicate bullfrogs.

Response: We appreciate your concern for the Oregon spotted frog. However, there are no populations of spotted frog in the AFO planning area. Our area includes a historic range only; see further discussions in Chapter 2.24 on wildlife. Similarly, we have no lodgepole pine on our wetlands. BLM's proposed management actions for wildlife allows for control of undesirable species such as bullfrogs which could be considered if plan are developed for reintroduction of spotted frog.

Comment Numbers: #30-47, #30-48, #30-49, #30-50, #30-51, #30-52, #30-53, #30-54, #30-55, #30-56, #30-57, #30-58, #30-59, #30-60, #30-61, #30-62, #30-63, #30-64, #30-65, #30-66, #30-67, #30-68, #30-69, #30-70, #30-71, #30-72, #30-73, #30-74, #30-75, #30-76

Comments: The U.S. Fish and Wildlife Service identified numerous measures that they wanted BLM AFO to implement relating to the protection of fish and wildlife.

Response: We appreciate these comments and fully support the implementation of the above recommendations in the protection of fish and wildlife within the AFO management area. Please note that these measures are consistent with BLM's current policies and procedures and are included in the revisions to the preferred alternative in Chapter 2.24 of the PRMP. We appreciate your support of our proposed management actions for wildlife and fisheries.

Comment Number: #30-67

Comment: Coordinate with state wildlife agencies regarding introduced brown trout, rainbow trout, and brook trout.

Response: BLM's strategy for managing trout and other fish is explained in Section 2.24.7.

Comment Number: #34-9

Comment: Asked about non-native wildlife species BLM is proposing to eliminate in the RMP.

Response: There currently are no plans to eliminate or reduce non-native wildlife species. The provisions of the RMP allows for this action to be used in cases where there is a need to enhance native species, such as eliminating Brown trout in favor native redband trout. Additionally, where there is a potential for reintroductions of native species, such as Oregon Spotted frog; reduction of bull frog could be implemented.

24.0 Public Involvement / Coordination with Other Agencies

Comment Number: #4-1

Comment: Offers language regarding consultation with military and joint analysis of impacts to military missions from any BLM land use decisions

Response: As an interested party and user of the airspace over AFO-administered lands, the Navy would be appropriately notified and given an opportunity to provide input on proposed actions, along with members of the interested public and other Federal, State, and local agencies. The following text has been added to Chapter 1 of the PRMP: "BLM would consult with the military and jointly analyze any impacts to the military mission including; Military Operating Areas (MOAs), Military Training Routes (MTRs), air space, coastal, and ground access, when making any land use decisions on BLM property at the earliest possible time to minimize impacts to current and future military mission uses. Examples of land uses that could impact the military mission include, but are not limited to: habitat improvement projects, environmental restoration projects, public utility development (e.g., erection of cell phone towers, electrical transmission lines, wind energy towers and solar array towers), large mining developments, recreational development (e.g., campgrounds, visitor centers), and land exchanges for the purpose of facilitating the preceding land uses."

Comment Number: #10-11 (and others not specifically identified)

Comment: Please keep Friends of the River on mailing list.

Response: All commenters on the Draft EIS have been added to the mailing list.

Comment Number: #18-2

Comment: Insufficient time to review extensive errata sheet released in June 2006. Request that BLM re-issue the DEIS, including errata sheet, to give public adequate opportunity to review data in errata sheet and effects associated with changes.

Response: We realize that review of the errata sheet required some additional effort from reviewers. However, we believe that the 90-day public comment period, which did not close until July 27, 2006, allowed a sufficient amount of time for review of this material.

Comment Number: #20-1

Comment: RMPs do not provide justification for decisions recommended that appear to be incompatible with the County.

Response: BLM believes that the choice of management actions, including those that may appear to be incompatible with the County, provides the best balance of public access and resource protection. BLM has addressed the County's specific comments in the preceding sections of this appendix.

Comment Number: #20-3

Comment: Coordination with other field offices (i.e., Carson City) has not occurred.

Response: The RMP effort has been coordinated with adjacent BLM field offices and National Forests. The Carson City Field Office is not adjacent to the AFO.

Comment Number: #20-6

Comment: Requested revision to Alternatives Summary table, under Water Resources: projects that involve inter-basin transfer of water would be coordinated and consistent with the local water resource policies and plans of local and regional governments.

Response: After careful consideration, we have decided not to change the language regarding interbasin transfer of water. All project proposals regarding the potential interbasin transfer of water would be evaluated under additional site-specific NEPA analysis.

Comment Number: #24-7

Comment: Request copy of BLM GIS database used to formulate preferred alternative – to assist MNF in its LRMP revision process.

Response: The requested information has been provided.

Comment Number: #31-6

Comment: A number of waters are listed as being in violation of State standards, yet no formal process is in place to notify the Regional Board when monitoring results show that standards have been violated. BLM relies primarily on the Water Quality Control Board to identify impaired waters or high probability of impaired water. However, if BLM is sampling these waters and Lahontan staff does not receive the data, how is Lahontan staff to determine if waters are impaired or not? There clearly needs to be a formal process for sharing of monitoring data. Perhaps could be addressed in Statewide MAA being developed by BLM and State Water Resources Control Board. Need to set up meeting and coordinate further on data collection and sharing.

Response: The issue of a formal process to verify the impairment and/or correct the problem will be addressed in the Management Agency Agreement (MAA) that is currently being developed by the BLM California State Office and the California State Water Resources Control Board.

Comment Number: #33-24

Comment: Request additional time to submit comments.

Response: We believe that the 90-day public comment period, and the consultation meeting with the commenters (Pit River Tribal Council), which occurred after that period, allowed a sufficient amount of time for review of this material.

Comment Number: #34-10

Comment: Concerned that Alturas Rancheria is being overlooked in consultation process. They have not been consulted with on Yankee Jim Ranch, Descent into Goose Lake, Invenergy or the West Valley Hydro Project.

APPENDIX R

Response: BLM appreciates and agrees with the Rancheria's concern and will ensure that the Alturas Rancheria is consulted on a more consistent basis.