Andrews/Steens Resource Management Plan

BLM

Burns District Office

ROD/RMP

Andrews Management Unit and Steens Mountain Cooperative Management and Protection Area Resource Management Plans Appendices (A – O) and Maps

August 2005

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

Photo courtesy of Mark Armstrong.

Andrews Management Unit and Steens Mountain Cooperative Management and Protection Area Resource Management Plans Appendices (A – O) and Maps

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Acronyms

Reader note: *Please refer to the list below for acronyms that may be used in this document.*

ACRONYM	DEFINITION
ACEC	Area of Critical Environmental Concern
AML	Appropriate Management Level
AMP	Allotment Management Plan
AMS	Analysis of the Management Situation
AMU	Andrews Management Unit/Andrews Resource Area outside the CMPA
AUM	Animal Unit Month
BCB	Back Country Byway
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
CCD	Census County Divisions
CD	Compact Disc
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CMPA	Cooperative Management and Protection Area
CWA	Clean Water Act
DEQ	Oregon Department of Environmental Quality
DEIS	Draft Environmental Impact Statement
DO	District Office
DRC	Desired Range of Conditions
DRMP	Draft Resource Management Plan
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
ESI	Ecological Site Inventory
FAR	Functional At Risk
FEIS	Final Environmental Impact Statement
FFR	Federal Fenced Range
FLPMA	Federal Land Policy and Management Act
FMP	Fire Management Plan
GIS	Geographic Information System
HMA	Herd Management Area
HUC	Hydrologic Unit Code
ICBEMP	Interior Columbia Basin Ecosystem Management Project
ID	Interdisciplinary
Malheur NWR	Malheur National Wildlife Refuge
MFP	Management Framework Plan
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRDG	Minimum Requirement Decision Guide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NSO	No Surface Occupancy
ODA	Oregon Department of Agriculture
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OHV	Off-Highway Vehicle
ONHP	Oregon Natural Heritage Program

ORS	Oregon Revised Statute
ORV	Outstandingly Remarkable Value
OWRD	Oregon Water Resources Department
PFC	Proper Functioning Condition
PILT	Payments In Lieu of Taxes
PL	Public Law
PM	Particulate Matter
PNC	Potential Natural Community
PRIA	Public Rangelands Improvement Act of 1978
R&PP	Recreation & Public Purpose
RA	Resource Area
RAC	Southeast Oregon Resource Advisory Council
RMIS	Recreation Management Information System
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision
ROW	Right-of-Way
RPS	Rangeland Program Summary
RTR	Redband Trout Reserve
S&Gs	Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington
SBR	Subbasin Review
SEORMP	Southeastern Oregon Resource Management Plan
SIP	State Implementation Plan
SMAC	Steens Mountain Advisory Council
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
T&E	Threatened and Endangered
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TNR	Temporary Non-Renewable
TP	Transportation Plan
TR	Technical Reference
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRM	Visual Resource Management
WJMA	Wildlands Juniper Management Area
WQMP	Water Quality Management Plan
WQRP	Water Quality Restoration Plan
WSA IMP	Interim Management Policy for Lands Under Wilderness Review
WSA	Wilderness Study Area
WSR	Wild and Scenic River
WUI	Wildland Urban Interface
ybp	years before present

Introduction

Appendices included contain information supporting management direction detailed in the main text of the AMU and CMPA RMPs. Some appendices have been slightly modified to correct errors noted during review of the Proposed RMP/FEIS and provide further clarification. Only those appendices containing management direction are published in this document. The appendices were re-lettered in alphabetical order and may not correspond to those within the Proposed RMP/FEIS. Not all appendices or portions thereof will be applicable to both the AMU and CMPA (e.g., Appendix M is only applicable to the CMPA). Appendix Q in the Proposed RMP/FEIS was incorporated into the text of the RMPs.

In general, maps contained in this document provide information on the AMU as well as the CMPA. Restricting maps solely to the CMPA or AMU would not provide the reader with a complete picture of the area. Therefore, not all maps will be applicable to both the AMU and CMPA (e.g., Map 13 is only applicable to the CMPA).

Appendix A – Steens Mountain Cooperative Management and Protection Act of 2000

H. R. 4828 \

One Hundred Sixth Congress -
of the -
United States of America -

AT THE SECOND SESSION

Begun and held at the City of Washington on Monday, the twenty-fourth day of January, two thousand

An Act -

To designate the Steens Mountain Wilderness Area and the Steens Mountain Cooperative Management and Protection Area in Harney County, Oregon, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; PURPOSES; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the "Steens Mountain Cooperative Management and Protection Act of 2000".

(b) Purposes.—The purposes of this Act are the following:

(1) To maintain the cultural, economic, ecological, and social health of the Steens Mountain area in Harney County, Oregon.

(2) To designate the Steens Mountain Wilderness Area.

(3) To designate the Steens Mountain Cooperative Management and Protection Area.

(4) To provide for the acquisition of private lands through exchange for inclusion in the Wilderness Area and the Cooperative Management and Protection Area.

(5) To provide for and expand cooperative management activities between public and private landowners in the vicinity of the Wilderness Area and surrounding lands.

(6) To authorize the purchase of land and development and nondevelopment rights.

(7) To designate additional components of the National Wild and Scenic Rivers System.

(8) To establish a reserve for redband trout and a wildlands juniper management area.

(9) To establish a citizens' management advisory council for the Cooperative Management and Protection Area.

(10) To maintain and enhance cooperative and innovative management practices between the public and private land managers in the Cooperative Management and Protection Area.

(11) To promote viable and sustainable grazing and recreation operations on private and public lands.

(12) To conserve, protect, and manage for healthy watersheds and the long-term ecological integrity of Steens Mountain.

(13) To authorize only such uses on Federal lands in the Cooperative Management and Protection Area that are consistent with the purposes of this Act.

H. R. 4828—2 \

(c) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

Sec. 1. Short title; purposes; table of contents.
Sec. 2. Definitions. \
Sec. 3. Maps and legal descriptions.
Sec. 4. Valid existing rights.
Sec. 5. Protection of tribal rights. \

TITLE I—STEENS MOUNTAIN COOPERATIVE MANAGEMENT AND \ PROTECTION AREA \

Subtitle A—Designation and Purposes \

Sec. 101. Designation of Steens Mountain Cooperative Management and Protection Area.
Sec. 102. Purpose and objectives of Cooperative Management and protection Area.

Subtitle B—Management of Federal Lands

Sec. 111. Management authorities and purposes.
Sec. 112. Roads and travel access. \
Sec. 113. Land use authorities. \
Sec. 114. Land acquisition authority.
Sec. 115. Special use permits. \

Subtitle C—Cooperative Management

Sec. 121. Cooperative management agreements.
Sec. 122. Cooperative efforts to control development and encourage conservation. \

Subtitle D—Advisory Council

Sec. 131. Establishment of advisory council.
Sec. 132. Advisory role in management activities.
Sec. 133. Science committee. \

TITLE II—STEENS MOUNTAIN WILDERNESS AREA

Sec. 201. Designation of Steens Mountain Wilderness Area.
Sec. 202. Administration of Wilderness Area. \
Sec. 203. Water rights.
Sec. 204. Treatment of wilderness study areas. \

TITLE III—WILD AND SCENIC RIVERS AND TROUT RESERVE

Sec. 301. Designation of streams for wild and scenic river status in Steens Mountain area.
Sec. 302. Donner und Blitzen River redband trout reserve.

TITLE IV—MINERAL WITHDRAWAL AREA

Sec. 401. Designation of mineral withdrawal area.
Sec. 402. Treatment of State lands and mineral interests. \

TITLE V—ESTABLISHMENT OF WILDLANDS JUNIPER MANAGEMENT AREA \

Sec. 501. Wildlands juniper management area.
Sec. 502. Release from wilderness study area status. \

TITLE VI—LAND EXCHANGES

Sec. 601. Land exchange, Roaring Springs Ranch.
Sec. 602. Land exchanges, C.M. Otley and Otley Brothers.
Sec. 603. Land exchange, Tom J. Davis Livestock, Incorporated.
Sec. 604. Land exchange, Lowther (Clemens) Ranch.
Sec. 605. General provisions applicable to land exchanges. \

TITLE VII—FUNDING AUTHORITIES

Sec. 701. Authorization of appropriations.
Sec. 702. Use of land and water conservation fund. \

SEC. 2. DEFINITIONS.

In this Act:

(1) ADVISORY COUNCIL.—The term "advisory council" means the Steens Mountain Advisory Council established by title IV.

(2) COOPERATIVE MANAGEMENT AGREEMENT.—An agreement to plan or implement (or both) cooperative recreation,

ecological, grazing, fishery, vegetation, prescribed fire, cultural site protection, wildfire or other measures to beneficially meet public use needs and the public land and private land objectives of this Act.

(3) COOPERATIVE MANAGEMENT AND PROTECTION AREA.—The term "Cooperative Management and Protection Area" means the Steens Mountain Cooperative Management and Protection Area designated by title I.

(4) EASEMENTS.—

(A) CONSERVATION EASEMENT.—The term "conservation easement" means a binding contractual agreement between the Secretary and a landowner in the Cooperative Management and Protection Area under which the landowner, permanently or during a time period specified in the agreement, agrees to conserve or restore habitat, open space, scenic, or other ecological resource values on the land covered by the easement.

(B) NONDEVELOPMENT EASEMENT.—The term "nondevelopment easement" means a binding contractual agreement between the Secretary and a landowner in the Cooperative Management and Protection Area that will, permanently or during a time period specified in the agreement—

(i) prevent or restrict development on the land covered by the easement; or

(ii) protect open space or viewshed.

(5) ECOLOGICAL INTEGRITY.—The term "ecological integrity" means a landscape where ecological processes are functioning to maintain the structure, composition, activity, and resilience of the landscape over time, including—

(A) a complex of plant communities, habitats and conditions representative of variable and sustainable successional conditions; and

(B) the maintenance of biological diversity, soil fertility, and genetic interchange.

(6) MANAGEMENT PLAN.—The term "management plan" means the management plan for the Cooperative Management and Protection Area and the Wilderness Area required to be prepared by section 111(b).

(7) REDBAND TROUT RESERVE.—The term "Redband Trout Reserve" means the Donner und Blitzen Redband Trout Reserve designated by section 302.

(8) SECRETARY.—The term "Secretary" means the Secretary of the Interior, acting through the Bureau of Land Management.

(9) SCIENCE COMMITTEE.—The term "science committee" means the committee of independent scientists appointed under section 133.

(10) WILDERNESS AREA.—The term "Wilderness Area" means the Steens Mountain Wilderness Area designated by title II.

SEC. 3. MAPS AND LEGAL DESCRIPTIONS.

(a) PREPARATION AND SUBMISSION.—As soon as practicable after the date of the enactment of this Act, the Secretary shall prepare and submit to Congress maps and legal descriptions of the following:

(1) The Cooperative Management and Protection Area.

(2) The Wilderness Area.

(3) The wild and scenic river segments and redband trout reserve designated by title III.

(4) The mineral withdrawal area designated by title IV.

(5) The wildlands juniper management area established by title V.

(6) The land exchanges required by title VI.

(b) LEGAL EFFECT AND CORRECTION.—The maps and legal descriptions referred to in subsection (a) shall have the same force and effect as if included in this Act, except the Secretary may correct clerical and typographical errors in such maps and legal descriptions.

(c) PUBLIC AVAILABILITY.—Copies of the maps and legal descriptions referred to in subsection (a) shall be on file and available for public inspection in the Office of the Director of the Bureau of Land Management and in the appropriate office of the Bureau of Land Management in the State of Oregon.

SEC. 4. VALID EXISTING RIGHTS.

Nothing in this Act shall effect any valid existing right.

SEC. 5. PROTECTION OF TRIBAL RIGHTS.

Nothing in this Act shall be construed to diminish the rights of any Indian tribe. Nothing in this Act shall be construed to diminish tribal rights, including those of the Burns Paiute Tribe, regarding access to Federal lands for tribal activities, including spiritual, cultural, and traditional food gathering activities.

TITLE I—STEENS MOUNTAIN COOPERATIVE MANAGEMENT AND PROTECTION AREA

Subtitle A—Designation and Purposes

SEC. 101. DESIGNATION OF STEENS MOUNTAIN COOPERATIVE MANAGEMENT AND PROTECTION AREA.

(a) DESIGNATION.—The Secretary shall designate the Steens Mountain Cooperative Management and Protection Area consisting of approximately 425,550 acres of Federal land located in Harney County, Oregon, in the vicinity of Steens Mountain, as generally depicted on the map entitled "Steens Mountain Boundary Map" and dated September 18, 2000.

(b) CONTENTS OF MAP.—In addition to the general boundaries of the Cooperative Management and Protection Area, the map referred to in subsection (a) also depicts the general boundaries of the following:

(1) The no livestock grazing area described in section 113(e).

(2) The mineral withdrawal area designated by title IV.

(3) The wildlands juniper management area established by title V.

SEC. 102. PURPOSE AND OBJECTIVES OF COOPERATIVE MANAGEMENT AND PROTECTION AREA.

(a) PURPOSE.—The purpose of the Cooperative Management and Protection Area is to conserve, protect, and manage the long-

term ecological integrity of Steens Mountain for future and present generations.

(b) OBJECTIVES.—To further the purpose specified in subsection (a), and consistent with such purpose, the Secretary shall manage the Cooperative Management and Protection Area for the benefit of present and future generations—

(1) to maintain and enhance cooperative and innovative management projects, programs and agreements between tribal, public, and private interests in the Cooperative Management and Protection Area;

(2) to promote grazing, recreation, historic, and other uses that are sustainable;

(3) to conserve, protect and to ensure traditional access to cultural, gathering, religious, and archaeological sites by the Burns Paiute Tribe on Federal lands and to promote cooperation with private landowners;

(4) to ensure the conservation, protection, and improved management of the ecological, social, and economic environment of the Cooperative Management and Protection Area, including geological, biological, wildlife, riparian, and scenic resources; and

(5) to promote and foster cooperation, communication, and understanding and to reduce conflict between Steens Mountain users and interests.

Subtitle B—Management of Federal Lands

SEC. 111. MANAGEMENT AUTHORITIES AND PURPOSES.

(a) IN GENERAL.—The Secretary shall manage all Federal lands included in the Cooperative Management and Protection Area pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and other applicable provisions of law, including this Act, in a manner that—

(1) ensures the conservation, protection, and improved management of the ecological, social and economic environment of the Cooperative Management and Protection Area, including geological, biological, wildlife, riparian, and scenic resources, North American Indian tribal and cultural and archaeological resource sites, and additional cultural and historic sites; and

(2) recognizes and allows current and historic recreational use.

(b) MANAGEMENT PLAN.—Within 4 years after the date of the enactment of this Act, the Secretary shall develop a comprehensive plan for the long-range protection and management of the Federal lands included in the Cooperative Management and Protection Area, including the Wilderness Area. The plan shall—

(1) describe the appropriate uses and management of the Cooperative Management and Protection Area consistent with this Act;

(2) incorporate, as appropriate, decisions contained in any current or future management or activity plan for the Cooperative Management and Protection Area and use information developed in previous studies of the lands within or adjacent to the Cooperative Management and Protection Area;

(3) provide for coordination with State, county, and private local landowners and the Burns Paiute Tribe; and

(4) determine measurable and achievable management objectives, consistent with the management objectives in section 102, to ensure the ecological integrity of the area.

(c) MONITORING.—The Secretary shall implement a monitoring program for Federal lands in the Cooperative Management and Protection Area so that progress towards ecological integrity objectives can be determined.

SEC. 112. ROADS AND TRAVEL ACCESS.

(a) TRANSPORTATION PLAN.—The management plan shall include, as an integral part, a comprehensive transportation plan for the Federal lands included in the Cooperative Management and Protection Area, which shall address the maintenance, improvement, and closure of roads and trails as well as travel access.

(b) PROHIBITION ON OFF-ROAD MOTORIZED TRAVEL.—

(1) PROHIBITION.—The use of motorized or mechanized vehicles on Federal lands included in the Cooperative Management and Protection Area—

(A) is prohibited off road; and

(B) is limited to such roads and trails as may be designated for their use as part of the management plan.

(2) EXCEPTIONS.—Paragraph (1) does not prohibit the use of motorized or mechanized vehicles on Federal lands included in the Cooperative Management and Protection Area if the Secretary determines that such use—

(A) is needed for administrative purposes or to respond to an emergency; or

(B) is appropriate for the construction or maintenance of agricultural facilities, fish and wildlife management, or ecological restoration projects, except in areas designated as wilderness or managed under the provisions of section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782).

(c) ROAD CLOSURES.—Any determination to permanently close an existing road in the Cooperative Management and Protection Area or to restrict the access of motorized or mechanized vehicles on certain roads shall be made in consultation with the advisory council and the public.

(d) PROHIBITION ON NEW CONSTRUCTION.—

(1) PROHIBITION, EXCEPTION.—No new road or trail for motorized or mechanized vehicles may be constructed on Federal lands in the Cooperative Management and Protection Area unless the Secretary determines that the road or trail is necessary for public safety or protection of the environment. Any determination under this subsection shall be made in consultation with the advisory council and the public.

(2) TRAILS.—Nothing in this subsection is intended to limit the authority of the Secretary to construct or maintain trails for nonmotorized or nonmechanized use.

(e) ACCESS TO NONFEDERALLY OWNED LANDS.—

(1) REASONABLE ACCESS.—The Secretary shall provide reasonable access to nonfederally owned lands or interests in land within the boundaries of the Cooperative Management and Protection Area and the Wilderness Area to provide the owner of the land or interest the reasonable use thereof.

(2) EFFECT ON EXISTING RIGHTS-OF-WAY.—Nothing in this Act shall have the effect of terminating any valid existing

right-of-way on Federal lands included in the Cooperative Management and Protection Area.

SEC. 113. LAND USE AUTHORITIES.

(a) IN GENERAL.—The Secretary shall allow only such uses of the Federal lands included in the Cooperative Management and Protection Area as the Secretary finds will further the purposes for which the Cooperative Management and Protection Area is established.

(b) COMMERCIAL TIMBER.—

(1) PROHIBITION.—The Federal lands included in the Cooperative Management and Protection Area shall not be made available for commercial timber harvest.

(2) LIMITED EXCEPTION.—The Secretary may authorize the removal of trees from Federal lands in the Cooperative Management and Protection Area only if the Secretary determines that the removal is clearly needed for purposes of ecological restoration and maintenance or for public safety. Except in the Wilderness Area and the wilderness study areas referred to in section 204(a), the Secretary may authorize the sale of products resulting from the authorized removal of trees under this paragraph.

(c) JUNIPER MANAGEMENT.—The Secretary shall emphasize the restoration of the historic fire regime in the Cooperative Management and Protection Area and the resulting native vegetation communities through active management of Western Juniper on a landscape level. Management measures shall include the use of natural and prescribed burning.

(d) HUNTING, FISHING, AND TRAPPING.—

(1) AUTHORIZATION.—The Secretary shall permit hunting, fishing, and trapping on Federal lands included in the Cooperative Management and Protection Area in accordance with applicable laws and regulations of the United States and the State of Oregon.

(2) AREA AND TIME LIMITATIONS.—After consultation with the Oregon Department of Fish and Wildlife, the Secretary may designate zones where, and establish periods when, hunting, trapping or fishing is prohibited on Federal lands included in the Cooperative Management and Protection Area for reasons of public safety, administration, or public use and enjoyment.

(e) GRAZING.—

(1) CONTINUATION OF EXISTING LAW.—Except as otherwise provided in this section and title VI, the laws, regulations, and executive orders otherwise applicable to the Bureau of Land Management in issuing and administering grazing leases and permits on lands under its jurisdiction shall apply in regard to the Federal lands included in the Cooperative Management and Protection Area.

(2) CANCELLATION OF CERTAIN PERMITS.—The Secretary shall cancel that portion of the permitted grazing on Federal lands in the Fish Creek/Big Indian, East Ridge, and South Steens allotments located within the area designated as the "no livestock grazing area" on the map referred to in section 101(a). Upon cancellation, future grazing use in that designated area is prohibited. The Secretary shall be responsible for

installing and maintaining any fencing required for resource protection within the designated no livestock grazing area.

(3) FORAGE REPLACEMENT.—Reallocation of available forage shall be made as follows:

(A) O'Keefe pasture within the Miners Field allotment to Stafford Ranches.

(B) Fields Seeding and Bone Creek Pasture east of the county road within the Miners Field allotment to Amy Ready.

(C) Miners Field Pasture, Schouver Seeding and Bone Creek Pasture west of the county road within the Miners Field allotment to Roaring Springs Ranch.

(D) 800 animal unit months within the Crows Nest allotment to Lowther (Clemens) Ranch.

(4) FENCING AND WATER SYSTEMS.—The Secretary shall also construct fencing and develop water systems as necessary to allow reasonable and efficient livestock use of the forage resources referred to in paragraph (3).

(f) PROHIBITION ON CONSTRUCTION OF FACILITIES.—No new facilities may be constructed on Federal lands included in the Cooperative Management and Protection Area unless the Secretary determines that the structure—

(1) will be minimal in nature;

(2) is consistent with the purposes of this Act; and

(3) is necessary—

(A) for enhancing botanical, fish, wildlife, or watershed conditions;

(B) for public information, health, or safety;

(C) for the management of livestock; or

(D) for the management of recreation, but not for the promotion of recreation.

(g) WITHDRAWAL.—Subject to valid existing rights, the Federal lands and interests in lands included in the Cooperative Management and Protection Areas are hereby withdrawn from all forms of entry, appropriation, or disposal under the public land laws, except in the case of land exchanges if the Secretary determines that the exchange furthers the purpose and objectives specified in section 102 and so certifies to Congress.

SEC. 114. LAND ACQUISITION AUTHORITY.

(a) ACQUISITION.—

(1) ACQUISITION AUTHORIZED.—In addition to the land acquisitions authorized by title VI, the Secretary may acquire other non-Federal lands and interests in lands located within the boundaries of the Cooperative Management and Protection Area or the Wilderness Area.

(2) ACQUISITION METHODS.—Lands may be acquired under this subsection only by voluntary exchange, donation, or purchase from willing sellers.

(b) TREATMENT OF ACQUIRED LANDS.—

(1) IN GENERAL.—Subject to paragraphs (2) and (3), lands or interests in lands acquired under subsection (a) or title VI that are located within the boundaries of the Cooperative Management and Protection Area shall—

(A) become part of the Cooperative Management and Protection Area; and

(B) be managed pursuant to the laws applicable to \ the Cooperative Management and Protection Area.

(2) LANDS WITHIN WILDERNESS AREA.—If lands or interests in lands acquired under subsection (a) or title VI are within the boundaries of the Wilderness Area, the acquired lands or interests in lands shall—

(A) become part of the Wilderness Area; and

(B) be managed pursuant to title II and the other laws applicable to the Wilderness Area.

(3) LANDS WITHIN WILDERNESS STUDY AREA.—If the lands or interests in lands acquired under subsection (a) or title VI are within the boundaries of a wilderness study area, the acquired lands or interests in lands shall—

(A) become part of that wilderness study area; and

(B) be managed pursuant to the laws applicable to that wilderness study area.

(c) APPRAISAL.—In appraising non-Federal land, development rights, or conservation easements for possible acquisition under this section or section 122, the Secretary shall disregard any adverse impacts on values resulting from the designation of the Cooperative Management and Protection Area or the Wilderness Area.

SEC. 115. SPECIAL USE PERMITS.

The Secretary may renew a special recreational use permit applicable to lands included in the Wilderness Area to the extent that the Secretary determines that the permit is consistent with the Wilderness Act (16 U.S.C. 1131 et seq.). If renewal is not consistent with the Wilderness Act, the Secretary shall seek other opportunities for the permit holder through modification of the permit to realize historic permit use to the extent that the use is consistent with the Wilderness Act and this Act, as determined by the Secretary.

Subtitle C—Cooperative Management

SEC. 121. COOPERATIVE MANAGEMENT AGREEMENTS.

(a) COOPERATIVE EFFORTS.—To further the purposes and objectives for which the Cooperative Management and Protection Area is designated, the Secretary may work with non-Federal landowners and other parties who voluntarily agree to participate in the cooperative management of Federal and non-Federal lands in the Cooperative Management and Protection Area.

(b) AGREEMENTS AUTHORIZED.—The Secretary may enter into a cooperative management agreement with any party to provide for the cooperative conservation and management of the Federal and non-Federal lands subject to the agreement.

(c) OTHER PARTICIPANTS.—With the consent of the landowners involved, the Secretary may permit permittees, special-use permit holders, other Federal and State agencies, and interested members of the public to participate in a cooperative management agreement as appropriate to achieve the resource or land use management objectives of the agreement.

(d) TRIBAL CULTURAL SITE PROTECTION.—The Secretary may enter into agreements with the Burns Paiute Tribe to protect cultural sites in the Cooperative Management and Protection Area of importance to the tribe.

SEC. 122. COOPERATIVE EFFORTS TO CONTROL DEVELOPMENT AND ENCOURAGE CONSERVATION.

(a) POLICY.—Development on public and private lands within the boundaries of the Cooperative Management and Protection Area which is different from the current character and uses of the lands is inconsistent with the purposes of this Act.

(b) USE OF NONDEVELOPMENT AND CONSERVATION EASEMENTS.—The Secretary may enter into a nondevelopment easement or conservation easement with willing landowners to further the purposes of this Act.

(c) CONSERVATION INCENTIVE PAYMENTS.—The Secretary may provide technical assistance, cost-share payments, incentive payments, and education to a private landowner in the Cooperative Management and Protection Area who enters into a contract with the Secretary to protect or enhance ecological resources on the private land covered by the contract if those protections or enhancements benefit public lands.

(d) RELATION TO PROPERTY RIGHTS AND STATE AND LOCAL LAW.—Nothing in this Act is intended to affect rights or interests in real property or supersede State law.

Subtitle D—Advisory Council

SEC. 131. ESTABLISHMENT OF ADVISORY COUNCIL.

(a) ESTABLISHMENT.—The Secretary shall establish the Steens Mountain Advisory Council to advise the Secretary in managing the Cooperative Management and Protection Area and in promoting the cooperative management under subtitle C.

(b) MEMBERS.—The advisory council shall consist of 12 voting members, to be appointed by the Secretary, as follows:

(1) A private landowner in the Cooperative Management and Protection Area, appointed from nominees submitted by the county court for Harney County, Oregon.

(2) Two persons who are grazing permittees on Federal lands in the Cooperative Management and Protection Area, appointed from nominees submitted by the county court for Harney County, Oregon.

(3) A person interested in fish and recreational fishing in the Cooperative Management and Protection Area, appointed from nominees submitted by the Governor of Oregon.

(4) A member of the Burns Paiute Tribe, appointed from nominees submitted by the Burns Paiute Tribe.

(5) Two persons who are recognized environmental representatives, one of whom shall represent the State as a whole, and one of whom is from the local area, appointed from nominees submitted by the Governor of Oregon.

(6) A person who participates in what is commonly called dispersed recreation, such as hiking, camping, nature viewing, nature photography, bird watching, horse back riding, or trail walking, appointed from nominees submitted by the Oregon State Director of the Bureau of Land Management.

(7) A person who is a recreational permit holder or is a representative of a commercial recreation operation in the Cooperative Management and Protection Area, appointed from nominees submitted jointly by the Oregon State Director of

the Bureau of Land Management and the county court for Harney County, Oregon.

(8) A person who participates in what is commonly called mechanized or consumptive recreation, such as hunting, fishing, off-road driving, hang gliding, or parasailing, appointed from nominees submitted by the Oregon State Director of the Bureau of Land Management.

(9) A person with expertise and interest in wild horse management on Steens Mountain, appointed from nominees submitted by the Oregon State Director of the Bureau of Land Management.

(10) A person who has no financial interest in the Cooperative Management and Protection Area to represent statewide interests, appointed from nominees submitted by the Governor of Oregon.

(c) CONSULTATION.—In reviewing nominees submitted under subsection (b) for possible appointment to the advisory council, the Secretary shall consult with the respective community of interest that the nominees are to represent to ensure that the nominees have the support of their community of interest.

(d) TERMS.—

(1) STAGGERED TERMS.—Members of the advisory council shall be appointed for terms of 3 years, except that, of the members first appointed, four members shall be appointed for a term of 1 year and four members shall be appointed for a term of 2 years.

(2) REAPPOINTMENT.—A member may be reappointed to serve on the advisory council.

(3) VACANCY.—A vacancy on the advisory council shall be filled in the same manner as the original appointment.

(d) CHAIRPERSON AND PROCEDURES.—The advisory council shall elect a chairperson and establish such rules and procedures as it deems necessary or desirable.

(e) SERVICE WITHOUT COMPENSATION.—Members of the advisory council shall serve without pay, but the Secretary shall reimburse members for reasonable expenses incurred in carrying out official duties as a member of the council.

(f) ADMINISTRATIVE SUPPORT.—The Secretary shall provide the advisory council with necessary administrative support and shall designate an appropriate officer of the Bureau of Land Management to serve as the Secretary's liaison to the council.

(g) STATE LIAISON.—The Secretary shall appoint one person, nominated by the Governor of Oregon, to serve as the State government liaison to the advisory council.

(h) APPLICABLE LAW.—The advisory committee shall be subject to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and the Federal Advisory Committee Act (5 U.S.C. App.).

SEC. 132. ADVISORY ROLE IN MANAGEMENT ACTIVITIES.

(a) MANAGEMENT RECOMMENDATIONS.—The advisory committee shall utilize sound science, existing plans for the management of Federal lands included in the Cooperative Management and Protection Area, and other tools to formulate recommendations for the Secretary regarding—

(1) new and unique approaches to the management of lands within the boundaries of the Cooperative Management and Protection Area; and

(2) cooperative programs and incentives for seamless landscape management that meets human needs and maintains and improves the ecological and economic integrity of the Cooperative Management and Protection Area.

(b) PREPARATION OF MANAGEMENT PLAN.—The Secretary shall consult with the advisory committee as part of the preparation and implementation of the management plan.

(c) SUBMISSION OF RECOMMENDATIONS.—No recommendations may be presented to the Secretary by the advisory council without the agreement of at least nine members of the advisory council.

SEC. 133. SCIENCE COMMITTEE.

The Secretary shall appoint, as needed or at the request of the advisory council, a team of respected, knowledgeable, and diverse scientists to provide advice on questions relating to the management of the Cooperative Management and Protection Area to the Secretary and the advisory council. The Secretary shall seek the advice of the advisory council in making these appointments.

TITLE II—STEENS MOUNTAIN - WILDERNESS AREA -

SEC. 201. DESIGNATION OF STEENS MOUNTAIN WILDERNESS AREA.

The Federal lands in the Cooperative Management and Protection Area depicted as wilderness on the map entitled "Steens Mountain Wilderness Area" and dated September 18, 2000, are hereby designated as wilderness and therefore as a component of the National Wilderness Preservation System. The wilderness area shall be known as the Steens Mountain Wilderness Area.

SEC. 202. ADMINISTRATION OF WILDERNESS AREA.

(a) GENERAL RULE.—The Secretary shall administer the Wilderness Area in accordance with this title and the Wilderness Act (16 U.S.C. 1131 et seq.). Any reference in the Wilderness Act to the effective date of that Act (or any similar reference) shall be deemed to be a reference to the date of the enactment of this Act.

(b) WILDERNESS BOUNDARIES ALONG ROADS.—Where a wilderness boundary exists along a road, the wilderness boundary shall be set back from the centerline of the road, consistent with the Bureau of Land Management's guidelines as established in its Wilderness Management Policy.

(c) ACCESS TO NON-FEDERAL LANDS.—The Secretary shall provide reasonable access to private lands within the boundaries of the Wilderness Area, as provided in section 112(d).

(d) GRAZING.—

(1) ADMINISTRATION.—Except as provided in section 113(e)(2), grazing of livestock shall be administered in accordance with the provision of section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)), in accordance with the provisions of this Act, and in accordance with the guidelines set forth

in Appendices A and B of House Report 101–405 of the 101st Congress.

(2) RETIREMENT OF CERTAIN PERMITS.—The Secretary shall permanently retire all grazing permits applicable to certain lands in the Wilderness Area, as depicted on the map referred to in section 101(a), and livestock shall be excluded from these lands.

SEC. 203. WATER RIGHTS.

Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

SEC. 204. TREATMENT OF WILDERNESS STUDY AREAS.

(a) STATUS UNAFFECTED.—Except as provided in section 502, any wilderness study area, or portion of a wilderness study area, within the boundaries of the Cooperative Management and Protection Area, but not included in the Wilderness Area, shall remain a wilderness study area notwithstanding the enactment of this Act.

(b) MANAGEMENT.—The wilderness study areas referred to in subsection (a) shall continue to be managed under section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782(c)) in a manner so as not to impair the suitability of the areas for preservation as wilderness.

(c) EXPANSION OF BASQUE HILLS WILDERNESS STUDY AREA.—The boundaries of the Basque Hills Wilderness Study Area are hereby expanded to include the Federal lands within sections 8, 16, 17, 21, 22, and 27 of township 36 south, range 31 east, Willamette Meridian. These lands shall be managed under section 603(c) of the Federal Lands Policy and Management Act of 1976 (43 U.S.C. 1782(c)) to protect and enhance the wilderness values of these lands.

TITLE III—WILD AND SCENIC RIVERS - AND TROUT RESERVE -

SEC. 301. DESIGNATION OF STREAMS FOR WILD AND SCENIC RIVER STATUS IN STEENS MOUNTAIN AREA.

(a) EXPANSION OF DONNER UND BLITZEN WILD RIVER.—Section 3(a)(74) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)(74)) is amended—

(1) by striking "the" at the beginning of each subparagraph and inserting "The";

(2) by striking the semicolon at the end of subparagraphs (A), (B), (C), and (D) and inserting a period;

(3) by striking "; and" at the end of subparagraph (E) and inserting a period; and

(4) by adding at the end the following new subparagraphs:

"(G) The 5.1 mile segment of Mud Creek from its confluence with an unnamed spring in the SW¼SE¼ of section 32, township 33 south, range 33 east, to its confluence with the Donner und Blitzen River.

"(H) The 8.1 mile segment of Ankle Creek from its headwaters to its confluence with the Donner und Blitzen River.

"(I) The 1.6 mile segment of the South Fork of Ankle Creek from its confluence with an unnamed tributary in the SE¼SE¼ of section 17, township 34 south, range 33 east, to its confluence with Ankle Creek.".

(b) DESIGNATION OF WILDHORSE AND KIGER CREEKS, OREGON.—Section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274(a)) is amended by adding at the end the following new paragraph:

"( ) WILDHORSE AND KIGER CREEKS, OREGON.—The following segments in the Steens Mountain Cooperative Management and Protection Area in the State of Oregon, to be administered by the Secretary of the Interior as wild rivers:

"(A) The 2.6-mile segment of Little Wildhorse Creek from its headwaters to its confluence with Wildhorse Creek.

"(B) The 7.0-mile segment of Wildhorse Creek from its headwaters, and including .36 stream miles into section 34, township 34 south, range 33 east.

"(C) The approximately 4.25-mile segment of Kiger Creek from its headwaters to the point at which it leaves the Steens Mountain Wilderness Area within the Steens Mountain Cooperative Management and Protection Area.".

(c) MANAGEMENT.—Where management requirements for a stream segment described in the amendments made by this section differ between the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.) and the Wilderness Area, the more restrictive requirements shall apply.

SEC. 302. DONNER UND BIITZEN RIVER REDBAND TROUT RESERVE.

(a) FINDINGS.—The Congress finds the following:

(1) Those portions of the Donner und Blitzen River in the Wilderness Area are an exceptional environmental resource that provides habitat for unique populations of native fish, migratory waterfowl, and other wildlife resources, including a unique population of redband trout.

(2) Redband trout represent a unique natural history reflecting the Pleistocene connection between the lake basins of eastern Oregon and the Snake and Columbia Rivers.

(b) DESIGNATION OF RESERVE.—The Secretary shall designate the Donner und Blitzen Redband Trout Reserve consisting of the Donner und Blitzen River in the Wilderness Area above its confluence with Fish Creek and the Federal riparian lands immediately adjacent to the river.

(c) RESERVE PURPOSES.—The purposes of the Redband Trout Reserve are—

(1) to conserve, protect, and enhance the Donner und Blitzen River population of redband trout and the unique ecosystem of plants, fish, and wildlife of a river system; and

(2) to provide opportunities for scientific research, environmental education, and fish and wildlife oriented recreation and access to the extent compatible with paragraph (1).

(d) EXCLUSION OF PRIVATE LANDS.—The Redband Trout Reserve does not include any private lands adjacent to the Donner und Blitzen River or its tributaries.

(e) ADMINISTRATION.—

(1) IN GENERAL.—The Secretary shall administer all lands, waters, and interests therein in the Redband Trout Reserve consistent with the Wilderness Act (16 U.S.C. 1131 et seq.) and the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.).

(2) CONSULTATION.—In administering the Redband Trout Reserve, the Secretary shall consult with the advisory council and cooperate with the Oregon Department of Fish and Wildlife.

(3) RELATION TO RECREATION.—To the extent consistent with applicable law, the Secretary shall manage recreational activities in the Redband Trout Reserve in a manner that conserves the unique population of redband trout native to the Donner und Blitzen River.

(4) REMOVAL OF DAM.—The Secretary shall remove the dam located below the mouth of Fish Creek and above Page Springs if removal of the dam is scientifically justified and funds are available for such purpose.

(f) OUTREACH AND EDUCATION.—The Secretary may work with, provide technical assistance to, provide community outreach and education programs for or with, or enter into cooperative agreements with private landowners, State and local governments or agencies, and conservation organizations to further the purposes of the Redband Trout Reserve.

TITLE IV—MINERAL WITHDRAWAL AREA

SEC. 401. DESIGNATION OF MINERAL WITHDRAWAL AREA.

(a) DESIGNATION.—Subject to valid existing rights, the Federal lands and interests in lands included within the withdrawal boundary as depicted on the map referred to in section 101(a) are hereby withdrawn from—

(1) location, entry and patent under the mining laws; and

(2) operation of the mineral leasing and geothermal leasing laws and from the minerals materials laws and all amendments thereto except as specified in subsection (b).

(b) ROAD MAINTENANCE.—If consistent with the purposes of this Act and the management plan for the Cooperative Management and Protection Area, the Secretary may permit the development of saleable mineral resources, for road maintenance use only, in those locations identified on the map referred to in section 101(a) as an existing "gravel pit" within the mineral withdrawal boundaries (excluding the Wilderness Area, wilderness study areas, and designated segments of the National Wild and Scenic Rivers System) where such development was authorized before the date of the enactment of this Act.

SEC. 402. TREATMENT OF STATE LANDS AND MINERAL INTERESTS.

(a) ACQUISITION REQUIRED.—The Secretary shall acquire, for approximately equal value and as agreed to by the Secretary and the State of Oregon, lands and interests in lands owned by the State within the boundaries of the mineral withdrawal area designated pursuant to section 401.

(b) ACQUISITION METHODS.—The Secretary shall acquire such State lands and interests in lands in exchange for—

(1) Federal lands or Federal mineral interests that are outside the boundaries of the mineral withdrawal area;

(2) a monetary payment to the State; or

(3) a combination of a conveyance under paragraph (1) and a monetary payment under paragraph (2).

TITLE V—ESTABLISHMENT OF WILDLANDS JUNIPER MANAGEMENT AREA

SEC. 501. WILDLANDS JUNIPER MANAGEMENT AREA.

(a) ESTABLISHMENT.—To further the purposes of section 113(c), the Secretary shall establish a special management area consisting of certain Federal lands in the Cooperative Management and Protection Area, as depicted on the map referred to in section 101(a), which shall be known as the Wildlands Juniper Management Area.

(b) MANAGEMENT.—Special management practices shall be adopted for the Wildlands Juniper Management Area for the purposes of experimentation, education, interpretation, and demonstration of active and passive management intended to restore the historic fire regime and native vegetation communities on Steens Mountain.

(c) AUTHORIZATION OF APPROPRIATIONS.—In addition to the authorization of appropriations in section 701, there is authorized to be appropriated $5,000,000 to carry out this title and section 113(c) regarding juniper management in the Cooperative Management and Protection Area.

SEC. 502. RELEASE FROM WILDERNESS STUDY AREA STATUS.

The Federal lands included in the Wildlands Juniper Management Area established under section 501 are no longer subject to the requirement of section 603(c) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782(c)) pertaining to managing the lands so as not to impair the suitability of the lands for preservation as wilderness.

TITLE VI—LAND EXCHANGES

SEC. 601. LAND EXCHANGE, ROARING SPRINGS RANCH.

(a) EXCHANGE AUTHORIZED.—For the purpose of protecting and consolidating Federal lands within the Cooperative Management and Protection Area, the Secretary may carry out a land exchange with Roaring Springs Ranch, Incorporated, to convey all right, title, and interest of the United States in and to certain parcels of land under the jurisdiction of the Bureau of Land Management in the vicinity of Steens Mountain, Oregon, as depicted on the map referred to in section 605(a), consisting of a total of approximately 76,374 acres in exchange for the private lands described in subsection (b).

(b) RECEIPT OF NON-FEDERAL LANDS.—As consideration for the conveyance of the Federal lands referred to in subsection (a) and the disbursement referred to in subsection (d), Roaring Springs Ranch, Incorporated, shall convey to the Secretary parcels of land consisting of approximately 10,909 acres, as depicted on the map referred to in section 605(a), for inclusion in the Wilderness Area, a wilderness study area, and the no livestock grazing area as appropriate.

(c) TREATMENT OF GRAZING.—Paragraphs (2) and (3) of section 113(e), relating to the effect of the cancellation in part of grazing permits for the South Steens allotment in the Wilderness Area

and reassignment of use areas as described in paragraph (3)(C) of such section, shall apply to the land exchange authorized by this section.

(d) DISBURSEMENT.—Upon completion of the land exchange authorized by this section, the Secretary is authorized to make a disbursement to Roaring Springs Ranch, Incorporated, in the amount of $2,889,000.

(e) COMPLETION OF CONVEYANCE.—The Secretary shall complete the conveyance of the Federal lands under subsection (a) within 70 days after the Secretary accepts the lands described in subsection (b).

SEC. 602. LAND EXCHANGES, C.M. OTLEY AND OTLEY BROTHERS.

(a) C. M. OTLEY EXCHANGE.—

(1) EXCHANGE AUTHORIZED.—For the purpose of protecting and consolidating Federal lands within the Cooperative Management and Protection Area, the Secretary may carry out a land exchange with C. M. Otley to convey all right, title, and interest of the United States in and to certain parcels of land under the jurisdiction of the Bureau of Land Management in the vicinity of Steens Mountain, Oregon, as depicted on the map referred to in section 605(a), consisting of a total of approximately 3,845 acres in exchange for the private lands described in paragraph (2).

(2) RECEIPT OF NON-FEDERAL LANDS.—As consideration for the conveyance of the Federal lands referred to in paragraph (1) and the disbursement referred to in paragraph (3), C. M. Otley shall convey to the Secretary a parcel of land in the headwaters of Kiger gorge consisting of approximately 851 acres, as depicted on the map referred to in section 605(a), for inclusion in the Wilderness Area and the no livestock grazing area as appropriate.

(3) DISBURSEMENT.—Upon completion of the land exchange authorized by this subsection, the Secretary is authorized to make a disbursement to C.M. Otley, in the amount of $920,000.

(b) OTLEY BROTHERS EXCHANGE.—

(1) EXCHANGE AUTHORIZED.—For the purpose of protecting and consolidating Federal lands within the Cooperative Management and Protection Area, the Secretary may carry out a land exchange with the Otley Brother's, Inc., to convey all right, title, and interest of the United States in and to certain parcels of land under the jurisdiction of the Bureau of Land Management in the vicinity of Steens Mountain, Oregon, as depicted on the map referred to in section 605(a), consisting of a total of approximately 6,881 acres in exchange for the private lands described in paragraph (2).

(2) RECEIPT OF NON-FEDERAL LANDS.—As consideration for the conveyance of the Federal lands referred to in paragraph (1) and the disbursement referred to in subsection (3), the Otley Brother's, Inc., shall convey to the Secretary a parcel of land in the headwaters of Kiger gorge consisting of approximately 505 acres, as depicted on the map referred to in section 605(a), for inclusion in the Wilderness Area and the no livestock grazing area as appropriate.

(3) DISBURSEMENT.—Upon completion of the land exchange authorized by this subsection, the Secretary is authorized to

make a disbursement to Otley Brother's, Inc., in the amount of $400,000.

(c) COMPLETION OF CONVEYANCE.—The Secretary shall complete the conveyances of the Federal lands under subsections (a) and (b) within 70 days after the Secretary accepts the lands described in such subsections.

SEC. 603. LAND EXCHANGE, TOM J. DAVIS LIVESTOCK, INCORPORATED.

(a) EXCHANGE AUTHORIZED.—For the purpose of protecting and consolidating Federal lands within the Wilderness Area, the Secretary may carry out a land exchange with Tom J. Davis Livestock, Incorporated, to convey all right, title, and interest of the United States in and to certain parcels of land under the jurisdiction of the Bureau of Land Management in the vicinity of Steens Mountain, Oregon, as depicted on the map referred to in section 605(a), consisting of a total of approximately 5,340 acres in exchange for the private lands described in subsection (b).

(b) RECEIPT OF NON-FEDERAL LANDS.—As consideration for the conveyance of the Federal lands referred to in subsection (a) and the disbursement referred to in subsection (c), Tom J. Davis Livestock, Incorporated, shall convey to the Secretary a parcel of land consisting of approximately 5,103 acres, as depicted on the map referred to in section 605(a), for inclusion in the Wilderness Area.

(c) DISBURSEMENT.—Upon completion of the land exchange authorized by this section, the Secretary is authorized to make a disbursement to Tom J. Davis Livestock, Incorporated, in the amount of $800,000.

(d) COMPLETION OF CONVEYANCE.—The Secretary shall complete the conveyance of the Federal lands under subsection (a) within 70 days after the Secretary accepts the lands described in subsection (b).

SEC. 604. LAND EXCHANGE, LOWTHER (CLEMENS) RANCH.

(a) EXCHANGE AUTHORIZED.—For the purpose of protecting and consolidating Federal lands within the Cooperative Management and Protection Area, the Secretary may carry out a land exchange with the Lowther (Clemens) Ranch to convey all right, title, and interest of the United States in and to certain parcels of land under the jurisdiction of the Bureau of Land Management in the vicinity of Steens Mountain, Oregon, as depicted on the map referred to in section 605(a), consisting of a total of approximately 11,796 acres in exchange for the private lands described in subsection (b).

(b) RECEIPT OF NON-FEDERAL LANDS.—As consideration for the conveyance of the Federal lands referred to in subsection (a) and the disbursement referred to in subsection (d), the Lowther (Clemens) Ranch shall convey to the Secretary a parcel of land consisting of approximately 1,078 acres, as depicted on the map referred to in section 605(a), for inclusion in the Cooperative Management and Protection Area.

(c) TREATMENT OF GRAZING.—Paragraphs (2) and (3) of section 113(e), relating to the effect of the cancellation in whole of the grazing permit for the Fish Creek/Big Indian allotment in the Wilderness Area and reassignment of use areas as described in paragraph (3)(D) of such section, shall apply to the land exchange authorized by this section.

(d) DISBURSEMENT.—Upon completion of the land exchange authorized by this section, the Secretary is authorized to make

a disbursement to Lowther (Clemens) Ranch, in the amount of $148,000.

(e) COMPLETION OF CONVEYANCE.—The Secretary shall complete the conveyance of the Federal lands under subsection (a) within 70 days after the Secretary accepts the lands described in subsection (b).

SEC. 605. GENERAL PROVISIONS APPLICABLE TO LAND EXCHANGES.

(a) MAP.—The land conveyances described in this title are generally depicted on the map entitled "Steens Mountain Land Exchanges" and dated September 18, 2000.

(b) APPLICABLE LAW.—Except as otherwise provided in this section, the exchange of Federal land under this title is subject to the existing laws and regulations applicable to the conveyance and acquisition of land under the jurisdiction of the Bureau of Land Management. It is anticipated that the Secretary will be able to carry out such land exchanges without the promulgation of additional regulations and without regard to the notice and comment provisions of section 553 of title 5, United States Code.

(c) CONDITIONS ON ACCEPTANCE.—Title to the non-Federal lands to be conveyed under this title must be acceptable to the Secretary, and the conveyances shall be subject to valid existing rights of record. The non-Federal lands shall conform with the title approval standards applicable to Federal land acquisitions.

(d) LEGAL DESCRIPTIONS.—The exact acreage and legal description of all lands to be exchanged under this title shall be determined by surveys satisfactory to the Secretary. The costs of any such survey, as well as other administrative costs incurred to execute a land exchange under this title, shall be borne by the Secretary.

TITLE VII—FUNDING AUTHORITIES

SEC. 701. AUTHORIZATION OF APPROPRIATIONS.

Except as provided in sections 501(c) and 702, there is hereby authorized to be appropriated such sums as may be necessary to carry out this Act.

SEC. 702. USE OF LAND AND WATER CONSERVATION FUND.

(a) AVAILABILITY OF FUND.—There are authorized to be appropriated $25,000,000 from the land and water conservation fund established under section 2 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–5) to provide funds for the acquisition of land and interests in land under section 114 and to enter into nondevelopment easements and conservation easements under subsections (b) and (c) of section 122.

(b) TERM OF USE.—Amounts appropriated pursuant to the authorization of appropriations in subsection (a) shall remain available until expended.

Speaker of the House of Representatives.

Vice President of the United States and President of the Senate.

Appendix B - Best Management Practices

Introduction

BMPs are those land and resource management techniques designed to maximize beneficial results and minimize negative impacts of management actions. Interdisciplinary site-specific analysis is necessary to determine which management practices would be necessary to meet specific objectives and goals. BMPs described in this appendix are designed to assist in achieving the objectives for maintaining or improving water quality, soil productivity, and the protection of watershed resources. These guidelines will apply, where appropriate, to all use authorizations, including BLM-initiated projects. Modifications may be necessary on a site-specific basis to minimize the potential for negative impacts. Each of the following BMPs are a part of the coordinated development of the plan and may be updated as new information becomes available. Applicants can suggest alternate conditions that could accomplish the same result.

BMPs are selected and implemented as necessary, based on site-specific conditions, to meet water, soil, and watershed objectives for specific management actions. This document does not provide an exhaustive list of BMPs. Additional BMPs may be identified during an interdisciplinary process when evaluating site-specific management actions. Implementation and effectiveness of BMPs need to be monitored to determine whether or not the practices are achieving water, soil, and other watershed resource objectives and progressing toward desired goals. Adjustments will be made as necessary to provide for meeting objectives and as needed to conform with changes in BLM regulations, policy, direction, or new scientific information.

These BMPs are a compilation of existing policies, guidelines, and commonly employed practices to minimize water quality degradation from nonpoint sources, to minimize the loss of soil productivity, and to provide guidelines for aesthetic conditions within watersheds from surface disturbing activities, while facilitating multiple-use resource management.

BMPs are considered one of the primary mechanisms to achieve Oregon water quality standards and reduce effects from nonpoint source pollution. Nonpoint sources of pollution result from natural causes, human actions, and the interactions between natural events and conditions associated with human use of the land and its resources. Nonpoint source pollution is caused by diffuse sources rather than from a discharge at a specific, single-source location. Such pollution results in alteration of the chemical, physical, and biological integrity of water.

BMPs are defined as methods, measures, or practices selected to meet nonpoint source control needs. BMPs include, but are not limited to, structural and nonstructural controls, operations, and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters (40 CFR 130.2(m), EPA Water Quality Standards Regulation).

Because the control of nonpoint sources of pollution is an ongoing process, continual refinement of BMP design is necessary. This process can be described in five steps: 1) selection of design of a specific BMP; 2) application of the BMP; 3) monitoring; 4) evaluation; and 5) feedback. Data gathered through monitoring in BMP design, application, or in the monitoring program.

Road Design and Maintenance

1. Design roads to minimize total disturbance, to conform with topography, and to minimize disruption of natural drainage patterns.
2. Base road design criteria and standards on road management objectives such as traffic requirements of the proposed activity and the overall TP, economic analysis, safety requirements, resource objectives, and minimizing damage to the environment.
3. Locate roads on stable terrain such as ridgetops, natural benches, and flatter transitional slopes near

ridges, and valley bottoms, and moderate side slopes and away from slumps, slide prone areas, concave slopes, clay beds, and where rock layers dip parallel to the slope. Locate roads on well-drained soil types; avoid wet areas when possible.

4. Construct cut and fill slopes to be approximately 3 horizontal (h):1vertical (v) or flatter where feasible. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.
5. Avoid headwalls, midslope locations on steep, unstable slopes, fragile soils, seeps, old landslides, side slopes in excess of 70 percent, and areas where the geologic bedding planes or weathering surfaces are inclined with the slope. Implement extra mitigation measures when these areas cannot be avoided.
6. Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars and insloping to ditches as appropriate.
7. Sloping the road base to the outside edge for surface drainage is normally recommended for local spurs or minor collector roads where low-volume traffic and lower traffic speeds are anticipated. This is also recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Out-sloping is not recommended on steep slopes. Sloping the road base to the inside edge is an acceptable practice on roads with steep side slopes and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.
8. Crown and ditching is recommended for arterial and collector roads where traffic volume, speed, intensity and user comfort are considerations. Recommended gradients range from 0 to 15 percent where crown and ditching may be applied, as long as adequate drainage away from the road surface and ditch lines is maintained.
9. Minimize excavation, when constructing roads, through the use of balanced earthwork, narrowing road widths, and end hauling where side slopes are between 50 and 70 percent.
10. If possible, construct roads when soils are dry and not frozen. When soils or road surfaces become saturated to a depth of 3 inches, BLM-authorized activities should be limited or ceased unless otherwise approved by the authorized officer.
11. Consider improving inadequately surfaced roads that are to be left open to public traffic during wet weather with gravel or pavement to minimize sediment production and maximize safety.
12. Retain vegetation on cut slopes unless it poses a safety hazard or restricts maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (i.e., avoid using excavators for brushing).
13. Retain adequate vegetation between roads and streams to filter runoff caused by roads.
14. Avoid riparian/wetland areas where feasible; locate in riparian/wetland areas only if the roads do not interfere with the attainment of resource objectives.
15. Minimize the number of unimproved stream crossings. When a culvert or bridge is not feasible, locate drive-through (low water crossings) on stable rock portions of the drainage channel. Harden crossings with the addition of rock and gravel if necessary. Use angular rock if available.
16. Locate roads and limit activities of mechanized equipment within stream channels to minimize their influence on riparian areas. When crossing a stream is necessary, design the approach and crossing perpendicular to the channel, where practicable. Locate the crossing where the channel is well-defined, unobstructed, and straight.
17. Avoid placing fill material in floodplain unless the material is large enough to remain in place during flood events.
18. Use drainage dips instead of culverts on roads where gradients will not present a safety issue. Locate drainage dips in such a way so that water will not accumulate or where outside berms prevent drainage from the roadway. Locate and design drainage dips immediately upgrade of stream crossings and provide buffer areas and catchment basins to prevent sediment from entering the stream.
19. Construct catchment basins, brush windrows, and culverts in a way to minimize sediment transport from road surfaces to stream channels. Install culverts in natural drainage channels in a way to conform with the natural streambed gradients with outlets that discharge onto rocky or hardened protected areas.
20. Design and locate water crossing structures in natural drainage channels to accommodate adequate fish passage, provide for minimum impacts to water quality, and to be capable of handling a 100-year event for runoff and floodwaters.

21. Use culverts that pass, at a minimum, a 50-year storm event or have a minimum diameter of 24 inches for permanent stream crossings and a minimum diameter of 18 inches for road crossdrains.
22. Replace undersized culverts and repair or replace damaged culverts and downspouts. Provide energy dissipaters at culvert outlets or drainage dips.
23. Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Culverts should be placed on solid ground to avoid road failures.
24. Proper sized aggregate and riprap should be used during culvert construction. Place riprap at culvert entrance to streamline waterflow and reduce erosion.
25. Establish adapted vegetation on all cuts and fill immediately following road construction and maintenance.
26. Remove berms from the downslope side of roads, consistent with safety considerations.
27. Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close abandoned roads to traffic. Physically obstruct the road with gates, large berms, trenches, logs, stumps, or rock boulders as necessary to accomplish permanent closure.
28. Abandon and rehabilitate roads that are no longer needed. Leave these roads in a condition that provides adequate drainage. Remove culverts.
29. When plowing snow for winter use of roads, provide breaks in snow berms to allow for road drainage. Avoid plowing snow into streams. Plow snow only on existing roads.
30. Maintenance should be performed to conserve existing surface material, retain the original crowned or out-sloped self-draining cross section, prevent or remove rutting berms (except those designed for slope protection) and other irregularities that retard normal surface runoff. Avoid wasting loose ditch or surface material over the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting back slopes.
31. Do not disturb the toe of cut slopes while pulling ditches or grading roads. Avoid sidecasting road material into streams.
32. Grade roads only as necessary. Maintain drain dips, waterbars, road crown, in-sloping and out-sloping, as appropriate, during road maintenance.
33. Maintain roads in special areas according to special area guidance. Generally, retain roads within existing disturbed areas and sidecast material away from the special area.
34. When landslides occur, save all soil and material usable for reclamation or stockpile for future reclamation needs. Avoid sidecasting of slide material where it can damage, overload, and saturate embankments, or flow into down-slope drainage courses. Reestablish vegetation as needed in areas where vegetation has been destroyed due to sidecasting.
35. Strip and stockpile topsoil ahead of construction of new roads, if feasible. Reapply soil to cut and fill slopes prior to revegetation.

Surface Disturbing Activities

1. Special design and reclamation measures may be required to protect scenic and natural landscape values. This may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, use of low profile permanent facilities, and painting to minimize visual contrasts. Surface disturbing activities may be moved to avoid sensitive areas or to reduce the visual effects of the proposal.
2. Aboveground facilities requiring painting should be designed to blend in with the surrounding environment.
3. Disturbed areas should be contoured to blend with the natural topography. Blending is defined as reducing form, line, and color contrast associated with the surface disturbance. Disturbance in visually sensitive areas should be contoured to match the original topography, where matching is defined as reproducing the original topography and eliminating form, line, and color caused by the disturbance as much as possible.
4. Reclamation should be implemented concurrent with construction and site operations to the fullest extent possible. Final reclamation actions shall be initiated within 6 months of the termination of operations unless otherwise approved in writing by the authorized officer.
5. Fill material should be pushed into cut areas and up over back slopes. Depressions that would trap water or form ponds should not be left.

Rights-of-Way and Utility Corridors

1. ROW and utility corridors should use areas adjoining or adjacent to previously disturbed areas whenever possible, rather than traverse undisturbed communities.
2. Waterbars or dikes should be constructed on all of the ROWs and utility corridors, and across the full width of the disturbed areas, as directed by the authorized officer.
3. Disturbed areas within road ROWs and utility corridors should be stabilized by vegetation practices designed to hold soil in place and minimize erosion. Vegetation cover should be reestablished to increase infiltration and provide additional protection from erosion.
4. Sediment barriers should be constructed when needed to slow runoff, allow deposition of sediment, and prevent transport from the site. Straining or filtration mechanisms may also be employed for the removal of sediment from runoff.

Forest Management

1. Design harvest units and forest health treatments to blend with natural terrain.
2. Consider clearcutting only where it is silviculturally essential to accomplish site-specific objectives. Areas with fragile watershed conditions or high scenic values should not be clearcut.
3. When soils or road surfaces become saturated to a depth of 3 inches, BLM-authorized activities such as log yarding and hauling should be limited or cease unless otherwise approved by the authorized officer.
4. Scatter unmerchantable material (tops, limbs, etc.) in cutting units and treatment areas, consistent with fuel loading limitations.
5. Ground-yarding systems are not recommended on slopes that are of 30 percent or greater.
6. Utilize designated skid trails and haul roads, where feasible, when ground-yarding timber harvest operations.
7. Locate skid trails on upper slope positions, as far as possible from surface water. Avoid skidding across drainage bottoms or creating conditions that concentrate and channelize surface flow.
8. Use directional felling, when applicable, to minimize skidding distance and locate skid trails as far as possible from sensitive areas.
9. Install waterbars and apply native seed, when available, to skid trails and landings prior to temporary seasonal closures and following harvest operations. Consider ripping or subsoiling on skid trails and abandoned haul roads to reduce compaction where soil and slope conditions permit.
10. When ground- or cable-yarding, logs should be fully suspended, or should at least have the lead end suspended.
11. Locate landings away from surface water. Design landings to minimize disturbance consistent with safety and efficiency of operation.
12. Use low pressure grapple equipment, if possible, when piling slash.
13. Conduct forested land treatments when soil surfaces are either frozen, dry, or have adequate snowpack, to minimize effects to soil and water resources.

Fire Suppression

1. Where possible, minimize surface disturbances and avoid the use of heavy earth-moving equipment on all fire suppression and rehabilitation activities, including mop-up, except where high value resources (including lives and property), are being protected.
2. Install waterbars and seed all constructed firelines with native or adapted nonnative species, as appropriate.
3. Avoid dropping fire retardant detrimental to aquatic communities on streams, lakes, ponds, and in riparian/wetland areas.
4. The location and construction of handlines should result in minimal surface disturbance while effectively controlling the fire. Hand crews should locate lines to take full advantage of existing land features that represent natural fire barriers. Whenever possible, handlines should follow the contour

of the slope to protect the soil, provide sufficient residual vegetation to capture and retain sediment, and maintain site productivity.

5. Suppression in riparian areas should be by hand crews when possible.

Prescribed Burning

1. To protect soil productivity, burning should be conducted, if possible, under conditions when a low-intensity burn can accomplish stated objectives and only when conditions of organic surface or duff layer have adequate moisture to minimize effects to the physical and chemical properties of the soil. When possible, maximize the retention of the organic surface or duff layer.
2. Slash should not be piled and burned within riparian/wetland areas. If riparian/wetland areas are within or adjacent to the prescribed burn unit, piles should be firelined or scattered prior to burning.
3. When preparing the unit for burning, avoid piling concentrations of large logs and stumps; pile small material (3 to 8 inches in diameter). Slash piles should be burned when soil and duff moisture are adequate to reduce potential damage to soil resources.

Livestock Grazing Management

Grazing management projects and improvements are constructed as a portion of adaptive management to reduce resource management conflicts and to achieve multiple-use management objectives. Rangeland improvements may include but are not limited to the following examples:

- Water developments (i.e., spring developments, pipelines/troughs, and reservoirs) to facilitate upland distribution and reduce concentration in riparian wetland areas of livestock, wildlife, and wild horses.
- Hardened crossings and water access points, or water gaps to direct livestock use to specific watering locations and reduce use over larger riparian wetland areas.
- Placement of salt or other supplements to distribute livestock throughout uplands and away from riparian areas.
- Riding and herding livestock to control use in sensitive areas.
- Planting desirable forage species in uplands to attract livestock away from riparian or other sensitive areas.
- Fencing to delineate pastures associated to area specific management objective(s), or to establish permanent, temporary or seasonal exclusion from specific areas.
- Barriers (i.e., trees, brush, boulder, gap fences) to reduce access or avoid specific areas.

Grazing schedules are developed and adjusted through the adaptive management process on an allotment-specific basis. This is to mitigate effects to resource values, and to progress toward multiple-use management objectives and sustainability of desirable values. Appendix O provides further details on intensity and season of use.

Mining

1. Reclaim all disturbed surface areas promptly, performing concurrent reclamation as necessary, and minimize the total amount of all surface disturbance.
2. Prior to conducting operations, all surface soil should be stripped stockpiled, and reapplied during reclamation, regardless of soil quality. Minimize the length of time soil remains in stockpiles and the depth or thickness of stockpiles. When slopes on topsoil exceed 5 percent, a berm or trench should be constructed below the stockpile to prevent sediment transport offsite.
3. Strip and separate soil surface horizons where feasible and reapply in proper sequence during reclamation.
4. Locate soil stockpiles and waste rock disposal areas away from surface water to minimize offsite drainage effects.
5. Establish vegetation cover on soil stockpiles that are to be in place longer than 1-year.
6. Construct and rehabilitate temporary roads to minimize total surface disturbance, consistent with intended use.

7. Consider temporary measures such as silt fences, straw bales, or mulching to trap sediment in sensitive areas until reclaimed areas are stabilized with vegetation.
8. Reshape to the approximate original contour all areas to be permanently reclaimed, providing for proper surface drainage.
9. Leave reclaimed surfaces in a roughened condition following soil application.
10. Complete reclamation and seeding during the fall if possible.

Noxious Weed Management

1. All contractors and land use operators moving surface disturbing equipment in or out of weed infested areas should clean their equipment before and after use on public land.
2. Control all weeds annually in areas frequently disturbed such as gravel pits, recreation sites, roadsides, and livestock concentration areas.
3. Consider livestock quarantine, removal, or timing limitations in weed-infested areas.
4. All seed, hay, straw, mulch, or other vegetation material transported and used on public land weed-free zones for site stability, rehabilitation, or project facilitation should be certified by a qualified Federal, State, or county officer as free of noxious weeds and noxious weed seed. All baled feed, pelletized feed, and grain transported into weed-free zones and used to feed livestock should also be certified as free of noxious weed seed.
5. All vehicles, including off-road and all-terrain, traveling in or out of weed-infested areas should be cleaned before and after use on public land.

Developed Recreation

1. Construct recreation sites and provide appropriate sanitation facilities to minimize effects to resource values, public health, and safety, and to minimize user conflicts regarding approved activities and access within an area, as appropriate.
2. Minimize effects to resource values and provide a quality recreational setting and experience. Harden site and locations subject to prolonged/repetitive concentrated recreational uses with selective placement of gravel or other porous materials and allow for dust abatement, paving, and engineered road construction.
3. Use public education or physical barriers (e.g., rocks, posts, vegetation) or both to direct or preclude uses and to minimize adverse effects to resource values and the quality of recreational experience.
4. As appropriate, employ limitations on specific activities to avoid or correct adverse effects to resource values, public safety issues, and conflicts between recreational uses.
5. Employ land use ethics programs and techniques such as “Leave No Trace” and “Tread Lightly.” Use outreach efforts of such programs to reduce the need for implementing more stringent regulatory measures in order to protect resources and provide a quality recreation experience.

Appendix C - Subbasin Review Report

Introduction

"The Interior Columbia Basin Ecosystem Management Project (ICBEMP) was established in 1994...to develop and then adopt a scientifically sound ecosystem based strategy for managing all USFS or BLM-administered land within the (Interior Columbia) Basin." (Status of the Interior Columbia Basin, Summary of Scientific Findings [USFS 1996]). The ICBEMP covered an area of 145 million acres, 53 percent of which is public land managed by the BLM or the USFS. The size of this area requires some means to bring findings and information down to a level where they can be applied in a USFS or BLM management unit such as a ranger district or resource area. A process was developed with which the pertinent information could be "stepped down" to the local management level. This is called the subbasin review process.

The ICBEMP area was divided for analysis and review purposes into four geographic scales: broad-scale (Interior Columbia Basin), mid-scale (subbasins or groups of subbasins), fine-scale (watershed), and site scale (project). The mid-scale or subbasin level is the level at which field offices would undertake long-range planning for all resources within their respective administrative boundaries. The subbasins are based on the US Geological Survey 4th field HUCs. On average these 4th field HUCs comprise an area of 500,000 to 1,000,000 acres. The Planning Area subbasin review area included six subbasins identified in the ICBEMP scientific assessment: Guano, Harney/Malheur Lakes, Alvord Lake, Donner und Blitzen, Thousand-Virgin, and Crooked-Rattlesnake comprising an area of approximately 6,200,110 acres. Landownership and administrative responsibilities included private, county, State of Oregon, BLM, and USFWS. The majority of the land in the Planning Area portion of the subbasin review area is administered by the BLM, Burns DO (Figure 2.9). Only those portions of the subbasins in the Planning Area are described.

In anticipation of preparing a comprehensive RMP/EIS, the Burns DO collected a considerable amount of data and information about the resources on BLM-administered land. Much of this information was in GIS format. Data and information needed for the resources in the subbasin review area and from other agencies were identified prior to preparation of the AMS/subbasin review.

A BLM team was assembled to be the core group responsible for gathering data and putting it into a written or GIS format. This team was comprised of a planning/NEPA specialist, a wildlife biologist, a fisheries biologist, a botanist, a recreation specialist, a wilderness specialist, a GIS specialist, and a management support specialist. This core group is also part of a larger ID team comprised of many other resource specialists and representatives for cooperating agencies. The subbasin review team would deal primarily with health-of-the-land issues.

Issues and Findings

Broad-scale information from the ICBEMP provides a general characterization of the Planning Area subbasin review area relative to the rest of the Interior Columbia Basin. The broad-scale information indicates that essentially 100 percent of this subbasin review area is rangeland. Rangeland in the subbasin review area is classified as low integrity. The rangeland is described as being dominated by dry shrubland vegetation that is highly sensitive to overgrazing and susceptible to invasion by noxious weeds. Hydrologic integrity is low to moderate and the integrity of riparian environments is commonly low. Some native fish species occur in highly fragmented habitat.

The conditions described above significantly increase the subbasins' susceptibility to wildland fire, insects and disease, soil erosion, loss of native species, and other problems that threaten ecological integrity, water quality, species recovery, timber and forage production, and other uses of public land (Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin, USFS, BLM 1996).

Potential issues were identified by the Burns DO prior to the beginning of the subbasin review process and are included in Section 1.4.2 (Planning Criteria) of the RMP/EIS. These mid-scale issues generally reflect many of the broad-scale findings in the ICBEMP scientific assessment.

The group then examined the list of findings in "Using Key Broad-scale Findings in Mid-scale Issue Identification" documented in the ICBEMP Scientific Assessment (Quigley and Arbelbide, 1997) and EIS. The participants determined that many of the findings applied to the Planning Area subbasin review area. Some of the findings were modified to more accurately reflect conditions within the Planning Area subbasin review. Of the approximately 60 findings or conditions listed, only 18 were considered not applicable to the Planning Area subbasin review. Either the resources did not occur in the area or conditions were known to be better than indicated in the ICBEMP findings.

The findings dealt primarily with terrestrial and aquatic habitat, water quality, riparian health, landscape health, and social and economic concerns including tribal rights. The group then developed the refined list of broad scale findings. These were discussed and small changes were made. Several findings dealt with designated priority issues including noxious weed and juniper expansion, water quality, Special Status species management, aquatic habitat, and riparian and wetland vegetation. Listed at the end of this chapter are those findings the group felt were not applicable to the Planning Area subbasin review. A complete description of the individual findings follows.

Revised List of Key Broad-Scale Findings Used in Issue Identification for the Andrews MU/Steens Mountain CMPA Subbasin Review Area

These findings are from *Ecosystem Review at the Subbasin Scale (Subbasin Review), Volume 1 - The Process,* August 1999, Appendix A. As stated above, some findings have been modified to more accurately reflect conditions within the Planning Area subbasin review. The ICBEMP did not address issues related to current management practices on cultural resources, including archaeological and American Indian traditional values, and therefore, are not addressed in this section.

Terrestrial Habitat/Landscape Health

(1) Rangelands

- Noxious weeds are spreading on roadway disturbance.
- Woody species encroachment by and/or increasing density of woody species (sagebrush and juniper), especially on dry grasslands and cool shrublands, has reduced herbaceous understory and biodiversity.
- Cheatgrass has taken over many dry shrublands, increasing soil erosion and fire frequency and reducing biodiversity and wildlife habitat. Cheatgrass and other exotic plant infestations have simplified species composition, reduced biodiversity, changed species interactions and forage availability, and reduced the systems' ability to buffer against changes.
- Expansion of agricultural and urban areas on non-Federal land has reduced the extent of some rangeland potential vegetation groups, most notably dry grasslands, dry shrublands, and riparian areas. Changes in some of the remaining habitat patches and loss of native species diversity have contributed to a number of wildlife species declines, some to the point of special concern (such as sage-grouse, Columbian sharptailed grouse, California bighorn sheep, pygmy rabbit, kit fox, and Washington ground squirrel).
- Increased fragmentation and loss of connectivity within and between blocks of habitat, especially in shrub steppe and riparian areas, have isolated some habitats and populations and reduced the ability of populations to move across the landscape, resulting in long-term loss of genetic interchange.
- Slow-to-recover rangelands (in general, rangelands that receive less than 12 inches of precipitation per year) are not recovering naturally at a pace that is acceptable to the general public, and are either highly susceptible to degradation or already dominated by cheatgrass and noxious weeds.
- Fire frequency has decreased in many locations resulting in an increase in conifer encroachment; an increase in tree density in formerly savanna-like stands of juniper and ponderosa pine; and increased density and/or coverage of big sagebrush and other shrubs, with an accompanying loss of herbaceous vegetation.
- Fire frequency has increased in some areas, particularly in drier locations where exotic annual grasses have become established. Increased fire frequency has caused a loss of shrub cover and reduction in bunchgrasses.

(2) Forests

- Interior ponderosa pine has decreased across its range with a significant decrease in old single story structure. The primary transitions were to interior Douglas-fir and grand fir/white fir.
- There has been a loss of the large tree component (live and dead) within roaded and harvested areas. This decrease affects terrestrial wildlife species that are closely associated with these old forest structures.
- Western larch has decreased across its range. The primary transitions were to interior Douglas-fir, lodgepole pine, or grand fir/white fir.
- Western white pine has decreased by 95 percent across its range. The primary transitions were to grand fir/white fir, western larch, and shrub/herb/tree regeneration.
- The whitebark pine/alpine larch potential vegetation type has decreased by 95 percent across its range, primarily through a transition into the whitebark pine cover type. Overall, however, the whitebark pine cover stand has also decreased, with compensating increases in Engelmann spruce/subalpine fir.
- Generally, mid-seral forest structures have increased in dry and moist forest Potential Vegetation Groups (PVG), with a loss of large, scattered, and residual shade-intolerant tree components, and an increase in the density of smaller shade-tolerant diameter trees.
- There has been an increase in fragmentation and a loss of connectivity within and between blocks of late-seral, old forests, especially in lower elevation forests and riparian areas. This has isolated some animal habitats and populations and reduced the ability of populations to move across the landscape, resulting in a long-term loss of genetic interchange.
- Habitat for several forest carnivores and omnivores is in decline.
- Insects and diseases always existed in forests, but the size and intensity of their attacks has increased in recent years due to increased stand density.
- Dry forests have had an increase in fuel loading, duff depth, stand density, and a fuel ladder that can carry fire from the surface into the tree crowns. As a result, wildfire intensity has increased.
- Noxious weeds are spreading rapidly, and in some cases exponentially, in most dry forest types.

Aquatic Habitat/Landscape Health

(3) Hydrology and Watershed Processes

- Management activities throughout watersheds in the Planning Area have affected the quantity and quality of water, processes of sedimentation and erosion, and the production and distribution of organic material, thus affecting hydrologic conditions.

(4) Source Habitat

- Source habitats for the majority of species in the basin declined strongly (>20 percent decline) from historical to current.
- The strongest declines were for species dependent on low-elevation, old-forest habitats, species dependent on combinations of rangeland or early-seral forests with late-seral forests, and species dependent on native grassland and open canopy sagebrush habitats (Wisdom et al., in press).
- Primary causes of decline in old-forest habitats and early-seral habitats are intensive timber harvest and large-scale fir exclusion.
- Primary causes for decline in native herbland, woodland, grassland, and sagebrush habitats are excessive livestock grazing, invasion of exotic plants, and conversion of land to agriculture, residential, and urban development. Altered fire regimes have also contributed to a decline in grassland and shrubland habitats.
- A variety of road-associated factors negatively affect habitats or populations of many species.
- Human interactions with wide-ranging carnivores are generally negative and large areas of the basin may not be used by wide-ranging carnivores; because of this, habitats for many riparian dependent terrestrial species, especially shrubland habitats, have declined.
- Snag and down wood habitats in managed woodland and riparian areas have declined.

(5) Streams, Rivers, and Lakes

- Banks and beds of streams, rivers, and lakes have been altered. In general, the changes have been greatest for the larger streams, rivers, and lakes.
- Water quantity and flow rates have been locally affected.
- Many BLM-administered steams are "water quality limited" as defined by the Clean Water Act. On USFS-administered land, the primary water quality problems are sedimentation, turbidity, flow alteration, and elevated temperatures. On BLM-administered land, sedimentation, turbidity, and elevated temperatures are the primary reasons for listing as water quality limited.
- Streams and rivers are highly variable across the project area, reflecting diverse physical settings and disturbance histories. Nevertheless, important aspects of fish habitat, such as pool frequency and large woody debris abundance, have decreased throughout much of the project area.

(6) Riparian Areas and Wetlands

- The overall extent and continuity of riparian areas and wetlands has decreased.
- Riparian ecosystem function has decreased in most subbasins within the project area.
- A majority of riparian areas on BLM-administered land are either "not meeting objectives," "nonfunctioning," or "functioning at-risk." However, the rate has slowed and a few areas show increases in riparian cover and large trees.
- Within riparian woodlands, the abundance of mid-seral vegetation has increased, whereas the abundance of late and early seral structural stages has decreased.
- Within riparian shrublands, there has been extensive spread of western juniper and introduction of exotic grasses and forbs.
- The frequency and extent of seasonal floodplain and wetland inundation has been altered by changes in flow regime, and by changes in channel morphology.
- There is an overall decrease in large trees and late seral vegetation in riparian areas.
- Riparian areas are important for about three quarters of the terrestrial wildlife species. Wildlife numbers have declined in proportion to the decline in riparian habitat conditions.

(7) Fish

- The composition, distribution, and status of fishes within the Planning Area are substantially different than they were historically. Some native fishes have been eliminated from large portions of their historical ranges.
- Many native nongame fish are vulnerable because of their restricted distribution or fragile or unique habitats.
- Although several of the key salmonids are still broadly distributed (notably the cutthroat trouts and redband trout), declines in abundance, loss of life history patterns, local extinctions, and fragmentation and isolation in smaller blocks of high quality habitat are apparent.
- Wild chinook salmon and steelhead are near extinction in a major part of their remaining distribution.
- Core areas for rebuilding and maintaining biological diversity associated with native fishes still exist within the basin.

Landscape Health

(8) Air Quality

- The current condition of air quality in the project area is considered good, relative to other areas of the country.
- Wildland fires significantly affect the air resources. Current wildland fires produce higher levels of smoke emissions than historically. Within the project area, the current trend in prescribed fire use is expected to result in an increase of smoke emissions.

Social/Economic

(9) Human Uses and Values

- The Planning Area is sparsely populated and rural, especially in areas with a large amount of agency land.
- Development for a growing human population is encroaching on previously undeveloped areas adjacent to land administered by the BLM. New development can put stress on the political and physical infrastructure of rural communities, diminish habitat for some wildlife, and increase agency costs to manage fire to protect people and structures.
- Recreation is an important use of agency land in the Planning Area in terms of economic value and amount of use. Most recreation use is tied to roads and accessible water bodies, though primitive and semi-primitive recreation is also important.
- Industries customarily served by agency land uses, such as logging, wood products manufacturing and livestock grazing, no longer dictate the economic prosperity of the region, but remain economically and culturally important in rural areas. The economic dependence of communities on these industries is highest in areas that are geographically isolated and offer few alternative employment opportunities.
- The public, including individuals and Harney County through gross receipts sharing, has invested substantial land and capital to develop road systems on agency land, primarily to serve commodity uses.
- For those counties that have benefited from Federal sharing of gross receipts from commodity sales on agency land, changing levels of commodity outputs can affect county budgets.
- Agency social and economic policy has emphasized the goal of supporting rural communities, specifically promoting stability in those communities deemed dependent on agency timber harvest and processing. Even-flow of timber sales, timber sale bidding methods, timber export restrictions, and small business set asides of timber sales have been the major policy tools on USFS-administered commercial forestlands. Regulation of grazing practices has been important on BLM-administered rangelands.
- The factors that appear to help make communities resilient to economic and social change include population size and growth rate, economic diversity, social and cultural attributes, amenity setting, and quality of life. The ability of agencies to improve community resiliency depends on the effectiveness of agency land uses and management strategies to positively influence these factors.
- Predictability in timber sale volume from agency land has been increasingly difficult to achieve. Advancing knowledge of ecosystem processes, changing societal goals, and changing forest conditions has undermined conventional assumptions underlying the quantity and regularity of timber supply from agency land.
- Land now administered by the BLM makes up the traditional homelands of affected American Indian Tribes. Land management actions and decisions on these lands affect the rights and/or interests of these tribes and their members.
- American Indian tribes in the Basin depend on lands and resources administered by the BLM for a myriad of needs and uses ranging from subsistence uses and economic purposes to religious and cultural purposes.
- Agency social and economic policy has emphasized the goal of supporting rural communities, including tribal communities. The ability of agencies to assist tribal members and tribal communities depends on the effectiveness of agency land uses and management strategies to positively consider and influence these factors (tribal employment, subsistence, treaty/reserved rights, spiritual, cultural/social purposes).

(10) American Indian Rights and Interests

- There is low confidence and trust that American Indian rights and interests are considered when decisions are proposed and made for actions to be taken on BLM-administered land.
- American Indian values on Federal land may be affected by proposed actions on woodlands and rangelands because of changes in vegetation structure, composition, and density; existing roads; and watershed conditions.
- Indian tribes do not feel that they are involved in the decision-making process commensurate with their legal status. They do not feel that government-to-government consultation is taking place.
- Culturally significant species such as anadromous fish and the habitat necessary to support healthy, sustainable, and harvestable populations constitute a major, but not the only, concern. American Indian people have concern for all factors that keep the ecosystem healthy.

Findings from the ICBEMP Scientific Assessment Not Applicable to the Andrews MU/Steens Mountain CMPA Subbasin Review Area

Following is a description of ICBEMP broad-scale findings determined by the BLM team to be not applicable to the subbasin review area. The reasons why the findings are not applicable are given.

Finding: Noxious weeds are spreading rapidly, and in some cases exponentially, on rangelands in every range cluster.

Response: Noxious weeds, although present on the Planning Area, are not spreading rapidly in every range cluster and the Burns BLM has implemented an integrated weed management program.

Finding: Expansion of agricultural and urban areas on non-Federal land has reduced the extent of some rangeland potential vegetation groups, most notably dry grasslands, dry shrublands, and riparian areas. Changes in some of the remaining habitat patches and loss of native species diversity have contributed to a number of wildlife species declines, some to the point of special concern (such as sage-grouse, Columbian sharptailed grouse, California bighorn sheep, pygmy rabbit, kit fox, and Washington ground squirrel).

Response: The Planning Area has not experienced expansion of agricultural and urban areas on non-Federal land.

Finding: Increased fragmentation and loss of connectivity within and between blocks of habitat, especially in shrub steppe and riparian areas, have isolated some habitats and populations and reduced the ability of populations to move across the landscape, resulting in long-term loss of genetic interchange.

Response: There has not been fragmentation and loss of habitat connectivity in the Planning Area; in fact, the BLM has acquired parcels for incorporation into contiguous lands under BLM administration, which increases habitat connectivity.

Finding: Fire frequency has decreased in many locations resulting in an increase in conifer encroachment; an increase in tree density in formerly savanna-like stands of juniper and ponderosa pine; and increased density and/or coverage of big sagebrush and other shrubs, with an accompanying loss of herbaceous vegetation.

Response: Conifers are not readily present in the Planning Area and are not encroaching.

Finding: Interior ponderosa pine has decreased across its range with a significant decrease in old single story structure. The primary transitions were to interior Douglas-fir and grand fir/white fir.

Response: Ponderosa pine has not occurred historically and does not presently occur within the Planning Area.

Finding: There has been a loss of the large tree component (live and dead) within roaded and harvested areas. This decrease affects terrestrial wildlife species that are closely associated with these old forest structures.

Response: The Planning Area is not forested; therefore, a loss of large trees has not occurred.

Finding: Western larch has decreased across its range. The primary transitions were to interior Douglas-fir, lodgepole pine, or grand fir/white fir.

Response: Western larch has not occurred historically and does not presently occur within the Andrews MU/Steens Mountain CMPA subbasin review area.

Finding: Western white pine has decreased by 95 percent across its range. The primary transitions were to grand fir/white fir, western larch, and shrub/herb/tree regeneration.

Response: The Planning Area contains a very small (approximately 40 acres) stand of white fir and it has not changed substantially in size

Finding: The whitebark pine/alpine larch potential vegetation type has decreased by 95 percent across its range, primarily through a transition into the whitebark pine cover type. Overall, however, the whitebark pine cover stand has also decreased, with compensating increases in Engelmann spruce/subalpine fir.

Response: Whitebark pine/alpine larch potential vegetation type has not occurred historically and does not presently occur within the Andrews MU/Steens Mountain CMPA subbasin review area.

Finding: Generally, mid-seral forest structures have increased in dry and moist forest potential vegetation groups (PVG), with a loss of large, scattered, and residual shade-intolerant tree components, and an increase in the density of smaller shade-tolerant diameter trees.

Response: The Planning Area does not have forest habitat.

Finding: There has been an increase in fragmentation and a loss of connectivity within and between blocks of late-seral, old forests, especially in lower elevation forests and riparian areas. This has isolated some animal habitats and populations and reduced the ability of populations to move across the landscape, resulting in a long-term loss of genetic interchange.

Response: The Planning Area does not contain old-growth forests.

Finding: Habitat for several forest carnivores and omnivores is in decline.

Response: The Planning Area does not have forest habitat.

Finding: Insects and diseases always existed in forests, but the size and intensity of their attacks has increased in recent years due to increased stand density.

Response: The Planning Area does not have forest habitat.

Finding: Dry forests have had an increase in fuel loading, duff depth, stand density, and a fuel ladder that can carry fire from the surface into the tree crowns. As a result, wildfire intensity has increased.

Response: The Planning Area does not have forest habitat.

Finding: Noxious weeds are spreading rapidly, and in some cases exponentially, in most dry forest types.

Response: Noxious weeds, although present on the Planning Area, are not spreading rapidly in dry forest types and the Burns BLM has implemented an integrated weed management program.

Finding: Primary causes of decline in old-forest habitats and early-seral habitats are intensive timber harvest and large-scale fir exclusion.

Response: Old-growth forest habitat has not occurred historically and does not presently occur within the Andrews MU/Steens Mountain CMPA subbasin review area.

Finding: Human interactions with wide-ranging carnivores are generally negative and large areas of the basin may not be used by wide-ranging carnivores; because of this, habitats for many riparian dependent terrestrial species, especially shrubland habitats, have declined.

Response: Wide-ranging carnivores are not prevalent in the Planning Area; therefore, there are no commensurate elevated levels of herbivores impacting the identified habitat.

Finding: The composition, distribution, and status of fishes within the Planning Area are substantially different than they were historically. Some native fishes have been eliminated from large portions of their historical ranges.

Response: The composition, distribution, and status of fishes within the Planning Area have not substantially changed.

Finding: Wild chinook salmon and steelhead are near extinction in a major part of their remaining distribution.

Response: Chinook salmon and steelhead do not occur in the Andrews MU/Steens Mountain CMPA subbasin review area. No anadromous fish occur in the subbasin review area since only one drainage in the subbasin review area is a tributary to the Columbia River (Wild Cat Creek), and it is an ephemeral stream.

Finding: Development for a growing human population is encroaching on previously undeveloped areas adjacent to land administered by the USFS and the BLM. New development can put stress on the political and physical infrastructure of rural communities, diminish habitat for some wildlife, and increase agency costs to manage fire to protect people and structures.

Response: The Planning Area is sparsely populated and rural; however, it is not experiencing any rapid population growth. The population is stable or declining.

Finding: Agency social and economic policy has emphasized the goal of supporting rural communities, specifically promoting stability in those communities deemed dependent on agency timber harvest and processing. Even-flow of timber sales, timber sale bidding methods, timber export restrictions, and small business set asides of timber sales have been the major policy tools on USFS-administered commercial forestlands. Regulation of grazing practices has been important on BLM-administered rangelands.

Response: The BLM does not have a social and economic policy.

Finding: Agency social and economic policy has emphasized the goal of supporting rural communities, including tribal communities. The ability of agencies to assist tribal members and tribal communities depends on the effectiveness of agency land uses and management strategies to positively consider and influence these factors (tribal employment, subsistence, treaty/reserved rights, spiritual, cultural/social purposes).

Response: The BLM does not have a social and economic policy.

Finding: Predictability in timber sale volume from agency land has been increasingly difficult to achieve. Advancing knowledge of ecosystem processes, changing societal goals, and changing forest conditions has undermined conventional assumptions underlying the quantity and regularity of timber supply from agency land.

Response: The Planning Area does not have forest habitat and there are no timber sales.

Finding: There is low confidence and trust that American Indian rights and interests are considered when decisions are proposed and made for actions to be taken on BLM-administered land.

Response: The Burns Paiute Tribe is the primary consultation partner for the Planning Area. The BLM has an active relationship with this tribe.

Finding: Indian tribes do not feel that they are involved in the decision-making process commensurate with their legal status. They do not feel that government-to-government consultation is taking place.

Response: The BLM has semi-annual project summary meetings and consultation on all projects in the Planning Area of interest to the tribe.

Finding: Culturally significant species such as anadromous fish and the habitat necessary to support healthy, sustainable, and harvestable populations constitute a major, but not the only, concern. American Indian people have concern for all factors that keep the ecosystem healthy.

Response: The Planning Area does not have and has not historically had anadromous fish and the habitat necessary to support healthy, sustainable, and harvestable populations of anadromous fish.

Mid-scale Character Description (Resource Area Profile)

The Description of the Mid-scale Character, Step 3 of the subbasin review process, was combined with the Resource Area Profile (RAP) of the AMS. Both the RAP and the Mid-scale Character are descriptions of the existing resources in the subbasin review area as well as their condition and use. The only difference is that the RAP covers all resources in the Planning Area, whereas the Description of the Mid-scale Character is tied to the ICBEMP findings for issue identification. Resources addressed by the findings are described for the subbasin review area as a whole. These include rangelands, woodlands, vegetation, fish and wildlife habitat, water quality, riparian habitats, and human uses and values. Those resources not addressed by the findings are described for the Andrews MU and Steens Mountain CMPA only.

Prior to the meeting of the subbasin review team, the Burns DO staff had begun to prepare mid-scale characterization, by resource, as they pertained to the mid-scale findings and issues for the subbasin review area. This was the next step in the subbasin review process. At the meeting, the group went over the draft characterizations and suggested changes and additions. The current status of each resource pertaining to the findings was described. Management concerns for the resources were identified. A listing of the concerns, by resource, is presented as the issues in Section 6.1.

These management concerns will be used in developing the Management Opportunities chapter of the AMS (Chapter 4) and will also be used in setting priorities and making recommendations as the final step in the subbasin review process. Eventually, this information will feed into the development of alternatives for the RMP/EIS.

The complete descriptions of the mid-scale character are included as Chapter 2 of this AMS.

Priorities and Recommendations (Management Opportunities)

This is Step 4 of the subbasin review process. This step is analogous to the Management Opportunities step in preparing the AMS. In both cases, management opportunities or management recommendations are identified and priority setting is begun. In the subbasin review, the priorities would set the stage for fine scale, or activity level or project planning; however, in this situation where the subbasin review and AMS are combined, the priority setting is begun at this stage, but is carried forward and refined in preparing the RMP/EIS. After that would come the fine-scale planning. The Management Opportunities/Priorities and Recommendations are in Chapter 4 of the AMS document.

The group then examined the mid-scale descriptions of 22 resources of concern. The team discussed the management concerns pertaining to these resources and "brainstormed" management opportunities and recommendations to address these concerns. This set the stage for the BLM staff to identify management opportunities for all resources to be addressed in the RMP/EIS. The following is a listing of the management opportunities by resource.

Air Resources

Meet or exceed the National Ambient Air Quality Standards and the Prevention of Significant Deterioration with all authorized actions.

Energy and Mineral Resources

Provide opportunities for exploration and development of leasable energy and mineral resources while protecting other sensitive resources. Provide opportunities for exploration and development of locatable mineral resources while protecting other sensitive resources. Provide for public demand for saleable minerals from public land while protecting sensitive resources.

Fire

Provide an Appropriate Management Response on all wildland fires, with emphasis on firefighter and public safety, minimizing suppression costs, benefits, and values to be protected, consistent with resource objectives. Recognize fire as a critical natural process and use it to protect, maintain, and enhance resources.

Vegetation

Restore, protect, and enhance the diversity and distribution of desirable vegetation communities, including perennial native and desirable introduced plant species. Provide for their continued existence and normal function in nutrient, water, and energy cycles. Manage big sagebrush cover in seedings and on native rangelands to meet the life history requirements of sagebrush dependent wildlife. Control the introduction and proliferation of noxious weed species and reduce the extent and density of established weed species to within acceptable limits.

Woodlands

Manage woodlands to maintain or restore ecosystems to a condition in which biodiversity is preserved and occurrences of fire, insects, and disease do not exceed levels normally expected in a healthy woodland. Manage woodlands for long-term healthy habitat for animal and plant species. Restore productivity and biodiversity in juniper and aspen woodland areas. Manage juniper areas where encroachment or increased density is threatening other resource values. Retain old growth characteristics in historic juniper sites not prone to frequent fire. Manage aspen to maintain diversity of age classes and to allow for species reestablishment.

Special Status Plant Species

Manage public land to maintain, restore, or enhance populations and habitats of Special Status plant species. Priority for the application of management actions would be: (1) Federal endangered species, (2) Federal threatened species, (3) Federal proposed species, (4) Federal candidate species, (5) State listed species, (6) BLM sensitive species, (7) BLM assessment species, and (8) BLM tracking species. Manage in order to conserve or lead to the recovery of threatened or endangered species.

Water Resources and Riparian/Wetlands

Ensure that surface water and groundwater influenced by BLM activities comply with or are making progress toward achieving State of Oregon water quality standards for beneficial uses as established per stream by the ODEQ. Restore, maintain, or improve riparian vegetation, habitat diversity, and associated watershed function to achieve healthy and productive riparian areas and wetlands. Where water rights are needed to support programs and projects within the Planning Area, they will be secured through normal channels as prescribed by State law.

Fish and Aquatic Habitat

Restore, maintain, or improve habitat to provide for diverse and self-sustaining communities of fishes and other aquatic organisms.

Wildlife and Wildlife Habitat

Maintain, restore, or enhance riparian areas and wetlands so they provide diverse and healthy habitat conditions for wildlife. Manage upland wildlife habitats to ensure that the necessary forage, water, cover, structure, and security are available on public land.

Special Status Animal Species

Manage public land to maintain, restore, or enhance populations and habitats of Special Status animal species. Priority for the application of management actions would be: (1) Federal endangered species, (2) Federal threatened species, (3)

Federal proposed species, (4) Federal candidate species, (5) State listed species, (6) BLM sensitive species, (7) BLM assessment species, and (8) BLM tracking species. Manage in order to conserve or lead to the recovery of threatened or endangered species. Facilitate the maintenance, restoration, and enhancement of bighorn sheep populations and habitat on public land. Pursue management in accordance with Oregon's Bighorn Sheep Management Plan in a manner consistent with the principles of multiple-use management.

Wild Horses

Maintain and manage wild horse herds in established HMAs at AMLs to ensure or enhance a thriving natural ecological balance between wild horse populations, wildlife, livestock, vegetation resources, and other resource values. Enhance and perpetuate special and unique characteristics that distinguish the respective herds.

Grazing Management

Grazing will be in compliance with current policy which includes the Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington. Provide for a sustained level of livestock grazing consistent with other resource objectives and public land use allocations. Livestock grazing in the Andrews MU will be managed under laws provided by the Taylor Grazing Act, Public Rangelands Improvement Act, National Environmental Policy Act, Wilderness Act, the Steens Act and BLM regulations. The RMP will include the Standards for Rangeland Health and Guidelines for grazing management which apply to all BLM land in Oregon. The RMP will address several pasture and allotment boundary changes occurring as a result of land exchanges, forage offsets for creation of the No Livestock Grazing Area and grazing management changes.

Recreation

Provide and enhance developed and undeveloped recreation opportunities and manage the increasing demand for resource-dependent recreation activities while protecting resources.

Off-Highway Vehicles

Manage OHV use to protect resource values, promote public safety, provide OHV use opportunities where appropriate, and minimize conflicts among various users.

Visual Resources

Manage public land actions and activities in a manner consistent with VRM class objectives.

Areas of Critical Environmental Concern

Retain existing and designate new ACECs/RNAs where relevance and importance criteria are met and special management is required to protect the values identified.

Wild and Scenic Rivers

Protect and enhance ORVs of designated NWSRS and protect and enhance ORVs of rivers found suitable for WSR status until Congress acts.

Wilderness

Designated Wilderness Areas will be managed under the Wilderness Management Policy. The wilderness resources will be dominant whenever choices must be made between preservation of the wilderness character and visitor use.

Wilderness Study Areas

BLM administered land identified in the Wilderness Study Report and determined to have wilderness values could be included in adjacent WSAs and managed under the WSA IMP.

Human Uses and Values

Manage public land and pursue partnerships in order to provide social and economic benefits to local residents, businesses, visitors, and for future generations.

Cultural Resources

Protect and conserve cultural and paleontological resources. Increase the public's knowledge, appreciation, and sensitivity regarding cultural and paleontological resources. Consult and coordinate with American Indian groups to ensure that their traditional religious sites, landforms, resources, and other interests are considered.

Land and Realty

Retain public land with high public resource values. Consolidate public land holdings and acquire land or interests in land with high public resource values to ensure effective administration and improve resource management. Acquired land would be managed for its intended purpose. Make public land available for disposal within Zone 3 by State indemnity selection, private or State exchange, Recreation and Public Purpose Act lease or sale, public sale, or other authorized method. Establish utility and transportation system corridor routes to the extent possible, considering avoidance areas, and consistent with resource objectives.

BLM Resource Management Planning Process

During the resource management planning process, the BLM will set priorities for acting on these recommendations and opportunities. Emphasis will be placed on opportunities for protecting and managing special areas such as Areas of Critical Environmental Concern; opportunities for management of resources across administrative boundaries such as watersheds, aquatic species, and noxious weeds; and opportunities for control of juniper expansion.

BLM staff incorporated the descriptions of the mid-scale character and the recommendations into the RAP and management opportunities sections, respectively, of the AMS. The similarities between the subbasin review process and the AMS process are shown in the following table. The integrated priority setting described in the subbasin review for BLM actions will be conducted through the RMP.

Table C-1:Steps in the Subbasin Review and Analysis of Management Situation

Subbasin Review		Analysis of the Management Situation	
Step		**Step**	
1.	Prepare for the Review	1.	Collect and Consolidate Data
2.	Identify Mid-scale Issues	2.	Conduct Internal and Public Scoping
3.	Describe Mid-scale Character (Describe character of the review area in relationship to the issues.)	3.	Resource Area Profile (Describe the condition of the resource area, including its physical, biological, and human environment.)
	No step in SBR corresponds to Existing Management Situation of the AMS	4.	Existing Management Situation (Describe for each resource its current uses, production, or protection problems and the management practices and direction.)
4.	Develop recommendations and integrated priority setting. (Develop recommended actions and determine urgency and timing of actions.)	5.	Identify Management Opportunities (Identify and evaluate all reasonable opportunities and/or actions to address the planning issues and management concerns.)
5.	SBR Report (Document the SBR results and the process. Provide information for further planning.)	6.	Prepare the AMS (Develop a comprehensive document for use by the BLM and a summary document for public distribution. Provide information for RMP/EIS.)

Appendix D – U.S. Fish and Wildlife Service Biological Opinion

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Reply To: 8330.0329(05)
File: 1-7-05-F-0329
TS Number: 05-1470

May 9, 2005

Memorandum

To: Field Manager, Andrews Resource Area, Burns District, Bureau of Land Management, Burns, Oregon

From: Field Supervisor, Bend Field Office, Bend, Oregon Nancy Gilbert

Subject: Formal Section 7 Consultation for the Bureau of Land Management's Proposed Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Resource Management Plan/Final Environmental Impact Statement, August 2004 (1-7-05-F-0329)

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the Bureau of Land Management's (BLM), Burns District Biological Assessment of the effects of the Proposed Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Resource Management Plan (RMP)/Final Environmental Impact Statement, August 2004. The RMP provides the BLM with a general framework for managing approximately 1,649,470 acres of public lands (planning area) located primarily in Harney County, southeastern Oregon. The Biological Assessment addresses the effects of the proposed RMP on Federally listed species known to occur in the planning area including Borax Lake chub (*Gila boraxobius*), Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), and bald eagle (*Haliaeetus leucocephalus*). The Service has reviewed your Biological Assessment evaluating effects to federally listed species from the RMP. Our comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et. seq.*). Your March 10, 2005 request for formal consultation was received on March 11, 2005.

This letter of concurrence and biological opinion is based on information provided in the March 10, 2005, RMP Biological Assessment (USDI/BLM 2005), the August 2004 Environmental

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Impact Statement, prior biological opinions completed for activities continuing under the guidance of this programmatic consultation, discussions between BLM, and Service personnel, and file information and reference material located at the Service's Bend Field Office. A complete administrative record of this consultation is on file at the Service's Bend Field Office.

The BLM Burns District requested our concurrence with their determinations that the proposed RMP actions and direction *may affect, not likely to adversely affect* the Borax Lake chub and its designated critical habitat, and the bald eagle. Formal consultation was requested for the "*may affect, likely to adversely affect*" determination for the Lahontan cutthroat trout in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). This information is summarized in Table 1. Your request also included a request for concurrence of "*not likely to adversely affect*" Lahontan cutthroat trout. Since your determination also concluded the activities of the RMP would "*likely adversely affect*" Lahontan cutthroat trout we are including here a biological opinion which addresses all of those affects described in your biological assessment and will not include Lahontan cutthroat trout in the concurrence section of this letter.

Table 1. Species addressed in the Biological Assessment, their listing status, and the BLM's effects determinations (USDI/BLM 2001).

Species Common name	**Scientific name**	**Listing Status**	**Effects Determination***
Borax Lake chub	*Gila boraxobius*	Endangered	NLAA
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*	Threatened	LAA
Bald eagle	*Haliaeetus leucocephalus*	Threatened	NLAA
Columbia spotted frog	*Rana luteiventris*	Candidate	N/A

* NLAA = may affect, not likely to adversely affect; LAA = may affect, likely to adversely affect; NE= no effect, N/A=not applicable

Consultation History

The Service received preliminary drafts of the Borax Lake chub and the Lahontan cutthroat trout sections of the Biological Assessment on November 17, and 22, 2004, respectively. The Service provided informal comments on these sections to BLM. We received a letter requesting initiation of formal consultation with a draft Biological Assessment dated January 21, 2005, received on January 25, 2005. The Service provided informal comments on the Draft Biological Assessment and information on herbicides in early February. On March 2, BLM provided a revised section on grazing management to the Service. The Service provided informal comments on March 5. On March 11, 2005, we received the final Biological Assessment.

The BLM and the Service have conducted numerous section 7 formal consultations for activities within the planning area that will be continuing under the guidance of the RMP. Section 7 formal consultations have occurred for livestock grazing authorization in four allotments of the Alvord Lake subbasin where Lahontan cutthroat trout are present. These biological assessments and biological opinions have concluded that the actions were likely to adversely affect, but not likely to jeopardize the continued existence of the species.
The Alvord and Mann Lake allotments encompass seven of the nine streams within the proposed RMP planning area that contain Lahontan cutthroat trout and have been combined under

previous ESA consultations. These streams occur along the east slope of Steens Mountain: Little McCoy Creek, Mosquito Creek, Willow Creek, Big Alvord Creek, Little Alvord Creek, Cottonwood Creek, and Pike Creek.

- USFWS (May 28, 2004): Biological Opinion – reinitiation of section 7 consultation for the Alvord and Mann Lake allotments grazing authorization, 2004 through 2010.
- USFWS (May 15, 2003): Biological Opinion – extension of the April 1995 Biological Opinion for the Alvord and Mann Lake allotments grazing authorization for 2003.
- USFWS (May 30, 2002): Biological Opinion – amendment and extension of the April 1995 Biological Opinion for the Alvord and Mann Lake allotments grazing authorization for 2002.
- USFWS (March 16, 2000): Biological Opinion – amendment of the April 1995 Biological Opinion for the Alvord and Mann Lake allotments grazing authorization for 2000 through 2001.
- USFWS (March 26, 1998): Biological Opinion – amendment of the April 1995 Biological Opinion for the Alvord and Mann Lake allotments grazing authorization for 1998 through 1999.
- USFWS (March 14, 1996): Biological Opinion – amendment of the April 1995 Biological Opinion for the Alvord and Mann Lake allotments grazing authorization.
- USFWS (April 4, 1995): Biological Opinion – Alvord and Mann Lake allotments grazing authorization for 1995 through 1996.

The Pueblo-Lone Mountain Allotment encompasses Van Horn Creek which may contain Lahontan cutthroat trout.

- USFWS (May 2001): Biological Opinion – Ongoing Implementation of the Pueblo-Lone Mountain Allotment Management Plan, livestock grazing authorization for 2001 through 2005.
- USFWS (March 7, 1996): Biological Opinion – Amending Implementation of the Pueblo-Lone Mountain Allotment Management Plan.
- USFWS (October 20, 1995): Biological Opinion – Implementation of the Pueblo-Lone Mountain Allotment Management Plan, livestock grazing authorization for 1996 through 2000.
- USFWS (April 14, 1995): Biological Opinion – Pueblo-Lone Mountain Allotment grazing authorization for 1995 through 1996.
- USFWS (May 1994): Biological Opinion – Pueblo-Lone Mountain Allotment grazing authorization for 1994.
- USFWS (May 15, 1993): Biological Opinion – Pueblo-Lone Mountain Allotment grazing authorization for 1993.

The Pueblo Mountain Allotment encompasses Denio Creek including Lahontan cutthroat trout occupied habitat.

- USFWS (October 21, 1999): Biological Opinion – Amending grazing authorization on the Pueblo Mountain Allotment under the June 1999 Biological Opinion.

- USFWS (June 11, 1999): Biological Opinion – Pueblo Mountain Allotment grazing authorization for 1999 through 2004.
- USFWS (May 26, 1993): Biological Opinion – Pueblo Mountain Allotment grazing authorization for 1993.

INFORMAL CONSULTATION

The Service concurs with the BLM's determinations of "*may affect, not likely to adversely affect*" for the bald eagle and the Borax Lake chub and its designated critical habitat based on the following summarized information available to the Service and presented in the Biological Assessment:

Borax Lake Chub (*Gila boraxobius*)

The Borax Lake chub is a small cyprinid endemic to Borax Lake and immediately adjacent wetland/pools in the Alvord Lake subbasin, Harney County, Oregon. Borax Lake comprises approximately 10 acres of surface water fed by geothermally heated groundwater. The lake is surrounded by salt crusts and is perched about 30 feet above the surrounding desert landscape. Occupied habitat is contained within private lands owned by The Nature Conservancy (TNC).

The Service listed the Borax Lake chub as endangered, and designated critical habitat by emergency rule May 28, 1980. The final rule designating endangered status and critical habitat was published October 5, 1982. Designated critical habitat is comprised of approximately 640 acres surrounding Borax Lake, including 320 acres of public land (T. 37 S., R. 33 E., sections 14 and 15).

The public land portion of critical habitat was additionally designated by BLM as the Borax Lake Area of Critical Environmental Concern (ACEC) in 1983. Following this designation, the area was fenced to exclude livestock grazing. Permanent exclusion from grazing will be formally instituted through the proposed RMP. The Steens Act congressionally designated a Mineral Withdrawal Area encompassing 900,000 acres of the planning area. The mineral withdrawal area contains the majority of the Alvord Known Geothermal Resource Area, including Borax Lake and surrounding public lands, with the exception of 332 acres located approximately 4.5 miles from Borax Lake.

The Recovery Plan for Borax Lake chub was published February 4, 1987. In 2003, Williams and MacDonald identified conservation elements that would further contribute to the recovery of Borax Lake chub which include elimination of livestock grazing from designated critical habitat, restriction of vehicle access and elimination of off-highway vehicle use within critical habitat, and a proposal to develop a cooperative agreement for management of the area through the BLM planning process.

Proposed RMP Action or directions that may affect the Borax Lake chub or its designated critical habitat include:

- RMP 2.7.3.1: Permanent protection of Borax Lake chub critical habitat would be pursued through establishment of a Conservation Agreement or other cooperative agreement among BLM, TNC, USFWS, ODFW, or other private landowners to manage and protect the area for the conservation or recovery of the species, including closing the area to livestock grazing, off-road vehicle travel, and limiting or closing vehicle access.

- RMP 2.21.1.2: Borax Lake ACEC; Motorized and mechanized vehicle access through the ACEC would be limited/controlled through a cooperative agreement among the BLM, TNC, USFWS, ODFW, and other private landowners. No cross-country travel would be permitted. The area within the fenced exclosure (fully encompassing critical habitat) would be closed to livestock grazing.

Conclusion:

The Service concurs with the BLM's determination that the proposed RMP may affect, but is not likely to adversely affect the endangered Borax Lake chub or its designated critical habitat. We made this determination based on the following;

1. The Borax Lake chub and its designated critical habitat occur within a designated Mineral Withdrawal Area.

2. The Borax Lake chub and its designated critical habitat occur within the BLM designated Borax Lake Area of Critical Environmental Concern (ACEC) and is fenced to exclude livestock grazing.

3. The proposed RMP would provide a permanent closure to livestock grazing within the fenced exclosure which fully encompasses the designated critical habitat.

4. The proposed RMP would limit motorized and mechanized vehicle access through the ACEC through a cooperative agreement.

5. The RMP proposes to establish a cooperative agreement among BLM, TNC, Service, Oregon Department of Fish and Wildlife (ODFW), and other private landowners to manage and protect the Borax Lake chub critical habitat area for the conservation of the species.

6. Future proposed actions would be evaluated individually and/or cumulatively, and need for consultation pursuant to the ESA would be determined.

Bald eagle (*Haliaeetus leucocephalus*)

The bald eagle was originally listed under the ESA as an endangered species in 1967. It is presently listed as threatened. As their range-wide viability improved, the bald eagle was proposed for delisting in 1999. No date has been projected for the removal of the bald eagle from the threatened species list.

The RMP planning area occurs within one of five established recovery regions in the United States, and is addressed in the Pacific Region Bald Eagle Recovery Plan. In Oregon, 343 bald eagle breeding territories were occupied in 1999. Recovery population goals were met or exceeded in 8 of 10 Oregon Recovery Zones (Isaacs and Anthony 1999). However, several Recovery Zones had productivity averages below 1.00 young per occupied territory in 1999, indicating that localized regions of poorer reproduction still persist within Oregon.

As of 2004, no bald eagle nesting has been documented on public land within the RMP planning area, but wintering populations migrate into southeast Oregon from breeding habitats or other wintering habitats located outside the planning area. There have been no planning area specific counts completed. Periodic random sightings have occurred in the planning area at different times during the winter. Some of these eagles may be migrating to other wintering areas.

Conclusion:

The Service concurs with the BLM's determination that the proposed RMP may affect, but is not likely to adversely affect the threatened bald eagle. We made this determination based on the following;

1. The proposed RMP includes the seasonal operating restrictions from the Pacific Bald Eagle Recovery Plan to prevent disturbance of any discovered winter roosts and nesting eagles. The seasonal operating restrictions are: no disturbance causing activities within known winter roost areas from approximately November 15, to March 15, (USDI/FWS 1986).

2. Currently there are no known bald eagle nest sites on BLM land within the planning area. Should a bald eagle nest site be located, BLM will consult prior to implementation of activities which may affect bald eagle nest sites.

3. Surveys for bald eagle night roosts will be conducted for any proposed project that may affect potential roosting habitat.

4. The Burns District's Winter Bald Eagle Roosts Habitat Management Plan establishes a 400 meter buffer strip around roost sites and allows only certain activities such as protection of roost sites from the effects of wildfire.

5. The RMP proposes to maintain and restore or improve riparian/wetland vegetation communities which could provide long-term benefits to bald eagles.

6. Future proposed actions would be evaluated individually and/or cumulatively, and the need for consultation pursuant to the ESA would be determined.

Columbia Spotted Frog (*Rana luteiventris*)

The Columbia spotted frog is found from Alaska south through British Columbia, eastern Washington, Idaho, eastern Oregon, western Montana, and northwestern Wyoming. Disjunct populations occur in SE Oregon, SW Idaho, Nevada, and Utah. Due to extensive impact on riparian habitats primarily from livestock grazing, conversion of wetland habitats to irrigated pasture, and dewatering of river areas by irrigation practices, the Service found that listing the Great Basin population of the Columbia spotted frog (Nevada, southern Idaho, and southeastern Oregon) was warranted, but precluded. Another significant threat to frog survival is the introduction of exotic fish and bullfrogs, which may compete with, or prey upon spotted frogs

Within the planning area, spotted frogs are associated with riparian/wetland habitat. Their known distribution within the planning area consists of several sites located mainly west of the summit of the Steens Mountain. The lower elevation populations occur at Page Springs and Mud Creek which are tributaries to the Blitzen River. The Mud Creek site is mainly on Malheur National Wildlife Refuge which has substantial wetland areas. Spotted frogs most likely occur on the public lands portion of Mud Creek as there are several small beaver dams that provide suitable habitat. Spotted frogs may use the Blitzen River and the East Canal on Malheur Refuge as travel corridors between sites.

Upper elevation sites include Fish Lake, Little Fish Creek, Grove Creek and McCoy Creek. The Fish Lake site is on State of Oregon land that is managed by the Oregon Department of Fish and Wildlife. The BLM manages the campground associated with the lake. Fish Lake is stocked annually with rainbow trout with naturalized brook trout also present. Outflow from Fish Lake into Fish Creek occurs only when water levels in Fish Lake are high. Fish Lake, Lily Lake (which is near Fish Lake), and Mud Creek (MNWR), are also known historic sites for spotted frogs on Steens Mountain. Lily Lake is the only historic site in recent years at which spotted frogs have not been observed. Fish Lake and Page Springs have been documented as consistently having all life stages of spotted frogs over the past five years. Recently, Mud Creek, McCoy Creek, Little Fish Creek and Grove Creek have been documented having all life stages (Wente and Adams, 2002). Although Fish Lake and Page Springs have been protected from grazing for several years, the other sites have been grazed consistently during the summer months.

The RMP (Chapter 4) identifies land use authorizations that have the potential to affect water resources, riparian/wetland habitat and fish and aquatic habitat. Because spotted frogs are riparian/wetland obligates and will be affected similarly by the same land uses that impact water resources, riparian/wetland habitat and fish and aquatic habitat, the analysis of potential effects of a given land use on frogs would be comparable to those resources. The analysis of effects for Lahontan cutthroat trout in the BLM's biological assessment may more accurately describe impacts to spotted frogs in relation to Water Resources, Riparian and Wetlands, Grazing Management, Wildland Fire Management and Transportation and Roads. OHV use is not a factor as the present distribution of spotted frogs is within an area closed to OHV use or where OHV use is limited to designated roads and ways.

The effects of Water Resources and Riparian and Wetland objectives and management actions should be beneficial for the maintenance of existing spotted frog populations and possibly allow for expansion into suitable habitat. The management action of reintroduction and expansion of beaver populations into suitable habitat on public lands should create additional habitat for spotted frogs by the impoundment of water to provide slack water and muddy substrates which spotted frogs use.

Effects from Grazing Management, Wildland Fire Management and Transportation and Roads could have some negative effects on spotted frogs associated with localized turbidity, and potential reduction of habitat quality (i.e. springs). Implementation of Best Management Practices (RMP - Appendix F), and adherence to the Standards for Rangeland Health and Guidelines for Livestock Management (RMP - Appendix G) will aid in reducing any foreseen impacts from grazing and roads. The effects of fire suppression in adjacent uplands to protect riparian areas may provide some protection for spotted frog habitat especially in Page Springs and Fish Lake campgrounds. Overall, the objectives and management actions are not anticipated to impact spotted frog populations in the planning area. Potential effects to the species would be addressed through project specific planning and analysis. The BLM would manage spotted frog habitat in accordance with the proposed RMP as described under Special Status Animal Species Objective 2 (RMP; page 2-34). Specific habitat objectives and project specifications to minimize or avoid impacts would be introduced into BLM activity plans if habitat needs for the species are not met.

Conclusion:

Specific land management directions in the RMP could have beneficial impacts to spotted frogs, including management of water resources, riparian/wetland habitat, and fish and aquatic habitat management. Negative impacts could occur to spotted frogs from fire management actions, grazing and roads.

The Service is available to work with the BLM to assist in the conservation of the Columbia spotted frog.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The RMP provides the BLM with a general framework for managing approximately 1,649,470 acres of public land within the Andrews Management Unit (AMU) and the Steens Mountain Cooperative Management and Protection Area (CMPA) of the Burns District. The RMP is intended to provide land use planning and management direction at a broad scale and to guide future actions to meet the requirements of the Federal Land Policy and Management Act. This Act mandates public land to be managed for multiple use and sustained yield under an approved RMP. Land use plan decisions consist of desired outcomes (goals, standards, and objectives) and the allowable uses and management actions necessary to achieve those outcomes. The goal of the plan is to provide commodity production and sustain the health and productivity of the land.

The RMP is considered to be a mid-scale planning document which links broad-scale efforts (such as the Interior Columbia Basin Ecosystem Management Project) with implementation generally occurring at the fine-scale or activity level. In general the RMP provides for an overview of goals, objectives, and needs associated with public lands management, and resolves multiple use conflicts or issues. Uses of public land, decisions, and direction are identified in the RMP for management of resources including water resources, vegetation, fish and wildlife, special status species, energy and minerals, grazing, wildland fire, transportation and roads, recreation, and off-highway vehicles (a complete list is included in the Final EIS).

Action Area

The RMP planning area is located primarily in Harney County, southeastern Oregon, and is bounded on the east by the BLM Vale District, on the south by Nevada, on the north by the BLM-Three Rivers Resource Area and the Malheur National Wildlife Refuge, and on the west by the BLM Lakeview District and approximately six miles bordering the Hart Mountain National Wildlife Refuge. The planning area includes the Andrews Resource Area and the portion of the Three Rivers Resource Area within the CMPA. The AMU and CMPA encompasses 1,221,314 acres and 428,156 acres of public land respectively.

The RMP planning area lies within the High Desert and Humboldt Ecological Provinces and a small portion of the Snake River Ecological Province (Anderson, et. al. 1998). Drainage is generally internal with no outlet to the seas, with the exception of the Crooked-Rattlesnake subbasin, which is a tributary to the Owyhee River. Average annual precipitation in the region is approximately 10 inches, with some isolated areas receiving up to 50 inches such as Steens Mountain. Most of the precipitation occurs from November through May, with about one-third falling as snow.

Water

The planning area contains portions of six subbasins: Guano, Harney/Malheur Lakes, Alvord Lake, Donner und Blitzen, Thousand-Virgin, and Crooked-Rattlesnake. The planning area,

inclusive of all ownership/jurisdiction, contains approximately 5,760 miles of ephemeral, intermittent, and perennial streams, of which 800 miles are considered perennial.

Vegetation
Riparian vegetation communities in the planning area generally range from dominant woody tree/shrub species adjacent to moderate gradient streams to monotypic stands of herbaceous vegetation associated with springs, saturated meadows, and low gradient stream reaches. Commonly observed woody riparian plant communities include cottonwood-willow, alder-willow, mixed willow, willow-chokecherry, and aspen. Herbaceous communities include grasses, rushes and sedges.

Quaking aspen is found throughout the Great Basin in small to moderately sized patches, and within the planning area on the Pueblo, Trout Creek and Steens Mountains between 4,500 and 7,500 feet.

Western juniper woodlands are the dominant woodland type throughout much of the planning area, and occupy sites at an elevation band between 4,500 and 7,000 feet. Over 90 percent of the western juniper woodlands are less than 120 years old and have developed after European settlement (hereafter identified as post-settlement woodlands). These post-settlement woodlands have encroached on and altered sagebrush, aspen, riparian, and mountain mahogany plant communities. Encroachment of western juniper into these plant communities can be attributed to past grazing practices, fire suppression, and subtle climate shifts over the past 120 years. The 3,268 acre Wildland Juniper Management Area (WJMA) located within the CMPA was created by the Steens Act for the purposes of experimentation, education, interpretation, and demonstration of active and passive management intended to restore the historic fire regime and native vegetation communities on Steens Mountain.

Approximately 20 acres of grand fir are present in scattered stands within the CMPA. These areas contain a mature overstory with large numbers of young trees as understory.

The Biological Assessment identified the following actions within the RMP that may affect federally listed species:

<u>Water Resources (Proposed RMP, section 2.3)</u>
Management actions identified in the RMP provide direction to accomplish the stated objectives:

- Comply with State and Federal requirements to protect public waters.

- Protect all designated beneficial uses by preventing or limiting nonpoint source pollution; maintain or improve existing water quality and quantity through implementation of best management practices.

- Manage impaired waters on public lands listed under section 303(d) of the Clean Water Act to restore beneficial uses and improve water quality so that listing is no longer warranted.

The RMP provides direction to maintain or improve water quality for beneficial uses of public waters. The streams providing habitat for Lahontan cutthroat trout are specifically recognized in the RMP as highest priority for development of a Water Quality Restoration Plan (WQRP). The WQRP is being developed in coordination with the Oregon Department of Environmental Quality to assess current conditions, and identify objectives, actions and monitoring necessary to comply with state water quality standards relative to habitat requirements for Lahontan cutthroat trout.

Riparian Vegetation (Proposed RMP, section 2.5.2)
Management actions identified in the RMP provide direction to accomplish the stated objectives:

- Achieve or maintain a rating of Proper Functioning Condition for perennial and intermittent flowing and standing waterbodies.

- Maintain, restore, or improve riparian/wetland vegetation communities relative to ecological status, site potential and capability, or site specific management objectives.

- Manage riparian/wetland areas to maintain, restore, or improve soil moisture content and retention of alluvial ground water to augment base flow conditions during warm summer months.

The proposed RMP provides direction to maintain or improve riparian vegetation. Potential actions identified in the Proposed RMP that may affect Lahontan cutthroat trout include active restoration such as planting or manipulation of riparian vegetation and adjacent uplands that influence the condition of riparian vegetation (i.e. fire frequency and/or intensity). These actions are intended to beneficially affect riparian vegetation including habitat for Lahontan cutthroat trout. Localized and temporary disturbances may occur that results in sediment input to streams containing Lahontan cutthroat trout.

Noxious Weeds
Management actions identified in the proposed RMP provide direction to accomplish the stated objectives:

- Treat noxious weeds and inventory for new infestations using the most effective means available, as outlined in the Burns District Integrated Management Program EA/Decision Record.

- Create public awareness on how to utilize public lands without inadvertently spreading noxious weeds.

The public awareness and education element of the Burns District weed management program could result in beneficial effects through reducing spread of noxious weeds that may compete with desirable vegetation, such as riparian species that contribute to aquatic streambank stability and habitat.

The proposed RMP and the Burns District Integrated Management Program EA/Decision Record (BLM 1998) prescribes control treatment of noxious weeds to include mechanical, chemical and/or biological methods. Treatment areas may range from small isolated sites of a few square feet to larger areas measured in acres for an estimated District-wide (inclusive of the planning area) cumulative treatment of 1,000 to 3,000 acres.

Mechanical treatment may result in areas of exposed soils with an increased potential of surface runoff contributing sediment to the stream environment. The areas in proximity to streams providing habitat for Lahontan cutthroat trout where mechanical treatment would occur is outside of riparian areas and on relatively flat topography. The flat topography of potential mechanical treatment areas and the natural sediment buffering capacity of riparian vegetation limits the likelihood of increased sediment input to the stream.

Herbicide application includes wiping, backpack spraying, spraying with a vehicle handgun or boom, and aerial spraying. Application is conducted in accordance with the manufacturer's label and only by certified applicators. The BLM further incorporates minimum buffers along streams, lakes and ponds (BLM 1991): 100 feet for aerial application, 25 feet for vehicle application, and 10 feet for hand spraying application. Areas within 10 feet are selectively wiped on individually targeted weeds. Additionally, site-specific chemical treatments adjacent to streams providing habitat for Lahontan cutthroat trout are reviewed by a BLM fisheries biologist(s) prior to treatment. The use of biological control agents (primarily insects) provides a mechanism of controlling noxious weeds without physical disturbance to aquatic habitat and adjacent uplands.

The area of treatment in proximity to Lahontan cutthroat habitat would primarily be targeting individual plants or small groups of plants with the largest probable areas of less than 0.25 acre in upland habitat. Annual cumulative treatment is not anticipated to exceed 1 acre within the drainage area of individual streams occupied by Lahontan cutthroat trout. The primary herbicides used in the planning area are Clarity (dicamba), Hi Dep (2, 4-D), RODEO (glyphosate), and Tordon 22K (picloram). The primary adjuvants used in the planning area are R-11, Syl-Tac, Hasten, and Hi-Light (indicator dye). Application is conducted in accordance with the manufacturer's label, at a minimum, and only by certified applicators. The following practices would be applied to minimize or avoid the likelihood of herbicide exposure to aquatic environment associated with Lahontan cutthroat trout habitat:

- Spraying of herbicides will not occur if wind speeds exceed 8 m.p.h.
- Mechanized application (ATV or truck mounted boom sprayer) will not occur within 25 feet of streams
- Hand application (wiping or backpack sprayer) will be used to target/spot-treat individual plants within 10 feet of streams
- Tordon 22K (picloram) will not be applied within 10 feet of streams

- Pesticide Use Proposals for treatment within proximity to streams occupied by Lahontan cutthroat trout will be reviewed by a BLM fisheries biologist

- Informal consultation, and formal consultation as necessary, would be initiated with the Service if:

  a) Broadcast application (vehicle mounted boom sprayer) is proposed within the 25 feet buffer

  b) Aerial application of herbicide is proposed within the drainage area of individual streams occupied by Lahontan cutthroat trout

  c) Cumulative proposed annual public land treatment area with herbicides exceeds 1 acre within the drainage area of individual streams occupied by Lahontan cutthroat trout

  d) Additional herbicides are approved for BLM use and are proposed for use within the drainage area of individual streams occupied by Lahontan cutthroat trout

The Lahontan cutthroat trout occupied stream reaches on public land are generally moderate to high gradient entrenched channels with active floodplain widths of less than 10 feet on each side of the channel. Therefore, potential herbicide application immediately adjacent to the stream or on the active floodplain would be limited to hand wiping or backpack spraying individual weeds. The 25 feet buffer for vehicle application would restrict these application methods to adjacent upland areas outside of the riparian zone.

Energy and Minerals (Proposed RMP, section 2.13.3)
Mineral management actions in the Proposed RMP include:

- Areas with federally listed species and their designated critical habitat that are not already closed to locatable mineral (i.e. gold, mercury, diatomite and copper) exploration and development by Congressional action (the Steens Mineral Withdrawal Area) would be recommended to the Secretary of the Interior for withdrawal.

- Areas with Federally listed species and their designated critical habitat that are not already closed to leasable mineral (i.e. oil, gas and geothermal) exploration and development by Congressional action (the Steens Mineral Withdrawal Area) and the WSA IMP would be identified for no surface occupancy. The No Surface Occupancy stipulation specifically states: Surface disturbing activities on all mineral leases are limited to existing roads until field surveys of the proposed area of disturbance is completed.

- Areas with federally listed species and their designated critical habitat that are not already closed to salable mineral (i.e. sand and gravel) exploration and development by Congressional action and the WSA IMP would be closed to salable mineral exploration

and development.

There are no existing locatable, leasable or saleable mineral operations in the areas associated with the streams providing habitat for Lahontan cutthroat trout. Mining operations/actions, other than casual use discussed below, require the applicant to submit a notice or plan of operations to the BLM (43 C.F.R. §3809.10). Public land segments of Little McCoy Creek, Mosquito Creek, Willow Creek, Cottonwood Creek, Big Alvord Creek, Little Alvord Creek and Pike Creek are closed to mineral exploration and development by Congressional action, other than casual use. Van Horn Creek and the upper reaches of Denio Creek are closed to leasable and salable mineral operations subject to the WSA IMP. Any proposed locatable mining action would require action specific NEPA analysis and necessary ESA consultation. The middle and lower reaches of Denio Creek contain approximately 1.5 miles of occupied habitat that is not subject to the Congressional closure or WSA IMP restrictions. Any proposed actions would require the applicant to file a notice or plan of operations, and would be subject to action specific analysis and ESA consultation. Additionally, the proposed RMP stipulates no surface occupancy for leasable minerals and closure to salable mineral activities within 25 feet of each side of Denio Creek to mineral development.

For locatable mineral, casual use may occur along all of the streams providing habitat for Lahontan cutthroat trout in the planning area. Casual use is defined as activities ordinarily resulting in no or negligible disturbance of the public lands or resources, such as hand panning and small portable suction dredges (43 C.F.R. §3809.5). The Oregon Department of Environmental Quality further requires a National Pollutant Discharge Permit General Permit 700-J to operate an in-stream suction dredge of no more than 40 HP, and to discharge the resulting wastewater. The General Permit 700-J requires following the Oregon Department of Fish and Wildlife's "Oregon Guidelines For Timing Of In-Water Work To Protect Fish and Wildlife Resources" including not dredging when fish eggs could be in the gravel (see Placer Mining in the State of Oregon). The General Permit is associated with the U.S. Army Corps of Engineers Clean Water Act permitting authority and is subject to ESA section 7 consultation. The potential effects of hand panning, such as human presence or limited sediment disturbance, would be minimal. Additionally, the BLM staff geologist with primary responsibility for minerals management has indicated a limited likelihood of recreational or casual use mining occurrence on streams providing habitat for Lahontan cutthroat trout. Access limitations due to terrain, limitation of vehicle travel and private land between public access points and public land associated with these streams further limits the likelihood of casual use mining activities.

Grazing Management (Proposed RMP, section 2.15)

Management actions identified in the proposed RMP provide direction to accomplish the stated objectives:

- Provide for a sustained level of livestock grazing while meeting resource objectives and requirements for Rangeland Health Standards and Guidelines.

- Implement Administrative solutions and rangeland management projects to provide

proper management for livestock grazing while meeting resource objectives and requirements for Rangeland Health Standards and Guidelines.

Grazing management under the proposed RMP for pastures that encompass Lahontan cutthroat trout habitat would continue in the manner as prescribed under the most recent ESA consultations pending activity level modifications and/or proposed actions. Therefore, the consultations identified under Consultation History are incorporated by reference (50 C.F.R. § 402.12(g)) to fulfill the biological assessment requirement for the proposed action(s) of grazing management described in the proposed RMP. Additionally, reinitiation of consultations for the Pueblo Mountain and Pueblo-Lone Mountain allotments are scheduled for 2005 and 2006, respectively.

Wildland Fire Management (Proposed RMP, section 2.16)

Management actions identified in the proposed RMP provide direction to accomplish the stated objectives:

- Implement appropriate fire suppression actions in the wildland urban interface and areas identified as possessing significant values that could be significantly altered by unplanned wildland fire.

- Implement the appropriate management actions upon discovery of wildland fires in areas outside of the designated wildland urban interface or areas that possess significant resource values that could be impaired by uncontrolled wildland fire.

- Implement management actions across the planning area that maintain or return plant communities to the historic fire regime, except where changes have progressed to the point that a return to historic conditions is impractical.

- Assess burned areas for appropriate biological and physical rehabilitation activities.

- Develop a management strategy that specifically identifies the wildland urban interface, resource values, and resource developments that need to be considered for fuels reduction planning throughout the planning area.

The proposed RMP provides direction for wildland fire management including suppression, management and restoration. Additionally, wildland fire management refers to the Fire Management Plan (FMP). The current FMP recognizes Lahontan cutthroat trout as a value to be protected, specifically identifying the species as an element to be considered in developing and implementing appropriate wildland fire suppression, management or restoration actions.

The proposed RMP, in conjunction with the FMP, provides direction for: 1) suppression of wildland fires that threaten life, property and other significant values; 2) management of wildland fires to allow appropriate function of this natural ecological process to benefit resources; 3) develop and implement mechanical and/or prescribed fire actions to reduce fuel

quantities that in turn reduce risks of wildland or prescribed fire and, where appropriate, promote development of plant community structure and dynamics to progress towards predicted natural fire return intervals; and 4) development and implementation of burned area rehabilitation to promote site stability.

Transportation and Roads (Proposed RMP, section 2.18)

Existing roads and ways that occur on public lands within close proximity (immediately adjacent to riparian/stream or crossing stream) of occupied Lahontan cutthroat trout habitat occur on Little McCoy Creek, Willow Creek, Pike Creek, Van Horn Creek and Denio Creek. Existence, use and maintenance of these roads or ways may affect the species through reduced riparian vegetation and subsequent reduced cover, soil compaction resulting in increased runoff and erosion, disturbance of stream substrate and localized temporary turbidity, and direct (destruction) and indirect (sediment intrusion) disturbance of spawning sites. The roads/ways on Pike, Denio and Van Horn creeks terminate at the outside edge of the riparian area. The roads/ways crossing Little McCoy Creek and Willow Creek occur at a single location perpendicular to the channel. The amount of reduced riparian vegetation and associated cover is limited to the width of the crossings, approximately 8 feet, for a total area of approximately 240 square feet.

Off-Highway Vehicles (Proposed RMP, section 2.19)

Off-highway vehicle use on public lands associated with streams occupied by Lahontan cutthroat trout would be limited to designated routes (roads and ways) as described in the transportation and roads section.

Recreation (Proposed RMP, section 2.20)

Management actions identified in the proposed RMP provide direction to accomplish the stated objectives:

- Establish and manage recreation areas where the presence of high quality natural resources and the current or potential demand warrants intensive management practices to protect areas for their scientific, educational, or recreational values while accommodating anticipated increases in use for recreation activities in specific areas.

- Manage recreation facilities to protect natural resources and to meet user needs.

- Outside of the intensive use areas and developed recreation sites, manage the remainder of the planning area for dispersed recreation.

- Manage visitor use in the planning area to protect natural resources and to provide a variety of recreation opportunities.

The proposed RMP identifies potential recreation site development at Pike Creek. Specific elements of the development would be determined at activity level planning. The effects to Lahontan cutthroat trout would be addressed if and when future development is proposed. With the exception of Pike, Van Horn and Denio creeks, recreational access, particularly by vehicle, is limited by private land and/or terrain.

Conservation Measures

No Conservation Measures are proposed by the BLM.

STATUS OF LAHONTAN CUTTHROAT TROUT

Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), is an inland subspecies of cutthroat trout endemic to the physiographic Lahontan basin of northern Nevada, eastern California, and southern Oregon (USFWS 1995). It was initially listed as endangered under the Endangered Species Conservation Act of 1969 based on evidence of destruction and drastic modification of their habitat and hybridization with introduced species (35 Federal Register 13520). The species was reclassified as threatened in 1975 to facilitate management and allow regulated angling (40 Federal Register 29864) (USFWS 1996). Critical habitat has not been designated for Lahontan cutthroat trout. The recovery plan for Lahontan cutthroat trout was published by the Service in January 1995. The species has been introduced into habitat outside of its native range, primarily for recreational fishing purposes.

Lahontan cutthroat trout is one of 14 recognized subspecies of cutthroat trout in the western United States. Cutthroat trout have the most extensive range of any inland trout species of western North America, and occur in anadromous, non-anadromous, fluvial, and lacustrine populations (Behnke 1979). Many of the basins in which cutthroat trout occur contain remnants of much more extensive bodies of water which were present during the wetter period of the late Pleistocene epoch (Smith 1978).

Differentiation of the species into 14 or so recognized subspecies occurred during subsequent general desiccation of the Great Basin and Inter-mountain Region since the end of the Pleistocene, and indicates presence of cutthroat trout in most of their historic range prior to the last major Pleistocene glacial advance (Behnke 1981, Loudenslager and Gall 1980). Ancestral Lahontan cutthroat trout probably invaded the pluvial Lake Lahontan system over 35,000 years ago (Gerstung 1986, Coffin 1982), although the precise events of entry and origin of original stock are unclear (Behnke 1979, Loudenslager and Gall 1980).

Lahontan cutthroat trout evolved in a range of habitat types, from cold-water, high elevation streams to warmer, more alkaline lake environments. It is likely that localized, natural events historically caused the local extirpation of small populations of Lahontan cutthroat trout. Those events included landslides and rock fall, fires, drought, and debris flows that restricted movement. Lahontan cutthroat trout population persistence is associated with the ability to maintain connectivity among populations, (i.e. networked populations). A networked system is defined as an interconnected, stream and/or stream lake system in which individuals can migrate

from or disperse into areas from which fish have been extirpated (Ray *et. al.* 2000). This ability to disperse and repopulate habitats allows populations to persist (Neville-Arsenault 2003; Rieman and Dunham 200; Ray *et. al.* 2000; Dunham *et. al.* 1997). Periodic repopulation by upstream or downstream sources enabled Lahontan cutthroat trout to survive extreme circumstances and provided for genetic exchange (Neville-Arsenault 2003).

Lahontan cutthroat trout historically occurred in most cold waters of the Lahontan Basin of Nevada and California, including the Humboldt, Truckee, Carson, Walker, and Summit Lake/Quinn River drainages. Large alkaline lakes, small mountain streams and lakes, small tributary streams, and major rivers were inhabited, resulting in the present highly variable subspecies. The fish occurred in Tahoe, Pyramid, Winnemucca, Summit, Donner, Walker, and Independence Lakes, but disappeared from the type locality, Lake Tahoe, about 1940 due primarily to blockage of spawning tributaries, and subsequently from Pyramid and Walker Lakes (Behnke 1979). The subspecies has been extirpated from most of the western portion of its range in the Truckee, Carson and Walker River Basins, and from much of its historic range in the Humboldt Basin. Only remnant populations remain in a few streams in the Truckee, Carson, and Walker Basins out of an estimated 1,020 miles of historic habitat (Gerstung 1986). Coffin (1988) estimated that only 85 stream populations existed in the Humboldt Basin in a total of 270 miles of habitat compared with an estimated historic occurrence in 2,210 stream miles.

In Oregon, Lahontan cutthroat trout historically occurred in Coyote Lake subbasin including Whitehorse, Little Whitehorse, Fifteenmile, Doolittle, and Cottonwood creeks, Willow Creek and its tributary, and Antelope Creek. Fifteenmile Creek fish are restricted by a natural barrier to the first 700 meters above the mouth. Antelope Creek was stocked in 1972 with trout from Whitehorse Creek and a small population remains.

Following a genetic and taxonomic evaluation of Willow-Whitehorse cutthroat trout, these populations were determined to be Lahontan cutthroat trout (Williams 1991). Willow-Whitehorse cutthroat were afforded protection and threatened status as Lahontan cutthroat trout on November 4, 1991. Sources and mechanisms of stream colonization outside of the Lahontan Basin by Lahontan cutthroat are uncertain, but human transport is suspected. Resident stream populations have subsequently been used to stock other Willow-Whitehorse area streams during the seventies and early eighties. These transplanted populations are considered threatened until they are determined to be "experimental populations" released outside of the native range of the species for conservation purposes.

The severe decline in range and numbers of Lahontan cutthroat trout is attributed to a number of factors, including hybridization and competition with introduced trout species; loss of spawning habitat due to pollution from logging, mining, and urbanization; blockage of streams by dams; channelization; de-watering from irrigation and urban water withdrawal; and watershed degradation due to overgrazing of domestic livestock (Gerstung 1986; Coffin 1988; Wydoski 1978). Minshall *et al.* (1989) state that the major human impacts on Great Basin streams are due to irrigated farming and livestock grazing. In the Humboldt Basin in Nevada, Coffin (1981; 1982; 1988) and Behnke (1979) attribute the poor condition of most stream habitats primarily to effects of extensive long-term livestock grazing. However, in the Truckee, Carson, and Walker

Basins, Gerstung (1986) does not include effects of livestock grazing as a factor in the decline of Lahontan cutthroat trout, but includes pollution, over fishing, construction of dams and diversions, and competition and hybridization with non-native trout species.

ENVIRONMENTAL BASELINE

The individuals/populations within the RMP planning area are considered "out of basin populations" originating from the Coyote Lake basin, Willow and Whitehorse creeks, of the Northwest Lahontan basin population segment (USDI 1995). Lahontan cutthroat trout life history and habitat parameters are discussed with additional references in the Recovery Plan for the Lahontan Cutthroat Trout (USDI 1995) and Lahontan Subbasins Fish Management Plan (ODFW 1993).

Lahontan cutthroat trout are believed to be the only fish species present in seven of the nine occupied streams within the planning area. Lahontan cutthroat trout presence in these streams is a result of fish transplants from Willow and Whitehorse Creeks by the Oregon Department of Fish and Wildlife. Between seven and thirty one fish were transplanted into the East Steens streams primarily in 1980 (Mosquito Creek was stocked in 1971). Last dates of survey for Lahontan cutthroat trout presence vary among the seven streams. Currently, the Service assumes that Lahontan cutthroat trout may be present in each of the seven streams. Substantiating absence of locally rare fishes is a difficult and time consuming task, which could in itself lead to further mortality.

In general, the streams in the RMP area are spring/snow fed, exhibiting elevated discharge during spring snowmelt and in response to periodic summer thunderstorms. The streams drain into the Alvord Basin which contains no outlet. Typically the streams are high gradient in the headwaters with gradient moderating as elevation decreases. Coarse substrates (boulder, rubble) predominate with lesser amounts of gravel, sand, and silt, primarily at lower elevations. Banks are generally well armored; stream morphology is typified by steep cascades with short riffles and sparse pool habitat. Lower elevation stream sections may experience episodic scouring events that damage riparian vegetation and degrade stream channels and are related to discharge-elevating weather events. Site survey conducted by the BLM in 1992 indicated that aquatic habitat conditions in the streams are fair or better, but that geomorphic constraints limit productive capacity for Lahontan cutthroat trout populations. Macroinvertebrate sample analysis indicates that good overall water quality and substrate conditions exist locally within area streams. Reduced base flow during prolonged drought likely also limits Lahontan cutthroat trout populations in area streams.

Lahontan cutthroat trout in the RMP planning area are confined to isolated habitats in nine streams (see map in the Biological Assessment): Little McCoy Creek, Mosquito Creek, Willow Creek, Cottonwood Creek, Big Alvord Creek, Little Alvord Creek, Pike Creek, Van Horn Creek, and Denio Creek. Occupied habitat within these streams ranges approximately between 0.5 and 2.5 miles. These nine isolated populations originated from transplanted individuals from the Coyote Lake subbasin during the 1970s and early 1980s. Sampling efforts conducted by the Oregon Department of Fish and Wildlife with the assistance of BLM in September 2004 on all of

the identified streams except Denio Creek verified species presence in Little McCoy Creek, Mosquito Creek, Willow Creek, Cottonwood Creek, Big Alvord Creek, Little Alvord Creek, and Pike Creek. No Lahontan cutthroat trout were observed in the section of Van Horn Creek sampled; brown trout (*Salmo trutta*) were observed. Although these surveys were not conclusive, this suggests that Lahontan cutthroat trout were not present in the section of Van Horn Creek sampled. Additionally, some individual specimens indicated possible mutations such as short operculum suggesting a potential genetic "bottleneck". Genetic analysis is being conducted by the University of Nevada in conjunction with the Service on the samples collected from these streams.

The Oregon Department of Environmental Quality (ODEQ) has developed a Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) for the Alvord Lake subbasin that includes the streams subject to this consultation (ODEQ 2003). The water quality constituent relevant to Lahontan cutthroat trout habitat in the planning area is stream temperature. The TMDL and WQMP was initiated in response to streams identified on the Clean Water Act (CWA) 303(d) List for exceeding water quality standards (temperature). These documents incorporate all streams in the Alvord Lake subbasin that provide habitat or may influence habitat condition (tributaries) for salmonid fish species. The streams identified on the CWA 303(d) list that provide habitat for Lahontan cutthroat trout are Mosquito Creek, Willow Creek, Van Horn Creek and Denio Creek. The TMDL and WQMP were approved by the Environmental Protection Agency in February 2004. The BLM has developed a Draft Water Quality Restoration Plan (WQRP), currently being revised in coordination with ODEQ, to address the streams identified in the TMDL and WQMP that will further describe the existing and potential riparian conditions.

The action area for the Proposed RMP is inclusive of the following streams and adjacent uplands within the respective watersheds downstream to the county road (East Steens Road and Fields-Denio Road): Little McCoy Creek, Mosquito Creek, Willow Creek, Cottonwood Creek, Big Alvord Creek, Little Alvord Creek, Pike Creek, Van Horn Creek, and Denio Creek.

EFFECTS OF THE ACTION

Direct and indirect effects of the RMP in the action area include:

Water Resources (Proposed RMP, section 2.3)
The direction provided in the RMP is to manage water resources to maintain, restore, or improve water quality and quantity to sustain the designated beneficial uses. The RMP is expected to result in beneficial effects to Lahontan cutthroat trout. Development of specific project level actions will require a site specific review and any applicable associated ESA consultation requirements.

Riparian Vegetation (Proposed RMP, section 2.5.2)
Potential actions identified in the RMP that may affect Lahontan cutthroat trout include active restoration such as planting or manipulation of riparian vegetation and adjacent uplands that influence the condition of riparian vegetation (i.e. fire frequency and/or intensity). These actions

are intended to beneficially affect riparian vegetation including habitat for Lahontan cutthroat trout; however, localized and temporary disturbances may occur that results in sediment input to streams containing the species. The direction provided in the RMP for riparian vegetation management at a programmatic level would result in beneficial effects to Lahontan cutthroat trout. Development of specific project level actions will require a site specific review and any applicable associated ESA consultation requirements.

Noxious Weeds

Mechanical treatment may result in areas of exposed soils with an increased potential of surface runoff contributing sediment to the stream environment. The areas in proximity to streams providing habitat for Lahontan cutthroat trout where mechanical treatment would occur is outside of riparian areas and on relatively flat topography. The flat topography of potential mechanical treatment areas and the natural sediment buffering capacity of riparian vegetation limits the likelihood of increased sediment input to the streams.

The use of biological control agents (primarily insects) provides a mechanism of controlling noxious weeds without physical disturbance to aquatic habitat and adjacent uplands.

Due to the limited area of treatment, implementation of appropriate application methods and additional stipulations (wind speed restrictions and buffers), herbicide contamination/exposure to Lahontan cutthroat trout is likely to be minimal. The BLM determined that noxious weed management would result in insignificant or discountable effects at a programmatic level. Development of specific project level actions will require a site specific review and any applicable associated ESA consultation requirements.

Energy and Minerals (Proposed RMP, section 2.13.3)

The potential effects of hand panning, such as human presence or limited sediment disturbance, are not anticipated to significantly disrupt normal behavior of Lahontan cutthroat trout. Additionally, the BLM staff geologist with primary responsibility for minerals management has indicated a limited likelihood of recreational or casual use mining occurrence on streams providing habitat for Lahontan cutthroat trout in the planning area. Access limitations due to terrain, limitation of vehicle travel and private land between public access points and public land associated with these streams further limits the likelihood of casual use mining activities.

Other agency permitting requirements and restrictions limits the likelihood of effects from casual use mining activities along streams providing habitat for Lahontan cutthroat trout.

Grazing Management (RMP, section 2.15)

Grazing allotments authorized by the proposed RMP have been consulted on previously and are identified in the Consultation History section of this biological opinion and in table 2 below. Grazing management described in the RMP includes actions described in the current biological opinions. Reinitiation of consultations for the Pueblo Mountain and Pueblo-Lone Mountain allotments are scheduled for 2005 and 2006, respectively. The Pueblo-Lone Mountain Allotment and Pueblo Mountain Allotment management incorporates adjusting use by 2 weeks (earlier or later) depending on rangeland vegetation conditions. The Alvord Allotment and Mann Lake

Allotment management incorporates adjusting use to April 1, to allow for management and utilization of cheatgrass (*Bromus tectorum*), an invasive species.

The effects of grazing management under the RMP to Lahontan cutthroat trout and their habitat would be the same or similar to those addressed through the existing biological opinions referenced above which concluded that the prescribed grazing management was likely to adversely affect but not jeopardize the continued existence of Lahontan cutthroat trout. There have been no new species listed or proposed and no new critical habitat designated or proposed in the area addressed through these consultations.

Table 2. Pasture use dates for grazing allotments associated with Lahontan cutthroat trout

Allotment	**Pasture**	**Grazing System / Dates**		
Pueblo-Lone Mountain		Year 1	Year 2	Year 3
	Cowden	Apr 01 – May 31	Aug 01 – Aug 31 Oct 01 – Jan 08	Rest
	Pueblo Mtn.	Rest	Jun 01 – Jun 22	Jun 01 – June 22
	Denio Basin	Jun 23 – Jul 15	Jun 23 – Jul 15	Rest
Pueblo Mountain	Pueblo Ridge	Apr 01 – Jun 15	Apr 01 – Jun 15	Apr 01 – Jun 15
Alvord	South Foothills	Apr 15 – June 16	Apr 15 – June 16	Apr 15 – June 16
	Middle Foothills	Apr 15 – June 16	Apr 15 – June 16	Apr 15 – June 16
	North Foothills	Apr 15 – June 16	Apr 15 – June 16	Apr 15 – June 16
Mann Lake	South Foothills	Apr 16 – June 15	Apr 16 – June 15	Apr 16 – June 15

For convenience, impacts of livestock grazing to stream habitat and fish populations can be separated into acute and chronic effects. Acute effects are those which contribute to the immediate loss of individual fish and loss of specific habitat features (undercut banks, spawning beds, etc) or localized reductions in habitat quality (sedimentation, loss of riparian vegetation, etc.). Chronic effects are those which, over a period of time, result in loss or reductions of entire populations of fish, or widespread reductions in habitat quantity and/or quality.

Acute Effects

Acute effects to habitat include compacting stream substrates, collapse of undercut banks, destabilized streambanks and localized reduction or removal of herbaceous and woody vegetation along streambanks and within riparian areas (Platts 1991). Increased levels of sediment can result through the resuspension of material within existing stream channels as well as increased contributions of sediment from adjacent streambanks and riparian areas. Impacts to stream and riparian areas resulting from grazing are dependent on the intensity, duration, and timing of grazing activities (Platts 1989) as well as the capacity of a given watershed to assimilate imposed activities, and the pre-activity condition of the watershed (Odum 1981).

Vulnerability of Lahontan cutthroat trout to acute effects of grazing is greatest during early development stages. During early phases of their life cycle, fish have little or no capacity for

mobility, and large numbers of embryos or young are concentrated in small areas. Cattle entering spawning areas can trample redds, and destroy or dislodge embryos and alevins. Embryo and alevin mortality can also result from localized sedimentation of spawning beds (Bjornn and Reiser 1991). Accumulations of silt, if delivered in sufficient quantity, can fill interstitial spaces in streambed material impeding water flow through redds, reducing dissolved oxygen levels, and restricting removal of wastes from redds. As development progresses, vulnerability to direct mortality from acute effects decreases. However, when environmental and/or human imposed disturbances to habitat work synergistically to reduce habitat quality and availability, additional stress to adult fish brought about by the presence of cattle within stream areas may be sufficient to lead to mortality (USDI 1994).

Within the Eastside Steens Watershed, cattle have access to streams and streamside areas primarily at lower elevations which generally are inhabited by Lahontan cutthroat trout, and estimated as limited to five percent of total riparian habitat (USDI 1995). Cattle access to the majority of streamside areas is limited by steep topography and rocky terrain. In addition a riparian exclosure was constructed on Pike Creek within an area burned by wildfire to preclude cattle use of the riparian zone during the revegetation/recovery period. That exclosure has since been removed and the stream habitat is currently managed as a riparian pasture. Existing information indicates that use of woody riparian vegetation within the area is slight with light to moderate use of herbaceous plant species (USDI 1995). The timing (early season), duration (approximately 2 months primary use), monitored grazing use, and rugged terrain should limit the intensity of impacts and allow improvement of instream and riparian conditions within the allotments. Streambank disturbance is localized to areas with cattle access, including areas inhabited by Lahontan cutthroat trout. Cattle grazing will occur during the spawning period, but effects should be minimized due to terrain features and reduced cattle use of riparian areas that occurs with early season use.

Within the Denio Creek Watershed, cattle have unrestricted access to the stream during a maximum continual monthly period from May 1 to August 31 and October 1 through January 8 within a given pasture. No riparian exclosures exist that would limit or preclude cattle use of riparian zones. Cattle access to Denio Creek within the Lahontan cutthroat trout-occupied mid-reach canyon area is limited by dense riparian vegetation. Although cattle will be turned out in the adjacent uplands, they will use stream and riparian areas for watering, particularly in the Denio Basin Pasture. Utilization of herbaceous vegetation is expected to occur in uplands, and in adjacent riparian zones, especially at favored watering sites. Under the proposed action, certain areas where woody vegetation expression has been repressed or where overall vegetative health is lower than optimal, such as the reach of Denio Creek that is currently Functioning at Risk, will be at higher risk of experiencing a continued repressed vegetative condition. The timing (early season), duration (approximately three week primary use in the upper elevation pastures [Denio Basin and Pueblo Mountain]), rest rotation cycle, restricted use based on utilization and bank damage standards, restriction of unauthorized use, should limit the intensity of impacts, and allow incremental improvement of instream and riparian conditions within the watershed. Although stream bank disturbance will be localized to areas with cattle access, increased sediment levels resulting from cattle use may be expected to be transported into

occupied, downstream areas as well. Further sediment contributions also may be expected to occur from past mining activity and other historic influences.

Chronic Effects

Chronic effects of grazing result when upland and riparian areas are exposed to activity and disturbance levels that exceed assimilative abilities of a given watershed. Both direct and indirect fish mortality are possible, and the potential for mortality extends to all life cycle phases. For example, following decades of high intensity season-long grazing the Whitehorse Creek watershed had extensive areas of degraded upland and riparian habitat (USDI 1992).

Although less extreme, increases in stream temperature and reduced allochthonous inputs following removal of riparian vegetation, increased sedimentation from instream, riparian and upland sources, and decreased instream, riparian and upland water storage capacity, work in concert to reduce the health and vigor of stream biotic communities (Armour et al. 1991; Platts 1991; USDI 1991; Chaney et al. 1990). Increased sediment loads reduce primary production in streams. Reduced instream plant growth and woody and herbaceous riparian vegetation limits populations of terrestrial and aquatic insects, the basic food source for Lahontan cutthroat trout. Persistent degraded conditions adversely influence resident fish populations (Meehan 1991).

According to Chaney et al. (1990), strategies for protection or restoration of riparian areas must address the contribution of upland areas and their condition to the overall hydrologic regime. Further, strategies should include one or more of the following features:

> "Including the riparian area within a separate pasture with separate management objectives and strategies.
>
> Fencing or herding livestock out of riparian areas for as long as necessary to allow vegetation and streambanks to recover.
>
> Controlling the timing of grazing to: (a) keep livestock off streambanks when they are most vulnerable to damage; and (b) coincide with the physiological needs of target plant species.
>
> Adding more rest to the grazing cycle to increase plant vigor, allow streambanks to heal, or encourage more desirable plant species composition. Rest is a rapid method of riparian recovery.
>
> Limiting grazing intensity to a level which will maintain desired species composition and vigor.
>
> Changing from cattle to sheep to obtain better animal distribution through herding.

> Permanently excluding livestock from riparian areas at high risk and with poor recovery potential when there is no practical way to protect them while grazing adjacent uplands."

The proposed action, compared to non-use of pastures from livestock, would have some negative direct and indirect effects to Lahontan cutthroat trout. BLM proposes to minimize effects of grazing through timing, duration, and observation of grazing management to maintain recovery of riparian habitat or improve riparian vegetation. Techniques used to minimize affects from grazing include scheduling use earlier in the season, removing cattle from pastures affecting riparian areas by July 15, limiting overall use on pastures, and monitoring riparian and streambank conditions. The expected protection, maintenance, and improvement of woody vegetation, and regrowth of herbaceous vegetation, would reduce potential impacts to Lahontan cutthroat trout and its habitat. The proposed action would allow continued improvement in riparian and upland conditions, with associated improvements in the aquatic habitat, although the proposed action will offer more risk of disturbance than that of non-use. Even though the riparian zone is included in the grazing activity, it is expected that the amount of forage removed from the riparian area would still leave adequate vegetation for cover, shading, and a source of terrestrial insects that provide food. The proposed action would allow remaining vegetation to dissipate stream energy, reduce instream sediment transport, and protect habitat conditions that benefit hydrologic function. A proposed action that included scheduled rest would result in more rapid recovery of riparian systems, and in turn benefit Lahontan cutthroat trout habitat.

The Burns District, BLM is implementing grazing strategies that limit the intensity of grazing, control timing of grazing both for physiological plant needs and streambank protection, add rest to grazing cycles, and utilize herding of livestock to allow maintenance and recovery of riparian vegetation. These actions are consistent with recommended management actions to restore upland and riparian conditions. Although grazing intensity would primarily be limited to early season use (see table 1.), grazing activity within these allotments would affect Lahontan cutthroat trout habitat within area streams, especially during persistent drought. However, the management strategy is intended to address maintenance and recovery of upland and riparian habitat necessary to allow overall watershed recovery and limit chronic grazing effects. In addition minimal use of woody riparian vegetation indicates that the present strategy is succeeding. Maintaining recovery of riparian habitat and improving riparian conditions are expected to continue under the proposed management.

Wildland Fire Management (Proposed RMP, section 2.16)

Suppression or management of wildland fires have the potential of direct or indirect effects to the species and their habitat, such as sediment input to stream environments, reduced riparian vegetation/overhanging cover, and reduced thermal buffering of water temperature. Due to the uncertainties of both wildland fire extent, and appropriate fire suppression or management actions taken, an effects determination would be speculative at this point. In the event of a BLM action to suppress or manage wildland fire that may affect Lahontan cutthroat trout, the BLM would coordinate with the Service pursuant to 50 C.F.R. § 402.05, emergency consultation.

Transportation and Roads (Proposed RMP, section 2.18)

The potential direct and indirect disturbance associated with use and maintenance of the roads/ways crossing Little McCoy Creek and Willow Creek is limited in frequency, duration and extent, and suitability of the site for spawning has not been confirmed (substrate size, flow, and proximity). The use and maintenance of the road crossings during spawning and incubation period could result in disturbance of redds through sediment intrusion or physical destruction. Spawning suitability at the road crossing and immediately downstream has not been qualified by BLM. General observations indicate substrate particle size at road crossings consists of cobble and large gravel, which may not provide suitable spawning habitat. Further assessment by BLM is pending site-specific investigation.

Elevated levels of sediment in stream gravels pose a threat to stream dwelling fish (Weaver and White 1985). Sediment can affect Lahontan cutthroat trout in several ways. One of the most likely ways is through effects on egg incubation and fry emergence. The level of impact is closely related to timing of activity and location of activity to spawning areas. Rearing habitat may also be affected by filling of interstitial spaces of stream rubble and filling of pool habitat (Waters 1995). Long term, chronic sediment delivery from roads can affect channel structure and stability. Additionally, if intensity and duration of ground disturbance is great enough in a limited area, it can affect channel structure and stability.

Roads are recognized as a long term source of sediment for extended periods even after erosion control measures have been implemented. Ground disturbance from road blading, particularly where the road is immediately adjacent to streams and at both intermittent and perennial stream crossings can result in elevated levels of sediment introduction. Ditch maintenance is another source of sediment delivery to streams. Increased erosion occurs within the ditch as a function of cleaning, pulling, or heeling, increased rate of slides in the cutslope, and long-term risk of increased sedimentation from vegetation or ditch rock removal within the ditch. Delivery of available sediment to streams can vary substantially depending on the level of best management practices in effect on a given road. Installation of cross drainage structures and maintenance of buffers between the road and the stream are a couple of important means by which sediment delivery to streams can be reduced.

Other activities associated with road maintenance such as brushing and culvert cleaning may also increase sediment delivery to streams. Installation of new cross drainage features as well as cleaning existing ones can result in some short term increases in sediment delivery, but can help reduce long term sediment delivery to streams during road maintenance activities.

Water temperature is particularly important to Lahontan cutthroat trout survival. Road maintenance can result in reduction or removal of streamside vegetation through brushing activities, possibly resulting in temperature increases. Vegetation and shade capability affected by the roads crossing streams analyzed by the BLM is relatively small, consisting of approximately 240 square feet of riparian and stream channel area. The risk of temperature increases is highest in very small streams and on roads adjacent to or crossing stream channels.

The use of various compounds for dust control or to hold to the road surface aggregate in place have been found to pose a risk for various salmonid species (Woodward 1983). The BLM does not propose to use road stabilizing compounds on roads in the vicinity of Lahontan cutthroat trout streams.

Cover in the form of pools is also a very important component of Lahontan cutthroat trout habitat. Woody debris is one of the primary means by which pools are formed in many stream channel types. Road maintenance has the potential to affect pools by removal of woody debris through the clearing of shrubs and trees that have fallen or washed along or across the road and into the stream. Clearing of material from the stream above crossing structures can impact pool forming functions of the stream. Due to the relatively small area affected by the two road crossings, the BLM expects affects from road maintenance to be minimal.

Off-Highway Vehicles (Proposed RMP, section 2.19)
Off-highway vehicle use on public lands associated with streams occupied by Lahontan cutthroat trout would be limited to designated routes (roads and ways). Therefore, the potential effects would be similar as those presented above for use of the road crossings on Little McCoy Creek and Willow Creek.

Recreation (Proposed RMP, section 2.20)
Other than effects identified under Transportation and Roads, and Off-Highway vehicles, the potential effects from public land authorized/recognized recreational uses would be human presence and incidental use (i.e. hiking, playing in the water). Effects of recreation on aquatic habitat may be more profound in riparian areas than other areas. People are drawn to water and they engage in activities that have potential to adversely affect fisheries resources. Recreationists take part in a variety of activities that may affect Lahontan cutthroat trout, including camping, hiking, fishing, and swimming in areas where Lahontan cutthroat trout may be present. Recreational effects on fisheries vary depending on where they take place in relation to fish habitat (upland, on bank, in water); when they occur (seasons, stage of fish's life cycle, timing of occupancy); the duration and type of activity (for instance, angling associated with recreation sites might have greater effects than hiking); the number of people in an area (intensity of use); and how widespread the use is over an area (extent of use).

The Recreation chapter in Meehan (1991) provides a good overview of the direct and indirect effects of recreation on aquatic organisms and habitats. Some research has been conducted on the effects of recreation on soils and vegetation in general and along streams in particular. There is also some speculation on how recreation can affect other environmental factors such as water quality, debris, sediment, streamflow, and channel morphology, and the implications such changes have for salmonids in various stages of their life cycle. Clark and Gibbons (1991) indicated recreational effects probably differ by region, river type, vegetation and soil condition, season, and the nature and extent of recreational use.

Recreational use can affect salmonid habitats (indirect effects) in the following ways:

- upland changes in soils and vegetation that may affect runoff and erosion;

- riparian changes that influence erosion, cover, food sources, and water quality; and,
- instream changes that affect stream morphology, water quality, streamflow, substrate, and debris.

The changes in vegetation from recreation in upland and riparian areas appears to be generally similar in type, but not of the same magnitude, as effects of livestock grazing (Platts 1991; Meehan 1991). Cole (1979) discussed problems in studying recreational effects on vegetation and concluded that most change results from initial use. Findings by Cole (1979) seem to emphasize the importance of actively managing recreation and addressing existing and new dispersed recreational sites in an effective and rapid manner.

In riparian areas, recreational activities may alter habitat elements important to fish populations. Recreation activities can add sediment to streams by trampling streambanks and secondarily by affecting upland soils. Streamside vegetation influences the quality of fish habitat. Overstory vegetation affects food, cover, and streambank stability, and it also provides shade, resulting in increased rearing space and water temperature modulation during both summer and winter. It also acts as a filter to prevent addition of sediment, and its roots provide streambank stability and cover for rearing fish. Riparian vegetation directly influences the food chain of a stream ecosystem by providing organic detritus and terrestrial insects. It also controls aquatic productivity that depends on solar radiation.

Settergen (1977) identified six possible effects on soils from recreation along rivers. They are compaction, root exposure, destruction of the soil profile through loss of vegetation, reduction in organic matter, increased bulk density, and decreased soil moisture. It was concluded in this study that the greatest compaction occurs immediately after an area is opened for use, after which the soil tends to stabilize. As soil compaction and vegetation loss occur, erosion may accelerate. This can decrease the depth of soil profiles and expose roots.

Understory vegetation can be reduced or removed when recreational activities occur along the edges of streams and lakes, depending on the intensity and type of activity. Loss of understory vegetation directly affects the rearing habitat of fish by reducing hiding cover, food production, and streambank stability. How quickly bank loss occurs and how much of the shoreline will be affected depends on the type of recreational activity taking place and its frequency. The addition of sediment directly affects spawning gravels, and the loss of undercut banks has a negative effect on rearing habitat.

Settergen (1977) also described five types of vegetation changes due to recreation. These include mortality of overstory, loss of tree vigor, mechanical injury, root kill, and loss of ground cover. Mechanical injury to riparian plants is common, increasing the likelihood of disease and possible subsequent mortality. Decline in tree vigor is sometimes associated with soil degradation, and reduced ground cover is one of the first signs of impact from recreational use.

Depth and flow of water over and through riffles and pools defines quality of spawning habitat for various salmonids. Activities such as swimming, wading, and instream use of off-road vehicles can affect riffle quality. If quality of riffle areas decreases, production of usable food for fish also decreases. Pools are used by fish for rearing and resting. Pools can be used by recreationists for swimming, boating, suction dredge mining, bathing, and other activities. A change in pool character (depth, width, debris) generally results in decline of fish habitat and fish numbers.

Pool character is affected most often by change in quantity of cover (logs, limbs, rocks, and undercut banks). Large woody debris is an important habitat component of a healthy salmonid stream. There is not much potential for large wood debris recruitment into the streams in the RMP area, but even affects to smaller pieces of wood can have adverse affects on streams limited in ability for pool forming. Swimmers, anglers, and others sometimes remove debris. Removal of large quantities can result in as much as an 80 percent reduction in fish populations (Elliot and Hubartt 1978), but debris removal by recreationists is usually localized and may have minor effects on the total fish population.

Recreational use often is associated with fishing, with adult salmonids being the primary targets of anglers. Currently, the East Steens, Denio Creek, and Van Horn Creek watersheds are closed to fishing for Lahontan cutthroat trout. Affects due to illegal fishing are not expected.

Interrelated and Interdependent Actions

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Both interdependent and interrelated activities are assessed by applying the "but for" test, which asks whether any action and its associated impacts would occur "but for" the proposed action. No interrelated or interdependent activities were identified or analyzed.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

The BLM does not foresee any future State or private activities that are reasonably certain to occur in the action area other than the ongoing activity of private land grazing management and herbicide use. The Denio Creek watershed includes the permittee's private pasture, which is situated within the Denio Basin Pasture. Although the BLM has no management authority for the private pasture, the overall grazing strategy for the Denio Creek watershed includes the possibility for movement of livestock if necessary off of the BLM pastures and onto the private pasture. The permittee has worked cooperatively with the BLM and the Service in the

development of an overall grazing strategy that would allow improvement in Denio Creek, including those private lands between Denio Basin and Pueblo Mountain pastures. No direct effects of livestock grazing on Lahontan cutthroat trout would occur, because the private parcel does not include currently occupied Lahontan cutthroat trout habitat.

Private, State and county applicators are using many of the same herbicides, and perhaps others not included in the proposed action, to control noxious weeds in agricultural situations, right-of-way maintenance, and yard and garden settings. Applicators are expected to follow EPA label directions, however, herbicide specimen labels are complex, the variety of chemicals is voluminous, toxicity information on labels may be ambiguous, or lacking, as in the case of adjuvants. Therefore, little is known about the types and quantities of chemicals being applied on non-Federal lands within the action area. However, based on the relatively limited noxious weed infestations within the range of Lahontan cutthroat trout, it is very unlikely that herbicide concentrations would reach levels lethal to fish. Currently, little information is known about the sublethal or chronic effects of herbicides.

CONCLUSION

After reviewing the current status of the Lahontan cutthroat trout, the environmental baseline for the action area, the effects of the proposed adoption and implementation of the Resource Management Plan, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of Lahontan cutthroat trout. No critical habitat has been designated for this species, therefore, none will be affected.

We reached these conclusions for the following reasons:

1. The Resource Management Plan proposes to manage perennial waters to attain water quality standards and satisfy other resource objectives using active and passive restoration efforts. Livestock management could be changed to meet the resource objects or livestock management could permanently or temporarily be removed from water sources that are currently below water quality standards (USDI 2004).

2. Riparian and adjacent upland areas would be managed to restore native or desirable nonnative vegetation. Livestock management could include changes in frequency, intensity, and season of use. Depending on area and severity of damage to riparian areas, livestock grazing can include temporary or permanent removal of livestock from riparian or adjacent upland areas.

3. The permitted action of livestock grazing incorporates by reference the existing biological opinions for the respective grazing allotments. These biological opinions individually conclude that the actions, as proposed, are not likely to jeopardize the continued existence of Lahontan cutthroat trout. Recognizing that grazing allotment management is periodically reviewed and revised, and permits are issued for specific periods of time, action specific consultations will continue to be conducted as necessary.

4. The Resource Management Plan contains standards for riparian management based on proper function of soil, climate, and landform supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

5. Monitoring of the Resource Management Plan is designed to measure the affects of grazing animals on riparian habitat, water quality, threatened and endangered species, and wildlife habitat. Improper grazing management can adversely affect Lahontan cutthroat trout through affects to stream side vegetation and water quality. Monitoring will focus on management and vegetation response, by monitoring use supervision, actual use reporting, and photo documentation. Monitoring will provide information necessary to change management strategies, allotment evaluations, and allotment management plans. Monitoring also provides a feedback loop to evaluate management decisions and evaluations necessary to change management strategies in order to best manage resources.

6. Monitoring of the Resource Management Plan is also designed to measure the affects of transportation on roads and routes, and the affects on natural resources as a result of vehicular use. Monitoring would measure the need for road and route maintenance, effectiveness of closures, degradation, and affects to soils and vegetation.

7. The Resource Management Plan states that when specific actions are proposed, the BLM will: (1) determine if the actions may affect listed species; and (2) promptly initiate consultation with the Service to avoid or mitigate impacts when a "may affect" determination is made. The BLM intends to coordinate with the Service to address issues as expeditiously as possible.

8. The Resource Management Plan has incorporated the Recovery Plan for the Lahontan cutthroat trout by reference, and within its authority the BLM will implement the actions outlined in the recovery plan.

Based on: the measures developed by the BLM in coordination with the Service and included in the proposed RMP to benefit and protect listed species; the limited area of weed control treatment, implementation of appropriate application methods and additional stipulations (wind speed restrictions and buffers); the proposed action and terms and conditions developed for livestock grazing in previous consultations (1993 – 2004); measures to minimize impacts of energy and mineral management, transportation and roads, and recreation; it is the Service's biological opinion that the RMP is not likely to jeopardize the continued existence of the threatened Lahontan cutthroat trout. Critical habitat has not been designated for this species, therefore none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat

modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of an Incidental Take Statement.

Reasonable and prudent measures and their terms and conditions are non-discretionary, and must be undertaken by the BLM so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(0)(2) to apply. The BLM has the continuing duty to regulate the activity covered by any incidental take statement. If the BLM (1) fails to assume and implement the terms and conditions or (2) fails to require any applicant to adhere to the terms and conditions of the incidental take statement though enforceable terms that are added to the permit or grant document, the protective coverage of section7(0)(2) may lapse. In order to monitor the impact of incidental take, the BLM must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement {50 CFR section 402.14(i)(3)].

Amount or Extent of Take Anticipated

No incidental take is anticipated due to the implementation of programs under the BLM's proposed Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Resource Management Plan/Final Environmental Impact Statement because any potential incidental take resulting from adoption of the management plan will be associated with future site specific actions that have yet to be identified, proposed, or analyzed. For that reason, it is not possible to identify potential incidental take at this time, and therefore, no exemption is provided herein. All such take on actions developed in accordance with the Resource Management Plan that are likely to adversely affect Lahontan cutthroat trout will be addressed in future consultations pursuant to the ESA. Therefore no incidental take statement is included in this biological opinion.

Reporting requirements

1. Upon locating dead, injured, or sick listed species on BLM managed lands, initial notification must be made to the Service's Division of Law Enforcement in Oregon at 503-682-6131. Instructions for proper handling and disposition of such specimens will be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured fish to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible state. In conjunction with the care of sick or injured Lahontan cutthroat trout, or the preservation of biological materials from a dead Lahontan cutthroat trout, the BLM has the

responsibility to ensure that information relative to the date, time, and location of the fish when found, and possible cause of injury or death of each fish be recorded and provided to the Service.

2. Current biological opinions for grazing allotments authorized by the RMP require results of annual monitoring conducted within the Burns District in conjunction with the grazing management programs to be provided to the Bend Field Office.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. The Andrews/Steens Resource Area Resource Management Plan incorporates the Recovery Plan for the Lahontan cutthroat trout by reference, and within its authority the BLM will implement the actions outlined in the recovery plan. Table 3 provides a list of recovery activities in which BLM could have a major role in implementing.

Table 3. Recovery actions for Lahontan cutthroat trout associated with BLM.

Recovery Task	Description
321	Coordinate with ODFW and the Service on the Oregon fish stocking program review process
1731	Work with ODFW to complete the Lahontan Subbasins Fisheries Management plan for Lahontan Cutthroat trout within the Alvord Lake basin
1732	Work with the Service to develop a Cooperative Management Agreements for Alvord Lake basin
1735	Work with ODFW to monitor Lahontan cutthroat trout populations within Alvord Lake basin

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This biological opinion addresses the effects of implementing the Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Resource Management Plan, to Lahontan cutthroat trout and outlines the bases for our concurrence with the other species as indicated in Table 1.

This concludes formal consultation on the proposed action described in the biological assessment dated March 10, 2005. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have questions or require additional information regarding this consultation, please contact Alan Mauer, or me at the Bend Field Office at 541-383-7146.

cc: Larry Salata, USFWS, Regional Office, Portland, Or.
Tim Walters, ODFW, Hines, Or.

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Appendix E - Legal Authorities, Planning Criteria, and Management Direction and Consistency with Other Plans

Legal Authorities

Several Federal statutes have been enacted over time to establish and define the authority of the BLM to make decisions regarding management and use of public land resources. Following is a list of 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) sets forth the policy of the United States concerning the management of BLM land.
   b. Sec. 201 requires the Secretary of the Interior to prepare and maintain an inventory of all BLM lands and their resource and other values, giving priority to ACECs; 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 land.
   d. Sec. 202 (c) (9) requires that land use plans for BLM land 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, 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 land.
   g. Sec. 302 (a) requires the Secretary to manage the BLM land 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 land 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 land.

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 (CAA), 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 (CWA), 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 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 Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755) as amended by: Chapter 634; June 20, 1936; 49 Stat. 1556; P.L. 86-732; September 8, 1960; 74 Stat. 866; P.L. 90-578; October 17, 1968; 82 Stat. 1118; P.L. 91-135; December 5, 1969; 83 Stat. 282; P.L. 93-300; June 1, 1974; 88 Stat. 190; P.L. 95-616; November 8, 1978; 92 Stat. 3111; P.L. 99-645; November 10, 1986; 100 Stat. 3590 and P.L. 105-312; October 30, 1998; 112 Stat. 2956.The original 1918 statute implemented the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia).

7. The Safe Drinking Water Act, 42 U.S.C. 201, is designed to make the Nation's waters "drinkable" as well as "swimmable." Amendments in 1996 establish a direct connection between safe drinking water and watershed protection and management.

8. The Endangered Species Act (ESA) of 1973, 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 to conserve endangered and threatened species and utilize applicable authorities in furtherance of the purposes of the ESA (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 ESA, 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 ESA, or result in the destruction or adverse modification of designated or proposed critical habitat (Sec. 1536 (a), Interagency Cooperation, and 50 CFR 402).

9. The Wild and Scenic Rivers Act (WSR Act), as amended, 16 U.S.C. 1271 et seq., requires the Federal land management agencies to identify potential river systems and then study them for potential designation as wild, scenic, or recreational rivers.

10. The Wilderness Act, as amended, 16 U.S.C. 1131 et seq., authorizes the President to make recommendations to the Congress for Federal land to be set aside for preservation as wilderness.

11. The Antiquities Act of 1906, 16 U.S.C. 431-433, protects cultural resources on Federal land and authorizes the President to designate National Monuments on Federal land.

12. 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.

13. 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.

14. The Recreation and Public Purposes Act of 1926 (R&PP), as amended, 43 U.S.C. 869 et seq., authorizes the Secretary of the Interior to lease or convey BLM land for recreational and public purposes under specified conditions.

15. The Federal Coal Leasing Amendments Act of 1976, 30 U.S.C. 201 (a)(3)(A)(i), requires that coal leases be issued in conformance with a comprehensive land use plan.

16. The Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq., requires application of unsuitability criteria prior to coal leasing and also to proposed mining operations for minerals or mineral materials other than coal.

17. 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.

18. The Onshore Oil and Gas Leasing Reform Act of 1987, 30 U.S.C. 181 et seq., provides:
    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.

19. 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 land of the United States.

20. 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.

21. The Taylor Grazing Act of 1934, 43 U.S.C. 315, A[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 are chiefly valuable for grazing and raising forage crops[.]...@ The Act also provides for the classification of land for particular uses.

22. The Public Rangelands Improvement Act of 1978 (PRIA), 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 Horses and Burros Act of 1971, as amended, 16 U.S.C. 1331-1340, requires the protection, management, and control of wild free-roaming horses and burros on public land.

24. Executive Order 11644 (as amended by Executive Order 11989) requires each Federal agency to designate areas and trails for off-road vehicle use or restriction and areas in which off-road vehicles may not be used, and to develop regulations to implement the Executive Order.

25. Executive Order 11988 (Floodplain Management) to avoid to the extent possible the long-and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid the direct or indirect support of floodplain development wherever there is a practical alternative.

26. Executive Order 11990 (Protection of Wetlands) to avoid to the extent possible the long-and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative.

27. Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), 49 Fed. Reg. 7629 (1994), requires that each Federal agency consider the impacts of its programs on minority populations and low income populations.

28. Executive Order 13007 (Indian Sacred Sites), 61 Fed. Reg. 26771 (1996), requires Federal agencies to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to:
    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.

29. 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.

30. 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.

31. Executive Order 13186 of January 10, 2001 (responsibilities of Federal agencies to protect Migratory Birds) *66 Fed. Reg. 3853* (2001), provides the furtherance of the purposes of the migratory bird conventions, the Migratory Bird Treaty Act (16 U.S.C. 703-711), the Bald and Golden Eagle Protection Acts (16 U.S.C. 668-668d), the Fish and Wildlife Coordination Act (16 U.S.C. 661-666c), the ESA of 1973 (16 U.S.C. 1531-1544), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347), and other pertinent statutes.

32. Secretarial Order 3175 (incorporated into the Departmental manual at 512 DM 2) requires that if Department of the Interior (DOI) 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.

33. Secretarial Order 3206 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the ESA) requires DOI agencies to consult with Indian Tribes when agency actions to protect a listed species, as a result of compliance with ESA, affect or may affect Indian land, tribal trust resources, or the exercise of American Indian tribal rights.

An additional legal authority specific to the CMPA RMP is as follows:

34. The Steens Mountain Cooperative Management and Protection Act of 2000, P.L. 106-399, October 30, 2000, establishes the Steens Mountain Wilderness Area, the CMPA, the RTR and the WJMA and designates additional components of the National WSR System. This Act requires the Burns BLM District to:
    - maintain the cultural, economic, ecological, and social health of the Steens Mountain Area in Harney County, Oregon.
    - acquire private land through exchange for inclusion in the Steens Mountain Wilderness and the CMPA.
    - provide for and expand cooperative management activities between public and private landowners in the vicinity of the Steens Mountain Wilderness and surrounding land.
    - authorize the purchase of land as well as development and nondevelopment rights.
    - establish a citizens' management advisory council for the CMPA.
    - maintain and provide cooperative and innovative management practices between the public and private land managers in the CMPA.
    - promote viable and sustainable grazing and recreation operations on private and public lands.
    - conserve, protect, and manage for healthy watersheds and long-term ecological integrity of Steens Mountain.
    - authorize only such uses on Federal land in the CMPA as are consistent with the purposes of the Steens Act.

Planning Criteria

BLM planning regulations (43 Code of Federal Regulations 1610) require preparation of planning criteria for all RMPs. Planning criteria are the constraints or ground rules guiding and directing the development of the plan. They determine how the planning team and the public approach the development of alternatives and

ultimately the selection of a Preferred Alternative. Criteria ascertain that plans are tailored to the identified issues, and that unnecessary data collection and analyses are avoided. Planning criteria are based on analyses of information pertinent to the Planning Area; professional judgment; standards prescribed by applicable laws, regulations, and agency guidance; and are the result of consultation and coordination with the public, other Federal, State, and local agencies, and American Indian tribes.

The preliminary criteria listed below were developed by the BLM and will be reviewed by the public before being used in the RMP process. The criteria will be included in a *Federal Register Notice* along with notification of public scoping meetings. After public input, criteria become proposed criteria and can be added to or changed as issues are addressed or new information is presented. The Burns District Manager will approve the issues, criteria, and any changes.

General Planning Criteria

The following general planning criteria will guide the preparation of the RMP/EIS and future land-use decisions.

- The RMP/EIS will be completed in compliance with the FLPMA and all other applicable laws.
- The planning team will work cooperatively with the State, SMAC, RAC, tribal governments, county and municipal governments, other Federal agencies, and all other interested groups, agencies, and individuals. Public participation will be encouraged throughout the process.
- The RMP/EIS will establish the guidance upon which the BLM will rely in managing the Planning Area.
- The planning process will include an EIS that complies with NEPA standards.
- The RMP/EIS will emphasize the protection and enhancement of the Planning Area's biodiversity while at the same time providing the public with opportunities for compatible commodity-based and recreation activities.
- The RMP/EIS will recognize valid existing rights within the Planning Area and review how such rights are verified. The plan will outline the process used by the BLM to address applications or notices filed on existing claims or other land use authorizations after completion of the plan.
- The lifestyles and concerns of area residents, including the activities of grazing, fishing, and hunting, will be recognized in the plan.
- Any land within the Planning Area's administrative boundary and subsequently acquired by the BLM will be managed consistent with the plan, subject to any constraints associated with the acquisition.
- The RMP/EIS will recognize the State's responsibility to manage wildlife. The BLM would consult with the ODFW before establishing no-hunting zones or periods for the purposes of protecting public safety, administration, or public use and enjoyment. Methods of access and the manner in which wildlife management activities are to be conducted will be governed by the BLM, consistent with language in the Steens Act.
- The RMP/EIS will address transportation and access, and will identify where better access is warranted, where it should remain as is, and where decreased access is appropriate to protect Planning Area resources and manage visitation.
- The management of grazing is regulated by laws and regulations. The RMP/EIS will incorporate the S&Gs. It will define a strategy for ensuring that proper grazing practices are followed within the Planning Area.
- The planning process will involve American Indian tribal governments and will provide possible strategies to protect recognized traditional uses, if such uses are identified.
- Consistent with Federal law and the Steens Act, decisions in the RMP/EIS will strive to be compatible with existing plans and policies of adjacent local, State, Federal, and tribal agencies.
- In addition to the general criteria listed above, specific criteria apply to the CMPA.

The CMPA RMP/EIS will meet the following specific requirements of the Steens Act:

a. Protect the CMPA's natural resources and outstanding recreation opportunities, while encouraging cooperative management.

b. Describe appropriate uses and management of the CMPA consistent with the Steens Act.

c. Incorporate, as appropriate, decisions contained in any current or future management or activity plan for the CMPA; use information developed in previous studies of the land within or adjacent to the CMPA.

d. Coordinate with State, county, and private landowners, and the Burns Paiute Tribe.

e. Determine measurable and achievable management objectives consistent with the Steens Act to ensure the ecological integrity of the area.

Project Specific Criteria

In addition to the general planning criteria identified above, other specific planning criteria have been developed and apply to the RMP/EIS.

(1) Air Quality

Under the CAA, air quality of the Planning Area is designated as Class II. All land will be managed under Class II standards unless reclassified by the State of Oregon.

(2) Water Quality

The Federal Water Pollution Control Act of 1977 as amended (CWA) requires the BLM to be consistent with State nonpoint source management program plans and relevant water quality standards. Section 313 requires compliance with State water quality standards. The RMP/EIS will incorporate BMPs or other conservation measures for specific programs and activities. Water quality will be maintained or improved in accordance with State and Federal standards. In addition, TMDLs will be developed pursuant to the CWA that address water quality limited stream segments. The TMDLs are being developed cooperatively between the BLM and the ODEQ.

(3) Soil

Soil will be managed to protect long-term productivity. BMPs will be incorporated into other programs to minimize soil erosion and compaction resulting from management actions.

(4) Vegetation

Vegetation will be managed to provide for biological diversity at the landscape level, to protect and restore native perennial and desirable nonnative perennial species, and to provide for consumptive uses and non-consumptive values, including visual quality and watershed condition. Livestock forage allocations established in the AMU grazing program EIS and subsequent agreements and decisions will not be revised by this plan.

Grazing management adjustments will occur on a priority basis over the life of the plan through the adaptive management process and subsequent agreements, decisions, or activity plan revisions. Authorization of livestock use in the Planning Area will be subject to change through the life of the plan. The RMP/EIS will include provisions for plant maintenance, watershed protection and stability, wildlife habitat, as well as for livestock and wild horses. Fire and other treatment methods are considered tools to meet vegetation management objectives.

(5) Riparian Areas, Floodplains, and Wetlands

Riparian areas, floodplains, and wetlands will be managed to restore, protect, or improve their natural functions relating to water storage, ground water recharge, water quality, and fish and wildlife values.

(6) Woodlands

All juniper and quaking aspen woodlands will be managed to protect long-term biological productivity and diversity and watershed values.

(7) Noxious Weed Control

The BLM will work with county, State, and Federal agencies to monitor the locations and spread of noxious weeds. Noxious weed control will be conducted in accordance with the integrated weed management guidelines and design features identified in the Burns District Noxious Weed Management Program. The BLM will assess land prior to acquisition to determine whether or not noxious weeds are present.

(8) Special Status Species

The BLM is mandated by law to assist in the conservation and recovery of species listed as Threatened or Endangered or proposed for listing under the ESA. Federal actions that may affect the well being of these species require consultation with the USFWS. BLM policy requires that authorized actions do not contribute to the need to list any other Special Status species under the provisions of the ESA. The intent is to avoid the need for future listings of species as threatened or endangered.

(9) Wild Horses

Forage will be provided to support wild horse populations at levels established in accordance with the Wild Free-Roaming Horses and Burros Act. Adjustments in range allocation will be based on monitoring to ensure a thriving natural ecological balance within HMAs.

(10) Grazing Management

Grazing of public land will be authorized under the principles of multiple-use and sustained yield. Livestock will be managed to maintain or improve public land resources and rangeland productivity and to stabilize the livestock industry dependent on the public range over the long term. Forage will be allocated by allotment for livestock grazing on suitable rangeland based on multiple-use and sustained yield objectives. Existing management systems, including those outlined in AMPs, will continue until evaluations indicate that change is needed to meet objectives.

The process for determining livestock forage allocations through allotment evaluations will proceed in accordance with BLM regulations and policy.

(11) Fire Management

Wildland fire will be integrated into land and resource management planning to help achieve resource management objectives. The use of surface-disturbing equipment to suppress wildland fires will be restricted in the Steens Mountain Wilderness, WSAs, and areas containing significant cultural or paleontological values, except when needed to protect human life or property. Public land affected by fire will be managed in accordance with multiple-use objectives.

(12) Land Tenure Adjustments

BLM-administered land will be retained in public ownership unless disposal of a particular parcel will serve the public interest. Land may be identified for disposal by sale, exchange, State indemnity selection, or other authorized methods. Land will be identified for acquisition based on public benefits, management considerations, and public access needs. Specific actions meeting land tenure adjustment criteria as established in the RMP/EIS will occur with public participation and will be made in consultation with local, county, State, and tribal governments.

(13) Rights-of-Way and Land Use Authorizations

Public land will generally be available for land use authorizations including transportation and utility ROWs, with preference given to existing corridors. Exceptions will include areas specifically prohibited by law or regulation (e.g., wilderness) and specific areas identified to protect resource values.

(14) Energy and Minerals

Except where specifically withdrawn, public land will be available for energy and mineral exploration and development, subject to applicable Federal and State laws and regulations.

(15) Recreation

All public land will be within SRMAs or ERMAs. Some areas may be subject to special measures to protect resources or reduce conflicts among uses. Where there is a demonstrated need, the BLM may develop and maintain recreation facilities including campgrounds, picnic areas, interpretive sites, boat access, and trails.

(16) Off Highway Vehicles

All public land will be designated as open, limited or closed for OHV use. Public safety, resource protection, user access needs, and conflict resolution will be considered in assigning these designations.

(17) Visual Resources

The BLM will manage public land to protect the quality of scenic (visual) values in accordance with established guidelines. All public land will be designated as VRM Class I, II, III or IV.

(18) Wild and Scenic Rivers

As required by law, streams will be evaluated for addition to WSRs. The evaluation will be conducted according to BLM Manual Section 8351 - Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation and Management. Designated WSRs will be managed in accordance with laws and existing plans.

(19) Wilderness and Wilderness Study Areas

Wilderness will be managed according to the Wilderness Act and wilderness regulations. WSAs designated under authority of the FLPMA, Sections 603 and 202, will be managed in accordance with the WSA IMP for land under wilderness review. This planning effort will not reopen the initial wilderness review mandated by Section 603 of the FLPMA, and it will not change existing decisions, signed by the Secretary of the Interior, to recommend areas as suitable for wilderness designation.

(20) Cultural and Paleontological Resources

Cultural and paleontological resources will be managed to maintain or improve scientific, interpretive, and educational values. Cultural resources will be managed to protect American Indian interests where possible.

(21) Areas of Critical Environmental Concern

ACECs will be designated where special management attention is required to protect historical, cultural, or scenic values; natural resources or processes; or human life and safety. Management requirements for ACECs will be identified in the RMP/EIS.

Management Direction and Consistency with other Plans

This section describes the management direction found within the Andrews MFP and the following associated NEPA documents applicable to the Planning Area:

Animal Damage Control Final Environmental Impact Statement, 3 Volumes (APHIS 1994); Steens Mountain CMPA IMP Draft (BLM 2001b); Decision Record and Finding of No Significant Impact for the Projects for Implementation of the Steens Mountain Cooperative Management and Protection Act of 2000, EA OR-027-01-27 (BLM 2001c); Three Rivers RMP, Record of Decision, and Rangeland Program Summary (BLM 1992a); Donner und Blitzen National Wild and Scenic River Management Plan Environmental Assessment (BLM 1993b); National Wild and Scenic River Donner und Blitzen Management Plan Environmental Assessment (BLM 1992b); Noxious Weed Management Project Environmental Assessment No. OR-020-98-05 (BLM 1998a); Decision Record and Finding of No Significant Impact for Steens Mountain Trail Maintenance (BLM 2001d); Pueblo-Lone Mountain Management Plan EA (BLM 1995b); Andrews Grazing Management Program EIS (BLM 1982); Burns District Environmental Assessment for Commercial Day-Use Activities OR-020-EA-99-24 (BLM 1999a); the Land Tenure Adjustment Plan Amendment for the Andrews and Drewsey MFPs (BLM 1988b); the Riddle Brothers Ranch Historic District Cultural Resources Management Plan, Environmental Assessment (BLM 1994b); and Winter Bald Eagle Roosts Habitat Management Plan (BLM 1986)

Several activity level plans have also been completed in recent years as follows:

Steens Mountain Final Recreation Area Management Plan (BLM 1985); Andrews Rangeland Program Summary Update (BLM 1986); Pueblo-Lone Mountain Allotment Management Plan (BLM 1995c); Andrews Plan Amendment for Recreation Access Surrounding the Steens Mountain Loop Road (BLM 1993c); The Riddle Brothers Ranch Historic District Cultural Resources Management Plan (Crespin 1990); Kiger Mustang Area of Critical Environmental Concern Management Plan (BLM 1996a); Riddle Mountain and Kiger Wild Horse Herd Management Area Plan (BLM 1996b); SE Oregon Recreation Plan for Harney, Lake and Malheur Counties (Oregon Parks and Recreation Department 2000); Noxious Weed Policy and Classification System (Oregon Department of Agriculture 1997); Oregon's Bighorn Sheep Management Plan (ODFW 1992-1997); Oregon's Elk Management Plan (ODFW 1992); Mule Deer Plan (ODFW 1990); Oregon Cougar Management Plan Public Review Draft (ODFW 1993); Catlow Redband Trout and Catlow Tui Chub Conservation Agreement and Strategy (ODFW 1997); Oregon Outdoor Recreation Plan 1994-1999 (Oregon Parks and Recreation Department 1994); Oregon Wildlife Diversity Plan, 2nd edition (Puchy and Marshall 1993); Recovery Plan for the Pacific Bald Eagle (USFWS 1986); The Pacific Coast American Peregrine Falcon Recovery Plan (USFWS Pacific Coast American Peregrine Falcon Recovery Team 1982); and Recovery Plan for the Borax Lake Chub, *Gila boraxobius* (USFWS 1997).

Several BLM program documents or Inter-Agency plan/NEPA documents and decisions which also guide current management of land within the Planning Area include the following:

Visual Resource Management Program (BLM 1980);1613 - Areas of Critical Environmental Concern Resource Management Planning Guidance (BLM 1988a); Oregon Wilderness Final Environmental Impact Statement (BLM 1989a); Vegetation Treatment on BLM Lands in Thirteen Western States Final Environmental Impact Statement (BLM 1991a); Federal Land Policy and Management Act of 1976, as amended; Land Use Planning Handbook H-1601-1 Handbook (BLM Updated 2001e); National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (BLM 2001f); Environmental Impact Statement, Volume III Appendices for all WSAs beginning with OR-2 plus OR-3-114 (BLM 1989b); National Environmental Policy Act Handbook H-1790-1 (BLM 1988c); Wilderness Management (BLM 2001g); Wilderness Management: Final Rule (BLM 2001h); Oregon Wilderness Environmental Impact Statement, Volume I-Statewide (BLM 1989c); Upper Columbia River Basin Draft Environmental Impact Statement, Volume 1 (BLM 1997b); Proposed Southeast Oregon Resource Management Plan and Final Environmental Impact Statement, Volume 1 of 3 - Text (BLM 2000a); Rangeland Reform '94, Draft Environmental Impact Statement Executive Summary (BLM 1994c); Interior Columbia Basin Final Environmental Impact Statement (BLM 2000b); House Report 101-405 (Arizona Desert Wilderness Act of 1990); House Report 101-405 Appendix A, Grazing Guidelines (1990); Oregon Natural Heritage Plan (Oregon Natural Heritage Advisory Council 1998a); the National Environmental Policy Act of 1969, as amended; Oregon Wilderness Final

Environmental Impact Statement (BLM 1989a); H-8550-1: IMP for lands under Wilderness Review (BLM 1995c); Wildland and Prescribed Fire Management Policy (National Park Service, et al. 1998); Endangered and Threatened Wildlife and Plants: Animal Candidate Review for Listing as Endangered or Threatened Species, Proposed Rules (USFWS 1991); National Wildland Fire Policy (BLM 1998); and Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines (BLM, et al. 2000j). Draft Washington and Eastern Oregon Transportation Management Plan.

Consistency with Local Government Land Use Plans:

Reformatted Comprehensive Plan for the City of Burns, Oregon (1997); Harney County Comprehensive Plan (1984); Comprehensive Plan for the City of Hines; Burns Paiute Tribal Land Use Plan; Harney County Strategic Plan; and Malheur County Land Use Plan.

Appendix F - Consistency with Oregon Statewide Plans

The RMP is consistent with the following Department of Land Conservation and Development planning goals and guidelines:

Goal 1: Citizen Involvement - To develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.

Goal 2: Land Use Planning - To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

Goal 3: Agricultural Land - To preserve and maintain agricultural land.

Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources - To protect natural resources and conserve scenic and historic areas and open spaces.

Goal 6: Air, Water, and Land Resources Quality - To maintain and improve the quality of the air, water, and land resources for the State.

Goal 7: Areas Subject to Natural Disasters and Hazards - To protect life and property from natural disasters and hazards.

Goal 8: Recreational Needs - To satisfy the recreational needs of the citizens of the State and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

Goal 9: Economy of the State - To provide adequate opportunities throughout the State for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Goal 11: Public Facilities and Services - To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Goal 12: Transportation - To provide and encourage a safe, convenient, and economical transportation system.

Goal 13: To Conserve Energy

Statewide Department of Land Conservation and Development goals which do not apply to the Planning Area or resource management opportunities include the following: Goal 4: Forest Lands; Goal 10: Housing; Goal 14: Urbanization; Goal 15: Willamette River Greenway; Goal 16: Estuarine Resources; Goal 17: Coastal Shorelands; Goal 18: Beaches and Dunes; and Goal 19: Ocean Resources.

The RMP is also consistent with the following Division of State Lands asset management prescriptions for State land:

- Rangelands will be managed to ensure forage yields for livestock grazing consistent with BMPs. Grazing levels may be adjusted, in consultation with lessees, on both trust and nontrust lands to protect rangeland health and the long-term value of the land.
- Rangelands will be managed to prevent human-induced loss of rangeland health. Work with lessees to continue to implement rangeland practices that maintain, achieve or restore healthy functioning ecosystems and maintain, restore or enhance water quality.
- Special interest land will be managed primarily to ensure the protection of unique scenic, wildlife, cultural, natural or recreation values. Revenue generation activities will generally be permitted only if they do not adversely impact these values.
- Land owned by the land board will be open to mineral exploration and development subject to existing laws, regulations, and management plans. Land will be open to mineral activity unless the proposed use (1) would have significant adverse and nonmitigatable impacts on watershed integrity, and natural, cultural, and archaeological features, (2) be located within a WSR, State scenic waterway, or similarly designated area, or (3) the proposal would not be permitted under the appropriate management plan.

Appendix G - Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington

Introduction

These Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington were developed in consultation with resource advisory councils and provincial advisory committees, tribes, and others. These standards and guidelines meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health) and are to be used as presented, in their entirety. These standards and guidelines are intended to provide a clear statement of agency policy and direction for those who use public land for livestock grazing, and for those who are responsible for their management and accountable for their condition. Nothing in this document should be interpreted as an abrogation of Federal trust responsibilities in protection of treaty rights of Indian tribes or any other statutory responsibilities including, but not limited to, the Taylor Grazing Act, Clean Water Act, and Endangered Species Act.

Fundamentals of Rangeland Health

The objectives of the rangeland health regulations referred to above are: "to promote healthy sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions ... and to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands."

To help meet these objectives, the regulations on rangeland health identify fundamental principles providing direction to the States, districts, and on-the-ground public land managers and users in the management use of rangeland ecosystems.

A hierarchy, or order, of ecological function and process exists within each ecosystem. The rangeland ecosystem consists of four primary, interactive components; a physical component, a biological component, a social component, and an economic component. This perspective implies that the physical function of an ecosystem supports the biological health, diversity, and productivity of that system. In turn, the interaction of the physical and biological components of the ecosystem provides the basic needs of society and supports economic use and potential.

The fundamentals of rangeland health stated in 43 CFR 4180 are:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality and the timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal proposed, Category 1 and 2 Federal candidate and other Special Status species.

The fundamentals of rangeland health combine the basic precepts of physical function and biological health elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the standards for rangeland health.

Standards for Rangeland Health

The standards for rangeland health (standards), based on the above fundamentals, are expressions of the physical and biological condition or degree of function necessary to sustain healthy rangeland ecosystems. Although the focus of these standards is on domestic livestock grazing on BLM-administered land, on-the-ground decisions must consider the effects and impacts of all issues.

Standards that address the physical components of rangeland ecosystems focus on the roles and interactions of geology and landform, soil, climate, and water as they govern watershed function and soil stability. The biological components addressed in the standards focus on the roles and interactions of plants, animals, and microbes (producers, consumers, and decomposers), and their habitats in the ecosystem. The biological component of rangeland ecosystems is supported by the physical function of the system, and it is recognized that biological activity also influences and supports many of the ecosystem's physical functions.

Guidance contained in 43 CFR 4180 of the regulations directs management toward the maintenance or restoration of the physical function and biological health of rangeland ecosystems. Focusing on the basic ecological health and function of rangelands is expected to provide for the maintenance, enhancement, or creation of future social and economic options.

The standards are based on the ecological potential and capability of each site. In assessing a site's condition or degree of function, it must be understood that the evaluation compares each site to its own potential or capability. Potential and capability are defined as follows:

Potential - The highest level of condition or degree of function a site can attain given no political, social, or economic constraints.

Capability - The highest level of condition or degree of function a site can attain given certain political, social, or economic constraints. For example, these constraints might include riparian areas permanently occupied by a highway or railroad bed that prevent the stream's full access to its original floodplain. If such constraints are removed, the site may be able to move toward its potential.

In designing and implementing management strategies to meet the standards of rangeland health, the potential of the site must be identified, and any constraints recognized, in order that plan goals and objectives are realistic and physically and economically achievable.

Standards and Guidelines in Relation to the Planning Process

The standards apply to the goals of land use plans, activity plans, and project plans (AMPs), annual operating plans, habitat management plans, etc.). They establish the physical and biological conditions or degree of function toward which management of publicly-owned rangeland is to be directed. In the development of a plan, direction provided by the standards and the social and economic needs expressed by local communities and individuals are brought together in formulating the goal(s) of that plan.

When the standards and the social and economic goals of the planning participants are woven together in the plan goal(s), the quantifiable, time-specific objective(s) of the plan are then developed. Objectives describe and quantify the desired future conditions to be achieve within a specified timeframe. Each plan objective should address the physical, biological, social, and economic elements identified in the plan goal.

Standards apply to all ecological sites and landforms on public rangelands throughout Oregon and Washington. The standards require site-specific information for full on-the-ground usability. For each standard, a set of indicators is identified for use in tailoring the standards to site-specific situations. These indicators are used for rangeland ecosystem assessments and monitoring, and for developing terms and conditions for permits and leases that achieve the plan goal.

Guidelines for livestock grazing management offer guidance in achieving the plan goal and objectives. The guidelines outline practices, methods, techniques, and considerations used to ensure that progress is achieved in a way, and at a rate, that meets the plan goal and objectives.

Indicators of Rangeland Health

The condition or degree of function of a site, in relation to the standards and its trend toward or away from any standard, is determined through the use of reliable and scientifically sound indicators. The consistent application of such indicators can provide an objective view of the condition and trend of a site when used by trained observers.

For example, the amount and distribution of ground cover can be used to indicate that infiltration at the soil surface can take place as described in the standard relating to upland watershed function. In applying this indicator, the specific levels of plant cover necessary to support infiltration in a particular soil should be identified using currently available information from reference areas, if they exist; from technical sources like soil survey reports, ecological site inventories, and ecological site descriptions, or from other existing reference materials. Reference areas are land that best represent the potential of a specific ecological site in both physical function and biological health. In many instances, potential reference areas are identified in ecological site descriptions and are referred to a "type location." In the absence of suitable reference areas, the selection of indicators to be used in measuring of judging condition or function should be made by an ID team of experienced professionals and other trained individuals.

Not all indicators identified for each standard are expected to be employed in every situation. Criteria for selecting appropriate indicators and methods of measurement and observation include, but are not limited to, 1) the relationship between the attribute(s) being measured or observed and the desired outcome; 2) the relationship between the activity (e.g., livestock grazing) and the attribute(s) being measured or observed, and 3) funds and workforce available to conduct the measurements or observations.

Assessment and Monitoring

The standards are the basis for assessing and monitoring rangeland condition and trend. Carrying out well-designed assessment and monitoring is critical to restoring or maintaining healthy rangelands and determining trends and conditions.

Assessments are a cursory form of evaluation based on the standards that can be used at different landscape scales. Assessments, conducted by qualified ID teams (which may include, but are not limited to, physical, biological, and social specialists and interagency personnel) with participation from permittees and other interested parties, are appropriate at the watershed and subwatershed level, at the allotment and pasture levels, and on individual ecological sites or groups of sites. Assessments identify the condition or degree of function within the rangeland ecosystem and indicate resource problems and issues that should be monitored or studied in more detail. The results of the assessments are a valuable tool for managers in assigning priorities within an administrative area and the subsequent allocation of personnel, money, and time in resource monitoring and treatment. The results of assessments may also be used in making management decisions where an obvious problem exists.

Monitoring, which is the well-documented and orderly collection, analysis, and interpretation of resource data, serves as the basis for determining trends in the condition or degree of function of rangeland resources and for making management decisions. Monitoring should be designed and carried out to identify trends in resource conditions, to point out resource problems, to help indicate the cause of such problems, to point

out solutions, and/or to contribute to adaptive management decisions. In cases where monitoring data do not exist, professional judgment, supported by ID team recommendation, may be relied upon by the authorized officer in order to take necessary action. Review and evaluation of new information must be an ongoing activity.

To be effective, monitoring must be consistent over time, throughout administrative areas, and in the methods of measurement and observation of selected indicators. Those doing the monitoring must have the knowledge and skill required by the level or intensity of the monitoring being done, as well as the experience to properly interpret the results. Technical support for training must be made available.

Measurability

It is recognized that not every area will immediately meet the standards and that it will sometimes be a long-term process to restore some rangelands to properly functioning condition. It is intended that in cases where standards are not being met, measurable progress should be made toward achieving those standards, and significant progress should be made toward fulfilling the fundamentals of rangeland health. Measurability is defined on a case-specific basis based upon the stated planning objectives (e.g., quantifiable, time-specific), taking into account economic and social goals along with the biological and ecological capability of the area. To the extent that a rate of recovery conforms with the planning objectives, the area is allowed the time to meet the standard under the selected management regime.

Implementation

The material contained in this document will be incorporated into existing land use plans and used in the development of new land use plans. According to 43 CFR 4130.3-1, permits and leases shall incorporate terms and conditions that ensure conformance with 43 CFR 4180. Terms and conditions of existing permits and leases will be modified to reflect standards and guidelines at the earliest possible date, with priority for modification being at the discretion of the authorized officer. Terms and conditions of new permits and leases will reflect standards and guidelines in their development.

Indicators identified in this document will serve as a focus of interpretation of existing monitoring data and will provide the basis of design for monitoring and assessment techniques, and in the development of monitoring and assessment plans.

The authorized officer shall take appropriate action as soon as practicable, but not later than the start of the next grazing year, upon determining through assessment or monitoring by experienced professionals and ID teams that a standard is not being achieved and that livestock are a significant contributing factor to the failure to achieve the standards and conform with the guidelines.

Standards for Rangeland Health

Standard 1: Watershed Function - Uplands

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

Rationale and Intent:

This standard focuses on the basic physical functions of upland soils that support plant growth, the maintenance or development of plant populations and communities, and promote dependable flows of quality water from the watershed.

To achieve and sustain rangeland health, watersheds must function properly. Watersheds consist of three principal components; the uplands, riparian/wetland areas, and the aquatic zone. This standard addresses the upland component of the watershed. When functioning properly, within its potential, a watershed captures,

stores, and safely releases the moisture associated with normal precipitation events (equal to or less than the 25-year, 5-hour event) that falls within its boundaries. Uplands make up the largest part of the watershed and are where most of the moisture is received during precipitation events is captured and stored.

While all watersheds consist of similar components and processes, each is unique in its individual makeup. Each watershed displays its own pattern of landform and soil, its unique climate and weather patterns, and its own history of use and current condition. In directing management toward achieving this standard, it is essential to treat each unit of the landscape (soil, ecological site, and watershed) according to its own capability and how it fits with both smaller and larger units of the landscape.

A set of potential indicators has been identified for which site-specific criteria will be used to determine if this standard is being met. The appropriate indicators to be used in determining attainment of the standard should be drawn from the following list.

Potential Indicators:

Protection of the soil surface from raindrop impact; detention of overland flow; maintenance of infiltration and permeability, and protection of the soil surface from erosion, consistent with the potential/capability of the site, as evidenced by the:

- amount and distribution of plant cover (including forest canopy cover);
- amount and distribution of plant litter;
- accumulation/incorporation of organic matter;
- amount and distribution of bare ground;
- amount and distribution of rock, stone, and gravel;
- plant composition and community structure;
- thickness and continuity of the “A” horizon;
- character of microrelief;
- presence and integrity of biotic crusts;
- root occupancy of the soil profile;
- biological activity (plant, animal, and insect); and
- absence of accelerated erosion and overland flow.

Soil and plant conditions promote moisture storage as evidenced by:

- amount and distribution of plant cover (including canopy cover);
- amount and distribution of plant litter;
- plant composition and community structure; and
- accumulation/incorporation of organic matter.

Standard 2: Watershed Function - Riparian/Wetland Areas

Riparian/wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

Rational and Intent:

Riparian/wetland areas are grouped into two major categories: 1) lentic, or standing water systems such as lakes, ponds, seeps, bogs, and meadows; and 2) lotic, or moving water systems such as rivers, streams, and springs. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Riparian areas commonly occupy the transition zone between the upland and surface water bodies (the aquatic zone) or permanently saturated wetlands.

Properly functioning condition of riparian and wetland areas describes the degree of physical function of these components of the watershed. Their functionality is important to water quality in the capture and retention of sediment and debris, the detention and detoxification of pollutants, and in moderating seasonal extremes of water temperature. Properly functioning riparian areas and wetlands enhance the timing and duration of streamflow through dissipation of flood energy, improved bank storage, and ground water recharge. Properly functioning condition should not be confused with the desired plant community or the desired future condition since, in most cases, it is the precursor to these levels of resource condition and is required for their attainment.

A set of indicators has been identified for which site-specific criteria will be used to determine if this standard is being met. The criteria are based upon the potential (or upon the capability where potential cannot be achieved) of individual sites or landforms.

Potential Indicators:

Hydrologic, vegetation, and erosional/depositional processes interact in supporting physical function, consistent with the potential or capability of the site, as evidenced by:

- frequency of floodplain/wetland inundation;
- plant composition, age class distribution, and community structure;
- root mass;
- point bars revegetating;
- streambank/shoreline stability;
- riparian area width;
- sediment deposition;
- active/stable beaver dams;
- coarse/large woody debris;
- upland watershed conditions;
- water table fluctuation.

Stream channel characteristics are appropriate for landscape position as evidenced by:

- channel width/depth ratio;

- channel sinuosity;
- gradient;
- rocks and coarse and/or large woody debris;
- overhanging banks;
- pool/riffle ratio;
- pool size and frequency; and
- stream embeddedness.

Standard 3: Ecological Processes

Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

Rationale and Intent:

This standard addresses the ecological processes of energy flow and nutrient cycling as influenced by existing and desired plant and animal communities without establishing the kinds, amounts, or proportions of plant and animal community compositions. While emphasis may be on native species, an ecological site may be capable of supporting a number of different native and introduced plant and animal populations and communities while meeting this standard. This standard also addresses the hydrologic cycle which is essential for plant growth and appropriate levels of energy flow and nutrient cycling. Standards 1 and 2 address the watershed aspects of the hydrologic cycle.

With a few exceptions, all life on earth is supported by the energy supplied by the sun and captured by plants in the process of photosynthesis. This energy enters the food chain when plants are consumed by insects and herbivores and passes upward through the food chain to the carnivores. Eventually, the energy reaches the decomposers and is released as the thermal output of decomposition or through oxidation.

The ability of plants to capture sunlight energy, to grow and develop, to play a role in soil development and watershed function, to provide habitat for wildlife, and to support economic uses depends on the availability of nutrients and moisture. Nutrients necessary for plant growth are made available to plants through the decomposition and metabolization of organic matter by insects, bacteria, and fungi, the weathering of rocks, and extraction from the atmosphere. Nutrients are transported through the soil by plant uptake, leaching, and by rodent, insect, and microbial activity. They follow cyclical patterns as they are used and reused by living organisms.

The ability of rangelands to supply resources and satisfy social and economic needs depends on the buildup and cycling of nutrients over time. Interrupting or slowing nutrient cycling can lead to site degradation, as this land becomes increasingly deficient in the nutrients plants require.

Some plant communities, because of past use, frequent fire or other histories of extreme or continued disturbance, are incapable of meeting this standard. For example, shallow-rooted winter-annual grasses that completely dominate some sites do not fully occupy the potential rooting depth of some soils, thereby reducing nutrient cycling well below optimum levels. In addition, these plants have a relatively short growth period and thus capture less sunlight than more diverse plant communities. Plant communities like those cited in this example are considered to have crossed the threshold of recovery and often require great expense to be recovered. The cost of recovery must be weighed against the site's potential ecological/economic value in establishing treatment priorities.

The role of indicators has been identified for which site-specific criteria will be used to determine if this standard is being met.

Potential Indicators:

Photosynthesis is effectively occurring throughout the potential growing season, consistent with the potential/capability of the site, as evidenced by plant composition and community structure.

Nutrient cycling is occurring effectively, consistent with the potential/capability of the site, as evidenced by:

- plant composition and community structure;
- accumulation, distribution, incorporation of plant litter and organic matter into the soil;
- animal community structure and composition;
- root occupancy in the soil profile; and
- biological activity including plant growth, herbivory, and rodent, insect, and microbial activity.

Standard 4: Water Quality

Surface water and ground water quality, influenced by agency actions, complies with State water quality standards.

Rationale and Intent:

The quality of the water yielded by a watershed is determined by the physical and chemical properties of the geology and soils unique to the watershed, the prevailing climate and weather patterns, current resource conditions, the uses to which the land is put, and the quality of the management of the uses. Standards 1, 2, and 3 contribute to attaining this standard.

States are legally required to establish water quality standards and Federal land management agencies are to comply with those standards. In mixed ownership watersheds, agencies, like any other landowners, have limited influence on the quality of the water yielded by the watershed. The actions taken by the agency will contribute to meeting State water quality standards during the period that water crosses agency-administered holdings.

Potential Indicators:

Water quality meets applicable water quality standards as evidenced by:

- water temperature;
- dissolved oxygen;
- fecal coliform;
- turbidity;
- pH;
- populations of aquatic organisms; and
- effects on beneficial uses (e.g., effects on management activities on beneficial uses as defined under the Clean Water Act and State implementing regulations).

Standard 5: Native, Threatened and Endangered, and Locally Important Species

Habitats support healthy, productive, and diverse populations and communities of native plants and animals (including Special Status species and species of local importance) appropriate to soil, climate, and landform.

Rationale and Intent:

Federal agencies are mandated to protect threatened and endangered species and will take appropriate action to avoid the listing of any species. This standard focuses on retaining and restoring native plant and animal (including fish) species, populations, and communities (including threatened, endangered, and other Special Status species and species of local importance). In meeting the standard, native plant communities and animal habitats would be spatially distributed across the landscape with a density and frequency of species suitable to ensure reproductive capability and sustainability. Plant populations and communities would exhibit a range of age classes necessary to sustain recruitment and mortality fluctuations.

Potential Indicators:

Essential habitat elements for species, populations, and communities are present and available, consistent with the potential/capability of the landscape, as evidenced by:

- plant community composition, age class distribution, productivity;
- animal community composition, productivity;
- habitat elements;
- spatial distribution of habitat;
- habitat connectivity; and
- population stability/resilience.

Guidelines for Livestock Grazing Management

Guidelines for livestock grazing management offer guidance in achieving plan goals, meeting standards for rangeland health, and fulfilling the fundamentals of rangeland health. Guidelines are applied in accordance with the capabilities of the resource in consultation, cooperation, and coordination with permittees/lessees and the interested public. Guidelines enable managers to adjust grazing management on public land to meet current and anticipated climatic and biological conditions.

General Guidelines

1. Involve diverse interests in rangeland assessment, planning, and monitoring.
2. Assessment and monitoring are essential to the management of rangelands, especially in areas where resource problems exist or issues arise. Monitoring should proceed using a qualitative method of assessment to identify critical, site-specific problems or issues using ID teams of specialists, managers, and knowledgeable land users.

Once identified, critical, site-specific problems or issues should be targeted for more intensive, quantitative monitoring or investigation. Priority for monitoring and treatment should be given to those areas that are ecologically at-risk where benefits can be maximized given existing budgets and other resources.

Livestock Grazing Management

1. The season, timing, frequency, duration, and intensity of livestock grazing use should be based on the physical and biological characteristics of the site and the management unit in order to:

   a. provide adequate cover (live plants, plant litter, and residue) to promote infiltration, conserve soil moisture, and to maintain soil stability in upland areas;

   b. provide adequate cover and plant community structure to promote streambank stability, debris and sediment capture, and floodwater energy dissipation in riparian areas;

   c. promote soil surface conditions that support infiltration;

   d. avoid subsurface soil compaction that retards the movement of water in the soil profile;

   e. help prevent the increase and spread of noxious weeds;

   f. maintain or restore diverse plant populations and communities that fully occupy the potential rooting volume of the soil;

   g. maintain or restore plant communities to promote photosynthesis throughout the potential growing season;

   h. promote soil and site conditions that provide the opportunity for the establishment of desirable plants;

   i. protect or restore water quality; and

   j. provide for the life cycle requirements, and maintain or restore the habitat elements of native (including threatened and endangered, Special Status, and locally important species) and desired plants and animals.

2. Grazing management plans should be tailored to site-specific conditions and plan objectives. Livestock grazing should be coordinated with the timing of precipitation, plant growth, and plant form. Soil moisture, plant growth stage, and the timing of peak streamflows are key factors in determining when to graze. Response to different grazing strategies varies with differing ecological sites.

3. Grazing management systems should consider nutritional and herd health requirements of the livestock.

4. Integrate grazing management systems into the year-round management strategy and resources of the permittee(s) or lessee(s). Consider the use of collaborative approaches (e.g., coordinated resource management, work groups) in this integration.

5. Consider competition for forage and browse among livestock, big game animals, and wild horses in designing and implementing a grazing plan.

6. Provide periodic rest from grazing for rangeland vegetation during critical growth periods to promote plant vigor, reproduction, and productivity.

7. Range improvement practices should be prioritized to promote rehabilitation and resolve grazing concerns on transitory grazing land.

8. Consider the potential for conflict between grazing use on public land and adjoining land uses in the design and implementation of a grazing management plan.

Facilitating the Management of Livestock Grazing

9. The use of practices to facilitate the implementation of grazing systems should consider the kind and class of animals managed, indigenous wildlife, wild horses, the terrain, and the availability of water. Practices such as fencing, herding, water development, and the placement of salt and supplements (where authorized) are used where appropriate to:

   a. promote livestock distribution;

   b. encourage a uniform level of proper grazing use throughout the grazing unit;

   c. avoid unwanted or damaging concentrations of livestock on streambanks, in riparian areas, and other sensitive areas such as highly erodible soils, unique wildlife habitats, and plant communities; and

   d. protect water quality.

10. Roads and trails used to facilitate livestock grazing are constructed and maintained in a manner that minimizes the effects on landscape hydrology; concentration of overland flow, erosion, and sediment transport are prevented; and subsurface flows are retained.

Accelerating Rangeland Recovery

11. Upland treatments that alter the vegetation composition of a site, such as prescribed burning, juniper management, and seedings or plantings must be based on the potential of the site and should:

    a. retain or promote infiltration, permeability, and soil moisture storage;

    b. contribute to nutrient cycling and energy flow;

    c. protect water quality;

    d. help prevent the increase and spread of noxious weeds;

    e. contribute to the diversity of plant communities, and plant community composition and structure;

    f. support the conservation of threatened and endangered, other Special Status species, and species of local importance; and

    g. be followed up with grazing management and other treatments that extend the life of the treatment and address the cause of the original treatment need.

12. Seedings and plantings of nonnative vegetation should only be used in those cases where native species are not available in sufficient quantities; where native species are incapable of maintaining or achieving the standards; or where nonnative species are essential to the functional integrity of the site.

13. Structural and vegetation treatments and animal introductions in riparian and wetland areas must be compatible with the capability of the site, including the system's hydrologic regime, and contribute to the maintenance or restoration of properly functioning condition.

Rangelands Glossary

Appropriate action - implementing actions pursuant to subparts 4110, 4120, 4130, and 4160 of the regulations that will result in significant progress toward fulfillment of the standards and significant progress toward conformance with the guidelines. (See Significant progress)

Assessment - a form of evaluation based on the standards of rangeland health, conducted by an ID team at the appropriate landscape scale (pasture, allotment, subwatershed, watershed, etc.) to determine conditions relative to standards.

Compaction layer - a layer within the soil profile in which the soil particles have been rearranged to decrease void space, thereby increasing soil bulk density and often reducing permeability.

Crust, Abiotic - (physical crust) a surface layer on soils, ranging in thickness from a few millimeters to a few centimeters, that is much more compact, hard, and brittle when dry, than the material immediately beneath it.

Crust, Biotic - (microbiotic or cryptogamic crust) a layer of living organisms (mosses, lichens, liverworts, algae, fungi, bacteria, and/or cyanobacteria) occurring on, or near the soil surface.

Degree of function - a level of physical function relative to properly functioning condition commonly expressed as properly functioning, functioning-at-risk, or nonfunctional.

Diversity - the aggregate of species assemblages (communities), individual species, and the genetic variation within species and the processes by which these components interact within and among themselves. The elements of diversity are: 1) community diversity (habitat, ecosystem); 2) species diversity; and 3) genetic diversity within a species; all three of which change over time.

Energy flow - the processes in which solar energy is converted to chemical energy through photosynthesis and passed through the food chain until it is eventually dispersed through respiration and decomposition.

Ground water - water in the ground that is in the zone of saturation; water in the ground that exists at, or below the water table.

Guideline - practices, methods, techniques, and considerations used to ensure that progress is made in a way and at a rate that achieves the standard(s).

Gully - a channel resulting from erosion and caused by the concentrated but intermittent flow of water usually during and immediately following heavy rains.

Hydrologic cycle - the process in which water enters the atmosphere through evaporation, transpiration, or sublimation from the oceans, other surface water bodies, or from the land and vegetation, and through condensation and precipitation returns to the earth's surface. The precipitation then occurring as overland flow, streamflow, or percolating underground flow to the oceans or other surface water bodies or to other sites of envirotranspiration and recirculation to the atmosphere.

Indicators - parameters of ecosystem function that are observed, assessed, measured, or monitored to directly or indirectly determine attainment of a standard(s).

Infiltration - the downward entry of water into the soil.

Infiltration rate - the rate at which water enters the soil.

Nutrient cycling - the movement of essential elements and inorganic compounds between the reservoir pool (soil, for example) and the cycling pool (organisms) in the rapid exchange (e.g., moving back and forth) between organisms and their immediate environment.

Organic matter - plant and animal residues accumulated or deposited at the soil surface; the organic fraction of the soil that includes plant and animal residues at various stages of decomposition; cells and tissues of soil organisms, and the substances synthesized by the soil population.

Permeability - the ease with which gases, liquids, or plant roots penetrate or pass through a bulk mass of soil or a layer of soil.

Properly functioning condition - *Riparian/wetland:* adequate vegetation, landform, or large (coarse) woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid in floodplain development; improve floodwater retention and ground water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse channel and ponding characteristics to provide the habitat and water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The result of interaction among geology, soil, water, and vegetation. *Uplands:* soil and plant conditions support the physical processes of infiltration and moisture storage and promote soil stability (as appropriate to site potential); includes the production of plant cover and the accumulation of plant residue that protect the soil surface from raindrop impact, moderate soil temperature in minimizing frozen soil conditions (frequency, depth, and duration), and the loss of soil moisture to evaporation; root growth and development in the support of permeability and soil aeration. The result of interaction among geology, climate, landform, soil, and organisms.

Proper grazing use - grazing that, through the control of timing, frequency, intensity, and duration of use, meets the physiological needs of the desirable vegetation, provides for the establishment of desirable plants, and is in accord with the physical function and stability of soil and landform (properly functioning condition).

Reference area – sites that, because of their condition and degree of function, represent the ecological potential or capability of similar sites in an area or region (ecological province); serve as a benchmark in determining the ecological potential of sites with similar soil, climatic, and landscape characteristics.

Rill - a small, intermittent water course with steep sides; usually only a few inches deep.

Riparian area - a form of wetland transition between permanently saturated wetlands and upland areas. These areas exhibit vegetation or physical characteristics reflective of permanent surface or subsurface water influence. Land along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and shores of lakes and reservoirs with stable water levels are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil. Includes, but is not limited to, jurisdictional wetlands.

Significant progress - when used in reference to achieving a standard: (actions), the necessary land treatments, practices, and/or changes to management have been applied or are in effect; (rate), a rate of progress that is consistent with the anticipated recovery rate described in plan objectives, with due recognition of the effects of climatic extremes (drought, flooding, etc.), fire, and other unforeseen naturally occurring events or disturbances. Monitoring reference areas that are ungrazed and properly grazed may provide evidence of appropriate recovery rates. (See Proper Grazing Use)

Soil density - (bulk density) - the mass of dry soil per unit bulk volume.

Soil moisture - water contained in the soil; commonly used to describe water in the soil above the water table.

Special Status species - species proposed for listing, officially listed (threatened/endangered), or candidate for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act; those listed or proposed for listing by the State in a category implying potential endangerment or extinction; those designated by each BLM State Director as sensitive.

Species of local importance - species of significant importance to American Indian populations (e.g., medicinal and food plants).

Standard - an expression of the physical and biological condition or degree of function necessary to sustain healthy rangeland ecosystems.

Uplands - land that exists above the riparian/wetland area, or active floodplains of rivers and streams; those lands not influenced by the water table or by free or unbound water; commonly represented by toe slopes, alluvial fans, and side slopes, shoulders, and ridges of mountains and hills.

Watershed - an area of land that contributes to the surface flow of water past a given point. The watershed dimensions are determined by the point past, or through which, runoff flows.

Watershed function - the principal functions of a watershed include the capture of moisture contributed by precipitation; the storage of moisture within the soil profile, and the release of moisture through the subsurface flow, deep percolation to ground water, evaporation from the soil, and transpiration by live vegetation.

Wetland - areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Appendix H - Wildlife Habitat Descriptions and Considerations

Introduction

The RMP Introduction and Background Section describes the DRC for land, resource, and social and economic conditions that are expected to be present on public land in 20 to 50 years if the plan management objectives are achieved. Since the DRC are descriptions associated with long-term BLM management, they provide limited direction for wildlife habitat assessments and prescriptions over the next 20 years. Due to this limitation, Appendix H has been included here to provide more descriptions of habitat characteristics important to wildlife. These descriptions will be incorporated into activity plans and evaluated in both the short- and long-term. The following text will help to explain how the BLM intends to:

1) Meet the general wildlife objectives (Resources, Goals, Objectives, Rationale, Management Direction and Monitoring
Section of RMP) regarding riparian habitats, rangeland habitats, woodland habitats, and special status species;

2) Meet the quality of wildlife habitat that is implied in the S&Gs; and

3) Provide a direct link to annual RMP progress, adopt appropriate objectives/terms/conditions in BLM activity plans, and prescribe appropriate activity plan monitoring.

This appendix is not intended to be an exhaustive list of criteria, but it does address a wide variety of fundamental wildlife habitat issues. Due to economic and social constraints associated with implementation of this plan, it is assumed that some of these desired conditions and mitigation measures are not going to be fully attained at all times or in all places on the public land. Where they cannot be fully attained, it is assumed that either wildlife concerns have been outweighed by other resource, social, or economic values, or that site potential and other environmental factors such as weeds or frequent fire are preventing their attainment at the present time.

H-1: Wildlife Habitat Security and Disturbances

Security is a fundamental component of wildlife habitat health. Disturbance to habitat security (defined herein as unavoidable or unintended harassment to animals resulting from noise and activity) is known to adversely affect wildlife populations and productivity. Levels of big game winter mortality may increase where human activities cause additional physiological stress to animals already coping with intense cold and wet conditions. For species such as birds, annual recruitment of young may be diminished or eliminated altogether when disturbances occur during the nesting or mating season. Consequently, effects to animal security during the breeding or wintering season that are caused by disturbance need to be avoided or minimized in BLM authorizations. Generally speaking, disturbances during the summer and fall time period have less potential to inflict serious adverse effects to wildlife than when they occur during wintering or breeding seasons.

As a general rule, the public can expect that land-use authorizations which may affect special status species, raptors, and big game will require some form of mitigation to protect habitat security values. Special stipulations may be applied for unique circumstances unforeseen in this document. Security threats to wildlife can originate from a wide range of activities which may include, but are certainly not limited to, OHV use, grazing, minerals exploration or development, recreational use, prescribed fire activities, or actions associated with ROW. Road locations and densities typically play a very significant and interrelated role in protecting or diminishing wildlife security. Avoidance or mitigation of disturbing activities can usually be accomplished by prescribing adjustments to the timing, location, or duration of authorized actions. In some instances, project denial may be the only appropriate course of action where resource values are high and mitigation or avoidance cannot reasonably be made. The appropriate measures necessary for the protection of

wildlife need to consider the nature of proposed actions, the species affected, and the time of year the action is expected to occur. Modifications and waivers may be applied to proposed actions that affect wildlife.

General wildlife seasons of use for the planning area are as follows:

Winter: Normally begins for most eastern Oregon wildlife by December and ends by early March.

Breeding: Normally begins in early March and extends through June. A few species, such as owls, begin breeding in winter months.

Summer–Fall: Normally begins in July and extends through November.

H-2: Structural Projects

Power lines should be configured and located according to the best current technical guidance for wildlife mitigation. The intent is to avoid or reduce potential for electrocution, collision, or avian predation (hunting perches that may affect some species such as sage-grouse) or other avoidable adverse effects. New powerlines should be installed within existing power line corridors whenever possible to limit the number of potential electrocution and collision hazard areas. Suggested Practices for Raptor Protection on Power Lines (1996) is one example of several technical references the BLM will use to provide protection for raptors.

Fences for livestock grazing administration will be designed to conform to BLM Manual 1737-1 which prescribes wire spacing and types (smooth, barbed, or net types) depending on the wildlife species that occupy a project area. These standards will accommodate most wildlife movements and minimize the risks of injuries or death due to entanglement and collisions. Fence design and placement needs to consider and mitigate adverse consequences to wildlife especially in migration corridors and big game winter ranges. Proposed fence locations may be adjusted in order to avoid congregation of livestock in important wildlife habitats.

Escape ramps (expanded metal panels or other designs) will be installed in all new livestock troughs or installed in concert with scheduled maintenance in order to reduce or eliminate the potential for wildlife entrapment and drowning.

Spring sources developed for the purpose of delivering water into a livestock trough should leave some of the native source flow intact where possible. This will protect endemic molluscs, amphibians, or other wildlife that are vulnerable to spring dewatering. Exclosure fencing should accompany spring developments to protect wetland vegetation if grazing systems do not allow for the attainment of PFC (see Riparian/Wetland section of this document). Troughs connected with spring developments should be placed away from riparian and wetland habitats to reduce livestock trampling damage to wet areas. Trough overflow at springs should be controlled with float valves or delivered back into the native channel.

Water developments such as reservoirs, pipelines, and guzzlers may benefit some species of wildlife such as antelope, chukar partridge, and bighorn sheep by providing new sources of drinking water. Judgment as to whether developed water will be an overall benefit or detriment to wildlife habitat and populations is dependent upon the area of consideration and the species affected. Maintaining habitats free of new water developments accessible to livestock will normally be considered a beneficial wildlife habitat conservation measure in high quality native range (refer also to H-3).

H-3: Grazing Use Considerations for Upland Habitats

Unless specified with rationale, the following factors would be considered consistent with the protection of most wildlife habitat values in activity plans.

Key area selection for monitoring activity plan performance (effectiveness monitoring) is based on habitat type, landform, or fence locations at reasonable distances from water accessible to livestock or wild horses.

One or more key species of wildlife and wildlife seasons of use need to be identified for activity plan evaluation purposes.

1) Grazing systems should incorporate periodic yearlong rest, growing season deferment or both.

2) Key grass forage species on native ranges should be grazed at stocking levels that allow for maintenance or improvement of plant vigor and recruitment of young plants.

3) Native range should be grazed in such a way that a patchy appearance comprised of lightly to moderately grazed and ungrazed areas is prevalent throughout most of the pasture. The rangeland may be topped, skimmed, or grazed substantially in patches. In so doing, a combination of seasonally important habitat values important to wildlife will be present, including grazed (conditioned) forage plants and areas with high-quality cover and structure (ungrazed or slightly grazed vegetation).

Livestock grazing described as a thorough search (heavy trampling, limited standing herbaceous cover, and uniformly grazed key forage plants) is limited to areas near watering facilities such as troughs and reservoirs. Heavy utilization patterns do not dominate the appearance of the landscape and vegetation structure at the end of the growing season. Most young plants are undamaged subsequent to grazing use and low-value, herbaceous plants are left ungrazed.

4) TNR livestock grazing use in native range should be avoided to protect forage, cover, and structure values for wildlife. Where it is permitted for the attainment of other management objectives, TNR grazing use should conform to the general descriptions under the RMP and be less than or equal to 40 percent as defined in this document.

5) Native upland range that is not grazed by domestic livestock is a desired wildlife habitat condition. It is generally in limited supply and typically provides very high-quality structure and native forage for wildlife use. Maintenance of currently ungrazed native range conditions by avoiding new water developments, salting, and fencing is considered a beneficial mitigating measure for the protection of wildlife habitat values.

6) Crested wheatgrass seedings should be grazed periodically in such a way that spring or fall green-up or conditioned forage is available for Canada geese, big game, or other species. Light use and non-use by livestock in seedings for long periods of time will diminish green forage values for wildlife because grass plants become rank and unpalatable.

7) Green-up and conditioned forage:

a. Green-up (new vegetative growth initiated by growing season moisture) is valuable to wildlife because it provides succulent, nutritious, and easily digested forage. Nearly all classes of wildlife from songbirds to big game can be observed consuming green-up whenever and wherever it is available throughout the year. Domestic livestock and wild horses also consume green-up for its palatability and nutritional qualities. The value of green-up for wildlife is highest on habitats used during the spring, winter, or fall.

   The nutritious character of spring green-up prepares animals for the physiological demands of breeding activity and therefore it can be directly tied to animal population productivity. Where green-up is available on winter ranges, it helps animals to maintain their physiological condition; therefore, it can be directly tied to population survival. Where green forage has been unavailable for prolonged periods due to drought or normal summer conditions, green-up helps to restore overall animal health and therefore it can be tied directly to animal population recovery from cyclic or seasonal stress.

b. Conditioned forage (areas that have been burned or grazed by livestock) also tends to provide green vegetation that is sought out by wildlife. Consequently, grazing and burning can both be of benefit to wildlife by providing a higher volume and greater availability of succulent, nutritious, and easily digested forage. However, conditioned forage on native range from fires and grazing use is not in limited supply, resulting in limited need for more conditioned forage (resulting from livestock use) to benefit wildlife on native range. Moreover, the structural characteristics and values of shrubby cover

will need to be carefully weighed before emphasizing the desirability of providing more conditioned forage on public land through prescribed fire (see H-5).

8) Quaking aspen (apart from riparian habitats) and mountain shrub species should exhibit healthy growth forms, structure, and plant vigor. Uneven aged stands of aspen and mountain shrubs should be prevalent and grazing systems should include rotations that allow for seed production and seedling establishment. Grazing systems need to allow for the likelihood of maintaining or improving forage, cover, and structural features important to game and nongame species.

H-4: Grazing Use Considerations for Riparian/Wetland Habitats

At a minimum, grazing use needs to be consistent with providing those conditions which are necessary to promote properly functioning riparian/wetland areas.

There is no single management strategy that will meet all riparian needs for wildlife and there is no single tool for measuring activity plan performance that can be applied in every riparian area. This is because riparian site potential and current conditions are highly variable. The appropriate tool for monitoring activity plan performance is determined by the important wildlife resources present. Therefore, specific riparian objectives need to be applied at the activity plan level in light of all these variables.

Where vegetative trend is judged to be inadequate for establishing desired wildlife habitat conditions, a desired plant community objective will be used to address wildlife habitat management in riparian areas. Where needed, DRC objectives will address one or more of the following habitat elements important to wildlife:

Systems capable of supporting woody and herbaceous species are: 1) age composition, structural characteristics (e.g., height, volume), species distribution, and abundance of key woody species. 2) Distribution, composition, and abundance of key herbaceous species including grasses, forbs, sedges, and rushes. 3) Reproductive success and grazing utilization of key herbaceous or woody species.

Systems with little or no capability to support woody species are: 1) distribution, composition, and abundance of key herbaceous species including grasses, forbs, sedges, and rushes. 2) Reproductive success and grazing utilization of key herbaceous species.

H-5: Management of Vegetation within Steppe Rangelands Occupied by Sage-Grouse and Other Species that use Sagebrush Habitats

General Values of Shrubby and Herbaceous Cover for Wildlife

Wildlife diversity and productivity are profoundly influenced by the relative abundance, structure, and spatial arrangement of sagebrush communities. Management of sagebrush communities that is appropriate to soil, climate, and landform needs to incorporate the following overstory and understory components which contribute towards healthy wildlife habitats:

Shrub overstory: Big sagebrush, low sagebrush, and other shrubby species within the genus *Artemisia* provide primary sources of wildlife habitat structure, food, and cover.

Herbaceous understory: Grasses and forbs provide primary sources of wildlife habitat structure, food, and cover. Herbaceous cover also provides indirect food sources for wildlife by supporting the environments that produce insects consumed by birds and other small animals.

Two important tables of habitat information that will be used for wildlife habitat evaluation purposes are included in this section: Table H-1 describes general relationships of wildlife use at various shrub overstory canopy measures, and Table H-2 describes the amount and arrangement of habitat that is desired at mid scales (watersheds) and fine scales (pastures). Used in combination, these two tables will enable the BLM to craft a multi-scale monitoring and assessment process that is able to address cumulative effects of management actions and determine whether or not future actions conform to RMP objectives for wildlife habitat in sagebrush rangelands.

Exceeding the fine scale (pasture level) percents (acreages) of Table H-2 may be necessary in order to compensate for currently fragmented habitats or where fragmentation is likely to continue due to fire history and frequency. Determining activity plan objectives can be done only after considering existing cover conditions at mid scales and larger, and in light of wildlife survey data. This will be accomplished as a part of the rangeland health assessment process.

In addition to sage-grouse, important species of wildlife that use big sagebrush habitats are as follows:

Nongame species: sage thrasher, Brewer's sparrow, sage sparrow, black-throated sparrow, gray flycatcher, loggerhead shrike, pygmy rabbit, sagebrush vole, and Preble's shrew.

Game species: mule deer, elk, and pronghorn.

Each Table H-1 class has value and contributes toward meeting the yearlong needs of wildlife in terms of food, cover, and structure. ICBEMP science describes similar relationships and values.

Too much Class 1 and 2 or 4 and 5 habitat within a watershed will result in an imbalance in habitat productivity and connectivity for wildlife. An overabundance of Class 1 and 2 is indicative of undesirable conditions for wildlife due to shrub cover fragmentation. Conversely, an overabundance of Class 4 and 5, especially where there is a depleted understory, is indicative of undesirable conditions for wildlife because of limited herbaceous understory productivity (such as limited food sources for wildlife provided by herbaceous plants and insects).

In a healthy rangeland that supports multiple resource values, sagebrush canopy cover equal to or greater than 15 percent line intercept values may occur in patches (per ICBEMP Final EIS) within a community complex that is predominantly a Class 2 or 3 type. Class 4 or 5 types may also be reasonably interpreted as part of the natural complex site variability found in the sagebrush steppe (Miller and Eddleman 2000). In other words Class 4 or 5 types can be a natural product of soil, climate, and landform, and may often occur as transitional areas among Wyoming, Great Basin, and mountain sage shrub communities. Class 4 or 5 type may also be indicative of poor conditions due to grazing disturbance; these areas often support a depleted understory.

Class 4 or 5 types can be high value habitat features of a well connected, biologically diverse sagebrush landscape that is desirable for native, T&E, and locally important species of wildlife, such as Standard #5 in the S&Gs. There are distinct site potential differences in shrub canopy and understory character that need to be incorporated into the management of Wyoming, basin, and mountain sagebrush communities at the fine scale.

H-6: Appropriate Management Actions in Sagebrush Habitats for Meeting Wildlife Habitat Needs

Appropriate management actions (BLM approved mechanical, chemical, biological, or fire-related means) that are consistent with management for wildlife in sagebrush ecosystems include:

1) Restore rangelands that are depleted in structure and plant composition due to past uses, fires, and weed invasions. Restoration with multiple native species is preferable to using introduced species such as crested wheatgrass. However, if native species cannot be established because (1) native seed sources are not available, or (2) intense competition from other undesirable vegetation is very likely to limit the success in establishing natives, then introduced grasses with a shrub component (crested wheatgrass and shrubs) will be considered preferable to taking no rehabilitation action at all. Fire and weed threats to remaining areas of good quality native range need to be reduced or eliminated where possible.

Table H-1.–*General Habitat Relationships of Sagebrush Canopy Cover (as Determined by Line Intercept) and Herbaceous Understory Composition to Wildlife Habitat Values and Use*

Class 1	No sagebrush canopy cover–
	Class 1(A): Plant communities that are dominated by native grasses and forbs which generally provide a portion of habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. These plant communities are typically observed after fire, before sagebrush species recolonize. These plant communities are desirable to achieve in a patchy mosaic pattern within the sagebrush-steppe, intermingled with Class 2(A, C), Class 3(A, B, C), Class 4(B), and Class 5(B:25 percent to near 35 percent canopy cover) plant communities.
	Class 1(B): Plant communities that are dominated by introduced annual grasses and forbs such as cheatgrass, medusahead, and tumblemustard, which do not provide habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies). Before converting to annual grasses and annual forbs, these Class 1(B) plant communities were more likely to have been Wyoming big sagebrush or basin big sagebrush plant communities than either low sagebrush or mountain big sagebrush plant communities (Miller and Eddleman 2000). These plant communities are biologically and physically unstable because of high risk for repeated fire. High plant density of these annual plants, combined with great amounts of litter, effectively eliminate biological soil crusts. The combination of these conditions inhibits native plant recovery.
	Class 1(C): Plant communities that are dominated by seedings of crested wheatgrass or other exotic perennial grasses which generally do not provide habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. These plant communities are lacking in sagebrush canopy cover either because a sagebrush seed source is lacking, or sufficient time has not elapsed for sagebrush species to recolonize the seeding. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies).
	Class 1(D): Plant communities that are closed woodlands dominated by species such as western juniper. Particularly in the mountain big sagebrush and low sagebrush plant communities, western juniper encroachment and increasing density can result in near total loss of sagebrush canopy cover (Miller and Eddleman 2000). These Class 1(D) plant communities do not provide habitat needs for sage-grouse (sage-grouse did not select western juniper communities in central Oregon for nesting or winter habitat [BLM 1994; Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitats. In many of these plant communities, excessive livestock grazing pressure, fire suppression or both, have been the main contributors to their formation. These plant communities have depleted herbaceous understories in addition to depleted shrub canopy cover, and could have depleted biological soil crusts if the sites are capable of supporting biological soil crusts. The depletion of the shrub, herbaceous, and biological soil crust cover can result in accelerated erosion on these sites. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies) and supported a sagebrush plant community(ies) before the western juniper encroached.
Class 2	**Trace to 5 percent–**
	Class 2(A): Plant communities that are dominated by native grasses and forbs with some recruitment of sagebrush species, which provide a portion of habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. These plant communities are typically observed after fire, when sagebrush species are recolonizing. These plant communities are desirable to achieve in a patchy mosaic pattern within the sagebrush-steppe, intermingled with Class 1(A), Class 2(C), Class 3(A, B, C), Class 4 (B), and Class 5(B:25 percent to near 35 percent canopy cover) plant communities.
	Class 2(B): Plant communities that are dominated by introduced annual grasses and forbs such as cheatgrass, medusahead, and tumblemustard, where sagebrush species are generally declining in abundance attributable to high fire frequency. These plant communities are typically not providing habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies). These plant communities are biologically and physically unstable because of high risk for repeated fire. High plant density of these annual plants combined with great amounts of litter effectively eliminates biological soil crusts. The combination of these conditions inhibits native plant recovery.

	Class 2(C): Plant communities that are dominated by seedings of crested wheatgrass or other exotic perennial grasses where sagebrush species are in the early stages of recolonization. These plant communities might not be providing the complex shrub-grass-forb cover and food needs of sage-grouse and other wildlife that use sagebrush-steppe habitat, but if there is active recolonization of sagebrush species, the likelihood is high for providing future habitat needs. These plant communities are desirable to sustain if they are moving successionally to greater abundance of sagebrush species.
	Class 2(D): Plant communities that are woodlands dominated by species such as western juniper. Particularly in the mountain big sagebrush and low sagebrush plant communities, western juniper encroachment and increasing density can result in near total loss of sagebrush canopy cover (Miller and Eddleman 2000). These plant communities do not provide habitat needs for sage-grouse (sage-grouse did not select western juniper communities in central Oregon for nesting or winter habitat [BLM 1994; Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitats. In many of these Class 2(D) plant communities, excessive livestock grazing pressure, fire suppression or both, have been the main contributors to their formation. These plant communities have depleted herbaceous understories in addition to depleted shrub canopy cover, and could have depleted biological soil crusts if the sites are capable of supporting biological soil crusts. The depletion of the shrub, herbaceous, and biological soil crust cover can result in accelerated erosion on these sites. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies) and if they supported a sagebrush plant community(ies) before the western juniper encroached.
Class 3	**Greater than 5 percent, up to 15 percent–**
	Class 3(A): Plant communities supporting low sagebrush or Wyoming big sagebrush, with an understory of native grasses and forbs (typically about ten percent grass canopy cover and less than ten percent forb canopy cover), and intact biological soil crusts in interplant spaces, represent the potential natural vegetation for these plant communities (Miller and Eddleman 2000). Class 3(A) low sagebrush or Wyoming big sagebrush plant communities provide habitat needs for sage-grouse (such as winter habitat [Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitat. They are desirable to sustain in a patchy mosaic pattern within the sagebrush-steppe, intermingled with Class 1(A), Class 2(A, C), Class 3(B, C), Class 4(B), and Class 5(B:25 percent to near 35 percent canopy cover) plant communities.
	Class 3(B): Plant communities supporting basin big sagebrush or mountain big sagebrush, with an understory of native grasses and forbs, which are typically moving successionally to greater abundance of sagebrush species and are not yet at the potential natural vegetation for these two plant communities. Despite this, Class 3(B) basin big sagebrush or mountain big sagebrush plant communities provide habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitat. Their presence in a mosaic, intermingled with Class 1(A), Class 2(A, C), Class 3(A, C), Class 4(B), and Class 5(B:25 percent to near 35 percent canopy cover) plant communities, should be considered desirable for sagebrush-steppe habitat. It should be recognized however, that these Class 3(B) plant communities are probably transitory and should be permitted to move successionally to Class 4 (see Class 4(B) for more detail).
	Class 3(C): Plant communities that are dominated by seedings of crested wheatgrass or other exotic perennial grasses, where sagebrush canopy cover is on the increase attributable to sagebrush colonization. While not providing the habitat quality of Class 3(A) or Class 3(B) plant communities due to lack of a diverse grass or forb component in these seedings, Class 3(C) plant communities do provide added structure because of the sagebrush, which provides habitat for some wildlife that use sagebrush-steppe habitat.
Class 4	**Greater than 15 percent, up to 25 percent–**
	Class 4(A): Plant communities supporting low sagebrush or Wyoming big sagebrush, which typically show a decrease in native grass and forb canopy cover (particularly where sagebrush canopy cover is 20 percent or greater [Miller and Eddleman 2000]) and biological soil crust development compared with Class 3(A) low sagebrush or Wyoming big sagebrush plant communities. Disturbances such as excessive livestock grazing pressure often contribute to development of Class 4(A) plant communities (Miller and Eddleman 2000). Class 4(A) is neither the potential natural vegetation nor a desirable outcome for these two plant communities when the inherent capabilities of soils, landform, and climate are factored in. However, Class 4(A) plant communities can provide some habitat needs for sage-grouse (such as winter habitat [Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitat.

	Class 4(B): Plant communities supporting basin big sagebrush or mountain big sagebrush, with an understory of native grasses and forbs, more often than not represent the potential natural vegetation for these plant communities. Class 4(B) plant communities provide habitat needs for sage-grouse (such as nesting and brood-rearing habitat [Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitat. Their presence in a mosaic, intermingled with Class 1(A), Class 2(A and C), Class 3(A, B, C), and Class 5(B:25 percent to near 35 percent canopy cover) plant communities, should be considered desirable for sagebrush-steppe habitat.
	Class 4(C): Plant communities supporting mountain big sagebrush or low sagebrush, with tree seedlings (particularly western juniper) in the understory. Particularly in the mountain big sagebrush and low sagebrush plant communities, western juniper encroachment and increasing density can result in near total loss of sagebrush canopy cover (Miller and Eddleman 2000). These Class 4(C) plant communities currently provide habitat needs for sage-grouse and other wildlife that use sagebrushsteppe habitats. However, with continued growth and increasing density of the western juniper, sagebrush will decline and these plant communities will transition and at some point will not provide habitat needs for sage-grouse and other wildlife that use sagebrush-steppe habitats. On many of these Class 4(C) plant communities, excessive livestock grazing pressure, fire suppression or both, have been the main contributors to their formation. These plant communities are not desirable to sustain in their present condition if the sites are capable of supporting a sagebrush plant community(ies) and supported a sagebrush plant community(ies) before the western juniper encroached.
Class 5	**Greater than 25 percent–**
	Class 5(A): Plant communities supporting basin big sagebrush or mountain big sagebrush, with an understory of native grasses and forbs, can represent the potential natural vegetation for these plant communities, particularly for canopy cover that ranges from 25 percent to less than 35 percent (Miller and Eddleman 2000). However, as sagebrush canopy cover approaches 35 percent, the understory of native grasses and forbs decreases. Class 5(B) basin big sagebrush or mountain big sagebrush plant communities can provide habitat needs for sage-grouse (such as nesting and brood-rearing habitat [Miller and Eddleman 2000]) and other wildlife that use sagebrush-steppe habitat (such as pygmy rabbit). Class 5(B) that has sagebrush canopy cover in the range of 25 percent to less than 35 percent is probably within the range of what the soils, landform, and climate would sustain for these two plant communities, whereas canopy cover Class 5(B) that approaches or exceeds 35 percent in these two plant communities is probably undesirable and a result of excessive livestock grazing pressure, fire suppression or both.
	Class 5(B): Plant communities supporting low sagebrush or Wyoming big sagebrush, which typically are depauperate in understory native grasses and forbs (Miller and Eddleman 2000) and often have an understory composed of exotic annuals such as cheatgrass and mustards. Understory native grasses, forbs, and biological soil crusts would be primarily restricted to microsites beneath shrub canopies and would rarely be found in interspace microsites. Disturbances such as excessive livestock grazing pressure are often contributory to development of Class 5(A) plant communities (Miller and Eddleman 2000). Although these low sagebrush or Wyoming big sagebrush plant communities can provide some habitat needs for sage-grouse (e.g. winter habitat; Miller and Eddleman 2000) and other wildlife that use sagebrush-steppe habitat, these Class 5(A) plant communities are neither the potential natural vegetation nor a desirable outcome for these two plant communities when the inherent capabilities of soils, landform, and climate are factored in.

Table H-2. - *Desired Amounts and Arrangements of Sagebrush Habitats*

Structural characteristics and general distribution at mid scales: Shrub cover capable of supporting the life history requirements of sage-grouse and other wildlife (such as Classes 3, 4, and 5 from Table P-1) that use sagebrush habitats should be present at multiple scales, over a large area, and in a variety of spatial arrangements (such as at a landscape level and with connectivity present). This should include a central core of sagebrush habitat which is present in large contiguous blocks as well as some other habitat arrangements such as islands, corridors, and mosaic patterns. Each of these patterns has significance to wildlife within geographic areas. Wildlife objectives for sagebrush communities in individual pastures, allotments, and watersheds will be determined on the basis of factors such as: (1) presence of sage-grouse and their seasonal life history needs, (2) existing native shrub cover patterns and characteristics within each watershed, (3) frequency and reasonably foreseeable likelihood of fire, and (4) locations of seedings and their shrub overstory conditions. Shrub cover should be present that shows some mix of height and age classes, but with an overall emphasis on the presence of communities with shrubs in a mature structural status (Thomas et al. 1984).
Big sagebrush shrub cover on native range at fine scales (pastures): Shrub overstories capable of supporting sage-grouse and other species that use sagebrush habitats should be present on at least 50 to 75 percent of the surface acreage of livestock management pastures capable of supporting big sagebrush communities. For example: a 1000-acre native range pasture that is a Wyoming, mountain, or basin sagebrush type should provide shrub cover capable of supporting sage-grouse and other species that use sagebrush habitats on at least 500 to 750 acres (such as Classes 3, 4, and 5 from Table G-1).
Big sagebrush shrub cover on seeded range at fine scales (pastures): Shrub overstories capable of supporting sage-grouse and other species that use sagebrush habitats should be present on at least 25 to 50 percent of the surface acreage of livestock management pastures capable of supporting a big sagebrush community. For example: a 1000-acre seeded pasture that is a Wyoming, mountain, or basin sagebrush habitat type should provide adequate shrub cover capable of supporting sage-grouse and other species that use sagebrush habitats on at least 250 to 500 acres (such as Classes 3, 4, and 5 from Table G-1).
Herbaceous understory on native range at fine scales (pastures): Herbaceous understory composition throughout most native range habitats should exhibit multiple species of native forbs and grasses consistent with site potential at mid, late, or potential natural community seral stages.
Herbaceous understory on seeded range at fine scales (pastures): Herbaceous cover composition in seedings should support one or more adapted forb species.

2) Reduce the level of western juniper encroachment into rangeland sites that threaten sage-grouse as a result of habitat loss and hunting perches for avian predators. Use mechanical means, rather than fire, where the risk is high of exacerbating fire cycles associated with invasive species (such as cheatgrass).

3) Modify landscape character in monotypic stands of sagebrush where there is reason to believe that such action would promote wildlife habitat values and not further exacerbate problems associated with fragmentation.

4) Restore habitat complexity, diversity, and structure in at least portions of rangelands currently dominated by monoculture stands of adapted grasses (nonnative). This action is considered appropriate if the area is judged to be of substantial consequence to the connectivity of individual geographic areas and the outcome would benefit critically important wildlife habitats (such as areas of concentrated or otherwise highly significant wildlife use).

5) Delay the timing of certain crested wheatgrass retreatments (treatments for the purpose of encouraging more grass production) where the status of sage-grouse winter use and breeding activity is uncertain. Prescribe treatments based on documented field survey data that address sage-grouse absence or presence.

6) Use cultural practices to establish greenstrips in order to diminish the chances for further loss of quality sagebrush habitats to wildfire. This is especially true for quality sage-grouse habitats that adjoin fire prone, cheatgrass dominated areas.

7) Where necessary, bring livestock utilization levels or seasons of use into conformance with herbaceous cover requirements in sage-grouse nesting habitats.

H-7: Western Juniper Woodland Management Considerations

Habitats that support western juniper should provide the following kinds of characteristics important to wildlife:

1) Patches of thermal and hiding cover sufficient to meet the habitat requirements of mule deer and elk.

2) Scattered mature trees suitable for nesting raptors such as ferruginous hawks.

3) Limited juniper presence in rangelands where sage-grouse forage and cover values are threatened or where predation by raptors may be affecting limited grouse populations.

4) Maintenance of all large trees (approximately 24-inch diameter measured one foot above ground) with nesting/hiding cavities used by various species of small mammals and birds.

5) Downed trees for small animal refugia and big game hiding cover.

6) Vegetation mosaics within project sites so that the result of treatments is approximately 10 to 30 percent juniper habitat and 70 to 90 percent shrub/grassland habitat. The patch size and layout of cover types resulting from projects (burning or cutting) is dependent upon wildlife that use the area and cover conditions within the geographic area being affected.

H-8: Bighorn Sheep Guidelines

Management pertaining to bighorn sheep, domestic sheep, and goats is specified within the BLM Revised Guidelines for Management of Domestic Sheep and Goats in Native Wild Sheep Habitats (1998). These guidelines, which may be modified by agreement among the parties involved, will be reviewed at least every five years by a work group of representatives from the livestock industry, State wildlife agencies, the BLM, and native wild sheep organizations.

H-9: Calculation of Big Game Forage Demand

Big game numbers used to set forage demand in this plan were supplied by the ODFW, and are based on State-approved management objectives and benchmark levels by seasons of use and grazing allotment.

Adhering to the descriptions of grazing use in H-3 of this section would allow the BLM to meet upland wildlife forage needs within the AMU and CMPA. Conflicts regarding forage availability for wildlife will be addressed on a case-by-case basis within periodic rangeland health evaluations. Evaluations may disclose the need for an allotment specific wildlife forage allocation where desired conditions described under upland utilization are not being met.

Bighorn sheep forage demand was not calculated in Appendix J. Specific locations of bighorn sheep use at the pasture level throughout the AMU and CMPA were not possible. Nevertheless, bighorn sheep forage will be considered in the course of evaluations similar to pronghorn, deer, and elk.

Big game forage demand in Appendix J was established by using the three mathematical calculations described below. These calculations are consistent with the Three Rivers Resource Management Plan (1991) in the Burns District, and they use locally adapted studies on dietary overlap cited in Vavra and Sneva (1978).

Mathematical Calculations Used for Determining Wildlife Forage Demand

1) Land ownership differences: The percentage of the grazing allotment administered by the BLM was multiplied by the management objective/benchmark number to determine the number of big game supported on public land versus other ownerships such as state or private.

2) Body mass differences: The number of big game at management objective/benchmark levels supported on BLM lands was then divided by a factor of 5.3 (for deer), 7.0 (for pronghorn), and 2.4 (for elk) to determine the number of each species that would potentially consume forage equal to one AUM, which is defined as 800 pounds of air dry forage. (The figure derived from this calculation is referred to as the unadjusted forage demand because it does not factor in the dietary differences between livestock and big game.)

3) Dietary preference differences: The unadjusted forage demand was then multiplied by factors of 0.18 for deer, 0.10 for antelope, and 0.70 for elk to reflect the differences in forage preferences between livestock and big game (this figure is referred to as the adjusted forage demand). For example: The adjusted big game forage demand (sometimes referred to as the competitive AUMs) needed to support 50 mule deer on an allotment with 80 percent public land over a period of 12 months would be 16.3 AUMs using the following calculation:

[50 deer x 12 months x 18 percent dietary overlap x 80 percent public land] ÷ 5.3 deer per AUM.

Appendix I - Minerals

Table I-1: Acres of Minerals Restrictions in the AMU

After subtracting out AMU land that is in the Mineral Withdrawal Area, WSAs, and split-estate land, there are 467,831 acres of available BLM-administered land in the AMU for locatable and leasable minerals exploration and development. There are 467,899 acres of available BLM-administered land for saleable minerals exploration and development in the AMU due to addition of 68 acres of AMU land within the Mineral Withdrawal Area that was congressionally identified as open for road maintenance use by the Steens Act. Steens Act saleable minerals sites for road maintenance use total 513 acres: 445 of those acres are in the CMPA and 68 acres are in the AMU.

Table I-1 summarizes the total acres recommended closed (withdrawn) and open for locatable, leasable, and saleable minerals; Table I-1 further summarizes the available BLM-administered acres recommended closed and open within areas of high mineral potential. See Map 4 for locatable mineral open areas, Map 5 for leasable minerals open areas, and Map 6 for saleable minerals open areas. Refer to the Proposed RMP/FEIS for additional minerals maps or the attached CD.

Table I-2 Mineral Leasing Management in the AMU

Table I-2 shows mineral leasing stipulations and their exceptions, modifications, and waivers. Map 5 shows AMU areas in the various leasing categories. Leasing and development decisions also apply to geophysical exploration. Changes requiring an RMP plan amendment will have a 30-day public review.

Table I-3 Summary Comparison in Acres by Mineral Category and Resource in the AMU

Table I-3 shows a summary comparison of acreages by resource values recommended closed across the management alternatives. Acreages of some resources overlap with acreages of other resources (an area may have both Special Status plant species and big game winter range, for example) and so the acreage shows up under each resource; in Map 5 and in Table I-1 the overlap acreage is not shown or counted twice.

Table I-1: Acres of Minerals Restrictions in the AMU

	Acres
Locatable Minerals	
Total available BLM-administered acres in the AMU	467,831
Total Closed	20,367
Total Open	447,464
Available BLM-administered acres with high potential for hot springs gold and mercury	32,055
Closed	8,005
Open	24,050
Available BLM-administered acres with high potential for uranium	0
Available BLM-administered acres with high potential for vein gold	0
Available BLM-administered acres with high potential for porphyry copper, gold and molybdenum	1,313
Closed	10
Open	1,303
Available BLM-administered acres with high potential for diatomite	1
Closed	1
Open	0
Leasable Minerals	
Total available BLM-administered acres in the AMU	467,831
Total Closed	0
Total Open with NSO	9,355
Total Open with Special Stipulations	241,683
Total Open with Standard Stipulations	216,793
Available BLM-administered acres with high potential for oil and gas resources	0
Available BLM-administered acres with high potential for geothermal resources	332
Closed	0
Open with NSO	0
Open with Special Stipulations	281
Open with Standard Lease Stipulations	51
Available BLM-administered acres with high potential for sodium or potassium mineral resources	0
Saleable Minerals	
Total available BLM-administered acres in the AMU	467, 899
Total Closed	22,057
Total Open	445,842

Table I-2: Mineral Leasing Management inthe AMU

Resource of Concern	Acres	Description
Closed to Leasing (nondiscretionary closures; there are no discretionary closures)		
Mineral Withdrawal Area	428,156	Includes some WSAs
WSAs outside of the Mineral Withdrawal Area	433,521	
Designated for NSO		
National Register listed cultural sites	0	Cultural values are rare if they are listed on the National Register. Standard stipulations would not provide sufficient protection if the site is extensive. There are currently no Natural Register listed cultural sites in the AMU or CMPA although sites may be listed in the future. Exception: None Modification: The authorized officer may modify the size of the stipulation area if a listed area is increased or decreased due to research. Waiver: The authorized officer may waive the stipulation if the listed area is small or reduced in size so that area can be avoided under standard stipulations.
Significant paleontological localities	9,352	Significant paleontological localities have mammal fossils or other rare fossils. Standard stipulations do not provide sufficient protection if the site is extensive. Exception: None Modification: The authorized officer may modify the size of a stipulation area if a significant paleontological locality area is increased or decreased due to research. Waiver: The authorized officer may waive the stipulation if the locality is small or reduced in size so that the area can be avoided under standard stipulations.
Designated for seasonal or other special stipulations or both		
Big game winter range (elk, mule deer, pronghorn antelope, and big horn sheep range	245,213	Big game tolerance to exploration and development activities varies by species and is influenced by the intensity, duration and timing of human disturbance. Winter season disturbances can be particularly detrimental to big game that are already under normal thermal and dietary stresses. When added to winter environmental stress, human activity can result in fetal losses in pregnant does as well as mortality in adults. In areas with big game range, no leasing activities will be allowed from December 1 - April 1 of each year. Exception: The authorized officer may grant an exception if site-specific environmental analysis indicates that an action will not interfere with habitat function or compromise animal condition. Modification: The authorized officer may modify the area and timeframes of the stipulation if monitoring indicates that current animal use patterns are inconsistent with areas and dates established for animal occupation. Waiver: This stipulation may be waived by the authorized officer if monitoring determines that all or specific portions of the AMU no longer serve as big game winter range.
Areas containing Federally listed species and their designated critical habitat	12.7	Surface-disturbing activities on all mineral leases are limited to existing roads until field surveys of the proposed area of disturbance are completed. These field surveys must be conducted at an appropriate time of year to enable the identification of Federally listed species and their designated critical habitat. If Federally listed species or their designated critical habitat are found or known to be in the area, the authorized officer may determine to not allow or to modify activities as needed. Exception: None Modification: The authorized officer may modify the size of the stipulation area if conference or consultation changes the area of designated critical habitat. Waiver: This stipulation may be waived by the authorized officer when the species is recovered or extinct, or when the habitat is no longer considered critical.
Within 0.6-mile of sage-grouse leks	20,372	Sage-grouse breeding and nesting activity could be disrupted by lease activities during the strutting season. NSO is allowed within 0.6-mile of sage-grouse leks between March 1 - June 1 of each year. Exception: None Modification: The authorized officer may modify the size of the stipulation area or timing if monitoring indicates that current animal use patterns are inconsistent with areas previously considered established as sage-grouse leks. Waiver: This stipulation may be waived by the authorized officer if monitoring determines that all or specific portions of the AMU no longer serve as sage-grouse leks.

Table I-3: Summary Comparison in Acres by Mineral Category and Resource in the AMU

Mineral Category and Resource	Acreage
Mineral Category: Leasable Minerals	
Closed	0
Open with NSO	
Significant paleontological localities	9,352
Open with Seasonal or Other Special Stipulations or Both	
Big game winter range (elk, mule deer, and pronghorn antelope) and yearlong big game range (California bighorn sheep)	245,213
Areas containing Federally listed species and their designated critical habitat	12.7
Within 0.6-mile of sage-grouse leks	20,372
Mineral Category: Locatable Minerals	
Closed	
Existing recreation and administrative sites and approved potential recreation sites	5
Significant paleontological localities	9,352
Areas containing Federally listed species and their designated critical habitat	12.7
Within 0.6-mile of sage-grouse leks	20,372
Mineral Category: Saleable Minerals	
Closed	
ACECs	1,689
Existing recreation and administrative sites and approved potential recreation sites	5
Significant paleontological localities	9,352
Areas containing Federally listed species and their designated critical habitat	12.7
Within 0.6-mile of sage-grouse leks	20,372

Appendix J - Allotment Management Summaries

The following summaries provide multiple-use information for each grazing allotment in the Planning Area. Each individual table is organized by allotment name and number and contains the following information:

- The Selective Management Category (M, I, C).
- Whether the allotment has an AMP and when it was implemented.
- The season of use.
- Whether the allotment has been assessed for S&Gs and when it was done.
- The permitted use and suspended use for livestock grazing.
- Forage allocations for wildlife and wild horses.
- Acres of public, private, State and refuge lands.
- Pastures associated with the allotment, including size, percent public land, ecological condition, upland trend, and major objectives.
- Pastures within the allotment that have riparian and water quality considerations and the miles of stream that are affected.
- Potential range improvement projects planned for the allotment over the life of the plan. This list is not rigid, so proposals may be added or deleted that reflect the situation at any particular part of the implementation period.
- Resource concerns that may be affected by potential actions within the allotment.
- Other pertinent information.

Since publication of the DRMP/DEIS, the Bridge Creek Allotment (06037) was combined with the Hardie Summer Allotment (06025). The two allotments were grazed by the same permittee**,** in a rotation which made combining the allotments necessary for ease of management. Other changes since the draft are: the addition of riparian and water quality considerations by pasture; the ecological condition and trend of upland areas by pasture; and potential range improvement projects. The allotment objectives from the AMPs were removed from each allotment summary since publication of the DRMP/DEIS.

The allotment summaries are listed by allotment number. The following is an alphabetical listing of the allotments along with the allotment number to better assist the reader in finding the allotment of interest.

Alvord (06012)**
Alvord FFR (06129)
Alvord Peak (06038)**
Basque Hills (06042)
Burnt Flat (05604)*
Carlson Creek (06027)*
Casey FFR (06109)
Chimney (06033)**
CM Otley FFR (06126)**
Crump/Calderwood FFR (06107)
Culp FFR (06123)
Defenbaugh FFR (06104)
Dixon FFR (06115)
Dunbar FFR (06111)
East Ridge (06010)**
Fields (06028)
Fields Basin (06035)
Frazier Field (06006)*
Grassy Basin (06017)
Hammond (06023)**
Hammond FFR (06100)**
Happy Valley (05309)*
Hardie Summer (06025)*
Henricks FFR (06108)
Jenkins B Flat FFR (05327)*
Kaser FFR (06117)
Keg Springs (06029)
Kings River (06022)
Konek FFR (06128)
Krumbo (06008)**
Krumbo Mountain (06032)**
Kueny FFR (06127)
LaVoy Tables (06031)**
Long Hollow FFR (06112)
Lower Antelope (06044)
Lupher FFR (06118)
Mann Lake (06026)**
Mann Lake FFR (06120)**
Mud Creek (06005)*
Neuschwander FFR (06121)
North Catlow (06001)
Northrop FFR (06116)
Oregon End FFR (06102)
Orlando FFR (06106)
Otley Brothers FFR (06133)**
Pollock (06011)**

Pollock FFR (06119)**
Pueblo Mountain (06021)
Pueblo Slough (06043)
Pueblo-Lone Mountain (06020)
Riecken'ss Corner (06030)
Riddle Mountain (05310)*
Riddle/Coyote (05329)*
Roaring Springs FFR (06125)**
Rock Creek FFR (06114)
Ruby Springs (06007)**
Sandhills (06016)
Scharff FFR (06130)*
Serrano Point (06019)**
Smyth/Kiger (05331)*
South Catlow (00032)(06041)
South Fork (06024)
South Pocket FFR (06131)
South Steens (06002)**
Starr FFR (06122)
Still FFR (06110)
Stonehouse (06040)*
Trout Creek Mountain (06015)
Tule Springs (06018)
Tum Tum (06014)
Waldkirch FFR (06101)
Wiley FFR (06103)
Windmill FFR (06124)
Wrench Ranch FFR (06105)

*The allotment is located entirely within the CMPA.
**The allotment is located in both the CMPA and the AMU.

Table J-1: Allotment Management Summaries

Allotment Name: Happy Valley			Allotment Number: 05309		
Management Category:	M	Public land acres:	16,763	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1996	Private acres:	2,569	Deer	25
Season of Use:	sp,su,fa	State acres:	0	Antelope	4
Yr S & G Assessment:	2001	Other Federal acres:	0	Elk	88
Active AUMS:	2,267			Wild Horses	132
Suspended AUMs:	131	Total Acres:	19,362		
Total Permitted AUMs:	2,398			Total	249

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[1]
North	1,583	100	fair seeding	up	B
South	2,599	86	mid-seral	up	A, B
Government Field	1,389	100	mid-seral	up	A, B
Deep Creek	2,486	31	mid-seral	down	A, B, D
West Field	2,247	99	fair seeding	up	A, B
Tank	1,071	100	mid-seral	static	A, B
Fisher Field	668	92	fair seeding	up	A, B
North Big Hill	2,522	93	early seral	up	A, B
South Big Hill	3,633	98	mid-seral	up	A, B
Smyth Creek Canyon	957	92	mid-seral	static	A, B, D
Exclosure	30	97	mid-seral	static	C
Hay Meadow	147	54	mid-seral	static	A, B

Potential Range Improvement Projects:
- Juniper cutting (600 acres)

Identified Resource Concerns:
- Riparian
- Water quality
- Special Status Species: Ferruginous hawk, redband trout, Malheur mottled sculpin
- Kiger HMA
- Kiger Mustang ACEC

Other:
- Only about 13% of the Happy Valley Allotment is within the Andrews/Steens Planning Area. All or portions of the Government Field, Deep Creek, and South Big Hill Pastures are within the Planning Area. The remaining portion of the Happy Valley Allotment is within the Three Rivers Planning Area.

[1] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Riddle Mountain	Allotment Number:	05310

Management Category:	I	Public land acres:	20,479	Other Forage Allocations (AUMS)	
Yr AMP Implemented:	1992	Private acres:	2,436	Deer	177
Season of Use:	sp,su.fa	State acres:	92	Antelope	6
Yr S & G Assessment:	1998	Other Federal acres:	0	Elk	188
Active AUMS:	3,095			Wild Horses	0
Suspended AUMS:	291	Total Acres:	23,007		
Total Permitted AUMS:	3,386			Total	371

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[2]
Seeding	1,003	92	fair seeding	static	B
Riddle	3,164	95	mid-seral	static	A
Paul Creek	3,206	54	mid-seral	static	A, D
Big	8,081	98	mid-seral	static	A, D
Dry	4,294	86	mid-seral	static	B
South	571	100	fair seeding	static	B
Dollarhide	1,390	98	late seral	up	B, D
Sheep Trail	1,287	100	mid-seral	down	A
Pony Moore Spring	11	100	late seral	up	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi) 3.5	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Dollarhide	No	0.3	1.0	-	-	-
Big	No		-	-	-	-

Potential Range Improvement Projects:
- Juniper cutting (600 acres)
- Aspen fences (2 each)
- Reservoirs (1 each)
- Prescribed burning (1,000 acres)

Identified Resource Concerns:
- Water quality
- Big game habitat, deer winter range
- Elk forage allocations
- Playa habitat
- Riparian and aquatic habitat
- Special Status Species: Greater sage-grouse, redband trout, Malheur mottled sculpin
- Range condition

Other:
- Only about 23% of the Riddle Mountain Allotment is within the Andrews/Steens Planning Area. All or portions of the Big, Dollarhide, Sheep Trail, and Pony Moore Spring Pastures are within the Planning Area. The remaining portion of the Riddle Mountain Allotment is within the Three Rivers Planning Area.

[2] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Jenkins B Flat FFR	Allotment Number:	05327

Management Category:	C	Public land acres:	1,037	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	3,466	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	283			Wild Horses	0
Suspended AUMs:	0	Total Acres:	4,503		
Total Permitted AUMs:	283			Total	0

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[3]
Jenkins B Flat FFR	4,503	23	late seral	unknown	E

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- None

[3] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Riddle/Coyote	Allotment Number:	05329

Management Category:	I	Public land acres:	1,549	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1996	Private acres:	98	Deer	0
Season of Use:	sp	State acres:	0	Antelope	0
Yr S & G Assessment:	1998	Other Federal acres:	0	Elk	0
Active AUMS:	300			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,647		
Total Permitted AUMs:	300			Total	0

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[4]
Riddle/Coyote	1,647	94	late seral	up	B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Riddle/Coyote	Yes	1.0	3.2	-	-	-

Potential Range Improvement Projects:
- Juniper cutting (300 acres)
- Aspen fence (1 each)

Identified Resource Concerns:
- Water quality
- Forage allocations for elk
- Riparian and aquatic habitat condition
- Special Status Species: Greater sage-grouse
- Range condition

[4] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Smyth/Kiger	Allotment Number:	05331

Management Category:	I	Public land acres:	22,706	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1996	Private acres:	7,351	Deer	87
Season of Use:	sp,su,fa	State acres:	0	Antelope	7
Yr S & G Assessment:	1996	Other Federal acres:	0	Elk	140
Active AUMS:	2,522			Wild Horses	852
Suspended AUMs:	0	Total Acres:	30,057		
Total Permitted AUMs:	2,522			Total	1,086

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[5]
Swamp Creek	5,004	91	mid-seral	static	A, B, D
Yank Springs	3,453	93	mid-seral	down	A, B, D
Ant Hill	2,576	91	mid-seral	up	A, B
Wood Camp	4,865	100	mid-seral	static	A, B
Ruins	7,514	76	late seral	up	A, B
Hamilton Individual	1,021	100	mid-seral	static	A, B, D
Deep Creek	668	97	mid-seral	up	A, B, D
Private	4,956	7	unknown	unknown	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Ruins	No	-	-	2.9	-	-
Hamilton Ind.	Yes	-	-	2.6	-	-
Private	Yes	-	0.1	-	-	-

Potential Range Improvement Projects:
- Juniper cutting (3,000 acres)
- Prescribed burning (1,300 acres)
- Spring developments (2 each)
- Reservoirs (1 each)

Identified Resource Concerns:
- Riparian
- Water quality
- Kiger HMA
- Kiger Mustang ACEC
- Special Status Species: Greater sage-grouse, redband trout, Malheur mottled sculpin

Other:
- Only about 36% of the Smyth-Kiger Allotment is within the Andrews/Steens Planning Area. All or a portion of the Yank Springs, Wood Camp, Ruins, Hamilton Individual, Deep Creek, and Private Pastures are located within the Planning Area. The remaining portion of the Smyth/Kiger Allotment is within the Three Rivers Planning Area.

[5] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Burnt Flat	Allotment Number:	05604

Management Category:	I	Public land acres:	29,154	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1996	Private acres:	5,414	Deer	83
Season of Use:	sp,su,fa	State acres:	394	Antelope	15
Yr S & G Assessment:	2001	Other Federal acres:	0	Elk	64
Active AUMS:	3,863			Wild Horses	672
Suspended AUMs:	0	Total Acres:	34,962		
Total Permitted AUMs:	3,863			Total	834

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[6]
Louie Hughes	2,303	89	mid-seral	static	B
Oriana Flat	30,024	87	late seral	up	B
Big Sage	632	76	fair seeding	static	B
Private	2,003	23	mid-seral	static	E

Potential Range Improvement Projects:
- Juniper cutting (400 acres)
- Prescribed burning (5,000 acres)

Identified Resource Concerns:
- Riddle Mountain HMA
- Forage allocations for elk
- Playa habitat
- Kiger Mustang ACEC
- Special Status Species: Greater sage-grouse, ferruginous hawk
- Range condition
- Stonehouse WSA

Other:
- About 87% of the Burnt Flat Allotment is within the Andrews/Steens Planning Area. All or a portion of the Louie Hughes, Oriana Flat, and Private Pastures are located within the Planning Area. The remaining portion of the Burnt Flat Allotment is within the Three Rivers Planning Area.

[6] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	North Catlow	Allotment Number:	06001

Management Category:	I	Public land acres:	177,966	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	21,328	Deer	56
Season of Use:	sp,su,fa,wi	State acres:	0	Antelope	14
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	4,424			Wild Horses	0
Suspended AUMs:	0	Total Acres:	199,294		
Total Permitted AUMs:	4,424			Total	70

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[7]
Rock Creek	175,647	89	mid-seral	up	A, B
North Duhaime	3,996	92	good seeding	static	B
North Catlow Winter	16,213	89	mid-seral	up	A, B
South Duhaime	3,438	100	fair seeding	down	B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Rock Creek	Yes	0.2	-	1.9	-	2.3

Potential Range Improvement Projects:
- Fence (16 miles)
- Wells (4 each)
- Reservoirs (3 each)
- Pipeline (10 miles)

Identified Resource Concerns:
- Special Status Species: Greater sage-grouse
- Noxious weeds
- Riparian

[7] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	South Steens	Allotment Number:	06002

Management Category:	I	Public land acres:	89,508	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1995	Private acres:	1,392	Deer	500
Season of Use:	sp,su,fa	State acres:	0	Antelope	22
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	60
Active AUMS:	9,577			Wild Horses	3,540
Suspended AUMs:	0	Total Acres:	90,900		
Total Permitted AUMs:	9,577			Total	4,122

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[8]
Tombstone	29,741	99	late seral	static	A, B, D
Steens	41,699	99	late seral	static	A, B, D
Home Creek	15,237	97	late seral	static	A, B, D
Hollywood Field	4,223	92	mid-seral	up	A, B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Tombstone	Yes	1.3	-	-	-	-
Home Creek	Yes	-	2.5	-	-	-

Potential Range Improvement Projects:
- Fence (5 miles)
- Wells (1 each)
- Spring developments (2 each)
- Cattleguards (2 each)
- Prescribed burning (6,000 acres)
- Juniper cutting (3,000 acres)

Identified Resource Concerns:
- Steens Mountain CMPA
- Steens Mountain Wilderness
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse, bighorn sheep
- Noxious weeds
- Wilderness Study Areas: Blitzen River WSA, South Fork Blitzen River WSA.
- South Steens HMA
- Donner und Blitzen WSR
- Recreation
- Juniper encroachment

[8] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Mud Creek	Allotment Number:	06005

Management Category:	I	Public land acres:	8,245	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	0	Deer	86
Season of Use:	sp,su	State acres:	0	Antelope	5
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	9
Active AUMS:	590			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,245		
Total Permitted AUMs:	590			Total	100

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[9]
Lower Field	4,016	100	late seral	up	A, B, D
Upper Field	4,229	100	mid-seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Lower Field	Yes	0.3	-	-	-	-

Potential Range Improvement Projects:
- Reservoirs (3 each)
- Prescribed burning (1,500 acres)
- Fence (0.5-mile)

Identified Resource Concerns:
- Bridge Creek WSA
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse
- Noxious weeds
- Juniper encroachment
- Steens Mountain CMPA

[9] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Frazier Field	Allotment Number:	06006

Management Category:	I	Public land acres:	20,506	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	14	Deer	311
Season of Use:	sp,su	State acres:	0	Antelope	6
Yr S & G Assessment:	None	Other Federal acres:	80	Elk	9
Active AUMS	1,906			Wild Horses	72
Suspended AUMs	0				
Total Permitted AUMs	1,906	Total:	20,600	Total	434

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[10]
East River	5,101	100	mid-seral	up	A, B, D
Road	4,476	100	mid-seral	up	A, B
Old Frazier Field	3,968	100	mid-seral	up	A, B
Lower Seeding	954	100	good seeding	static	B
West Upper River	3,023	100	late seral	static	A, B, D
West Lower River	2,093	96	late seral	static	A, B, D
Mud Creek Exclosure	1,085	100			C

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
West Upper River	Yes	0.3	-	-	-	-
Mud Creek Excl	No	3.2	-	-	-	-

Potential Range Improvement Projects:
- Pipeline (1 mile)
- Prescribed burning (1,200 acres)
- Wells (2 each)

Identified Resource Concerns:
- Critical mule deer winter range
- South Steens HMA
- Steens Mountain Wilderness
- Blitzen River WSA
- Donner Und Blitzen WSR
- Noxious Weeds
- Riparian
- Water quality
- Special Status Species: Redband trout, Greater sage-grouse
- Steens Mountain CMPA
- Juniper encroachment

[10] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Ruby Springs	Allotment Number:	06007

Management Category:	I	Public land acres:	14,788	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	613	Deer	58
Season of Use:	sp,su	State acres:	0	Antelope	8
Yr S & G Assessment:	None	Other Federal acres:	36	Elk	36
Active AUMS:	1,950			Wild Horses	0
Suspended AUMs:	0	Total Acres:	15,437		
Total Permitted AUMs:	1,950			Total	102

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[11]
Ruby Springs Seeding	1,284	98	good seeding	up	B
Bird Reservoir	2,335	97	late seral	static	B, D
Ruby Springs	2,932	92	late seral	static	B
Bess Lake	3,762	98	late seral	static	A, B
Moon Hill	2,173	98	late seral	static	A, B
East Seeding	777	81	good seeding	static	B
North Seeding	303	91	good seeding	static	B
Elliot Field	1,103	100	mid-seral	up	A, B
Pack Trail	768	99	late seral	static	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Bird Reservoir	No	0.2	-	-	0.2	-
Pack Trail	Yes	-	-	1.6	-	-

Potential Range Improvement Projects:
- Pipeline (3 miles)
- Reservoirs (2 each)
- Prescribed burning (4,500 acres)
- Juniper cutting (2,000 acres)

Identified Resource Concerns:
- Noxious weeds
- Special Status Species: Greater sage-grouse
- Riparian
- Water quality
- Steens Mountain CMPA
- Juniper encroachment

[11] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Krumbo	Allotment Number:	06008

Management Category:	M	Public land acres:	14,413	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	2000	Private acres:	1,130	Deer	11
Season of Use:	sp,su,fa	State acres:	0	Antelope	10
Yr S & G Assessment:	2000	Other Federal acres:	681	Elk	0
Active AUMS:	4,133			Wild Horses	0
Suspended AUMs:	0	Total Acres:	16,224		
Total Permitted AUMs:	4,133			Total	21

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[12]
Witzel Well	886	95	excellent seeding	static	B
Witzel Tank	1,273	100	excellent seeding	static	B
West Anderson	1,105	86	excellent seeding	static	B
North Hogwallow	1,810	80	mid-seral	static	B
East Hogwallow	2,787	94	excellent seeding	static	B
McLean	1,305	100	excellent seeding	static	B
Exchange	381	100	excellent seeding	static	B
East Anderson	1,888	83	excellent seeding	static	B
South Hogwallow	841	86	excellent seeding	static	B
Dell Witzel	1,781	100	mid-seral	static	B
Middle Hogwallow	1,536	92	excellent seeding	static	B
Private	631	18	unknown	unknown	E

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Noxious weeds
- Antelope summer range
- Mule deer winter range
- Steens Mountain CMPA

[12] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: East Ridge		Allotment Number: 06010			
Management Category:	I	Public land acres:	5,066	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	5,440	Deer	115
Season of Use:	sp,su	State acres:	0	Antelope	2
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	44
Active AUMS:	431			Wild Horses	0
Suspended AUMs:	0	Total Acres:	10,506		
Total Permitted AUMs:	431			Total	161

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[13]
West Kiger	1,642	78	mid-seral	up	A, B
Upper Ridge	817	34	late seral	static	A, B
Lower 3 Forks	1,252	41	mid-seral	up	A, B
Upper 3 Forks	1,954	11	mid-seral	up	A, B
Middle Canyon	2,161	67	mid-seral	up	A, B, D
Lower Gorge	949	28	late seral	static	A, B
Upper Gorge	1,731	62	late seral	static	A, B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Middle Canyon	No	4.3	-	-	-	-

Potential Range Improvement Projects:
- Spring developments (1 each)
- Fence (2 miles)

Identified Resource Concerns:
- Noxious weeds
- Riparian
- Water quality
- Juniper encroachment
- High Steens WSA
- Steens Mountain Wilderness
- Steens Mountain CMPA
- Special Status Species: Bighorn sheep, Greater sage-grouse

[13] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Pollock			Allotment Number: 06011		
Management Category:	I	Public land acres:	76,812	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	4,896	Deer	79
Season of Use:	sp,wi	State acres:	5,681	Antelope	12
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	4,107			Wild Horses	1,224
Suspended AUMs:	0	Total Acres:	87,389		
Total Permitted AUMs:	4,107			Total	1,315

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[14]
Anderson Seeding	4,440	88	good seeding	static	B, D
Stonehouse Seeding	5,854	89	good seeding	static	B, D
Alberson Seeding	4,824	95	fair seeding	up	A, B
Road	25,266	90	mid-seral	up	B
Winter	37,017	100	late seral	static	B
Juniper Lake Seeding	48	100	fair seeding	up	B
Five Cent Lake	127	100	unknown	unknown	C
Lambing Canyon	6,391	1	unknown	unknown	
Folly Farm	3,422	97	mid-seral	up	B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Anderson Seeding	No	0.3	-	-	-	-
Stonehouse Seeding	No	2.1	-	-	-	-

Potential Range Improvement Projects:
- Fence (14 miles)
- Reservoirs (2 each)
- Wells (2 each)
- Pipeline (8 miles)

Identified Resource Concerns:
- Wilderness Study Areas: Sheepshead HMA, Stonehouse WSA, Lower Stonehouse WSA
- Noxious weeds
- Special Status Species: Bighorn Sheep, Greater sage-grouse
- Steens Mountain CMPA
- Riparian
- Deer winter range

[14] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Alvord			Allotment Number: 06012		
Management Category:	I	Public land acres:	223,895	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1985	Private acres:	5,600	Deer	244
Season of Use:	sp,su,fa,wi	State acres:	0	Antelope	20
Yr S & G Assessment:	2003	Other Federal acres:	0	Elk	0
Active AUMS:	7,355			Wild Horses	1,200
Suspended AUMs:	1,892	Total Acres:	229,495		
Total Permitted AUMs:	9,247			Total	1,464

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[15]
Alvord Seeding	2,937	100	fair seeding	up	A
North Foothills	5,807	63	late seral	static	A, B, D
South Foothills	4,052	60	mid-seral	static	A, B, D
Table Mountain	20,743	100	late seral	static	B
Desert	190,425	99	mid-seral	up	B
Pike Creek	5,281	94	mid-seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
North Foothills	Yes	4.1	-	-	-	-
South Foothills	No	1.1	-	-	-	-
Pike Creek	No	10.6	-	-	-	-

Potential Range Improvement Projects:
- Reservoir (3 each)
- Pipelines (3 miles)
- Fence (4 miles)
- Prescribed burning (2,000 acres)
- Brush control (2,000 acres)

Identified Resource Concerns:
- Steens Mountain Wilderness
- Wilderness Study Areas: High Steens WSA, Alvord Desert WSA, Winter Range WSA, East Alvord WSA, Table Mountain WSA, Wildcat Canyon WSA
- Riparian
- Water quality
- Special Status Species: Bighorn sheep, Greater sage-grouse, Lahontan cutthroat trout
- Areas of Critical Environmental Concern: Mickey Basin RNA/ACEC, Alvord Desert ACEC, Mickey Hot Springs ACEC, Big Alvord Creek RNA/ACEC
- Special Status Plant habitat
- Recreation
- Steens Mountain CMPA

[15] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Tum Tum	Allotment Number:	06014

Management Category:	M	Public land acres:	7,374	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1985	Private acres:	705	Deer	9
Season of Use:	wi	State acres:	0	Antelope	1
Yr S & G Assessment:	1999	Other Federal acres:	0	Elk	0
Active AUMS:	730			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,079		
Total Permitted AUMs:	730			Total	10

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[16]
North Tum Tum	6,605	99	mid-seral	up	A, B
South Tum Tum	770	100	mid-seral	up	A, B
Coleman	704	5	early seral	static	A, B

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Special Status Species: Alvord chub
- Noxious weeds

[16] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Trout Creek Mountain	Allotment Number:	06015

Management Category:	I	Public land acres:	85,442	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1989	Private acres:	2,931	Deer	483
Season of Use:	sp,su	State acres:	0	Antelope	17
Yr S & G Assessment:	2000	Other Federal acres:	0	Elk	0
Active AUMS:	8,352			Wild Horses	0
Suspended AUMs:	0	Total Acres:	88,373		
Total Permitted AUMs:	8,352			Total	500

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[17]
Red Mountain	16,925	97	late seral	up	A, B, D
Antelope Seeding	4,581	100	good seeding	up	B, D
Stony	13,369	97	mid-seral	up	A, B, D
Flagstaff Seeding	2,189	100	fair seeding	static	B
Buckskin Mountain	6,523	97	good seeding	static	B
Little Trout Creek Seeding	2,869	99	fair seeding	static	B, D
Pole Patch	4,910	98	late seral	up	A, B, D
Chalk Canyon Seeding	312	98	fair seeding	static	B
No Name	9,580	100	mid-seral	static	A, B
East Fork	11,459	92	late seral	up	A, B, D
West Buckskin	4,213	99	good seeding	static	B
Rock Creek Springs	36	100	late seral	static	C
Government Corrals	54	94	mid-seral	static	C
Mahogany	5,176	93	late seral	up	A, B, D
Headwaters	3,419	100	late seral	up	A, B, D
Rock Cabin	2,758	80	late seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Red Mountain	No	2.0	-	-	-	-
Antelope Seeding	No	1.2	-	-	-	-
Stony	No	4.8	-	-	-	0.7
L. Trout Creek Seeding	No	0.6	-	-	-	-
Pole Patch	No	3.3	-	1.0	-	-
East Fork	No	3.2	-	-	-	-
Mahogany	Yes	2.5	-	-	-	-
Headwaters	Yes	3.2	-	-	-	-
Rock Cabin	Yes	3.2	-	-	-	-

Potential Range Improvement Projects:
- Fence (5 miles)
- Brush control (1,500 acres)

Identified Resource Concerns:
- Water quality
- Special Status Species: Greater sage-grouse
- Wilderness Study Areas: Disaster Peak WSA, Mahogany Ridge WSA, Red Mountain WSA, Willow Creek WSA
- East Fork Trout Creek RNA/ACEC
- Noxious weeds
- Riparian
- Recreation

[17] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Sandhills			Allotment Number: 06016		
Management Category: M	Public land acres: 17,976		Other Forage Allocations (AUMs)		
Yr AMP Implemented: 1992	Private acres: 159		Deer 10		
Season of Use: sp,su,fa,wi	State acres: 0		Antelope 5		
Yr S & G Assessment: 2002	Other Federal acres: 0		Elk 0		
Active AUMS: 2,294			Wild Horses 0		
Suspended AUMs: 0	Total Acres: 18,135				
Total Permitted AUMs: 2,294			Total 15		

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[18]
Maggie Creek	4,495	100	good seeding	up	A, B
Road	7,199	99	good seeding	up	A, B, D
Winter Seeding	1,376	100	poor seeding	static	A, B
Holloway Mountain	2,546	98	late seral	static	B
Native Winter	2,175	100	mid-seral	up	A, B
Ryegrass	344	86	mid-seral	up	B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Road	No	-	-	-	-	0.6

Potential Range Improvement Projects:
- Fence (7 miles)

Identified Resource Concerns:
- Noxious weeds
- Special Status Species: Greater sage-grouse
- Riparian

Other:
- Portions of the Sandhills Allotment are in Nevada, outside the Planning Area.

[18] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Grassy Basin	Allotment Number:	06017

Management Category:	M	Public land acres:	6,927	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1992	Private acres:	3,201	Deer	18
Season of Use:	sp,su	State acres:	0	Antelope	2
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	942			Wild Horses	0
Suspended AUMs:	0	Total Acres:	10,128		
Total Permitted AUMs:	942			Total	20

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[19]
Lower Grassy Basin	2,464	96	mid-seral	up	A, B
Upper Grassy Basin	1,651	100	late seral	up	B
Lower Crow Creek	594	4	mid-seral	static	A, B
Middle Crow Creek	670	10	mid-seral	static	A, B
South Fork	2,744	57	mid-seral	static	A, B
Upper Crow Cr/Long Cny	1,320	93	late seral	static	A, B
Log Cabin	685	2	mid-seral	static	A, B

Potential Range Improvement Projects:
- Pipeline (2 miles)

Identified Resource Concerns:
- Special Status Species: Greater sage-grouse

Other:
- Portions of the Grassy Basin Allotment are in Nevada and are outside the Planning Area.

[19] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Tule Springs			Allotment Number: 06018		
Management Category:	I	Public land acres:	136,895	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1989	Private acres:	12,789	Deer	108
Season of Use:	wi	State acres:	0	Antelope	24
Yr S & G Assessment:	2000	Other Federal acres:	0	Elk	0
Active AUMS:	5,506			Wild Horses	480
Suspended AUMs:	0	Total Acres:	149,684		
Total Permitted AUMs:	5,506			Total	612

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[20]
Tule Springs	116,893	90	mid-seral	up	A, B, D
Fields	14,483	99	early seral	up	A, B, D
Trout Creek Lane	176	100	unknown	unknown	C
Rim	13,786	97	mid-seral	up	A, B
Alvord Slough Exclosure	210	96	unknown	unknown	C
Kueny	3,429	97	late seral	up	B
Borax Lake ACEC Excl.	591	73	unknown	unknown	C
N. Borax Springs Excl.	116	9	unknown	unknown	C

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Tule Springs	No	5.7	-	-	-	-
Fields	No	6.5	1.0	1.8	-	-

Potential Range Improvement Projects:
- Wells (1 each)

Identified Resource Concerns:
- Special Status Species: Borax Lake chub, Alvord chub, bighorn sheep
- Alvord-Tule Springs HMA
- Borax Lake ACEC
- Noxious Weeds
- Serrano Point RNA/ACEC
- Alvord Desert WSA

[20] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Serrano Point	Allotment Number:	06019

Management Category:	I	Public land acres:	14,008	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,086	Deer	107
Season of Use:	sp,su,fa	State acres:	0	Antelope	4
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	500			Wild Horses	0
Suspended AUMs:	0	Total Acres:	15,094		
Total Permitted AUMs:	500			Total	111

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[21]
Serrano Point	6,122	88	late seral	static	A, B
Stonehouse	4,499	100	mid-seral	up	A, B, D
Indian Creek	4,473	93	late seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfun (Mi)
Stonehouse	No	5.7	-	2.4	-	-
Indian Creek	No	0.4	-	-	-	-

Potential Range Improvement Projects:
- Fence (4 miles)
- Juniper cutting (500 acres)

Identified Resource Concerns:
- Steens Mountain Wilderness
- Riparian
- Special Status Species: Bighorn sheep
- Steens Mountain CMPA

[21] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Pueblo-Lone Mountain		Allotment Number: 06020
Management Category: I	Public land acres: 218,995	Other Forage Allocations (AUMs)
Yr AMP Implemented: 1996	Private acres: 5,256	Deer 346
Season of Use: sp,su,fa,wi	State acres: 0	Antelope 35
Yr S & G Assessment: None	Other Federal acres: 0	Elk 0
Active AUMS: 13,149		Wild Horses 0
Suspended AUMs: 0	Total Acres: 224,251	
Total Permitted AUMs: 13,149		Total 381

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[22]
Pueblo Valley	599	100	unknown	unknown	C
MW Rincon Seeding	808	100	fair seeding	static	A, B
ME Rincon Seeding	734	100	fair seeding	static	A, B
Desert	92,384	100	mid-seral	up	A, B
SE Rincon Seeding	2,103	100	fair seeding	up	A, B
SW Rincon Seeding	1,276	100	fair seeding	static	A, B
Pueblo Ridge	86,304	95	mid-seral	up	A, B, D
Starr Winter	8,661	99	early seral	up	A, B, D
Oregon End Winter	29,006	100	mid-seral	up	A, B
Tum Tum Exclosure	1,804	97	unknown	unknown	C
East Pueblo Corral	572	94	unknown	unknown	B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Pueblo Ridge	Yes	53.7	9.9	9.8	-	2.1
Starr Winter	No	-	-	-	-	4.2

Potential Range Improvement Projects:
- 3,000 acres of brush control

Identified Resource Concerns:
- Special Status Species - Lahontan cutthroat trout, bighorn sheep, Western burrowing owl, Greater sage-grouse
- Wilderness Study Areas - Basque Hills WSA, Hawk Mountain WSA, Pueblo Mountain WSA, Rincon WSA
- Water Quality
- Noxious Weeds
- ACECs - Tum Tum Lake RNA/ACEC, Pueblo Foothills RNA/ACEC, Long Draw RNA/ACEC
- Riparian

[22] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Pueblo Mountain	Allotment Number:	06021

Management Category:	I	Public land acres:	8,177	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1990	Private acres:	611	Deer	28
Season of Use:	sp,su,fa	State acres:	0	Antelope	1
Yr S & G Assessment:	1999	Other Federal acres:	0	Elk	0
Active AUMS:	323			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,788		
Total Permitted AUMs:	323			Total	29

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[23]
Denio Basin	2,951	89	mid-seral	up	A, B, D
Pueblo Mountain	2,647	100	mid-seral	up	A, B, D
Alberson Basin	1,132	100	late seral	static	A, B
Cowden	1,538	97	mid-seral	static	A, B, D
Private	520	52	unknown	unknown	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Denio Basin	Yes	1.0	-	0.2	-	-
Pueblo Mountain	Yes	1.2	-	1.0	-	-
Cowden	No	0.7	-	-	-	-

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Pueblo Mountain WSA
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse, Lahontan cutthroat trout, bighorn sheep

Other:
- The entire allotment extends into Nevada and totals 26,311 acres of public land. The total permitted use in the allotment as a whole is 2,069 AUMs. Only the portion within Oregon is in the Planning Area.

[23] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Kings River		Allotment Number: 06022			
Management Category: I Yr AMP Implemented: None Season of Use: su,fa Yr S & G Assessment: None Active AUMS: 113 Suspended AUMs: 0 Total Permitted AUMs: 113		Public land acres: 1,771 Private acres: 0 State acres: 0 Other Federal acres: 0 Total Acres: 1,771		Other Forage Allocations (AUMs) Deer 10 Antelope 0 Elk 0 Wild Horses 0 Total 10	
Pasture/Area Kings River	Acres 1,771	% Public 100	Condition late seral	Upland Trend static	Objective[24] A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Kings River	No	1.7	-	-	-	-

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Disaster Peak WSA
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse

Other:
- The entire allotment contains 145,930 acres and 12,192 AUMs. There are 1,771 acres and 113 AUMs in Oregon, within the Planning Area.

[24] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Hammond	Allotment Number:	06023

Management Category:	I	Public land acres:	11,009	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	2,077	Deer	33
Season of Use:	sp,su,fa	State acres:	0	Antelope	6
Yr S & G Assessment:	None	Other Federal acres:	635	Elk	0
Active AUMS:	473			Wild Horses	0
Suspended AUMs:	0	Total Acres:	13,721		
Total Permitted AUMs:	473			Total	39

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[25]
N Dutch Oven Seeding	1,304	92	excellent seeding	static	B
Krumbo Creek	2,087	71	mid-seral	static	A, D
Kern Reservoir	2,245	46	mid-seral	static	A
Webb Springs	1,550	100	mid-seral	up	A, B
Knox Spring	2,492	100	excellent seeding	static	B, D
Larkspur Reservoir	1,245	100	excellent seeding	static	B
Baca Lake	616	10	fair seeding	static	A, B
Knox Pond	249	20	excellent seeding	static	B
Landing Strip	240	99	excellent seeding	static	B
S Dutch Oven Seeding	601	95	excellent seeding	static	B
Hole in the Ground	437	100	fair seeding	static	A, B
Artesian	655	100	mid-seral	static	A, B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Krumbo Creek	No	1.9	-	0.2	-	-
Knox Spring	Yes	2.2	-	-	-	-

Potential Range Improvement Projects:
- Fence (2 miles)
- Wells (1 each)

Identified Resource Concerns:
- Bridge Creek WSA
- Special Status Species: Greater sage-grouse
- Critical mule deer winter range
- Noxious weeds
- Water quality
- Riparian

[25] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: South Fork			Allotment Number: 06024		
Management Category: M Yr AMP Implemented: 1986 Season of Use: sp Yr S & G Assessment: None Active AUMS: 40 Suspended AUMs: 0 Total Permitted AUMs: 40		Public land acres: 381 Private acres: 138 State acres: 0 Other Federal acres: 0 Total Acres: 519		Other Forage Allocations (AUMs) Deer 1 Antelope 0 Elk 0 Wild Horses 0 Total 1	
Pasture/Area South Fork	Acres 519	% Public 73	Condition late seral	Upland Trend static	Objective[26] A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
South Fork	No	-	0.5	-	-	-

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Noxious Weeds
- Riparian

[26] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Hardie Summer	Allotment Number:	06025

Management Category:	M	Public land acres:	6,008	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres	3,775	Deer	340
Season of Use:	su,fa	State acres:	0	Antelope	1
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	42
Active AUMS:	408			Wild Horses	0
Suspended AUMs:	0	Total Acres:	9,783		
Total Permitted AUMs:	408			Total	383

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[27]
Cabin	3,949	50	late seral	up	B, D
North	2,175	19	late seral	up	B, D
Bridge Creek	3,061	100	late seral	up	B, D
Thompson	598	92	late seral	up	B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Cabin	No	-	1.7	-	-	-
North	No	0.5	-	-	-	-
Bridge Creek	No	2.0	-	-	-	-
Thompson	No	0.7	-	-	-	-

Potential Range Improvement Projects:
- Fence (6 miles)
- Juniper cutting (1,200 acres)

Identified Resource Concerns:
- Riparian
- Special Status Species: Greater sage-grouse
- Noxious weeds
- Water quality
- Juniper encroachment
-Steens Mountain CMPA

Other:
- The Bridge Creek Allotment, which was formally unallotted since acquisition in the past ten years, has been combined with the Hardie Summer Allotment to recognize authorized use occurring within the past ten years. No specific permanent AUM allocation is provided at this time but would be based on analysis of resource conditions and forage availability data upon the next S&G evaluation of the allotment. Grazing of the Bridge Creek pasture will continue to be allowed as a part of the Hardie Summer grazing rotation.

[27] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Mann Lake	Allotment Number:	06026

Management Category:	I	Public land acres:	35,363	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,460	Deer	110
Season of Use:	sp,wi	State acres:	0	Antelope	6
Yr S & G Assessment:	2002	Other Federal acres:	0	Elk	15
Active AUMS:	3,670			Wild Horses	0
Suspended AUMs:	0	Total Acres:	36,823		
Total Permitted AUMs:	3,670			Total	131

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[28]
N Mann Lake Seeding	1,686	99	good seeding	up	A, B
S Mann Lake Seeding	1,628	85	poor seeding	static	A, B
South Foothills	6,065	86	mid-seral	up	A, B, D
East Desert	12,443	100	mid-seral	up	A, B
North Foothills	2,001	88	mid-seral	up	A, B
West Desert	12,570	99	mid-seral	up	A, B
Mann Lake Rec Area	430	91	unknown	unknown	C

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
South Foothills	No	8.7	-	0.7	-	-

Potential Range Improvement Projects:
- Fence (5 miles)
- Pipeline (2 miles)
- Wells (2 each)

Identified Resource Concerns:
- Steens Mountain Wilderness
- Wilderness Study Areas: High Steens WSA, West Peak WSA, Table Mountain WSA, Lower Stonehouse WSA
- Special Status Species: Lahontan cutthroat trout, bighorn sheep
- Steens Mountain CMPA
- Noxious weeds
- Water quality
- Recreation
- Riparian

[28] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Carlson Creek	Allotment Number:	06027

Management Category:	I	Public land acres:	8,876	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	4,017	Deer	29
Season of Use:	sp,su,fa	State acres:	0	Antelope	2
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	684			Wild Horses	0
Suspended AUMs:	0	Total Acres:	12,893		
Total Permitted AUMs:	684			Total	31

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[29]
Carlson Creek	5,916	84	late seral	up	A, B, D
Juniper Creek	6,977	56	mid-seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Carlson Creek	No	1.5	-	-	-	-
Juniper Creek	No	2.2	-	-	-	-

Potential Range Improvement Projects:
- Prescribed burning (500 acres)
- Juniper cutting (200 acres)

Identified Resource Concerns:
- Steens Mountain Wilderness
- Riparian
- Special Status Species: Bighorn sheep, Greater sage-grouse
- Steens Mountain CMPA
- Noxious weeds

[29] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Fields		Allotment Number: 06028
Management Category: I AMP Implemented: None Season of Use: sp,su S & G Assessment: None Active AUMS: 210 Suspended AUMs: 0 Total Permitted AUMs: 210	Public land acres: 4,837 Private acres: 192 State acres: 0 Other Federal acres: 0 Total Acres: 5,029	Other Forage Allocations (AUMs) Deer 5 Antelope 0 Elk 0 Wild Horses 0 Total 5

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[30]
Scoubes Creek	1,882	91	mid-seral	up	A, B, D
Pedro	1,185	98	mid-seral	up	A, B
Fields Seeding	1,807	100	good seeding	up	A, B, D
Williams Creek	155	100	early seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Scoubes Creek	No	0.4	-	-	-	-
Fields Seeding	No	-	-	-	-	0.1
Williams Creek	No	0.8	-	-	-	

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Noxious Weeds
- Riparian
- Water quality

[30] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Keg Springs	Allotment Number:	06029

Management Category:	I	Public land acres:	40,661	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	503	Deer	13
Season of Use:	sp,su,fa	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	1,791			Wild Horses	0
Suspended AUMs:	0	Total Acres:	41,164		
Total Permitted AUMs:	1,791			Total	13

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[31]
Keg Springs	35,506	99	mid-seral	static	A, B
Walls Lake Seeding	5,658	100	good seeding	up	A, B

Potential Range Improvement Projects:
- Fence (16 miles)
- Reservoirs (4 each)
- Wells (2 each)
- Pipeline (8 miles)

Identified Resource Concerns:
- Noxious weeds
- Special Status Species: Greater sage-grouse

[31] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Riecken's Corner		Allotment Number: 06030
Management Category: M Yr AMP Implemented: 1991 Season of Use: sp,su,fa Yr S & G Assessment: None Active AUMS: 688 Suspended AUMs: 0 Total Permitted AUMs: 688	Public land acres: 8,841 Private acres: 999 State acres: 0 Other Federal acres: 0 Total Acres: 9,840	Other Forage Allocations (AUMs) Deer 3 Antelope 4 Elk 0 Wild Horses 0 Total 7

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[32]
- Sand Hollow Seeding	1,687	100	good seeding	static	A, B
- Gene Miller Seeding	2,289	75	good seeding	up	A, B
- Reicken=s Corner	5,864	93	mid-seral	up	A, B

Potential Range Improvement Projects:
- Fence (2 miles)
- Wells (2 each)
- Pipeline (5 miles)

Identified Resource Concerns:
- Noxious weeds
- Special Status Species: Greater sage-grouse

[32] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	LaVoy Tables	Allotment Number:	06031

Management Category:	I	Public land acres:	38,257	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	692	Deer	136
Season of Use:	sp,su,fa	State acres:	0	Antelope	7
Yr S & G Assessment:	2001	Other Federal acres:	1,016	Elk	0
Active AUMS:	1,653			Wild Horses	36
Suspended AUMs:	0	Total Acres:	39,965		
Total Permitted AUMs:	1,653			Total	143

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[33]
Savoy Lake	16,173	96	late seral	up	A, B
LaVoy Tables	12,384	100	late seral	up	A, B
P Hill	7,751	99	mid-seral	static	A, B
Hwy 205	3,657	71	late seral	static	C

Potential Range Improvement Projects:
- Fence (6 miles)
- Reservoirs (2 each)
- Juniper cutting (1,000 acres)
- Wells (2 each)

Identified Resource Concerns:
- Noxious weeds
- Special Status Species: Greater sage-grouse
- Blitzen River WSA
- Steens Mountain CMPA
- South Steens HMA
- Juniper encroachment

[33] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Krumbo Mountain	Allotment Number:	06032

Management Category:	I	Public land acres:	17,353	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1991	Private acres:	6	Deer	43
Season of Use:	su,fa	State acres:	0	Antelope	4
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	30
Active AUMS:	1,059			Wild Horses	0
Suspended AUMs:	0	Total Acres:	17,359		
Total Permitted AUMs:	1,059			Total	77

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[34]
Krumbo Ridge	9,301	100	mid-seral	up	A, B, D
Krumbo Mountain	8,058	100	mid-seral	up	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Krumbo Ridge	No	-	-	-	0.3	-
Krumbo Mountain	No	-	-	2.2	-	-

Potential Range Improvement Projects:
- Fence (6 miles)
- Reservoirs (4 each)
- Juniper cutting (1,600 acres)

Identified Resource Concerns:
- Bridge Creek WSA
- Special Status Species: Greater sage-grouse
- Steens Mountain CMPA
- Noxious weeds
- Juniper encroachment
- Riparian
- Water quality

[34] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Chimney			Allotment Number: 06033		
Management Category:	I	Public land acres:	14,769	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	10,125	Deer	149
Season of Use:	sp,su,fa	State acres:	0	Antelope	6
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	38
Active AUMS:	2,015			Wild Horses	0
Suspended AUMs:	0	Total Acres:	24,894		
Total Permitted AUMs:	2,015			Total	193

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[35]
West Crested	1,539	84	good seeding	up	B
North Crested	816	77	good seeding	up	B
Chimney	5,455	65	late seral	up	B, D
Oliver Springs	2,227	74	mid-seral	up	A, B
Big Field	1,563	25	late seral	up	D, E
Mountain Top	9,885	61	late seral	up	B, D
Thoroughbred	321	16	late seral	up	B, E
Cow Camp	299	0	unknown	unknown	E
Horton Creek	317	69	late seral	up	B, D
Doe Camp	1,470	51	mid-seral	up	A, B, D
Private	1,002	8	unknown	unknown	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Chimney	Yes	0.2	-	1.9	-	-
Big Field	No	0.2	-	-	-	-
Mountain Top	Yes	7.1	-	1.8	1.3	-
Horton Creek	No	-	-	0.2	-	-
Doe Camp	Yes	-	-	0.3	1.7	-

Potential Range Improvement Projects:
- Fence (6 miles)
- Reservoirs (2 each)
- Juniper cutting (1,000 acres)
- Prescribed burning (2,000 acres)

Identified Resource Concerns:
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse, redband trout, Malheur mottled sculpin, spotted frog
- Steens Mountain Wilderness
- Steens Mountain CMPA
- High Steens WSA
- Noxious Weeds
- Juniper encroachment

[35] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Fields Basin			Allotment Number: 06035		
Management Category:	I	Public land acres:	30,968	Other Forage Allocations (AUMs)	
AMP Implemented:	None	Private acres	1,773	Deer	49
Season of Use:	sp,su,fa	State acres:	0	Antelope	7
S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	3,325			Wild Horses	0
Suspended AUMs:	0	Total Acres:	32,741		
Total Permitted AUMs:	3,325			Total	56

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[36]
Long Hollow	1,983	100	late seral	static	A, B
Fields Basin	9,710	97	late seral	up	A, B
McDade	14,774	94	late seral	up	B, D
North Rincon Seeding	675	100	fair seeding	up	A, B
Summit	694	100	mid-seral	up	A, B
Private Field	452	5	unknown	unknown	E
O=Keefe	4,453	98	excellent seeding	static	B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
McDade	No	0.8	-	-	-	-
Okeefe	No	-	2.3	-	-	-

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Special Status Species: Bighorn sheep, Greater sage-grouse
- Rincon WSA
- Noxious weeds
- Riparian
- Water quality

[36] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Alvord Peak	Allotment Number:	06038

Management Category:	I	Public land acres:	24,354	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	709	Deer	28
Season of Use:	sp,fa	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	2,328			Wild Horses	0
Suspended AUMs:	0	Total Acres:	25,063		
Total Permitted AUMs:	2,328			Total	28

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[37]
Bone Creek	7,708	99	mid-seral	up	A, B, D
Miners Field	10,033	95	mid-seral	up	A, B, D
Schouver Flat Seeding	1,305	100	good seeding	up	B, D
Alvord Peak	6,008	98	late seral	static	B
Burke Spring Excl	9	100	unknown	unknown	C, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Bone Creek	No	1.9	1.1	-	0.9	1.3
Miners Field	No	0.4	-	0.2	-	1.1
Schouver Flat Seeding	No	0.2	-	-	-	-
Burke Spring Excl	No	-	-	-	0.1	-

Potential Range Improvement Projects:
- Fence (2 miles)

Identified Resource Concerns:
- Steens Mountain CMPA
- Steens Mountain Wilderness
- Riparian
- Special Status Species: Bighorn sheep, Greater sage-grouse
- Noxious weeds

[37] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Stonehouse			Allotment Number: 06040		
Management Category:	I	Public land acres:	10,517	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	321	Deer	39
Season of Use:	su	State acres:	0	Antelope	3
Yr S & G Assessment:	1999	Other Federal acres:	0	Elk	17
Active AUMS:	1,772			Wild Horses	0
Suspended AUMs:	0	Total Acres:	10,838		
Total Permitted AUMs:	1,772			Total	59

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[38]
Stonehouse	10,838	97	mid-seral	static	A, B, D

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Stonehouse	No	1.4	-	2.7	-	-

Potential Range Improvement Projects:
- Reservoirs (2 each)
- Fence (7 miles)
- Spring developments (1 each)
- Pipeline (3 miles)
- Prescribed burning (1,500 acres)
- Juniper cutting (1,000 acres)
- Cattleguards (2 each)

Identified Resource Concerns:
- Wilderness Study Areas: Stonehouse WSA, Lower StonehouseWSA
- Riparian
- Water quality
- Special Status Species: Greater sage-grouse, bighorn sheep
- Noxious weeds
- Steens Mountain CMPA
- Recreation

[38] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	South Catlow	Allotment Number:	00032

Management Category:	I	Public land acres:	42,351	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	19,817	Deer	2
Season of Use:	wi	State acres:	0	Antelope	26
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	2,069			Wild Horses	0
Suspended AUMs:	0	Total Acres:	62,168		
Total Permitted AUMs:	2069			Total	28

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[39]
South Catlow	62,168	68	mid-seral	up	A, B

Potential Range Improvement Projects:
- Wells (1 each)
- Pipeline (3 miles)

Identified Resource Concerns:
- Wilderness Study Areas: Basque Hills WSA, Rincon WSA
- Noxious weeds

[39] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Basque Hills			Allotment Number: 06042		
Management Category: I Yr AMP Implemented: 1996 Season of Use: sp Yr S & G Assessment: None Active AUMS: 900 Suspended AUMs: 0 Total Permitted AUMs: 900		Public land acres: 39,449 Private acres: 0 State acres: 0 Other Federal acres: 0 Total Acres: 39,449		Other Forage Allocations (AUMs) Deer 5 Antelope 2 Elk 0 Wild Horses 0 Total 7	
Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[40]
Basque Hills	39,449	100	late seral	static	B

Potential Range Improvement Projects:
- Wells (1 each)

Identified Resource Concerns:
- Special Status Species: Bighorn sheep, Greater sage-grouse
- Wilderness Study Areas: Basque Hills WSA, Rincon WSA
- Noxious weeds

[40] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Pueblo Slough		Allotment Number: 06043
Management Category: I Yr AMP Implemented: 1996 Season of Use: wi Yr S & G Assessment: None Active AUMS: 1,400 Suspended AUMs: 0 Total Permitted AUMs: 1,400	Public land acres: 9,768 Private acres: 7 State acres: 0 Other Federal acres: 0 Total Acres: 9,775	Other Forage Allocations (AUMs) Deer 2 Antelope 2 Elk 0 Wild Horses 0 Total 4

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[41]
Pueblo Slough #1	111	100	unknown	unknown	C
Pueblo Slough #2	84	100	unknown	unknown	C
N. Colony Winter	1,563	100	early seral	up	A, B
Colony Seeding	1,306	100	fair seeding	up	A, B, D
N. Sandhills Seeding	896	100	fair seeding	up	A, B
Colony Winter	5,815	100	mid-seral	static	A, B

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Colony Seeding	No	0.1	-	-	-	-

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Special Status Species: Alvord Chub
- Noxious Weeds
- Riparian
- Water quality

[41] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Lower Antelope			Allotment Number: 06044		
Management Category: I Yr AMP Implemented: 1989 Season of Use: wi Yr S & G Assessment: 2000 Active AUMS: 500 Suspended AUMs: 0 Total Permitted AUMs: 500		Public land acres: 5,867 Private acres: 19 State acres: 0 Other Federal acres: 0 Total Acres: 5,886		Other Forage Allocations (AUMs) Deer 1 Antelope 1 Elk 0 Wild Horses 0 Total 2	
Pasture/Area Lower Antelope	Acres 5,886	% Public 100	Condition late seral	Upland Trend up	Objective[42] A, B

Potential Range Improvement Projects:
- None

Identified Resource Concerns:
- Special Status Species: Greater sage-grouse
- Noxious weeds

[42] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Hammond FFR	Allotment Number:	06100

Management Category:	C	Public land acres:	1,158	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	6,145	Deer	0
Season of Use:	None	State acres:	13	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	32			Wild Horses	0
Suspended AUMs:	0	Total Acres:	7,316		
Total Permitted AUMs:	32			Total	0

Pasture/Area	Acres	% Public Domain	Objective[43]
Dust Bowl	2,557	0	E
Krumbo Springs	1,499	16	E
Webb Springs	1,258	48	E
Mud Creek	2,002	16	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[43] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Waldkirch FFR	Allotment Number:	06101

Management Category:	C	Public land acres:	27	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	324	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	12			Wild Horses	0
Suspended AUMs:	0	Total Acres:	351		
Total Permitted AUMs:	12			Total	0

Pasture/Area	Acres	% Public Domain	Objective[44]
Red Point	351	8	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[44] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Oregon End FFR	Allotment Number:	06102

Management Category:	C	Public land acres:	1,656	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	841	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	138			Wild Horses	0
Suspended AUMs:	0	Total Acres:	2,497		
Total Permitted AUMs:	138			Total	0

Pasture/Area	Acres	% Public Domain	Objective[45]
Rincon Reservoir	1,040	99	E
Oregon End Ranch	1,094	51	E
Roux Place	363	19	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[45] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Wiley FFR		Allotment Number: 06103			
Management Category:	C	Public land acres:	29	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,145	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	6			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,174		
Total Permitted AUMs:	6			Total	0

Pasture/Area	Acres	% Public Domain	Objective[46]
Wiley Base	1,174	2	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[46] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Defenbaugh FFR	Allotment Number:	06104

Management Category:	C	Public land acres:	1,276	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	2,655	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	60			Wild Horses	0
Suspended AUMs:	0	Total Acres:	3,931		
Total Permitted AUMs:	60			Total	0

Pasture/Area	Acres	% Public Domain	Objective[47]
Trout Creek	2,509	44	D, E
Whitehorse Road	1,422	12	E

Pastures with riparian and DEQ water quality considerations:

Pasture	Stream	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Trout Creek		Yes	0.4	-	-	-	-

Identified Resource Concerns:
- Riparian
- Water quality

Other:
- Condition and trend of upland areas on public land is unknown.

[47] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Wrench Ranch FFR	Allotment Number:	06105

Management Category:	C	Public land acres:	411	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	4,514	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	51			Wild Horses	0
Suspended AUMs:	0	Total Acres:	4,925		
Total Permitted AUMs:	51			Total	0

Pasture/Area	Acres	% Public Domain	Objective[48]
East Basin	1,882	7	E
Sherman Field	1,241	7	E
Ranch	1,636	8	E
Upper Holloway	166	26	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[48] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Orlando FFR	Allotment Number:	06106

Management Category:	C	Public land acres:	1,823	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	6,605	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	320			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,428		
Total Permitted AUMs:	320			Total	0

Pasture/Area	Acres	% Public Domain	Objective[49]
Smith Field	3,149	34	E
South Fork	356	56	E
Holloway Reservoir	661	4	E
Tum Tum	1,489	14	E
Ranch	1,712	4	E
Morris Base	874	22	E
Road	187	29	E

Identified Resource Concerns
- None

Other
- Condition and trend of upland areas on public land is unknown.

[49] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Crump/Calderwood FFR			Allotment Number: 06107		
Management Category:	C	Public land acres:	231	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,399	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	12			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,630		
Total Permitted AUMs:	12			Total	0

Pasture/Area	Acres	% Public Domain	Objective[50]
Crump Section	693	11	D, E
Trout Creek	810	16	E
Adrian Place	127	19	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Crump Section	Yes	0.1	-	-	-	-

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.
- Riparian
- Water quality

[50] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Henricks FFR	Allotment Number:	06108

Management Category:	C	Public land acres:	131	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	870	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	30			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,001		
Total Permitted AUMs:	30			Total	0

Pasture/Area	Acres	% Public Domain	Objective[51]
Ranch	800	12	E
Holloway Place	201	18	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[51] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Casey FFR			Allotment Number: 06109		
Management Category:	C	Public land acres:	376	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	243	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	21			Wild Horses	0
Suspended AUMs:	0	Total Acres:	619		
Total Permitted AUMs:	21			Total	0

Pasture/Area	Acres	% Public Domain	Objective[52]
Hamilton Place	619	61	E

Identified Resource Concerns:
- Wilderness Study Area: Red Mountain WSA

Other:
- Condition and trend of upland areas on public land is unknown.

[52] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Still FFR	Allotment Number:	06110

Management Category:	C	Public land acres:	321	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	2,975	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	68			Wild Horses	0
Suspended AUMs:	0	Total Acres:	3,296		
Total Permitted AUMs:	68			Total	0

Pasture/Area	Acres	% Public Domain	Objective[53]
Catlow Place	1,361	14	E
Colony Ranch	1,744	5	E
Lower Roux Place	191	21	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[53] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Dunbar FFR	Allotment Number:	06111

Management Category:	C	Public land acres:	536	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	2,010	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	68			Wild Horses	0
Suspended AUMs:	0	Total Acres:	2,546		
Total Permitted AUMs:	68			Total	0

Pasture/Area	Acres	% Public Domain	Objective[54]
Dunbar	801	26	E
Home Field	1,745	19	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[54] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Long Hollow FFR	Allotment Number:	06112

Management Category:	C	Public land acres:	836	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	828	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	103			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,664		
Total Permitted AUMs:	103			Total	0

Pasture/Area	Acres	% Public Domain	Objective[55]
South Long Hollow	1,664	50	E

Identified Resource Concerns:
- Rincon WSA

Other:
- Condition and trend of upland areas on public land is unknown.

[55] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Rock Creek FFR	Allotment Number:	06114

Management Category:	C	Public land acres:	1,260	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	7,595	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	148			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,855		
Total Permitted AUMs:	148			Total	0

Pasture/Area	Acres	% Public Domain	Objective[56]
North Catlow	6,575	7	E
Miller Homestead	1,396	24	E
Augustine Gilbert	447	41	E
Desert Field	437	64	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[56] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Dixon FFR			Allotment Number: 06115		
Management Category:	C	Public land acres:	96	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,145	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	22			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,241		
Total Permitted AUMs:	22			Total	0

Pasture/Area	Acres	% Public Domain	Objective[57]
Outerkirk Ranch	1,241	8	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[57] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Northrop FFR	Allotment Number:	06116

Management Category:	C	Public land acres:	613	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,985	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	40			Wild Horses	0
Suspended AUMs:	0	Total Acres:	2,598		
Total Permitted AUMs:	40			Total	0

Pasture/Area	Acres	% Public Domain	Objective[58]
McDade Ranch	548	16	E
Calderwood	570	84	E
Pony Express	1,480	4	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[58] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Kaser FFR		Allotment Number: 06117	
Management Category: C Yr AMP Implemented: None Season of Use: None Yr S & G Assessment: None Active AUMS: 5 Suspended AUMs: 0 Total Permitted AUMs: 5	Public land acres: 40 Private acres: 1,578 State acres: 0 Other Federal acres: 0 Total Acres: 1,618	Other Forage Allocations (AUMs) Deer 0 Antelope 0 Elk 0 Wild Horses 0 Total 0	

Pasture/Area	Acres	% Public Domain	Objective[59]
Kaser Place	1,618	2	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[59] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Lupher FFR		Allotment Number: 06118			
Management Category:	C	Public land acres:	79	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	131	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	21			Wild Horses	0
Suspended AUMs:	0	Total Acres:	210		
Total Permitted AUMs:	21			Total	0

Pasture/Area	Acres	% Public Domain	Objective[60]
Lupher Place	210	38	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Lupher Place	No	0.3	-	-	-	-

Identified Resource Concerns:
- Riparian

Other:
- Condition and trend of upland areas on public land is unknown.

[60] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Pollock FFR	Allotment Number:	06119

Management Category:	C	Public land acres:	994	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	5,009	Deer	0
Season of Use:	None	State acres:	119	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	19			Wild Horses	0
Suspended AUMs:	0	Total Acres:	6,122		
Total Permitted AUMs:	19			Total	0

Pasture/Area	Acres	% Public Domain	Objective[61]
Juniper Ranch	2,756	24	E
Folly Farm	2,321	5	E
Tudor Lake	1,045	22	E

Identified Resource Concerns:
- Stonehouse WSA
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[61] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Mann Lake FFR	Allotment Number:	06120

Management Category:	C	Public land acres:	1,629	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	26,456	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	22			Wild Horses	0
Suspended AUMs:	0	Total Acres:	28,085		
Total Permitted AUMs:	22			Total	0

Pasture/Area	Acres	% Public Domain	Objective[62]
Wilson	3,536	9	E
Big Pasture Creek	19,396	6	E
Pivot	5,153	2	E

Identified Resource Concerns:
- High Steens WSA

Other:
- Condition and trend of upland areas on public land is unknown.

[62] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Neuschwander FFR	Allotment Number:	06121

Management Category:	C	Public land acres:	640	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,370	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	43			Wild Horses	0
Suspended AUMs:	0	Total Acres:	2,010		
Total Permitted AUMs:	43			Total	0

Pasture/Area	Acres	% Public Domain	Objective[63]
Miller	2,010	32	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[63] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Starr FFR		Allotment Number: 06122	
Management Category: C Yr AMP Implemented: None Season of Use: None Yr S & G Assessment: None Active AUMS: 9 Suspended AUMs: 0 Total Permitted AUMs: 9	Public land acres: 194 Private acres: 584 State acres: 0 Other Federal acres: 0 Total Acres: 778	Other Forage Allocations (AUMs) Deer 0 Antelope 0 Elk 0 Wild Horses 0 Total 0	
Pasture/Area Starr Place	Acres 778	% Public Domain 25	Objective[64] E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[64] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Culp FFR		Allotment Number: 06123
Management Category: C Yr AMP Implemented: None Season of Use: None Yr S & G Assessment: None Active AUMS: 0 Suspended AUMs: 0 Total Permitted AUMs: 0	Public land acres: 183 Private acres: 3,591 State acres: 0 Other Federal acres: 0 Total Acres: 3,774	Other Forage Allocations (AUMs) Deer 0 Antelope 0 Elk 0 Wild Horses 0 Total 0

Pasture/Area	Acres	% Public Domain	Objective[65]
Clover Swale	3,774	5	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[65] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Windmill FFR			Allotment Number: 06124		
Management Category:	C	Public land acres:	222	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	619	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	15			Wild Horses	0
Suspended AUMs:	0	Total Acres:	841		
Total Permitted AUMs:	15			Total	0

Pasture/Area	Acres	% Public Domain	Objective[66]
Windmill	841	26	D, E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Windmill	No	0.7	-	-	-	-

Identified Resource Concerns:
- Riparian

Other:
- Condition and trend of upland areas on public land is unknown.

[66] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Roaring Springs FFR	Allotment Number:	06125

Management Category:	C	Public land acres:	6,400	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	195,674	Deer	0
Season of Use:	None	State acres:	658	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	374			Wild Horses	0
Suspended AUMs:	0	Total Acres:	202,732		
Total Permitted AUMs:	374			Total	0

Pasture/Area	Acres	% Public Domain	Objective[67]
Roaring Springs	202,732	3	D, E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
Roaring Springs	Yes	5.1	0.8	-	-	-

Identified Resource Concerns:
- Riparian
- Water quality
- Special Status Species: Bighorn sheep
- Steens Mountain Wilderness
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[67] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	CM Otley FFR	Allotment Number:	06126

Management Category:	C	Public land acres:	907	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	13,173	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	151			Wild Horses	0
Suspended AUMs:	0	Total Acres:	14,080		
Total Permitted AUMs:	151			Total	0

Pasture/Area	Acres	% Public Domain	Objective[68]
McCoy Creek	2,000	10	D, E
West Slope	10,145	6	D, E
Frazier Lake	1,935	4	E

Pastures with riparian and DEQ water quality considerations:

Pasture	WQ Limited	PFC (Mi)	FAR-up (Mi)	FAR-na (Mi)	FAR-dn (Mi)	Nonfunct (Mi)
McCoy Creek	Yes	-	-	0.5	-	-
West Slope	Yes	-	-	0.4	-	-

Identified Resource Concerns:
- Riparian
- Water Quality
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[68] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Kueny FFR	Allotment Number:	06127

Management Category:	C	Public land acres:	513	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	11,206	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	35			Wild Horses	0
Suspended AUMs:	0	Total Acres:	11,719		
Total Permitted AUMs:	35			Total	0

Pasture/Area	Acres	% Public Domain	Objective[69]
Ranch	10,329	3	E
Miranda Creek	1,390	14	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[69] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Konek FFR		Allotment Number: 06128	
Management Category: C Yr AMP Implemented: None Season of Use: None Yr S & G Assessment: None Active AUMS: 10 Suspended AUMs: 0 Total Permitted AUMs: 10	Public land acres: 80 Private acres: 285 State acres: 0 Other Federal acres: 0 Total Acres: 365	Other Forage Allocations (AUMs) Deer 0 Antelope 0 Elk 0 Wild Horses 0 Total 0	

Pasture/Area	Acres	% Public Domain	Objective[70]
Mormon Place	365	22	E

Identified Resource Concerns:
- None

Other:
- Condition and trend of upland areas on public land is unknown.

[70] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Alvord FFR		Allotment Number: 06129	
Management Category: C	Public land acres: 299	Other Forage Allocations (AUMs)	
Yr AMP Implemented: None	Private acres: 17,978	Deer	0
Season of Use: None	State acres: 0	Antelope	0
Yr S & G Assessment: None	Other Federal acres: 0	Elk	0
Active AUMS: 0		Wild Horses	0
Suspended AUMs: 0	Total Acres: 18,277		
Total Permitted AUMs: 0		Total	0

Pasture/Area	Acres	% Public Domain	Objective[71]
Alvord Ranch Meadows	17,663	1	E
Hot Springs	614	8	E

Identified Resource Concerns:
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[71] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name: Scharff FFR		Allotment Number: 06130	
Management Category: C	Public land acres: 276	Other Forage Allocations (AUMs)	
Yr AMP Implemented: None	Private acres: 4,761	Deer	0
Season of Use: None	State acres: 39	Antelope	0
Yr S & G Assessment: None	Other Federal acres: 0	Elk	0
Active AUMS: 68		Wild Horses	0
Suspended AUMs: 0	Total Acres: 5,076		
Total Permitted AUMs: 68		Total	0

Pasture/Area	Acres	% Public Domain	Objective[72]
Scharff	5,076	5	E

Identified Resource Concerns:
- Steens Mountain Wilderness
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[72] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	South Pocket FFR	Allotment Number:	06131

Management Category:	C	Public land acres:	145	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	1			Wild Horses	0
Suspended AUMs:	0	Total Acres:	146		
Total Permitted AUMs:	1			Total	0

Pasture/Area	Acres	% Public Domain	Objective[73]
South Pocket	146	100	E

Identified Resource Concerns:
- Noxious Weeds

Other:
- Condition and trend of upland areas on public land is unknown.

[73] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Allotment Name:	Otley Brothers FFR	Allotment Number:	06133

Management Category:	C	Public land acres:	313	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	8,682	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal acres:	0	Elk	0
Active AUMS:	21			Wild Horses	0
Suspended AUMs:	0	Total Acres:	8,995		
Total Permitted AUMs:	21			Total	0

Pasture/Area	Acres	% Public Domain	Objective[74]
Otley Brothers	8,995	3	E

Identified Resource Concerns:
- Steens Mountain CMPA

Other:
- Condition and trend of upland areas on public land is unknown.

[74] Current allotment management objectives
A) Improve the ecological condition of upland vegetation communities.
B) Maintain the ecological condition of upland vegetation communities.
C) Maintain the integrity of research plots and exclosures.
D) Maintain/improve the condition of riparian vegetation communities.
E) Pasture dominated by private land and managed custodial with no specified management objective.

Appendix K - Land Tenure Adjustment Criteria and Legal Requirements

The Land Tenure Map depicts three general zones that identify public land with potential for land tenure adjustments (e.g., acquisition or disposal), consistent with existing regulations and BLM policy. Section 102(a)(1) of the FLPMA provides that A. . . 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 . . .@ In addition, Section 113(g) of the Steens Act provides additional limitations on disposals of land within the CMPA boundary by withdrawing Afrom all forms of entry, appropriation, or disposal under the public land laws, except in the case of land exchanges if the Secretary determines that the exchange furthers the purpose and objectives specified in Section 102." General management guidelines for each zone are described below. Specific direction for each Zone is contained in the Management Direction of the RMP.

Zone 1: Retention/Acquisition (Includes Zones 1, 1A, and 1B)

Zone 1 land has been generally identified for retention in public ownership. These are also areas where emphasis will be placed on acquisition of land containing high resource values through such methods as exchange, purchase, donation, or public agency jurisdictional transfers. Zone 1 land may contain significant visual, wildlife, watershed, vegetative, cultural, and other resource values and are generally well blocked. Exchanges, and, in some cases, sales of Zone 1 lands may be considered for community expansion, public purposes, and to resolve long-term inadvertent unauthorized use.

Zone 2: Exchange Zone (Includes Zones 2 and 2A)

Zone 2 land has been identified generally for retention but may be exchanged for land in other zones for nonfederal land with high resource values. Zone 2 public land generally includes well-blocked or fragmented BLM-administered land outside of Zone 1. Generally, Zone 2 land possesses relatively lower resource values than are present in Zone 1. These are areas where exchanges, purchases, donations, or public agency jurisdictional transfers may be used to acquire nonpublic land containing high resource values and to create consolidated public land areas. Sales of Zone 2 land may be considered for community expansion, public purposes, and to resolve long-term inadvertent unauthorized use.

Zone 3: Disposal

Zone 3 land generally has low or unknown resource values and meets the disposal criteria of Section 203 of the FLPMA. This land is potentially suitable for disposal by such methods as public agency jurisdictional transfers, or state indemnity selection (state in lieu election), or R&PP lease or patent, exchange, or sale unless significant recreation, wildlife, watershed, Special Status species, cultural resources, or other high resource values are identified as a result of site specific analysis. This zone may include land needed for community expansion, small parcels located adjacent to private inholdings within and/or adjacent to large blocks of public land being retained by the BLM, parcels on which unauthorized use exists, and land included within survey hiatus. Zone 3 land may be exchanged for land with greater resource values in Zones 1 and 2.

The FLPMA and other federal laws, Executive Orders, and policies suggest criteria for use in categorizing public land for retention or disposal, and for identifying acquisition priorities. This list is not considered all inclusive, but represents the major factors to be evaluated. They include the following:

- Wild horse HMAs
- Threatened or endangered or sensitive plant and animal species habitat
- Areas containing scientific value (e.g., RNAs)
- Riparian areas, wetlands, designated floodplains

- Fish habitat
- Nesting/breeding habitat for game animals
- Key big game seasonal habitat
- Developed recreation sites and recreation access
- VRM
- Energy and mineral potential
- Significant cultural resources and sites eligible for inclusion on the National Register of Historic Places
- Wilderness and areas being studied for wilderness
- Accessibility of the land for public uses
- Amount of public investments in facilities or improvements and the potential for recovering those investments
- Difficulty or cost of administration (manageability)
- Suitability of the land for management by another federal agency
- Significance of the decision in stabilizing business, social and economic conditions, and/or lifestyles
- Whether or not private sites exist for the proposed use
- Encumbrances, including but not limited to withdrawals, or existing leases or permits
- Consistency with cooperative agreements and plans or policies of other agencies
- Suitability (need for change in landownership or use) for purposes including but not limited to community expansion or economic development, such as industrial, residential or agricultural (other than grazing development)
- Existing landownership patterns

The criteria identified above will be among those considered in inventory, review, and analyses prepared for specific land tenure adjustment proposals following plan implementation. Minor adjustments involving sales or exchanges or both may be permitted based on site-specific application of these adjustment criteria.

The FLPMA provides that a tract of public land may be disposed of by exchange provided that the public interest will be well served by making that exchange. To be considered to be in the public interest, exchanges must:

- facilitate access to public land and resources, or
- maintain or improve important public values and uses,
- maintain or improve local social and economic conditions; and
- facilitate implementation of other goals and objectives of the RMP.

The FLPMA also prescribes that the values and objectives which the federal land may serve if retained in federal ownership are not more than the values of the nonfederal land and the public objectives they could serve if acquired. Further, the Steens Act provides that exchanges of land within the CMPA must further the purpose and objectives specified in Section 102 of the Steens Act.

Direct purchases of nonfederal land may be used when the same public interest criteria apply as described for land exchanges above.

Public land or tracts to be sold must meet the following disposal criteria stated in the FLPMA:

“. . . 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 such tract was acquired for a specific purpose and the tract is no longer required for that or any other federal purpose; or 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.”

Generally, exchanges are the preferred method of disposal but sales will be utilized when: it is required by national policy; or it is required to achieve disposal objectives on a timely basis, and where disposal through exchange would cause unacceptable delays; or disposal through exchange is not feasible.

The preferred method of selling public land will be by competitive bidding at public auction to qualifying purchasers. However, modified competitive bidding procedures may be used when there is no legal public access to a tract, when necessary to avoid jeopardizing an existing use on adjacent land, or to avoid dislocation of existing public land users.

Public land may be sold by direct sale at fair market value when:

- such land is needed by state or local governments; or
- direct sale is needed to protect equities arising from authorized use; or
- direct sale is needed to protect equities resulting from inadvertent, unauthorized use; or
- there is only one adjacent landowner and no public access.

Current BLM Washington Office interpretation of the Land and Water Conservation Act prohibits the disposal of land acquired with Land and Water Conservation Funds by sale or exchange.

Current policy prescribes general priorities for implementing land disposal actions. These actions include the following:

- BLM and other federal jurisdictional transfers
- Transfers to state and local agencies (e.g., R&PP patents, in-lieu selections, airport patents)
- State exchanges
- Private exchanges
- Sales
- American Indian allotments
- Desert land entries

Site-specific environmental review and documentation in conformance with NEPA, including completion of categorical exclusions and plan conformance determinations where appropriate, will be accomplished for each proposed land program action. Interdisciplinary impact analysis will be tiered within the framework of this and other applicable environmental documents. Many of the foregoing provisions of this appendix are based upon current policy. Future shifts in policy and national priorities may result in modifications of these provisions and changes in addressing priority lands actions.

Appendix L - Areas of Critical Environmental Concern Descriptions

Alvord Desert ACEC

The Alvord Desert ACEC is located in the Alvord Valley, just east of the Alvord Desert playa, about 30 miles north of Fields, Oregon. The area is unfenced and covers 21,615 acres at the edge of a popular recreation use area in the Alvord Desert playa. Many kinds of OHVs are used on the dry lakebed, with some drifting onto the adjacent ACEC.

The relevant and important values associated with this ACEC are centered around an ecosystem containing a diversity of desert landforms and plant communities. Those values include sand dunes; bare playa; playa margins; and big sagebrush greasewood, spiny hopsage, and shadscale plant communities. An additional relevant and important value includes the high scenic quality of the area.

The area is located almost entirely within portions of the Alvord Desert (2-74) and East Alvord (2-73A) WSAs. WSAs are currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation. The area is also within the Alvord-Tule Springs HMA.

Some of the human-made developments existing in the ACEC include a bladed road and the remains of four wells, including troughs and windmills. The area is located within the Alvord grazing allotment and is withdrawn from mineral entry.

A small portion of the Alvord Desert playa is within the boundary of the ACEC, creating some concern over OHV use in that area and the potential effect it may have on the rest of the ACEC. The playa itself heals rapidly after OHV use, but other adjacent areas would take much longer.

Borax Lake ACEC

The Borax Lake ACEC is located in the Pueblo Valley, about 6 miles northeast of Fields, Oregon. Borax Lake itself is situated on private land owned by TNC in the middle of the 600-acre ACEC.

The area was designated to protect the habitat of the Federally endangered Borax Lake chub. The fish and its habitat are the relevant and important values for this area. Some parts of the ACEC support populations of the chub during the spring and summer, but most of the chub habitat is located on the private land in the center of the ACEC. The area also protects the diversity of plant and animal life inhabiting the area around Borax Lake.

The area is highly alkaline and supports vegetation that is highly salt tolerant such as greasewood, borax weed, saltgrass, and a variety of sedges and rushes in the wetter areas. Hot and cold springs can be found in the ACEC north of Borax Lake. A large reservoir, covering about 15 acres in the western part of the ACEC, is fed by overflow from Borax Lake. The reservoir contains some chubs during the summer and is an important nesting area for waterfowl.

A portion of the area is located within the Tule Springs grazing allotment and the Alvord-Tule Springs Wild Horse HMA. The ACEC is fenced, except for 120 acres on the east. About 1-mile of bladed road exists within the ACEC. The area receives substantial sightseer visitor use in the spring, summer, and fall, and waterfowl hunter use in the winter. The area is withdrawn from mineral entry.

East Kiger Plateau RNA/ACEC

The 1,216-acre East Kiger Plateau RNA/ACEC, located on the ridge that forms the east side of Kiger Gorge on Steens Mountain, consists of a wide ridgetop gently sloping to the north with steep slopes on both sides.

Relevant and important values include a unique plant community type and several Special Status plant species. The area represents an excellent condition, high elevation fescue grassland, which is an important natural area cell need listed by the Oregon Natural Heritage Program (ONHP). This area has been determined to be one of the best examples of a high elevation fescue grassland in Oregon. The Special Status plant species known to occur on the plateau include Steens Mountain paintbrush, Cusick's draba, weak-stemmed stonecrop, foetid sedge, and Davidson's penstemon.

The RNA/ACEC is located within the High Steens WSA (2-85F) and the Steens Mountain Wilderness. Within the WSA, the area is managed under the WSA IMP. The area within the Steens Mountain Wilderness is managed under direction provided by the Wilderness Act.

There are no roads or other human-made developments within this natural area. The area is located within two grazing allotments, although livestock rarely graze the site due to topographic barriers. A small portion of the area is within the "No Livestock Grazing Area" on Steens Mountain. The RNA/ACEC is withdrawn from mineral entry.

Kiger Mustang ACEC

The Kiger Mustang ACEC is made up of the Kiger and Riddle Mountain Wild Horse HMAs and is located on the north side of Steens Mountain, about 10 miles east of Diamond, Oregon. The entire ACEC is 66,244 acres, but the portion of the ACEC in the Planning Area is 31,725 acres.

The relevant and important values for which the ACEC was designated center around the wild horses that reside there. The Kiger mustangs are judged to be descendants of the original Spanish mustangs. They are of important historic and cultural value, as they represent centuries of genetic heritage that originated from some of the earliest pre-colonial Spanish mustangs introduced to the New World by European explorers. These horses' exhibit special characteristics of color and marking that indicate a relatively untainted genetic pool. The habitat where these horses range is well suited to their needs.

The ACEC is located within portions of the Stonehouse WSA (2-23L) and portions of the Burnt Flat and Smyth-Kiger grazing allotments. The portion of the ACEC within the WSA is managed in accordance with the WSA IMP for land under review for wilderness. Surface-disturbing activities requiring reclamation are generally precluded from WSAs until Congress makes a decision on wilderness designation.

The ACEC contains about 43 miles of roads and ways along with many reservoirs and other range developments. The area is withdrawn from mineral entry.

Little Blitzen RNA/ACEC

The Little Blitzen RNA/ACEC covers 2,255 acres on the top of Steens Mountain at the headwaters of the Little Blitzen River. The elevation ranges from 7,000 feet in Little Blitzen Gorge to 9,400 feet near the top of Steens Mountain.

Relevant and important values include plant community types and several Special Status plant species. The RNA/ACEC was designated to protect several terrestrial and aquatic ecosystems (cells) recognized by the ONHP as being the best examples of those cells in Oregon's Basin and Range Physiographic Province. The cells that were recognized within this natural area include a mid- to high-elevation vernal pond; a stream system originating in the subalpine, aspen grove, and alpine communities on Steens Mountain, including snow deflation and moderate snow cover communities; late-lying snowbeds; high-elevation fescue grassland; and rare plant communities. The rare plants occurring in this natural area include Steens Mountain paintbrush, moonwort, pinnate grapefern, lance-leaved grapefern, wedge-leaf saxifrage, Hayden's cymopterus, and moss gentian.

This entire RNA/ACEC is situated within the Steens Mountain Wilderness and is managed under direction provided by the Wilderness Act. A portion of the Oregon High Desert National Recreation Trail runs through the natural area.

The RNA/ACEC is located within the "No Livestock Grazing Area" on Steens Mountain. The area is withdrawn from mineral entry.

Little Wildhorse Lake RNA/ACEC

The 241-acre Little Wildhorse Lake RNA/ACEC is located on the highest elevations of Steens Mountain at the headwaters of Little Wildhorse Creek. The elevation ranges from 8,500 to 9,300 feet.

The relevant and important value for the RNA/ACEC is an aquatic ecosystem. The area fills a cell need for a pristine, mid-to-high elevation lake in the Basin and Range Physiographic Province as identified by the ONHP. The area also contains rims and upper-elevation plant communities in good to excellent condition.

This entire RNA/ACEC is located within the Steens Mountain Wilderness and is managed under the provisions of the Wilderness Act.

This RNA/ACEC is located within the "No Livestock Grazing Area" on Steens Mountain and is withdrawn from mineral entry. The area contains no human-made developments.

Long Draw RNA/ACEC

The 441-acre RNA/ACEC is located in southwest Harney County about 4 miles from the Nevada border. The site is about 2 miles south of Lone Mountain and about 3 miles east of Hawk Mountain. The elevation at the site is 5,000 feet.

The relevant and important value for this area is a plant community type. The RNA/ACEC was designated to protect a unique terrestrial ecosystem containing Indian ricegrass and needleandthread needlegrass in association with Wyoming big sagebrush. The drainages within the natural area contain the key elements or values of the RNA/ACEC, and the ridgetops are a Wyoming big sagebrush/bottlebrush squirreltail plant community.

The entire RNA/ACEC is located within portions of the Hawk Mountain (1-146A) and Rincon (2-82) WSAs. WSAs are currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation.

The one human-made development within this area is 0.5-mile of road. The RNA/ACEC is located within the Pueblo-Lone Mountain grazing allotment.

A portion of the RNA/ACEC has a high potential for the occurrence of epithermal-related gold/silver/mercury deposits. Little or no interest has been shown for any mineral resources in the area.

Mickey Basin RNA/ACEC

The 560-acre RNA/ACEC is located in the north end of the Alvord Valley about 35 miles north of Fields and about 4 miles north of the Alvord Desert. Approximately 191 acres of the 560 acres are fenced to exclude livestock and wild horses.

The relevant and important value includes a vegetation community type. The RNA/ACEC was designated to protect an ecosystem consisting of a winterfat plant community growing in a nearly pure stand on ash soils. This vegetation type was listed in the ONHP as a cell that is uncommon in the Basin and Range Physiographic Province and in need of protection and recognition as a natural area.

The entire RNA/ACEC is located within the East Alvord (2-73A) and Winter Range (2-73H) WSAs. WSAs are currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation.

The human-made developments existing within this area include about 1-mile of fence and 0.75-mile of road. The RNA/ACEC is located within the Alvord grazing allotment. The area is also within the Alvord-Tule Springs Wild Horse HMA and is withdrawn from mineral entry.

Pueblo Foothills RNA/ACEC

The 2,424-acre Pueblo Foothills RNA/ACEC is located on the lowest reach of Cottonwood Creek, about 7 miles south of Fields, Oregon. The elevation ranges from 4,400 to 5,700 feet.

Relevant and important values include a plant community type and Special Status plant species. The RNA/ACEC was designated to protect an ecosystem recognized by the ONHP as being the best example of a Mormon tea/narrowleaf cottonwood community complex in the Basin and Range Physiographic Province, if not in the State of Oregon. Several Special Status plant species that also occur in this unique ecosystem include narrowleaf cottonwood, large-flowered chaenactis, naked-stemmed phacelia, ochre-flowered buckwheat, and Malheur cryptantha.

This RNA/ACEC is situated entirely within the Pueblo Mountain WSA (2-81). WSAs are currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation.

The only human-made development is a small piece of the Arizona Creek Road. Two other roads that were within the area were blocked and rehabilitated due to lack of official use. This RNA/ACEC is located within the Pueblo-Lone Mountain grazing allotment.

The RNA/ACEC has a high potential for the occurrence of epithermal-related gold/silver/mercury deposits. A portion of the RNA/ACEC has a high potential for porphyry-related deposits of gold, copper, or molybdenum. The area has a moderate potential for the occurrence of low sulfide gold deposits. The area has been heavily claimed in the past for locatables, but only a few claims exist in the area at the present time.

Rooster Comb RNA/ACEC

The 683-acre RNA/ACEC is located at the mouth of the Little Blitzen Gorge on Steens Mountain. The area encompasses both sides of the canyon and about 1.5 miles of the Little Blitzen River.

Relevant and important values include several vegetation community types. The RNA/ACEC was designated to protect a terrestrial and an aquatic ecosystem, both of which were determined to be the best examples of those ecosystems in the Basin and Range Physiographic Province. The ONHP cells represented in this natural area are a mountain mahogany/bluebunch wheatgrass community and a black cottonwood riparian community.

The entire RNA/ACEC is situated within the Steens Mountain Wilderness and is managed under the provisions of the Wilderness Act. A portion of the Oregon High Desert National Recreation Trail runs through the natural area.

The only human-made development found within this RNA/ACEC is about 11 miles of hiking trail. The area is located within the “No Livestock Grazing Area” on Steens Mountain. The area is also withdrawn from mineral entry.

South Fork Willow Creek RNA/ACEC

The 186-acre South Fork Willow Creek RNA/ACEC is located in the upper part of a glacial cirque on the east rim of Steens Mountain, at the headwaters of the South Fork of Willow Creek. The natural area contains a wide variety of microhabitats including rock outcrops, ledges, and a series of three boggy terraces with pools, streams, and open shrubby areas.

Relevant and important values for which the RNA/ACEC is designated include vegetation community types and Special Status plants. ONHP vegetation cells represented in the natural area include alpine communities

on Steens Mountain and a stream system originating in a glacial cirque. The Special Status plants that occur within this natural area include Steens Mountain paintbrush, moonwort, pinnate grapefern, lance-leaved grapefern, Cusick's giant hyssop, moss gentian, and slender gentian.

The entire RNA/ACEC is located within the Steens Mountain Wilderness and is managed in accordance with the Wilderness Act. The area is located within the "No Livestock Grazing Area" on Steens Mountain and is withdrawn from mineral entry.

Tum Tum Lake RNA/ACEC

The 1,689-acre Tum Tum Lake RNA/ACEC is located in Pueblo Valley about 10 miles south of Fields, Oregon. The area includes Tum Tum Lake and the area north and east of the lake. The elevation is 4,100 feet.

The relevant and important values for which the RNA/ACEC was designated include vegetation community types, Special Status plant species, and a Special Status fish. The ONHP vegetation cells present at this site are low elevation alkaline lake and salt desert shrub plant communities. The three Special Status plant species occurring on this site are iodine bush, salt heliotrope, and verrucose sea-purslane. Most of the plant species growing around Tum Tum Lake are very salt tolerant. The lake is also a valuable waterfowl rearing area as well as habitat for the Alvord chub, a Special Status fish species.

The RNA/ACEC has high potential for epithermal-related gold/silver/mercury deposits. The area has had mining claims in the past, but no claims are present now. The area is not within any grazing allotment.

Big Alvord Creek RNA/ACEC

The Big Alvord Creek RNA/ACEC is located on the east face of Steens Mountain, about 30 miles south of Fields, Oregon. The area totals 1,676 acres, and comprises most of the drainage of Big Alvord Creek, which flows into the Alvord Desert near the Alvord Ranch. The terrain is steep and rugged with elevations ranging from 5,400 to 9,200 feet.

Relevant and important values include several plant community types. The ONHP vegetation cells present on the site include a first-to-third order stream with a high gradient reach in a sagebrush zone, including intermittent streams with alder and dogwood; a big sagebrush/bluebunch wheatgrass plant community; and a black cottonwood riparian community.

The area is entirely within the Steens Mountain Wilderness and is managed in accordance with the Wilderness Act. The area is also within the "No Livestock Grazing Area" on Steens Mountain. There are no human-made developments within the RNA/ACEC, and the area is withdrawn from mineral entry.

East Fork Trout Creek RNA/ACEC

The East Fork Trout Creek RNA/ACEC is located in the Trout Creek Mountains, about 25 miles southeast of Fields, Oregon. The area, which totals 361 acres, includes part of the headwaters of the East Fork of Big Trout Creek and contains several unique ecosystems. The elevation of the area is from 7,400 to 8,000 feet.

The relevant and important values include several plant community types. The ONHP vegetation cells represented in this area include a riparian community dominated by quaking aspen and Scouler willow, a high-elevation wet meadow dominated by sedges, and a first-to-third order stream system originating in the subalpine zone.

The RNA/ACEC is located entirely within the Mahogany Ridge WSA (2-77), and is currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation.

The area is located within the Trout Creek Mountain grazing allotment. Approximately 0.5-mile of road is located in the northeast quarter of the area.

The RNA/ACEC has high potential for the occurrence of epithermal-related gold/mercury deposits. No mining claims or interest in mining have been proposed in the area.

Fir Groves ACEC

The Fir Groves ACEC, totaling 477 acres, is located 2 miles north of the North Steens Loop Road on Steens Mountain. Specifically the ACEC is in two parcels, one located on Little Fir Creek and one on Fence Creek. The area is about 12 miles east of Frenchglen, Oregon.

The relevant and important value is a unique plant community type. The ONHP vegetation cell that is represented on the site is a grand fir forest on Steens Mountain. The ACEC consists of a dense stand of old and middle age class trees on one site and a mix of old and young trees on the smaller site. This area is one of the last places on Steens Mountain containing grand fir.

One of the ACEC parcels is within the Hardie Summer grazing allotment and the other is within an FFR grazing allotment composed mostly of private land. The area contains about 1-mile of jeep trail and an old cabin constructed in the early 1900's. The ACEC is withdrawn from mineral entry.

Mickey Hot Springs ACEC

The Mickey Hot Springs ACEC, totaling 42 acres, is located in the Alvord Valley about 5 miles north of the Alvord Desert and about 35 miles north of Fields, Oregon.

Relevant and important values include hot springs and the associated hazards. The site supports a hot springs complex containing about 50 active and inactive vents, including a mud pot, hot pools, and cool pools. The area is geologically unique and an attraction for sightseers. It is also potentially hazardous because the water temperature is near boiling. The entire area is currently fenced to keep livestock, wild horses, and vehicles out of the hazard area.

The ACEC is located entirely within the East Alvord WSA (2-73A), which is currently managed in accordance with the WSA IMP. Under this direction, surface-disturbing activities requiring reclamation are generally precluded from the WSAs until Congress makes a decision on wilderness designation.

The area is surrounded by the Alvord-Tule Springs Wild Horse HMA. The area is part of the Alvord grazing allotment, and is withdrawn from mineral entry.

Serrano Point RNA/ACEC

The Serrano Point RNA/ACEC, totaling 679 acres, is located in southern Harney County, about 2 miles east of Andrews. The elevation of the area is 4,100 feet.

Relevant and important values include several vegetation community types. The ONHP vegetation cells that are present on this site include a playa with greasewood and basin wildrye, big sagebrush/greasewood communities, and greasewood/shadscale/bunchgrass playa margin communities. The wildrye communities are some of the best sites for that species in the Basin and Range Physiographic Province. Wildrye grows with greasewood, sagebrush, and by itself in plant communities that are naturally lacking in species diversity.

The RNA/ACEC is located within the Tule Springs grazing allotment and is grazed exclusively during the winter. A portion of the Oregon High Desert National Recreation Trail and about 1-mile of road runs through the area. The RNA/ACEC is in an area withdrawn from mineral entry.

Appendix M - Transportation Plan

Appendix M describes how routes within the CMPA will be managed. The TP provides details on the various components of the transportation management system. The TP identifies the current route system (Map 13) and outlines the various route categories and road maintenance levels. BMPs for route management, a glossary of transportation terms and Steens Act Section 112 off-road travel exception criteria are also attached.

Transportation and Roads

Goal 1- Provide travel routes to and through BLM-managed land as appropriate to meet resource objectives while providing for private and public access needs.

Management Framework

A major element of a TP is the management and protection of the basic resources of water, soils, fish, wildlife, and vegetation while providing a route system that accommodates public, private, and administrative access needs. In meeting these needs, routes should be managed to minimize undue damage, maintenance costs, and provide for safe travel. Numerous Federal laws and internal regulations give the BLM the authority and guidance to develop and manage transportation systems. For a list of authorities, see the Draft Washington and Eastern Oregon Transportation Management Plan (USDI 2000c). Section 112 of the Steens Act prohibits off-road motorized travel within the CMPA and also identifies exceptions to the off-road vehicle travel prohibition. Criteria for the Section 112 exceptions are included at the end of this appendix. Section 112 also calls for the development of a comprehensive TP for the CMPA. This section of the RMP meets this legislative requirement. Routes specifically addressed by name will need no further analysis. An EA/Travel Plan, based on specific field inventories and need determinations of all other routes within the CMPA, will complete the comprehensive requirements and be completed by December 31, 2005. In the interim, the open roads and ways shown on Map 13 in the RMP represent the routes known to be historically available for motorized use and shall remain available for such use unless changed through the development of the updated Travel Plan mentioned above.

Objective 1. Manage roads and ways within the CMPA consistent with the Route Management Categories and Maintenance Levels.

Routes within this TP are either roads or ways. Ways are routes within WSAs that can be repaired in accordance with the WSA IMP. Ways fall under one or more of the Route Management Categories depending upon their particular purpose and need. Roads also fall under one or more Route Management Categories and their condition varies based substantially on their assigned Maintenance Level. The open roads and ways currently shown on Map 13 in the RMP represent the current BLM recognized motorized routes within the CMPA. Management actions within this TP pertain only to the currently mapped routes. Other routes are known to exist; however, the exact location and uses of most of these routes are not currently known. Once these unmapped routes are inventoried, an EA/Travel Plan will be prepared to determine if they should be added to the transportation system, converted to hiking trails, or closed and rehabilitated. Routes currently mapped may also be reevaluated through an EA process and closed, rerouted or upgraded, if needed, to meet resource objectives or provide for access. Public input to the EA(s) will be sought.

The Steens Act closed approximately 104 miles of motorized routes upon designation of the Steens Mountain Wilderness. These routes will remain closed. This TP and subsequent EAs may also prescribe other routes for closure within the CMPA as needed to meet resource objectives or protect persons and property. Examples of routes that may be closed include those with redundancy of purpose or which are causing environmental damage. Closed routes will be signed or otherwise physically obstructed as necessary to accomplish permanent closure. Some routes closed to the public may still need to be used by private landowners to access private land within the CMPA or by livestock operators to administer their grazing permits. These Service Use Permit Routes and Private Property Access Routes are shown on Map 11 and will be specifically authorized by the BLM if an analysis finds the access to be reasonable.

Route Management Categories describe the primary purposes and uses for the routes. Many routes fall under more than one management category. Most use by private landowners, grazing operators, and the public occurs on Common Use Routes and is provided under casual use; therefore, a formal use authorization is not required. Maintenance levels outline the degree of maintenance to be performed, dependent on funding levels. Maintenance of routes with limited or no public access may be the responsibility of the landowner. Private landowner maintenance of routes on BLM-administered land will be supervised by the BLM. Route maintenance is generally prioritized, based on safety concerns and degree of use. Inadequate funding may preclude the BLM from maintaining routes at levels assigned in this TP. Route Management Categories and Maintenance Levels are monitored and may be modified as needs and conditions change. Minimal use of traffic control signs will continue along the Steens Loop Road as needed to mitigate safety concerns. Other routes within the CMPA will not generally be signed except to address specific needs.

Route Management Categories

Common Use Routes: Routes that are open to the public but may be closed, or have seasonal use restrictions during certain sensitive periods, to protect resource values such as road conditions. These include routes on BLM-managed land and private land where public access easements have been acquired.

Cooperatively Managed Routes: Routes across private, State, BLM-administered, or other agency land that is cooperatively administered and maintained. Routes may have specified levels of public use, season of use, and type of use. Administration and maintenance may be facilitated through a cooperative agreement.

Service/Permit Use Routes: Routes used only for administration, facility service, property maintenance, or those associated with an authorized permit. Motorized public use is not allowed.

Private Property Access Routes: Routes across public land used to access private property. Motorized use allowed only for private property interests and BLM administration.

Private Routes: Routes across private land that are not open for use by the public.

Note: Access descriptions within the above Route Management Categories may be subordinate to other rights, agreements, or privileges as provided by law, policy, or other legal instrument.

Maintenance Levels

Level 1: This level is assigned to roads where maintenance is limited to protecting adjacent land and resource values. These roads are no longer needed and are closed to traffic. The objective is to remove these roads from the transportation system. At a minimum, drainage and runoff patterns will be maintained as needed to protect adjacent land. Grading, brushing, or slide removal will not be performed unless roadbed drainage is being adversely affected or is causing erosion. Closure and traffic restrictive devices will be maintained.

Level 2: This level is assigned to roads open seasonally or year-round and uses may include commercial, recreation, private property access, and administration purposes. Typically, these roads are passable by high clearance vehicles and are maintained, as needed, depending on funding levels. Seasonal closures or other restrictions may be needed to meet resource objectives or because of snow levels or other weather conditions. At a minimum, drainage structures will be inspected within a 3-year period and maintained as needed. Grading will be conducted as necessary to correct drainage problems. Brushing will be conducted as needed and slides may be left in place provided they do not adversely affect drainage.

Level 3: This level is assigned to roads open seasonally or year-round and uses may include commercial, recreation, private property access, and administrative purposes. Typically, these roads are natural or have an aggregate surface, but may include bituminous surface roads. These roads have a defined cross section with drainage structures such as rolling dips, culverts or ditches and may normally be negotiated by passenger cars driven cautiously. User comfort and convenience are not considered a high priority. At a minimum, drainage structures will be inspected annually and maintained as needed. Grading will be conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing will be conducted as needed to improve sight distance. Slides adversely affecting drainage will receive high priority for removal and other slides will be removed on a scheduled basis.

Level 4: This level is assigned to roads open seasonally or year-round. Uses include commercial, recreation, private property access, and administrative purposes. Typically, these roads are single or double lane and have an aggregate or bituminous surface. This maintenance level provides access for passenger cars driven at prudent speeds. At a minimum, the entire roadway will be maintained at least annually, although a preventive maintenance program may be established. Major problems will be repaired as discovered.

Level 5: This level is assigned to roads open seasonally or year-round that carry the highest traffic volume of the transportation system. Uses include commercial, recreation, private property access, and administrative purposes. Typically, these roads are single or double lane and have an aggregate or bituminous surface. This maintenance level provides access for passenger cars traveling at prudent speeds. The entire roadway will be maintained at least annually and a preventive maintenance program will be established. Problems will be repaired as discovered.

Ways within WSAs are not maintained other than by the passage of vehicles, with certain exceptions. Exceptions are limited to the minimum mechanical maintenance necessary to provide access as follows: 1) for emergencies such as suppression activities associated with wildfire or search and rescue; 2) to grandfathered grazing uses and facilities as defined by the WSA IMP; 3) to sites where reclamation or stabilization is needed to protect or improve the lands' wilderness values; and 4) to private inholdings. In these exceptions, maintenance will occur using the "minimum tool concept" described in the WSA IMP. An EA is required to analyze maintenance alternatives except in the case of emergencies.

Easements across non-Federal lands, both public and administrative, will be sought as needed to meet resource objectives.
Management directions include the following:

- Keep the entire Steens Loop Road, including the routes to the overlooks, open to motorized use at Maintenance Level 5, except the Rooster Comb section, which will be upgraded to Maintenance Level 3.
- Keep the Fish Creek, Cold Springs, Grove Creek, Big Alvord Creek, Indian Creek, Three Springs, and Newton Cabin routes open where bounded on both sides by wilderness.
- Consider closing a portion of the Bone Creek route, in the transportation route inventory EA, as recommended by the SMAC.
- Keep open all cherry stem roads and ways associated with WSAs except as shown on Map 13 in the RMP.
- Retain Maintenance Level 3 as currently prescribed for the Moon Hill Road system.
- Close specific routes as shown on Map 13 in the RMP. Approximately 6 miles of routes will be closed.
- Assign Maintenance Level 3 to the Kiger Wild Horse Overlook Road; the Witzel/Yriarte access road; the road to Riddle Brothers Ranch; the Virginia Valley Road to its junction with the private land in Section 9, Township 30 South, Range 35 East; the Kiger Ridge Road between Fred Otley's driveway and the junction with the private land in Section 16, Township 32 South, Range 33 East; and a portion of the Fence Creek Roads. Map 13 shows the location of these roads and their assigned maintenance levels.
- Assign Maintenance Level 4 to the road into Fred Otley's ranch.
- Use the existing gate and permit system to close the Steens Loop Road to public motorized use from approximately November 15 to May 15 each year except to access the snowline on the North Steens Loop Road for motorized and nonmotorized forms of winter recreation.
- Assign Maintenance Level 2 to all remaining open roads within the CMPA unless otherwise prescribed under a Cooperative Management Agreement. Consider seasonal closures and road upgrades as needed to reduce damage to road surfaces, protect resources, or provide for public safety.
- Install a gate to seasonally close the Moon Hill Road near the Diamond Grain Camp Road from February 1 to May 15 each year to protect road surfaces and improve natural values. Install an additional gate on the Moon Hill Road near the base of Moon Hill to protect higher elevation road surfaces. Closure of the Moon Hill gate will correspond with the closure of the lower gate on the North Steens Loop Road.
- Develop Cooperative Road Management Agreements or acquire voluntary easements with private landowners and other entities that provide recreation opportunities, improve natural values, or otherwise improve access.

- Allow motorized access to existing dispersed campsites unless precluded by special designation or other resource concerns.
- Allow the parking of motorized vehicles within 100 feet of centerline along many of the open routes unless precluded by special designation or other resource concerns.
- Limit motorized traffic and vehicle parking to existing disturbed areas adjacent to the Steens Loop Road and the overlook roads from Jackman Park to the Rooster Comb.
- Allow permitted motorized access along the Riddle Brothers Ranch segment of the Cold Springs Road.

BEST MANAGEMENT PRACTICES

1) Design roads to minimize total disturbance, to conform with topography, and to minimize disruption of natural drainage patterns.
2) Base road design criteria and standards on road management objectives such as traffic requirements of the proposed activity and the overall TP, economic analysis, safety requirements, resource objectives, and minimizing damage to the environment.
3) Locate roads on stable terrain such as ridgetops, natural benches, and flatter transitional slopes near ridges, and valley bottoms, and moderate side slopes and away from slumps, slide prone areas, concave slopes, clay beds, and where rock layers dip parallel to the slope. Locate roads on well-drained soil types; avoid wet areas when possible.
4) Construct cut and fill slopes to be approximately 3 horizontal (h):1vertical (v) or flatter where feasible. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.
5) Avoid headwalls, midslope locations on steep, unstable slopes, fragile soils, seeps, old landslides, side slopes in excess of 70 percent, and areas where the geologic bedding planes or weathering surfaces are inclined with the slope. Implement extra mitigation measures when these areas cannot be avoided.
6) Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars and insloping to ditches as appropriate.
7) Sloping the road base to the outside edge for surface drainage is normally recommended for local spurs or minor collector roads where low-volume traffic and lower traffic speeds are anticipated. This is also recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Out-sloping is not recommended on steep slopes. Sloping the road base to the inside edge is an acceptable practice on roads with steep side slopes and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.
8) Crown and ditching is recommended for arterial and collector roads where traffic volume, speed, intensity and user comfort are considerations. Recommended gradients range from 0 to 15 percent where crown and ditching may be applied, as long as adequate drainage away from the road surface and ditch lines is maintained.
9) Minimize excavation, when constructing roads, through the use of balanced earthwork, narrowing road widths, and end hauling where side slopes are between 50 and 70 percent.
10) If possible, construct roads when soils are dry and not frozen. When soils or road surfaces become saturated to a depth of 3 inches, BLM-authorized activities should be limited or ceased unless otherwise approved by the authorized officer.
11) Consider improving inadequately surfaced roads that are to be left open to public traffic during wet weather with gravel or pavement to minimize sediment production and maximize safety.
12) Retain vegetation on cut slopes unless it poses a safety hazard or restricts maintenance activities. Roadside brushing of vegetation should be done in a way that prevents disturbance to root systems and visual intrusions (i.e., avoid using excavators for brushing).
13) Retain adequate vegetation between roads and streams to filter runoff caused by roads.
14) Avoid riparian/wetland areas where feasible; locate in riparian/wetland areas only if the roads do not interfere with the attainment of resource objectives.
15) Minimize the number of unimproved stream crossings. When a culvert or bridge is not feasible, locate drive-through (low water crossings) on stable rock portions of the drainage channel. Harden crossings with the addition of rock and gravel if necessary. Use angular rock if available.
16) Locate roads and limit activities of mechanized equipment within stream channels to minimize their influence on riparian areas. When crossing a stream is necessary, design the approach and crossing

perpendicular to the channel, where practicable. Locate the crossing where the channel is well-defined, unobstructed, and straight.

17) Avoid placing fill material in floodplain unless the material is large enough to remain in place during flood events.
18) Use drainage dips instead of culverts on roads where gradients will not present a safety issue. Locate drainage dips in such a way so that water will not accumulate or where outside berms prevent drainage from the roadway. Locate and design drainage dips immediately upgrade of stream crossings and provide buffer areas and catchment basins to prevent sediment from entering the stream.
19) Construct catchment basins, brush windrows, and culverts in a way to minimize sediment transport from road surfaces to stream channels. Install culverts in natural drainage channels in a way to conform with the natural streambed gradients with outlets that discharge onto rocky or hardened protected areas.
20) Design and locate water crossing structures in natural drainage channels to accommodate adequate fish passage, provide for minimum impacts to water quality, and to be capable of handling a 100-year event for runoff and floodwaters.
21) Use culverts that pass, at a minimum, a 50-year storm event or have a minimum diameter of 24 inches for permanent stream crossings and a minimum diameter of 18 inches for road crossdrains.
22) Replace undersized culverts and repair or replace damaged culverts and downspouts. Provide energy dissipaters at culvert outlets or drainage dips.
23) Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Culverts should be placed on solid ground to avoid road failures.
24) Proper sized aggregate and riprap should be used during culvert construction. Place riprap at culvert entrance to streamline waterflow and reduce erosion.
25) Establish adapted vegetation on all cuts and fill immediately following road construction and maintenance.
26) Remove berms from the downslope side of roads, consistent with safety considerations.
27) Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close abandoned roads to traffic. Physically obstruct the road with gates, large berms, trenches, logs, stumps, or rock boulders as necessary to accomplish permanent closure.
28) Abandon and rehabilitate roads that are no longer needed. Leave these roads in a condition that provides adequate drainage. Remove culverts.
29) When plowing snow for winter use of roads, provide breaks in snow berms to allow for road drainage. Avoid plowing snow into streams. Plow snow only on existing roads.
30) Maintenance should be performed to conserve existing surface material, retain the original crowned or out-sloped self-draining cross section, prevent or remove rutting berms (except those designed for slope protection) and other irregularities that retard normal surface runoff. Avoid wasting loose ditch or surface material over the shoulder where it can cause stream sedimentation or weaken slump-prone areas. Avoid undercutting back slopes.
31) Do not disturb the toe of cut slopes while pulling ditches or grading roads. Avoid sidecasting road material into streams.
32) Grade roads only as necessary. Maintain drain dips, waterbars, road crown, in-sloping and out-sloping, as appropriate, during road maintenance.
33) Maintain roads in special areas according to special area guidance. Generally, retain roads within existing disturbed areas and sidecast material away from the special area.
34) When landslides occur, save all soil and material usable for reclamation or stockpile for future reclamation needs. Avoid sidecasting of slide material where it can damage, overload, and saturate embankments, or flow into down-slope drainage courses. Reestablish vegetation as needed in areas where vegetation has been destroyed due to sidecasting.
35) Strip and stockpile topsoil ahead of construction of new roads, if feasible. Reapply soil to cut and fill slopes prior to revegetation.

GLOSSARY OF TERMS

Access Agreement - (a) Generally construed to mean a Reciprocal ROWs agreement. It is an exchange of grants between the United States and a permittee that provides for each party using the other's roads or constructing roads over the other's lands; (b) the rights granted to the United States through the purchase of a ROWs easement.

All Terrain Vehicle (ATV) Route - A route reserved for ATVs or other mechanized transport not normally suitable for full size four-wheeled vehicles.

Back Country Byway - A road segment designated as part of the National Scenic Byway System. (These roads may or may not be BLM-controlled roads.)

Best Management Practices (BMPs) - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls, and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Casual Use - Activities ordinarily resulting in negligible disturbance of Federal lands and resources.

Construction - In general, building something new.

Cultural Resource - Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence. This includes archaeological and architectural sites or structures and places of traditional cultural or religious importance to specific groups whether or not represented by physical remains.

Decommission - An indeterminate term commonly used in the context of closing roads, obliterating roads, or the rehabilitation of roads.

Developed Recreation - Recreation that requires facilities, resulting in concentrated use of an area. An example of a developed recreation site is a campground. Facilities might include roads, parking lots, picnic tables, rest rooms, drinking water, and buildings.

Dispersed Recreation -A general term referring to recreation use outside developed recreation sites. This includes activities such as scenic driving, hiking, bicycling, backpacking, hunting, fishing, snowmobiling, horseback riding, cross-country skiing, and recreation in primitive environments.

Drainage Structure - Culvert, arch pipe, pipe arch, bridge (over a water way), or similar structure.

Easement - The rights granted to the United States through the purchase of a ROW.

Easement (Exclusive) – A right acquired by the United States to use land of another for a particular purpose, such as a physical access corridor, which **may** allow the United States to set rules of use and authorize third-party use (i.e., public use).

Easement (Nonexclusive) – A right acquired by the United States to use land of another for a particular purpose, such right not granted exclusively to the United States and not excluding others from enjoying the same privilege. Use is allowed to the United States, its agents, and those authorized to do business on U.S. Government land. The underlying landowner retains control of the land use, subject to the terms of the rights granted to the United States.

Environmental Assessment (EA) – A systematic analysis of site-specific activities used to determine whether such activities have a significant effect on the quality of the human environment and whether a formal EIS is required. Also used to aid an agency's compliance with the NEPA when no EIS is necessary.

Feasible -An alternative that, when considered in a comprehensive context, is functionally suitable, physically viable, sociologically and economically reasonable, and biologically sound.

Harm - An appreciable or significant adverse impact to the environment.

Long Term - In context of these guidelines, 10 years and beyond.

Maintenance - In general, taking care of what already exists.

Manual on Uniform Traffic Control Devices - Standards for signing of streets and highways as approved by the Federal Highway Administration as the National Standard in accordance with Title 23, U.S. Code. These standards usually apply to roads subject to the Highway Safety Act, Maintenance Levels 3-5.

Monitoring - The process of collecting information to evaluate whether or not the objective and anticipated or assumed results of a management plan are being realized or whether implementation is proceeding as planned.

Partnership - In the context of these guidelines, partnerships are those alliances between individuals, groups and the Burns District that enable road and trail maintenance or monitoring activities beyond those required for resource management access. Partnerships: 1) Foster good stewardship within the land management plan; 2) Are not exclusive but serve publics at large; and 3) Benefit all parties involved.

Passive Closure: A transportation facility closure technique where ongoing processes continue unabated to render the facility unusable and revert the facility to a more natural state.

Permittee - (a) The cooperating party to a reciprocal agreement (some early agreements refer to such a party as Applicant); (b) A third party using a road controlled by the United States and constructed over land belonging to the permittee in a reciprocal agreement; and (c) A party authorized to use roads controlled by the United States under the terms of Unilateral ROWs, mining, or grazing permit, etc.

Project - Actions such as route use restrictions and ownership adjudication; and facility closure, new construction, reconstruction, maintenance, betterment, reconfiguration, or site rehabilitation.

Public Involvement - A process designed to broaden the information base upon which agency decisions are made by (1) informing the public about District activities, plans, and decisions, and (2) encouraging public understanding about and participation in the planning processes leading to final decision-making.

Reconstruction -In general, a construction activity involving an existing route such as removing a corrugated metal culvert and installing a concrete arch.

Resource Management Plan (RMP) - A land use plan prepared by BLM Districts or Resource Areas under current regulations in accordance with the FLPMA.

Riparian Area - A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affect it. This includes floodplains, woodlands, and all areas within a specified distance from the normal line of high water of a stream channel or from the shoreline of a standing body of water.

Road - Constructed or evolved transportation route that is normally maintained for regular use (except during periods of closure) and that can be reasonably and prudently driven by motorized or mechanized motorized vehicles.

Road Density - A ratio of the cumulative horizontal length (miles) of all roads within a planning boundary, to the horizontal projection of the land area (measured in square miles) within the Planning Area boundary deemed most appropriate for the road density goal being considered, such as the land within the boundaries of a critical/sensitive habitat area, watershed, or the actual land area within a map section.

Roadbed - The graded portion of the road within the top and side slopes, prepared as a foundation for the surface structure and shoulders.

Route - A linear ground transportation feature such as way or road.

Stabilization - A process to reduce risk of erosion and landslides by constructing drainage structures such as dips and waterbars. This also includes seeding, planting other vegetation, or mulching on slopes. Unstable fill embankments that exceed the required road/trail width may be partially or fully removed.

Trail Density - A ratio of the cumulative horizontal length (miles) of all trails within a planning boundary, to the horizontal projection of the land area (measured in square miles) within the Planning Area boundary deemed most appropriate for the trail density goal being considered, such as the land within the boundaries of a critical/sensitive habitat area, watershed, or the actual land area within a map section.

Transportation Management Objectives - Written route-specific prescriptions developed by an ID team that detail the parameters for construction, use, maintenance, and site rehabilitation.

Transportation Plan (TP) – A description of the components of the transportation management system including the management action of the routes within the CMPA.

Watershed - The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Way – A route maintained solely by the passage of vehicles which has not been improved or maintained by mechanical means to ensure relatively regular and continuous use. Ways may be repaired consistent with the exceptions identified in the Interim Management Policy for Lands Under Wilderness Review (H-8550-1).

Steens Act Section 112 Exception Criteria

The following criteria are used to identify situations when off-road travel within the CMPA will be allowed:

1. Emergencies:
   A. Search and Rescue: Motorized travel allowed anywhere and in any manner that benefits the search and rescue efforts.
   B. Fire Suppression:
      a) Wilderness – as per district policy. [1]
      b) WSAs – as per Fire Management Plan. [2]
      c) Other CMPA public land – currently no restrictions.
2. Administration:
   A. Administration of authorized uses (grazing permits, landowner access, etc.): Refer to authorizations for OHV allowances.
   B. BLM administration: Case-by-case as approved by the BLM Authorized Officer.
3. Construction and maintenance of facilities or restoration projects outside Wilderness and WSAs: Case-by-case as approved by the BLM Authorized Officer.

[1] Preauthorizes helicopter landings and bucket work for initial attack but chain saws, engines, etc.., must be specifically approved.
[2] Preauthorizes all initial-attack, fire suppression tactics except caterpillar work.

Appendix N – Wild and Scenic Rivers Suitability Evaluations

WSR SUITABILITY EVALUATION THREEMILE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Fisheries and cultural resources (prehistoric) are the 2 Outstandingly Remarkable Values (ORVs) identified on public land within the river corridor, which could contribute to the designation of a WSR.

Threemile Creek is one of only 3 streams that provides habitat for the Catlow Valley redband trout, one of 2 native fish species of the Catlow Valley. A fourth stream within the area has recently lost its redband trout population. However, the redband trout population may be greatly influenced by the private operation of the Threemile Creek Reservoir and diversion below the corridor. This can have an effect on how the fish move through the system. The stream historically, but no longer contains the other native fish species, the Catlow tui chub.

This segment of Threemile Creek contains significant prehistoric sites. One site is considered to be in very good condition, which is the reason for the ORV, and is described in more detail in the following section. There are several other sites found within the segment, but are only found to be considered significant.

With a WSR designation, it is possible that any management activity that can affect the ORVs may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreational activities within the corridor.

Because of the broken ownership, the stream segment would be difficult to manage due to the private land within the headwaters of the river corridor.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 4.3 miles (63.2 percent) of the 6.8-mile stream length. Of the 2180.1 acres within the river corridor, 1558.9 acres are public land, and 621.2 acres are private property. The segment lies on the west side of Steens Mountain and flows westerly from its headwater until it enters private land in the Catlow Valley.

Threemile Creek begins on a plateau before cutting down through a canyon that exhibits Steens Basalt lava flows in its walls. The present amount of flow in the creek is undersized for the size of the canyon that it flows through, indicating that the canyon was downcut by the creek mostly during the wetter Late Pleistocene, common for this geographic region. There is a linear plateau northeast of Threemile Creek consisting of sediments capped by the Devine Canyon Ash-Flow Tuff. The plateau has a linear form that is parallel to the linear form of Threemile Creek, suggesting that the tuff was deposited in an ancient drainage that had the same trend as the current drainage. It is common to see similar linear plateaus paralleling present-day drainages on the west slope of Steens Mountain.

The stream is 1 of only 3 that provided habitat for the endemic Catlow Valley redband trout, a BLM and Oregon sensitive species. Higher quality fish habitat occurs in the portion of the canyon where good condition riparian vegetation provides a good cover of woody riparian species and large springs provide cooler water. No exotic fish species are in the system. The upper portion of the stream is above the canyon and has a lower gradient with sedge-rush dominated sites and very little woody riparian cover. During mid- or late summer, there is no water in the upper 1.3 miles of the drainage. Habitat for the Catlow Valley redband trout is poor or nonexistent in the upper area. The population of redband trout may be currently influenced by several years of drought, loss of good habitat in the upper reaches, and the private irrigation operation of Threemile Reservoir and diversion of water from the lower end of the stream, immediately below the corridor. Because

of the low population seen during an ODFW survey in 1995, the ODFW closed the stream to angling. Catlow tui chub, another endemic BLM sensitive and Oregon sensitive species, has been found in the lower reaches of the stream and on the reservoir in the past, but they are no longer in the system. They have never been located in public reaches of the stream.

California bighorn sheep use the canyon reaches yearlong. Mule deer winter at the lower elevations, and chukar are abundant. Valley quail are also found within the canyon. A sage-grouse lek (strutting ground used in courtship) is in the upper part of the area, and nesting and brood use also occurs. The Federally endangered American peregrine falcon and Federally threatened northern bald eagle are documented migrants using this segment of the stream. Sensitive species that use the segment are western sage-grouse, ferruginous hawk, California bighorn sheep, Townsend's big-eared bat, and Preble's shrew. Other Special Status species found or that possibly might use the stream segment are Swainson's hawk, merlin, yellow-billed cuckoo, gray catbird, mountain bluebird, western bluebird, bobolink, and northern sagebrush lizard.

The botanical values on this drainage are common to the region.

Prehistoric sites have been located in the drainage. A relatively intact rock shelter is located within the assessment area. Rock shelters are the source of much of the most spectacular, complete information about prehistoric American Indians. Because rock shelters are very often dry, they possess the proper environmental conditions for the preservation of prehistoric basketry, textiles, and other perishable artifacts. These items are extremely rare and provide much of the missing information not found at a majority of other prehistoric sites in the region.

This site remains unevaluated. It has the potential to be regionally important in the interpretation of prehistory because of its potential to contain perishable, datable items. There are 2 other prehistoric sites within the assessment area. Both are surface lithic scatters probably containing data of local importance only. These sites do not possess ORVs, but contribute substantially to the river setting because they are a part of the prehistoric settlement pattern found in Threemile Creek. All of the sites need to be evaluated for significance through subsurface testing and mapping of surface elements. Until this information is gathered, the data potential of these sites is not fully known.

The public and private portions of the corridor are managed for livestock grazing as part of the 332,400-acre South Steens AMP. It is also part of the active Herd Management Area of the South Steens Wild Horse Herd Area. Recreational use activities include hiking, hunting, sightseeing, photography, and wildlife observation, but currently not angling. The corridor lies within the Home Creek WSA, and is being managed to protect those values.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management would be similar to the present situation for most activities, but could be curtailed if there are impacts to the ORVs.

Recreation use would continue at the current level, until such a time that it is determined that impacts were occurring from overuse of the corridor. Livestock grazing is currently managed as described in the South Steens AMP, but could be eliminated due to designation.

Designation as a scenic river would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications along the river. There are currently no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's, showing a list of their recommended rivers. Currently, there is no sponsor for their proposal.

Cost of Administration

The basic objective of Federal designation is to protect and enhanced the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$ 87,600

Annual Management:

(signing, data collection, monitoring)	=	$ 10,000

Acquisition:

Purchase or exchange of private land at $225/acre	=	$139,720
Administrative cost of split-estate acquisition	=	NA
Total	=	$237,320

No State or local agency has come forward and stated they would be willing to share in the cost of administering this stream should it become part of the system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR, with experienced personnel. Threemile Creek is within the Home Creek WSA and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

The Catlow redband trout will continue to be managed and protected under existing BLM policy. At the present time, Threemile Creek is closed to fishing. The entire watershed is part of the nominated Catlow Redband Trout ACEC and a portion is part of the nominated North Catlow Rim ACEC. Under any of these, if approved, the area would have further protective management prescriptions, as yet to be decided.

All sensitive species will be managed in a manner to conserve the species to prevent listing.

The prehistoric rock shelter site would be protected by the BLM in compliance with the National Historic Preservation Act of 1966, as amended.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek**.**

Suitability Determination

The BLM has determined that the eligible 4.3 miles of Threemile Creek that is located on public land is "not suitable" for inclusion in the National WSR system. The amount of private land located in the headwaters of the system would make management difficult.

It is felt that the 2 listed ORVs are currently being protected under existing management, as previous described, and will offer the same protection as found under the WSRs Act.

WSR SUITABILITY EVALUATION
WILLOW CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The ORV identified within this river corridor is the botanical values associated with the existing South Fork Willow Creek RNA/ACEC.
Approximately 200 acres out of a total of 230 acres of the RNA are within the river corridor. The area represents a wide variety of microhabitats including rock outcrops, ledges, and a series of 3 bog terraces with pools, streams, and open shrubs. Plant communities include those associated with stream systems originating in a glacial cirque.

With a WSR designation, it is possible that any management activities that could affect the ORVs may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, increasing recreation activities within the corridor.

Manageability will be a problem due to the private lands, adjacent to the county road, for public access.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 6.2 miles of Willow Creek, while approximately .76-mile of Willow Creek is private property. Approximately 1,951 acres of public land are within the river corridor, while 243 acres are private land.

The head of Willow Creek and the head of Little Blitzen River meet at a narrow divide that has thick soil and no ice erosional features. Within the exposure of Steens Basalt and Steens Mountain Volcanics, there are some erosion-resistant feeder dikes that look like wall protrusions that extend northward for miles. These are inferred to be feeder dikes for the Steens Basalt flows.

Cirques developed in about 10 drainages on the east side of the Steens during the Pleistocene epoch. Each of these drainages generally contains 2 cirques, one about 2,500 feet above the Alvord Valley floor and the other about 1,500 feet above the lower one. It is interpreted that the more severe Fish Lake phase of glaciation formed cirques at a lower elevation than those that formed during the later and less severe Blitzen phase of glaciation.

In the northern fork of Willow Creek, the base of the upper cirque was at about 8,000 feet elevation and in the southern fork was at about 8,600 feet. The base of the lower cirque was at about 6,600 feet elevation for both forks. Below 6,600 feet, the creeks have a V-shaped cross section, indicative of normal stream erosion.

Lateral and ground moraines extend as low as 6,200 feet elevation in Willow Creek. Above these glacial deposits, the drainage exposes lava flows and pyroclastic rocks of the Steens Mountain volcanic to 5,500 feet elevation. Between 5,500 feet and 5,400 feet are exposures of tuffaceous sediments of the Alvord Creek Formation. Below this, the creek is in alluvial fan deposits to the valley floor. On the south side of the creek, below 5,400 feet, there is a large landslide that was probably active during the Pleistocene.

Steens Mountain, which includes the Willow Creek drainage, falls within the BLM VRM Class II. The objective of this class is to maintain the existing character of the landscape. It is also part of the High Steens WSA. This WSA is being recommended to Congress as part of the national wilderness system.

Recreational use within the river corridor is primitive in nature such as hiking, backpacking, hunting, and sightseeing.

Livestock grazing does occur and is within the Alvord Allotment. Due to topography, grazing occurs only in the lower elevation of the system.

Willow Creek is 1 of 9 streams in the Alvord Basin that has provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed threatened species. Populations in the Alvord Basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote, Willow, and Whitehorse Basins from which the original transplants came.

The area is closed to recreational angling for the protection of the Lahontan cutthroat trout.

Willow Creek has high wildlife habitat diversity and most of the riparian habitat is in good or excellent condition. Willow Creek is a steep, rough, rocky drainage that drops 4,400 feet in elevation over approximately 2.5 horizontal miles.

California bighorn sheep may be viewed within the canyon yearlong. Raptor nesting occurs in abundant numbers in the cliffs and rims along Willow Creek. The area provides both summer and winter habitat for mule deer. As winter snow increases, deer may be forced to lower elevations. Deer use is often heavy during winter months.

Chukars are abundant in the area and valley quail are found along the riparian areas and at lower elevation within the uplands. Pika are found in the upper elevation within the talus slopes.

As mentioned, the botanical values were identified as an ORV because of the designated RNA for a high-elevation, cirque plant communities known as the South Fork of Willow Creek.

The remaining botanical resources within the Willow Creek system are interesting, but not unique to the area.

No archaeological inventory has been completed for the area, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a WSR, management would be similar to the present situation, for most activities, but could be curtailed if there are impacts to the ORVs.

Existing uses, such as recreation, would continue in the corridor at current levels, until such a time that increased uses or activities could harm the ORV. The corridor would still be managed under VRM Class II. The WSA would continue to be managed to protect their wilderness values until Congress makes a determination on designation as wilderness.

Designation as a wild or scenic river area would continue with the existing management for botanical values, under the RNA/ACEC management plan. Fish and wildlife habitat would be maintained, but not necessarily enhanced through long-term protection under the WSRs Act.

Designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to maintain the river's existing condition, and to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated

with each designation. Developing a management plan will require the following estimated cost:

Plan Development:		
Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$ 87,600
Annual Management:		
(signing, data collection, monitoring)	=	$ 10,000
Acquisition:		
Purchase or exchange of private land at $300./acre	=	$ 72,900
Administrative cost of split-estate acquisition	=	NA
Total	=	$170,500

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel.

All sensitive species, within the river corridor, will be managed or action mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

The South Fork of Willow Creek RNA/ACEC will continue to be managed under the existing RNA plan to preserve the character of streams originating in glacial cirques. Scenic values will be managed under the guidelines for VRM Class II and WSAs will be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the eligible 6.2 miles of public land within the Willow Creek drainage is "not suitable" for inclusion in the National WSR system. There are 243 acres of private land which breaks up the ownership pattern. There is also no legal public access to this drainage from the county road. Visitors to the area would have to find other ways to access the corridor for recreational opportunities.

It is felt that the ORV listed for the system is only a small part of the headwaters of Willow Creek, and is already protected under an existing management plan for the RNA. The RNA is inaccessible due to topography adding further protection from physical disturbance.

WSR SUITABILITY EVALUATION
VAN HORN CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The ORV identified on public land within the river corridor is recreation. This ORV could contribute to the designation of a WSR.

Approximately 1 mile of the Oregon High Desert National Recreation Trail parallels the upper portion of Van Horn Creek, and offers outstanding recreation opportunities for hiking and backpacking within the area.

With a WSR designation, it is possible that any management activities that could affect the ORV, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area increasing recreation activities within the corridor.

Management of the river corridor would be practical due to public ownership.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 9.9 miles of Van Horn Creek. Approximately 3,153 acres of public land are within the river corridor. The segment runs through one section of split-estate land (State owns the mineral rights).

Like Colony Creek and Cherry Creek, Van Horn Creek cuts through alluvial fan deposits from the valley floor to approximately 4,500 feet elevation. From 4,500 feet to beyond the ridgeline, the creek cuts through Mesozoic schistose metavolcanic rocks. These rocks are generally rich in muscovite and have a whitish sheen. They form erosion resistant outcrops that protrude into Van Horn Creek.

At approximately 4,900 feet, the edge of a pluton crosses the creek. This pluton is composed of fine-grained quartz diorite, and is one of 7 plutons in the Pueblos. In the quartz diorite, the most easily recognized mineral is plagioclase. The mafic minerals in the quartz diorite have been metamorphosed from hornblende to biotite, magnetite, and epidote.

The upper reaches of the creek, above 6,700 feet elevation in Van Horn Basin, are in the lower part of a several thousand foot thick package of lava flows known as Steens Basalt. The tertiary Steens Basalt tilts gently westward and lies in erosional unconformity on the older metamorphic rocks.

Pueblo Mountains, which includes the Van Horn Creek drainage, fall within the BLM VRM Class II. The objective of this class is to maintain the existing character of the landscape. Van Horn Creek is within the Pueblo Mountain WSA, with portions of this WSA being recommended to Congress as wilderness.

Recreation has been identified as an ORV. Recreational use within the river corridor is a primitive type such as hiking, backpacking, hunting, and sightseeing. Approximately 1 mile of Van Horn Creek, located in Van Horn Basin, is within close proximity of the Oregon High Desert National Recreational Trail.

The majority of Van Horn Creek is inaccessible for hiking due to the dense vegetation, boulders, and steep cliffs found in the drainage.

Van Horn Creek is 1 of 9 streams in the Alvord Basin that has provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed threatened species. Populations in the Alvord Basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote, Willow, and Whitehorse Basins from which the original transplants came.

Brown trout, which are not native to this system, are also present within this stream, along with the Lahonton cutthroat trout.

Van Horn Creek also provides habitat for Alvord chub, a BLM sensitive species. These fish have been seen in the lower reaches, but probably do not extend much upstream because of the steeper gradient in the lower canyon reaches.

Livestock grazing does occur and is within the Pueblo-Lone Mountain Allotment.

The area is closed to recreational angling for the protection of the Lahontan cutthroat trout.

Van Horn Creek has good wildlife habitat diversity, but is much lower in elevation than many other streams.

The creek provides habitat for California bighorn sheep from spring through the fall, but move out of the area during winter. Mule deer summer at upper elevations and winter at lower areas. Antelope make light use of the area.

Sage-grouse use upper elevation springs during the summer. Chukars are abundant in the rough lower canyon of Van Horn Creek. Valley quail are also present along the lower reaches.

Narrowleaf cottonwood, which only grows in a few areas in the region, occurs in the drainage. This botanical value is considered significant, but not exceptional.

No archaeological inventory has been completed for the area, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management would be similar to the present situation for most activities, but could be curtailed if there are impacts to the ORV.

Existing uses, such as recreation, would continue in the corridor at current levels, until such time that increased uses or activities could harm the ORV or free-flowing character of the stream. The corridor would still be managed under VRM Class II. WSAs would continue to be managed to protect their wilderness values until Congress makes a determination on designation as wilderness.

A scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000

Subtotal	=	$ 87,600
Annual Management:		
(signing, data collection, monitoring)	=	$ 10,000
Acquisition:		
Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	$ 5,280*
Total	=	$102,880

* The administrative cost of split-estate acquisition includes preparation of a mineral report by BLM staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel.

All sensitive species within the river corridor will be managed or action mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

Recreation values will continue to be managed under the existing guidelines and policy for recreation management. Scenic values will continue to be managed under existing guidelines for VRM Class II, and WSAs will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the eligible 9.9-mile segment of the Van Horn Creek is "not suitable" for inclusion in the National WSR system. It is felt that the recreation ORV is currently being managed under the existing guidelines and policy for recreation management. The 1-mile portion of the Oregon High Desert National Recreation Trail, which is in close proximity of Van Horn Creek, has been established since 1992. The original Oregon High Desert Trail was established in 1980.

The combined management activities as discussed will offer the same protection as found under the National WSRs Act.

WSR SUITABILITY EVALUATION COTTONWOOD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The ORV identified within this river corridor is the botanical value associated with the narrowleaf cottonwood/ Mormon tea community, and could contribute to the designation of a WSR.

Several State and BLM sensitive species are also found within the corridor.

With a WSR designation, it is possible that any management activities that could affect the ORV, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area increasing recreation activities within the corridor.

Manageability of the river corridor would be practical due to total public ownership.

Landownership Status and Current Management and Uses

The Andrews RA administers all of the 12.1 miles of Cottonwood Creek. Approximately 3,712 acres of public land are within the river corridor.

The area contains geologic characteristics similar to other creeks in this geographic region. Steens Basalt and tertiary sediment deposited in the ancestral Pueblo Valley have been exposed by the action of the stream.

Recreational use within the river corridor is of a primitive type such as hiking, backpacking, solitude, and hunting.

The diverse vegetation and geomorphic features influence the diversity of wildlife species. Deer and antelope summer at the upper elevations and winter at lower elevations along the river corridor. Bighorn sheep summer in the headwaters of Cottonwood Creek and winter outside the area. Sage-grouse use the drainage all year with the meadows being important habitat in the spring and summer. Chukars are abundant throughout the steep parts of the drainage and valley quail are found at mid- and lower elevations.

No fish are present within the Cottonwood Creek drainage.

The lower reach of the stream is an RNA/ACEC for the special narrowleaf cottonwood/Mormon tea complex plant community. Several State sensitive plant species of concern are present in the lower reaches of this drainage. The upper reaches contain alder and aspen groves.

All of the drainage is within the Pueblo Mountain WSA, with a portion of this area being recommended to Congress for wilderness designation.

Livestock grazing occurs within the Pueblo-Lone Mountain Allotment from April to June each year.

No archaeological inventory has been completed for the area, nor are significant historic or prehistoric values known to occur.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a WSR, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the ORV.

Recreation use would continue at current levels until such time that it was determined that impacts were occurring from overuse of the river corridor. The corridor will still be managed under VRM Class II. The WSA would continue to be managed to protect their wilderness values until Congress makes a determination on designation as wilderness.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply for flood control dams, or other major streambank modifications along the stream. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$ 87,600

Annual Management:

(signing, data collection, monitoring)	=	$ 10,000

Acquisition:

Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	$ 5,280*
Total	=	$102,880

* The administrative cost of split-estate acquisitions includes preparation of a mineral report by BLM staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.

No State or local agency has come forward and stated they would be willing to share in the cost of administering this stream should it become part of the system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel.

All sensitive species within the river corridor will be managed or action mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

The Pueblo Foothills RNA/ACEC contains most of the narrowleaf cottonwood and Mormon tea, as well as several State and BLM sensitive plant species. This particular value is currently being managed and protected under the Pueblo Foothill RNA/ACEC Management Plan.

Scenic values will continue to be managed under existing VRM guidelines for Class II, and WSAs will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Historic and Existing Rights

The area in and around the Cottonwood Creek drainage is high in mineralization and claims have been filed and worked in the past. Presently, there are no valid mining claims or any other existing rights within the study portions of the creek.

Suitability Determination

The BLM has determined that the eligible 12.1 miles of Cottonwood Creek is "not suitable" for inclusion in the National WSR system.

It is felt that the ORV for botanical resources is currently being managed under the existing Pueblo Foothills RNA/ACEC Management Plan. The RNA has been established since 1982, with the first management plan being developed in 1984 and updated in 1994.

The continued BLM riparian management and sensitive species policies will also add protection to the Cottonwood Creek area.

WSR SUITABILITY EVALUATION BIG TROUT CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The ORV identified within this river corridor is scenic quality, and could contribute to the designation of a WSR.

Big Trout Creek, which includes the East Fork, has a diverse landscape with rock outcrops and a thick blanket of quaking aspen throughout the canyon. The scenic quality is currently being managed under the VRM Class II. The objective of this class is to retain the existing character of the landscape.

With a WSR designation it is possible that any management activities that could affect the ORV may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area increasing recreation activities within the corridor.

Manageability of the river corridor would be a problem due the amount of private land within the river corridor.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 9.6 miles of Big Trout Creek and 2.9 miles of the East Fork of Trout Creek, while there are 4.2 miles of private land in Big Trout Creek and 3.6 miles within the East Fork of Trout Creek. This totals 20.3 miles of stream within the river corridor. The segment also runs through 3 different sections of split-estate land (State owns the minerals).

Approximately 4,998 acres of public land are within the river corridor and 1,493 acres of private land for a total of 6,491 acres.

Big Trout Creek and the East Fork of Trout Creek cut through gently-dipping Steens Basalt flows that are overlain by andesitic lava flows and rhyolitic ash-flow tuffs. The linear pattern of the creeks indicate that the location of Big Trout Creek and the East Fork of Trout Creek are fault-controlled, and geologic mapping in "The V" topographic quadrangle shows faults along portions of the creeks. The plateaus between the creeks are nearly flat because the ash-flow tuffs and lava flows capping the plateaus were deposited with a flat top and are thick and resistant to erosion. The ash-flow tuffs erupted from the McDermitt Caldera complex to the southeast, the Pueblo Caldera to the west, and the Whitehorse Caldera to the north.

As described earlier, Trout Creek Mountains fall within the BLM's VRM Class II. A good portion of Big Trout Creek is within the Mahogany Ridge WSA. None of this WSA is being recommended to Congress for wilderness designation.

Recreational use within the corridor includes primitive types such as hiking, backpacking, hunting, fishing, and sightseeing.

Big Trout Creek provides habitat for hybrid rainbow-cutthroat trout and Alvord chub. The Alvord chub is a BLM sensitive species.

Livestock grazing does occur and is within the Trout Creek AMP. As a result of recent changes in grazing management, the riparian area is rapidly improving.

Big Trout Creek has good diversity of wildlife habitats. The lower elevations provide deer winter range and the upper elevations provide deer summer range. Sage-grouse use meadows and springs near the headwaters as summer habitat and winter at lower elevations.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a WSR, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the ORV.

Existing uses, such as recreation, would continue in the corridor at current levels until such a time that increased uses or activities could harm the ORV or free-flowing character of the stream.

Designation as a scenic river area would allow continued management under the current VRM Class II. WSAs would continue to be managed to protect their wilderness values, until Congress makes a determination on designation as wilderness.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$ 87,600
Annual Management:		
(signing, data collection, monitoring)	=	$ 10,000

Acquisition:

Purchase or exchange of private land at $350./acre	=	$522,830
Administrative cost of split-estate acquisition	=	$ 5,280*
Total	=	$625,710

* The administrative cost of split-estate acquisition includes preparation of a mineral report by BLM staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel.

Scenic values will continue to be managed under the existing VRM guidelines for Class II, and WSAs will continue to be managed to protect their wilderness values until Congress makes a decision on wilderness designation.

Even though the area is not recommended by the BLM for designation as wilderness, this does not mean that Congress will not decide to designate this area as part of the national wilderness system.

All sensitive species within the river corridor will be managed or action mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the eligible 11.9-mile segment of the Big Trout Creek, on public land, which includes the East Fork tributary, is "not suitable" for inclusion in the National WSR system.

The area has a large amount of private land, primarily in the form of 40-acre parcels, scattered within the bottom of the river corridor. Manageability would be very difficult due to the broken ownership.

WSR SUITABILITY EVALUATION BIG ALVORD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The ORVs identified for this stream are the diversity and excellent condition of riparian and wildlife habitat found in Big Alvord Creek, especially the upper elevation.

The ORVs discussed make Big Alvord Creek a potential addition to the National WSR system. The excellent condition riparian and upland vegetation are similar to other drainage on the East Steens, but the diversity here is greater.

This drainage is one of 9 streams in the Alvord Basin which provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed fish species. Populations of this fish in the Alvord Basin are

addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote-Willow-Whitehorse Basin from which the original transplants came. The fish in Big Alvord Creek, however, are not native to the stream, so the effects of the introduction of the species on what was the native aquatic fauna are not known. It is not known if the fish are still present in the stream and an intensive examination has not been done. Even if the fish are present, the stream may not provide sufficient habitat for a long-term reliable source for future reintroduction.

With a WSR designation, it is possible that the management of activities that can affect the ORV, may have fewer options. Livestock grazing for cattle may be eliminated if this system was designated. Designation may also draw more people to the area causing increased use of the area for recreation.

The lower portion of this drainage, west of the county road, is private property. There is no public access from the county road to the BLM lands. Manageability problems will occur, if the segment is added to the system. Recreationists will have to find other ways around the private property to gain access to Big Alvord Creek.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 6.3 miles of Big Alvord Creek. The lower reach of the stream is on private land owned by Alvord Ranch.

Land in the Big Alvord Creek drainage is used for wildlife habitat, recreation, and livestock grazing. This drainage has high wildlife habitat diversity and the riparian habitat is in excellent condition. It is a steep, rough, and rocky drainage that drops about 5,000 feet within 3 horizontal miles. Wildlife using the area include California bighorn sheep, deer, chukar, quail, pikas, and many other birds and mammals. Bighorn sheep may be viewed within the canyon all year. Raptors nest in the cliffs and rims, and deer occupy the area during both summer and winter. Deer use is often heavy in the winter as snow forces them to move to lower elevations. Chukars are abundant on the steep, lower slopes and valley quail are found along the riparian areas and in the lower uplands. Pikas are found in the upper elevation talus slopes.

The vegetation in the drainage is diverse and in excellent condition. Plant communities include upper cirque communities, alpine areas, rocky rims and slopes, black cottonwood, alder, dogwood and willow riparian areas, bluebunch wheatgrass slopes, Idaho fescue slopes, mountain mahogany, and aspen patches.

The public land within the drainage is part of the High Steens WSA, the Steens Mountain ACEC for scenic values, and the potential Big Alvord Creek RNA for special plant communities.

The Big Alvord drainage is within the Alvord grazing allotment, but only the lowest reaches can be grazed by livestock due to steep topography.

The geology of this area is similar to other creeks in this region. The drainage contains glacial cirques, moraines, remnants of lava flows, and a large alluvial fan.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If the Big Alvord Creek drainage is designated as a Wild or Scenic River, the management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the ORVs. Livestock grazing could be eliminated due to the designation of the stream into the WSR system. Recreational use would continue at the current level until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Many parts of Steens Mountain could end up having one special designation stacked on top of another. The Big Alvord Creek drainage is proposed to become an ACEC for the excellent condition vegetation resources. It is also part of an existing ACEC for scenic qualities and is also recommended to be designated as wilderness.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$87,600

Annual Management:

(signing, data collection, monitoring)	=	$10,000

Acquisition:

Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	NA
Total	=	$97,600

No State or local agency has come forward and stated that they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel. The Big Alvord Creek drainage is currently within the High Steens WSA and is also being managed to protect these values until Congress makes a determination on wilderness designation.

The overall condition of the watershed and the riparian area is being managed in compliance with the ESA Section 7 Biological Opinion for the Lahontan cutthroat trout, BLM's policies for riparian areas, and the Terms and Conditions of the grazing permit consistent with the Biological Opinion.

Other sensitive species will be managed or actions mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

The ORVs within this drainage can be protected without the WSR designation because of existing management, and also because the majority of the stream is inaccessible to most types of disturbances.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the eligible 6.3 miles of Big Alvord Creek is "not suitable" for inclusion in the National WSR system. The presence of the Federally listed trout, the WSA status, the location and

topography of the drainage along the east face of the Steens, and the continued BLM riparian management policies will provide the same level of protection for the 2 ORVs as would protection under the WSRs Act.

Public access from the county road is not available to the public, and offers no legal access for visitor use.

WSR SUITABILITY EVALUATION HOME CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Fisheries, scenic quality, and recreation are the ORVs identified for Home Creek. Home Creek is 1 of only 3streams that provided habitat for the Catlow Valley redband trout, 1 of 2 native fish species of the Catlow Valley. Recently, a fourth stream has apparently lost its redband trout population. The limited and possibly diminishing distribution of the Catlow Valley redband trout would make Home Creek a potential for designation, because it offers the most habitat for this species. The stream historically, but no longer, contains the other native fish species, the Catlow tui chub.

Management for the protection of the stream habitat, however, is complicated by the landownership pattern. The BLM manages less than half of the corridor and less than half of the stream length. Most of the upper watershed is privately owned. Any adverse impacts to the condition of the watershed in this upper area can affect the downstream portion. Management to prevent such threats and to improve the overall condition of the stream is dependent upon cooperative and adaptive management with the private landowner through the South Steens AMP.

With a WSR designation, it is possible that management of activities that can affect the ORVs may have fewer options. For example, livestock grazing for cattle may be eliminated due to designation.

If the stream continues to be open for angling, designation may draw more anglers to the area, increase angling pressure, and possibly impact the Catlow redband trout population.

Management as a WSR would be difficult due to the large size of the pastures in which it is situated, the amount of private land in the watershed, and the free-roaming nature of the wild horse herd in the area.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 5.7 stream miles (2,096 acres), which is 38.5 percent of the 14.8 stream length (4,615 acres). The remaining 9.1 miles of stream are on private land. All 3 tributaries of Home Creek in the headwaters are located on private property. The upper two-thirds of the creek are located on private property, while the lower one-third is public land. The lower one-third portion of the creek flows through a deep Basalt canyon, terminating in Catlow Valley.

Home Creek begins on a plateau, before cutting down through a canyon that exhibits Steens Basalt lava flows within its walls. There is a linear plateau lying parallel to and northeast of Home Creek, consisting of sediments capped by the Devine Canyon Ash-Flow Tuff. The location and orientation of the plateau suggests that the tuff was deposited in an ancient drainage that had the same trend as the current drainage. It is common to see similar linear plateaus paralleling present-day drainages on the west slope of Steens Mountain. The present amount of stream flow in the creek is undersized for the size of the canyon that it flows through, indicating that the canyon was downcut by the creek mostly during the wetter Late Pleistocene, common for this geographic region. At the mouth of Home Creek Canyon there is a curved deposit of alluvium that may either be a delta that formed during the time of pluvial Catlow Lake or it may be recent faulting of a shoreline wave-cut terrace formed by pluvial Catlow Lake. Neither feature is unique to this geographic region.

The lower portion of Home Creek flows through a rough, rocky canyon with 300 to 1,300-foot canyon walls and has high habitat diversity in excellent riparian condition. California bighorn sheep use the lower canyon yearlong, and mule deer use it in winter. Steep canyon walls provide good nesting sites for raptors.

The lower canyon is excellent habitat for chukar and valley quail. The lower reach of the stream is in a naturally vegetated state due to the inaccessibility of the area to livestock and wild horses. Above Home Creek Canyon, the habitat on public land has a low diversity, the condition is poor, and woody riparian species are absent or sparse. This is partly due to livestock and wild horse grazing, but is expected to improve under a recently implemented AMP. Mule deer summer at the upper elevations, and some antelope summer use also occurs. Sage-grouse use the mid- and upper portions spring through fall. The Federally endangered American peregrine falcon and the Federally threatened northern bald eagle are documented migrants for the area. The BLM sensitive species that are found or possibly found are ferruginous hawk, western sage-grouse, California bighorn sheep, Townsend's big-eared bat, and Preble's shrew. Other Special Status species that are found or possibly occur are Swainson's hawk, merlin, yellow-billed cuckoo, bank swallow, mountain bluebird, western bluebird, loggerhead shrike, bobolink, and northern sagebrush lizard.

Home Creek has provided habitat for the Catlow redband trout and Catlow tui chub, both sensitive species and endemic to the Catlow Valley. Home Creek is one of only 4 streams in the valley that historically provided habitat for these species, only 3 of which still provide habitat for the Catlow redband trout. No exotic fish species are in the system. Part of the stream reaches on public land provide good quality redband trout habitat, associated with excellent riparian conditions. The upper reaches, which are privately owned, do not provide good quality fish habitat and can affect the lower reaches; however, they are managed as part of a public grazing allotment and have the potential for improvement.

Surveys in 1974, 1994, and 1995 indicate that the Catlow tui chub is not in Home Creek. However, it is possible that the tui chub was never abundant in the system because of the steep gradient in its lower reaches.

The botanical resources indigenous to Home Creek are not remarkable or unique to the area.

Prehistoric cultural sites are known to occur within this drainage. None have rare, unusual characteristics or exceptional human interest value. No historic sites have been recorded for this drainage.

From a scenic and recreation perspective, Home Creek, compared to the other creeks in the immediate area, offers diversity. Home Creek Canyon cuts into the plateau with a depth of 300 to 1,300 feet for over 2.5 miles. With sheer rock walls, the canyon rises 1,300 feet in about 0.25-mile. The remaining 13.5 miles of Home Creek and associated tributaries are in a fairly shallow canyon just over 100 feet in depth The variety of landforms and color, scenic views of the canyon, and its impressive size contribute to the high quality of the scenery. Compared to other streams in the broader area, such as the larger Donner und Blitzen National WSR, Home Creek is not considered as spectacular.

Recreation opportunities are accessible, but challenging primitive recreation, such as hiking, hunting, and fishing are available to those willing to dare the steep, rocky terrain. The length of the canyon and its ruggedness and steepness would be a challenge to the hiker and of interest to a backpacker. Hunting occurs in the area as a whole and to some degree in Home Creek, although this is limited due to the extremely rugged terrain. Fishing for inland redband trout occurs.

The public and private portions of the corridor are managed for livestock grazing as part of the 332,400-acre South Steens Allotment, which has an AMP. It is also part of the active HMA of the South Steens Wild Horse Herd Area. The corridor lies within the Home Creek WSA, but only the Federal portion falls within the area the BLM recommended as suitable for wilderness designation.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If Home Creek is designated as a WSR, the management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the ORVs. The Catlow redband trout would be managed and protected under the BLM's policy to manage sensitive species in a manner to conserve the species.

Livestock grazing, which includes cattle and wild horses, could be eliminated due to designation.

Until such time as Congress determines wilderness designation, the area would continue to be managed to protect those values. Recreation use would continue at its current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Designation as a scenic river, would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications along the river. There are currently no known applications for such stream modifications. No management activities that could adversely affect the fish habitat or free-flowing character of the river would be allowed on public land.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The basic objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$ 87,600

Annual Management:

(signing, data collection monitoring)	=	$ 10,000

Acquisition:

Purchase or exchange of private land, estimated at $225./acre	=	$556,707
Administrative cost of split-estate	=	NA
Total	=	$654,307

No State or local agency has come forward and stated that they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR, with experienced personnel. The Home Creek drainage is currently within the Home Creek WSA and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

The Catlow redband trout are currently being managed as a sensitive species. All sensitive species will be managed or actions mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

The South Steens AMP currently outlines the management of livestock, including cattle and wild horses. The AMP describes the present conditions for riparian, aquatic habitat, and upland, and outlines how this area will be monitored on a yearly basis.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the eligible 5.7 miles of Home Creek that is on public land is "not suitable" for inclusion in the National WSR system. The presence of the Catlow redband trout is currently being managed as a sensitive species. The amount of private land within the system would make it difficult to manage.

The continued BLM policies, as described previously, will provide the same level of protection for the 3 listed ORVs for this stream as would protection under the WSRs Act.

WSR SUITABILITY EVALUATION MCCOY CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The diversity of wildlife habitat is the ORV identified on public land within the river corridor, and could contribute to the designation of a WSR. McCoy Creek is a free-flowing stream that has a high diversity of wildlife habitat including subalpine, meadows, springs, beaver dams, black cottonwoods, aspen, willows, cliffs, and talus slopes.

With a WSR designation, it is possible that the management of activities that can affect the ORV may have fewer options. For example, livestock grazing for cattle may be eliminated if this system is designated.

The stream segment would be difficult to manage due to the broken ownership, and the amount of private land that is found throughout the system.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 18.2 miles of McCoy Creek, while approximately 12.6 miles are private property. Approximately 5,238.1 acres of public land are within the river corridor, while 3,161.4 acres are private land. Landownership is broken throughout the system, with the majority of BLM land being in the headwaters of the system. This segment runs through approximately 1 section of split-estate land (State owns the minerals).

The geologic values of McCoy Creek are similar to other streams on Steens Mountain. McCoy Creek, like Kiger and Cucamonga Creeks, is north-flowing and is probably located along faults with at least minor displacement. The cap of ice that extended down to about 6,000 feet elevation during the Fish Lake advance of the Pleistocene glaciation on the Steens moved down slope at right angles (westward) over the north-flowing McCoy Creek.

Later, during the Blitzen glacial advance, ice moved from the southern highlands and flowed northward along McCoy Creek for about 3 miles to about 6,760 feet elevation. Here the creek's cross-section shows an abrupt transition from U-shaped (glacially carved) to V-shaped (stream erosion). Lateral and ground moraines were locally deposited by the glacier. Steens Basalt lava flows are exposed in the canyon walls.

Steens Mountain, which includes the McCoy Creek drainage, falls within the BLM VRM Class II. The objective of this class is to maintain the existing character of the landscape.

There are many opportunities for primitive types of recreation such as hunting, hiking, horseback riding, and fishing, but none of these are considered exceptional or unusual. The view from above the canyon is scenic, but similar to other views in this area.

McCoy Creek is within the Chimney grazing allotment and is currently divided into 3 pastures.

Inland redband trout, a sensitive species, is found throughout McCoy Creek and its tributaries. Nineteen sensitive species including the Malheur mottled sculpin, Steens Mountain carabid beetle, and Preble's shrew may be found in the area.

Bald eagle, a threatened species, winter in the lower reaches of McCoy Creek, while the American peregrine falcon, an endangered species, is a migrant that uses the area during spring and fall.

The Special Status plant, Castilleja pilosa v. Steenensis, is present at upper elevations on the ridge.

The variety of plant communities and geomorphic features provides summer habitat for an excellent diversity of wildlife species including mule deer and Rocky Mountain elk; cavity-nesting species in the black cottonwoods, western junipers, and aspens; black rosy finch (a rare species on public land); and sage-grouse (a sensitive species) summering in the subalpine. Raptors nest in cliffs along the canyon.

The remaining botanical resources within the McCoy Creek system are interesting, but not unique to the area.

No archaeological inventory has been completed for the area, nor are significant historic values known to occur. One prehistoric site is located in the area and offers possibility for study or interpretation.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

Designation as a scenic river area would allow continuation of existing management for most activities, but could be curtailed if they impact the ORV. As mentioned, livestock grazing could be eliminated due to designation. Recreation use would continue at the current level until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to maintain the river's existing condition, and to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$ 66,000
Management and Support - 4 people for 1 WM @ $4,000	=	$ 16,000
Miscellaneous	=	$ 5,000

Subtotal	=	$ 87,600
Annual Management:		
(signing, data collection, monitoring)	=	$ 10,000
Acquisition:		
Purchase or exchange or private land, estimated at $300./acre	=	$ 949,320
Administrative cost of split-estate acquisition	=	$ 5,280*
Total	=	$1,052,200

* The administrative cost of split-estate acquisitions includes preparation of a mineral report by BLM staff. At this time, cost for the actual mineral estate cannot be determined because each parcel's mineral value is unknown without the detailed mineral report.

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment, should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel. If McCoy Creek was added to the National WSR system, the BLM would continue to manage the land and resources in the river corridor.

Portions of McCoy Creek are within the High Steens WSA and are being managed to protect wilderness values until Congress makes a determination on wilderness designation.

All sensitive species will be managed or actions mitigated in a manner to conserve the species so as not to contribute to the need to list the species. Whether or not the stream receives designation, the inland redband trout and the Malheur mottled sculpin would be managed and protected through application of BLM policy. Recreation use will continue at the current level until such a time that the use will impact the ORV within the McCoy Creek system.

Historic and Existing Use

There are no known historic or existing rights within the studied portions of the creek. The BLM would negotiate with the State of Oregon to seek fee title acquisition or exchange of the split-estate land.

Suitability Determination

The 18.2-mile segment of McCoy Creek, which is located on public land, is "not suitable" for inclusion in the National WSR system. The broken landownership (12.6 miles being private) would make it very difficult to manage. It is felt that the ORV listed for McCoy Creek is currently being protected under existing management.

The inland redband trout and the Malheur mottled sculpin will continue to be managed as sensitive species. All of the combined management activities for McCoy Creek, as previously described, will offer the same protection as found under the WSRs Act.

WSR SUITABILITY EVALUATION
MUD CREEK

Characteristics Which do or Do Not Make the Area a Worthy Addition to the System

The botanical values have been identified as the ORV within the river corridor. An isolated patch of white fir, approximately 15 acres, is located along Little Fir Creek, which is a tributary of Mud Creek.

An error in the inventory shows that the tributaries of Mud Creek within the headwaters should not have been inventoried due to the amount of private land. These tributaries include Fence, Big, and Little Fir Creeks. The inventory was to start below the confluences of these tributaries to the Malheur NWR boundary, a total of 7.2 miles. The isolated patch of white fir is located outside the inventoried stretch in Little Fir Creek.

With a WSR designation, it is possible that the management activities that can affect the ORVs may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area, which could have an impact on the area.

Landownership Status and Current Management and Uses

The Andrews RA administers approximately 7.2 miles of the lower reaches of Mud Creek. Approximately 2,133 acres of public land are within the river corridor. There is no private land within the lower reach. All the private land is located in the tributaries as described above.

The Steens Mountain fault-block tilts westward, forming a gentle western flank that extends upward from the Blitzen and Catlow Valleys for a distance of approximately 20 miles to the mountain crest. Mud Creek is incised into this western flank, exposing flows of Steens Basalt that are individually 10-30 feet thick and may be separated by soil horizons that developed by weathering during lulls in volcanic activity. The total thickness of the Steens Basalt flows is around 4,000 feet, but the creek walls expose no more than 400 feet maximum in any one stretch of this drainage. Parallel to the drainage are low mesas capped by ash-flowed tuff. During glaciation on Steens Mountain, less than 1-million years ago, an ice field called the Fish Lake Advance extended from the mountain crest westward almost 10 miles. The edge of the maximum extent of this ice field was at approximately 6,000 feet elevation, which is near the confluence of Fir and Fence Creeks. Land above this elevation may be hummocky and contain glacial erratics and kettle holes.

Steens Mountain, which includes the Mud Creek drainage, falls within the BLM VRM Class II. The objective of this class is to maintain the existing character of the landscape.

Recreational use within the river corridor is primitive in nature such as hiking, backpacking, hunting, fishing, and sightseeing. Portions of Mud Creek are also part of the Bridge Creek WSA.

Livestock grazing does occur and is within the Mud Creek Allotment. The lower 50 yards of Mud Creek are used as a watering gap for livestock, while the rest of the drainage is within an exclosure.

Mud Creek contains inland redband trout and Malheur mottled sculpin, both BLM sensitive species. The stream also contains the other native fish species of the Malheur Lake Basin.

Raptors nest along the steep canyon walls of Mud Creek Canyon. The upper portions of the area provide summer habitat for mule deer and Rocky Mountain elk. Mule deer make heavy use of the area during normal winters, but most of their use is outside the canyon. Wintering elk also make some use of the area.

Spotted frogs, a Federal candidate for T&E species, have been found in Mud Creek.

Chukars and valley quail are found in the area. Bald eagles, a threatened species, make occasional use during the winter. The botanical values were identified as outstandingly remarkable, because of the isolated groves of white fir found at the confluence of Little Fir Creek, outside the inventoried section for Mud Creek.

The remaining botanical resources on public land within the Mud Creek system are not remarkable or unique to the area.

No archaeological inventory has been completed, nor are historic or prehistoric values of any significance known to occur within this area.

Reasonably Foreseeable Uses of the Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a scenic river, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the system.

Recreation use would continue at the current level until such a time that it was determined impacts were occurring from overuse of the river corridor. Livestock grazing is currently managed under the Mud Creek AMP, but could be eliminated due to designation. WSAs and fish and wildlife habitat would be maintained or possibly enhanced through long-term protection under the WSRs Act.

Scenic designation would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other major streambank modifications along the river. Currently, there are no known applications for such stream modifications.

Groups, Individuals or Other Agencies' Interest in designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended river. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$87,600

Annual Management:

(signing, data collection, monitoring)	=	$10,000

Acquisition:

Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	NA
Total	=	$97,600

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel. Mud Creek is within the Bridge Creek WSA, and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

All sensitive species will be managed or actions mitigated in a manner to conserve the species so as not to contribute to the need to list the species. Whether or not the stream receives Wild and Scenic designation**,** the inland redband trout and Malheur mottled sculpin would be managed and protected through application of BLM policies.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The BLM has determined that the 7.2-mile segment of Mud Creek is "not suitable" for inclusion in the National WSR system. An error was made in the inventory. The botanical ORV, which describes the isolated patch of white fir, is located outside the segment of Mud Creek that has been inventoried.

The 7.2 mile stretch of Mud Creek has significant botanical values, which are common to the area. There are no ORVs for Mud Creek.

WSR SUITABILITY EVALUATION PIKE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Wildlife habitat diversity is the ORV identified within the river corridor, and could contribute to the designation of a WSR. The excellent condition of riparian and upland vegetation is similar to other drainages located on the east side of Steens Mountain.

This drainage is 1 of 9 streams in the Alvord Basin which provided habitat for a transplanted population of Lahontan cutthroat trout, a Federally listed fish species. Populations of this fish in the Alvord Basin are addressed in the Recovery Plan for the species as being important as a source for possible reintroduction of the species into streams in the Coyote-Willow-Whitehorse Basin from which the original transplants came. The fish in Pike Creek are not native to the stream, so the effects of the introduction of the species on what is the native aquatic fauna are not known.

With a WSR designation, it is possible that the management activities that could impact the ORVs, may have fewer options. For example, livestock grazing for cattle may be eliminated as a result of designation. Designation may also draw more people to the area causing increased recreation.

The lower portion of this segment, west of the county road, is private property. There is no legal public access to the BLM land from the county road. At the present time, this is one place that the Alvord Ranch is allowing the public to access (a favorite camping site located on BLM land next to Pike Creek), however, this privilege could be denied at any time.

Landownership Status and Current Management and Uses

The BLM administers approximately 4.17 miles of Pike Creek. This land is all west of the county road and does not include the private property.

Land in the Pike Creek drainage is used for livestock grazing, recreation, and as wildlife habitat.

Pike Creek contains geologic values similar to other creeks in this region. Above about 6,400 feet elevation the drainage exposes lava flows and feeder dikes of the Steens Basalt with glacial cirques in the headwaters. Between 6,400 and 6,000 feet elevation are andesitic lava flows and pyroclastic rocks of the Steens Mountain Volcanics. Between 6,000 and 4,800 feet elevation are exposures of rhyolitic to dacitic lava flows and domes and minor tuffaceous sediments of the Pike Creek Formation. Between 4,800 feet and 4,400 feet, the creek is in exposures of tuffaceous sediments of the Alvord Creek Formation. Below this, the creek is in landslide deposits and alluvial fan deposits to the valley floor.

The area is within the High Steens WSA and is being managed to protect wilderness values until Congress makes a determination. It is also within a VRM Class II. The objective of this class is to maintain the existing character of the landscape.

Portions of Pike Creek are also within the Steens Summit Scenic ACEC which includes 50,500 acres of the upper elevations of Steens.

Pike Creek is a free-flowing stream that has a high diversity of wildlife habitat including subalpine, meadows, springs, narrowleaf cottonwoods, willows, cliffs, and talus. This variety of plant communities and geomorphic features provides habitat for an excellent diversity of wildlife species. California bighorn sheep use the area yearlong. Heavy use by wintering mule deer occurs at lower elevations. Cavity nesting species use cottonwoods and western junipers. Raptors, including golden eagles and prairie falcon, nest in abundant cliffs. Chukar are common. Pika may be found at upper elevation talus slopes. Sixteen sensitive wildlife species may be found using the area including 3 Federally listed species. Bald eagle (Federal threatened) and American peregrine falcon (Federal endangered) are migrants that use the area, but sightings are uncommon.

Sensitive species include loggerhead shrike, yellow-billed cuckoo, ferruginous hawk, and others.

The stream contains Lahontan cutthroat trout as described earlier. This lower reach of Pike Creek was burned by wildfire in 1992, reducing the density and height of woody riparian species. Habitat of Lahontan cutthroat trout is of high quality, but is limited due to the small stream size and steep gradient.

There are no sensitive plant species identified in the area, but narrowleaf cottonwoods are rare in southeast Oregon. One prehistoric archaeological site is located within the corridor, but it is not considered to be rare, and quite common to the area.

Most of Pike Creek has had considerable exploration for uranium and mercury with no recorded production. There are at least 2 prospect tunnels and about 1,000 feet of bulldozer cuts in addition to a road that extends about a mile up the canyon. The old road is mostly more than 50 feet above the creek and is not accessible beyond the canyon mouth. It probably once extended the entire length of the canyon but has since been obliterated by landslides and rockfalls.

Recreation use includes car camping, rockhounding, and hunting. Day hiking and backpacking are available, but limited opportunities are available compared to other places in the area. Angling is currently not permitted by the State in order to protect the Lahontan cutthroat trout.

Pike Creek is part of the Alvord Allotment which is grazed by cattle in the spring. The lower 5 percent is grazed while the upper portion is not used due to steep, rocky slopes.

Reasonably Foreseeable Uses of Land and Water which would be Affected by Designation and the Values that would be Affected if the Area is not Designated

If designated as a WSR, the management would be similar to the present situation, unless there are impacts to the ORV. Livestock grazing could be eliminated due to designation. Recreational use would continue at the current level, until such a time that it was determined that impacts were occurring from overuse of the river corridor.

Until such time as Congress determines wilderness designation the area would continue to be managed to protect those values.

Designation as a scenic river would preclude major diversions, hydroelectric power facilities, water supply or flood control dams, or other streambank modifications. No management activities that could adversely affect the fish habitat or free-flowing character of the river would be allowed on public land.

Groups, Individuals, or Other Agencies' Interest in Designation or Nondesignation

The proponents of the Oregon High Desert Protection Act have recommended this stream as a National WSR. They published a brochure in the early 1990's showing a list of their recommended rivers. Currently, they have no sponsor for their proposal.

Cost of Administration

The objective of Federal river designation is to protect and enhance the ORVs. Developing a management plan will depend upon the complexity of the issues associated with each designation.

Developing a management plan will require the following estimated cost:

Plan Development:

Resource Specialists - 6 people for 3 WMs @ $3,700	=	$66,600
Management and Support - 4 people for 1 WM @ $4,000	=	$16,000
Miscellaneous	=	$ 5,000
Subtotal	=	$87,600

Annual Management:

(signing, data collection, monitoring)	=	$10,000

Acquisition:

Purchase or exchange of private land	=	NA
Administrative cost of split-estate acquisition	=	NA
Total	=	$97,600

No State or local agency has come forward and stated they would be willing to share in the cost of administering this river segment should it become part of the national system.

Bureau of Land Management's Ability to Manage

The BLM currently manages the Donner und Blitzen National WSR with experienced personnel.

Whether or not the system becomes designated, the overall watershed and the riparian area would be managed in compliance with the Biological Opinion to protect the habitat of the Lahontan cutthroat trout under Section 7 of the ESA.

Other sensitive species will also be managed or actions mitigated in a manner to conserve the species so as not to contribute to the need to list the species.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek. Historic mining has occurred in the past, as described earlier, but no valid mining claims are known to exist.

Suitability Determination

The BLM has determined that the eligible 4.2-mile segment of Pike Creek is "not suitable" for inclusion in the National WSR system.

The scars left from the exploration of minerals detract from the character of the stream. They include the old road, prospect tunnels, and disturbances from bulldozer work.

The issue with public access is uncertain. As mentioned, no legal access exists from the county road. Visitors to the area will have to find other ways to enjoy the recreational values of Pike Creek.

The presence of the Federally listed trout, the WSA status, the similarity of the adjacent streams along the east face of the Steens, and the continued BLM riparian management policies will provide the same level of protection for the ORV as would designation under the WSRs Act.

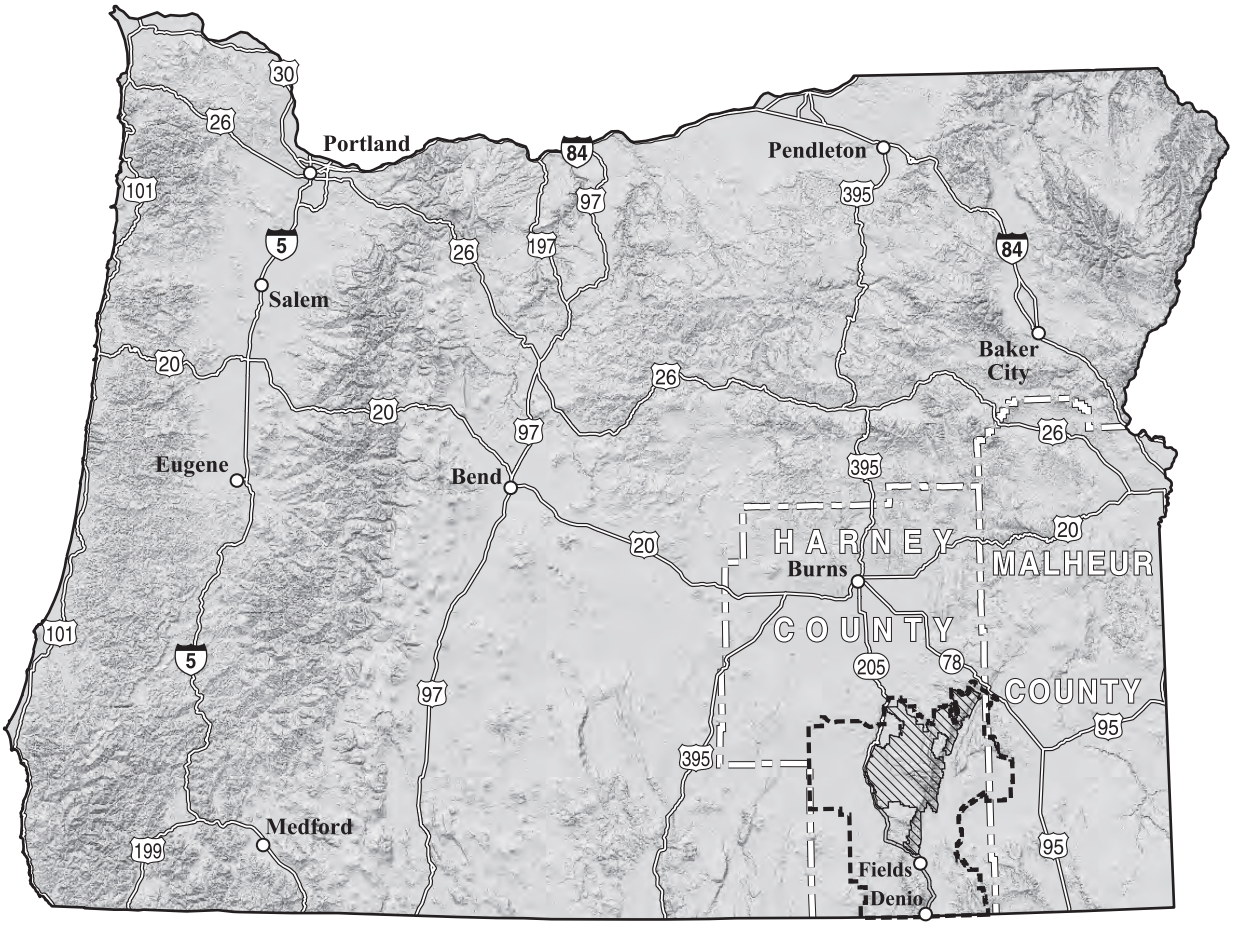
Appendix O - Final Plan Table of Data Needs/ Status

PLANNING QUESTION ADDRESSED	Data Set(s) Used to Address Planning Question	Are FGDC Metadata Available? Yes/No	Name/Source of Data Standard?	Does Available Data Meet a National or Regional Standard?
1) BLM management of resource uses to improve and maintain the integrity of upland ecological communities;	PROPOSED RANGE IMPROVEMENT Layer - Burns District GIS	Yes	BLM	N/A
	VEGETATION Layer - Burns District GIS	Yes	BLM	Yes
	SOIL Layer - Burns District GIS	Yes	BLM/NRCS	Yes
	ALLOTMENT Layer - Burns District GIS	Yes	BLM	Yes
2) BLM management of resource uses to improve or maintain the integrity of riparian ecological communities;	EXISTING RANGE IMPROVEMENT Layer - Burns District GIS	Yes	BLM	Yes
	STREAM Layer - Burns District GIS	Yes	BLM	Yes
	VEGETATION Layer - Burns District GIS	Yes	BLM	Yes
	SOIL Layer - Burns District GIS	Yes	BLM/NRCS	Yes
3) BLM maintenance or improvement of woodland communities and how woodlands will be managed to maintain or improve rangeland and wildlife habitat;	VEGETATION Layer - Burns District GIS	Yes	BLM	Yes
	WILDLIFE Layer - Burns District GIS	Yes	BLM	Yes
	Pt. Reyes Bird Surveys on Steens Mtn	No	Pt. Reyes Bird Observatory	N/A
	Bird Surveys on Burns District			
	ACEC/RNA Layer - Burns District GIS	No	BLM	N/A
	SOIL Layer - Burns District GIS	Yes	BLM	Yes
		Yes	BLM/NRCS	Yes
4) BLM provisions for wildlife habitat while considering other resource uses;	WILDLIFE Layer - Burns District GIS	Yes	BLM	Yes
	ODFW Plan for Elk, Mule Deer, Antelope, Bighorn Sheep in Oregon	No	ODFW	Yes
	VEGETATION Layer - Burns District GIS	Yes	BLM	Yes
	Breeding Bird Surveys in Planning Area	Yes	USGS	Yes

5) Public land management contributions to the preservation of and increase in healthy, sustainable populations of species now considered in special status. Land management for successful prevention of habitat destruction, which would lead to listing of additional species;	ODFW Lek Counts	No	ODFW	Yes
	WILDLIFE Laye – Burns District GIS	Yes	BLM	Yes
	USFWS - Winter Bald Eagle Counts	No	USFWS	Yes
	ODFW Special Status Sp. Sightings	No	ODFW	No
	BLM Raptor Surveys	No	Local files	Yes
	BLM Bat Surveys	No	Local files	No
	SPECIAL STATUS PLANTS Layer - Burns District GIS	Yes	BLM	N/A
	STREAM Layer - Burns District GIS	Yes	BLM	Yes
	SAGE GROUSE Layer - Burns District GIS	Yes	BLM	Yes
	PYGMY RABBIT Layer - Burns District GIS	Yes	BLM	Yes
	STREAM Layer - Burns District GIS	Yes	BLM	Yes
6) BLM management of energy and mineral resources on public land;	MINERAL STIPULATIONS FOR LEASABLES, LOCATABLES AND SALEABLES Layer - Burns District GIS	Yes	BLM	Yes
	SUBSURFACE MINERAL ESTATE Layer - Burns District GIS	Yes	BLM	Yes
	ABANDONED MINE LAND INVENTORY Layer - Burns District GIS	Yes	BLM	Yes
	LOCATABLE MINERAL POTENTIAL Layer - Burns District GIS	Yes	BLM	Yes
	GEOTHERMAL Layer - Burns District GIS	Yes	BLM	Yes
	SODIUM Layer - Burns District GIS	Yes	BLM	Yes
	DIATOM Layer - Burns District GIS	Yes	BLM	Yes
	CLAIM Layer - Burns District GIS	Yes	BLM	Yes
	STEENS MINERAL WITHDRAWAL Layer - Burns District GIS	Yes	BLM	Yes
	MINERAL MATERIAL SITES Layer - Burns District GIS	Yes	BLM	Yes

7) Special area management within the CMPA and in the AMU;	SPECIAL RECREATION MANAGEMENT AREAS Layer - Burns District GIS	Yes	BLM	Yes
	WILDERNESS STUDY AREAS Layer - Burns District GIS	Yes	BLM	Yes
	WILDERNESS CHARACTERISTICS Layer - Burns District GIS	Yes	BLM	Yes
	ACEC/RNA Layer - Burns District GIS	Yes	BLM	Yes
	WILDLANDS JUNIPER MANAGEMENT AREA Layer - Burns District GIS	Yes	BLM	Yes
	WILD AND SCENIC RIVER CORRIDOR Layer - Burns District GIS	Yes	BLM	Yes
	HISTORIC DISTRICT Layer - Burns District GIS	Yes	BLM	Yes
	NO LIVESTOCK GRAZING AREA Layer - Burns District GIS	Yes	BLM	Yes
	WILDERNESS MANAGEMENT AREAS Layer - Burns District GIS	Yes	BLM	Yes
8) BLM management of wildland fire, fuels, and prescribed fire to meet and be consistent with resource objectives, while protecting life and property. BLM and private landowners working together to manage wildland fires;	VEGETATION Layer - Burns District GIS	Yes	BLM	Yes
	SOIL Layer - Burns District GIS	Yes	BLM/NRCS	Yes
	FIRE Layer - Burns District GIS	Yes	BLM	N/A
	Historical Weather	No	Local Files	No
9) BLM management of recreation opportunities for both developed and dispersed recreation uses while meeting other resource objectives;	RECREATION POINTS Layer - Burns District GIS	Yes	BLM	N/A
	RECREATION AREAS Layer - Burns District GIS	Yes	BLM	N/A
	RECREATION LINES Layer - Burns District GIS	Yes	BLM	N/A
	VISUAL RESOURCE MANAGEMENT Layer - Burns District GIS	Yes	BLM	N/A
	RECREATION MANAGEMENT INFORMATION SYSTEM BLM database	No	BLM	Yes
	Wilderness Visitor Use Monitoring	No	Local Files	N/A
	WILDERNESS Layer - Burns District GIS	Yes	BLM	Yes
10) BLM administration of land status and values to improve management efficiency and cooperation with private landowners;	OWNERSHIP Layer - Burns District GIS	Yes	BLM	Yes
	SUBSURFACE MINERAL ESTATE Layer - Burns District GIS	Yes	BLM	Yes
	STEENS MINERAL WITHDRAWAL Layer - Burns District GIS	Yes	BLM	Yes
	EASEMENT Layer - Burns District GIS	Yes	BLM	Yes
	TAXLOT Layer - Harney County GIS	Yes	Harney County	Yes
11) Management of wild horses in the HMAs for maintenance of a sustainable, viable, healthy population for existence in thriving, natural, ecological balance with their habitat	HORSE OBSERVATIONS Layer - Burns District GIS	Yes	BLM	N/A
	WILDHORSE HERD/HERD MANAGEMENT AREA Layer - Burns District GIS	Yes	BLM	Yes

and other multiple uses of the area;				
12) Management of significant cultural sites and localities for protection and preservation. Use of interpretation as an education tool to increase the public=s awareness and appreciation of the Planning Area=s cultural resources. Gaining the scientific information to form the basis of this interpretation. Consideration and protection of American Indian interests, traditional practice sites, land forms and resources;	Central Oregon Heritage Group Database ARCHAEOLOGY Layer - Burns District GIS Burns District Records	Yes Yes No	BLM BLM BLM & Oregon State Historic Preservation Office	Yes N/A Yes
13) Controlling and eradicating noxious weeds;	WEED Layer - Burns District BLM	Yes	BLM	Yes
14) Management of OHV use in the Planning Area;	OFF HIGHWAY VEHICLE Layer - Burns District BLM ROAD Layer - Burns District BLM	Yes Yes	BLM BLM	N/A Yes
15) BLM management of resource uses to improve unacceptable aquatic habitat and water quality conditions (such as stream reaches listed as Water Quality Limited (303(d) by the DEQ or maintain aquatic habitat and water quality that are currently in acceptable conditions;	STREAM Layer - Burns District GIS	Yes	BLM	Yes



40 0 40 80 Miles

40 0 40 80 Kilometers

LEGEND

Planning Area

Cooperative Management and Protection Area

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Map 1: General Vicinity

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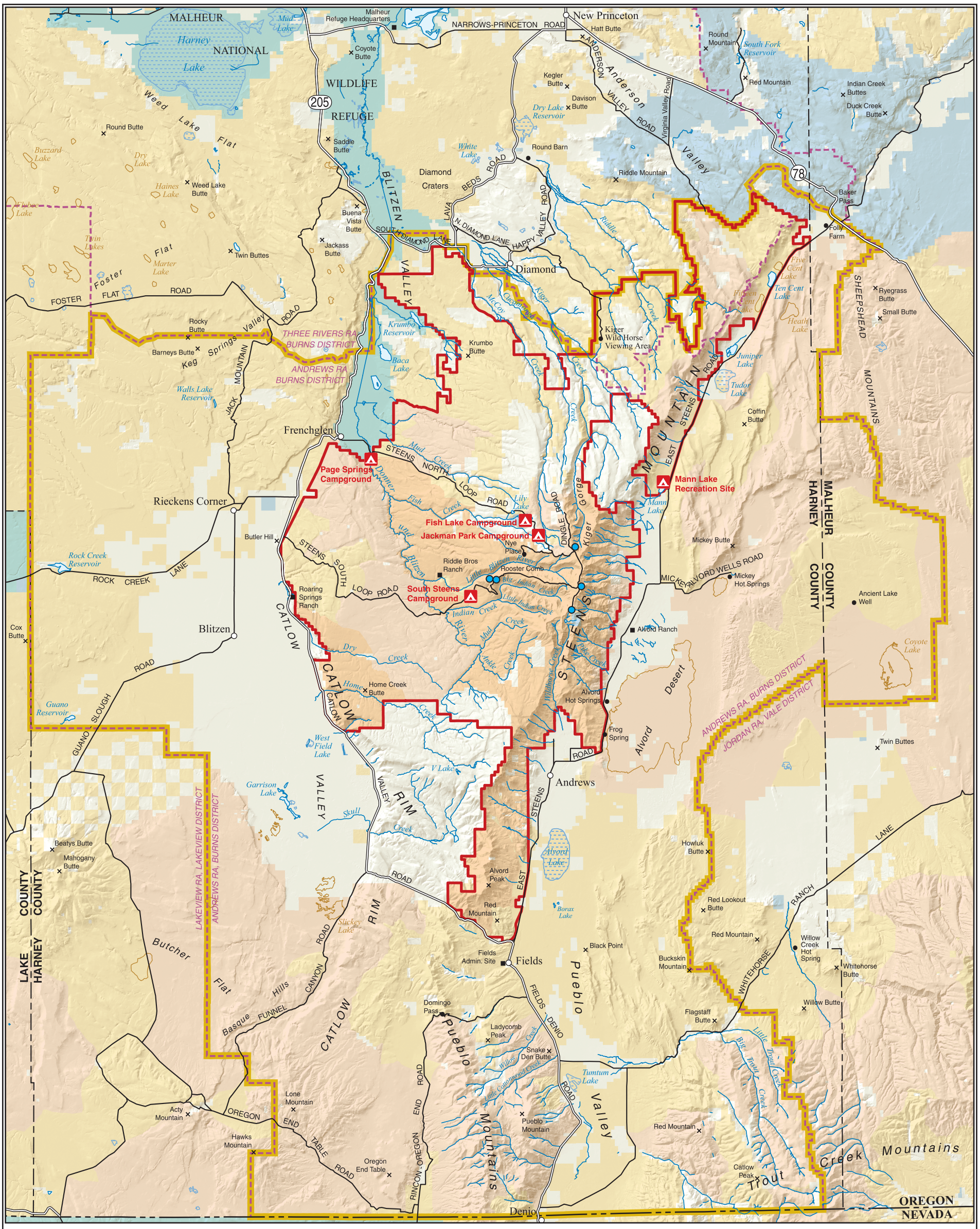

LEGEND

- Campground
- Overlook
- State Tour Route
- State Scenic Byway
- Backcountry Byway
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 2: Administered Lands

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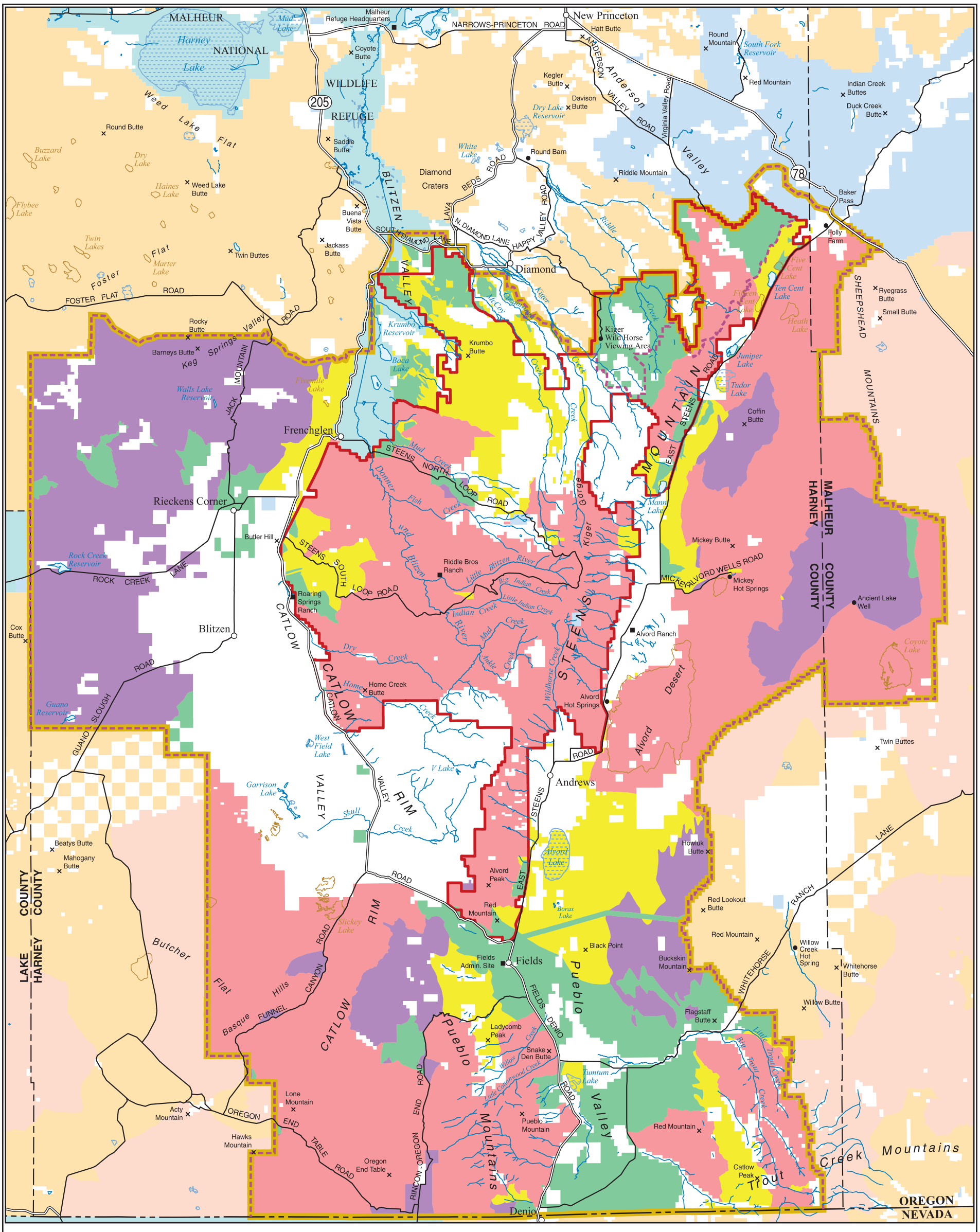

LEGEND

Visual Resource Management

- Class I
- Class II
- Class III
- Class IV
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land Outside the Planning Area Boundary
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 3: Visual Resource Management Classes

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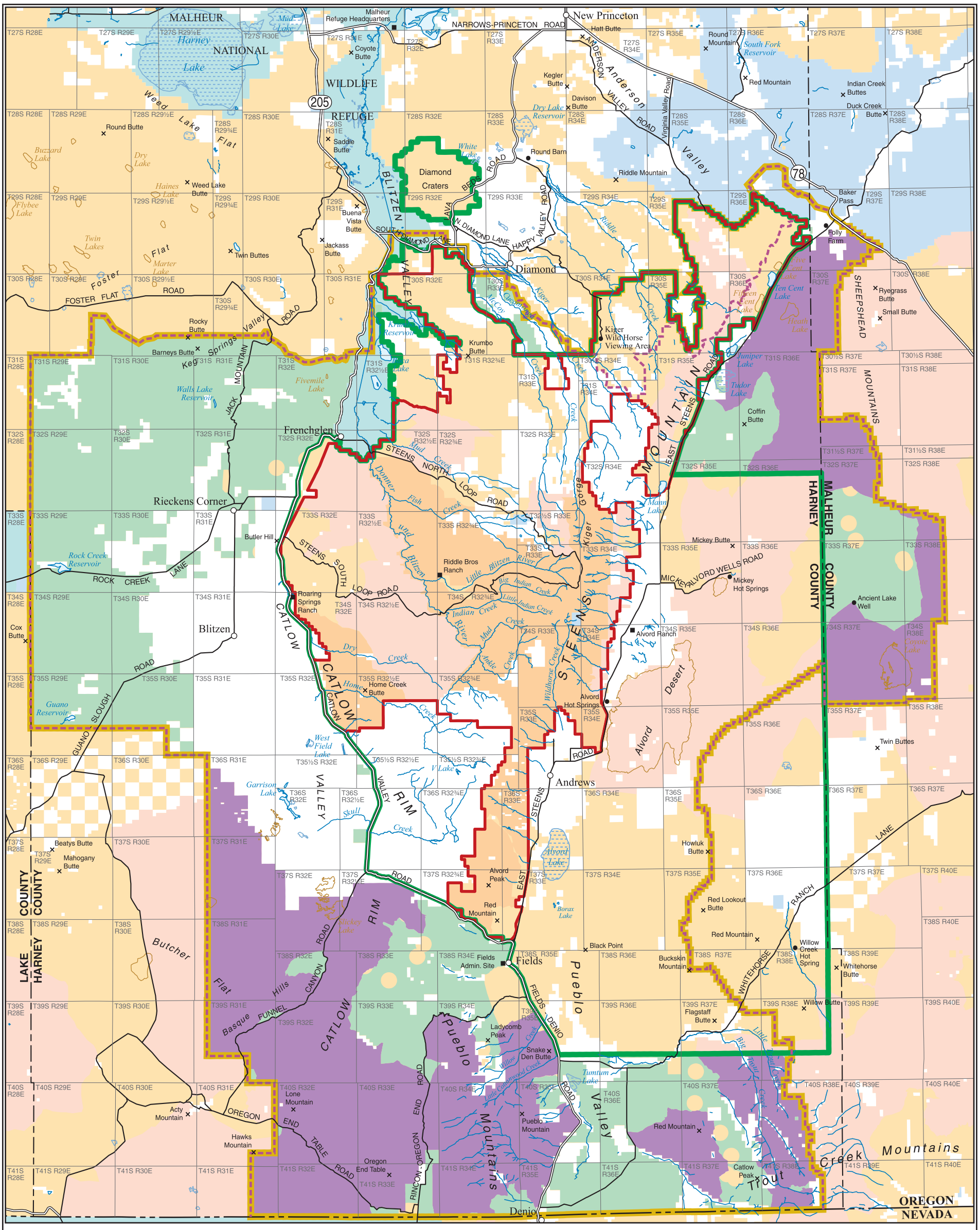
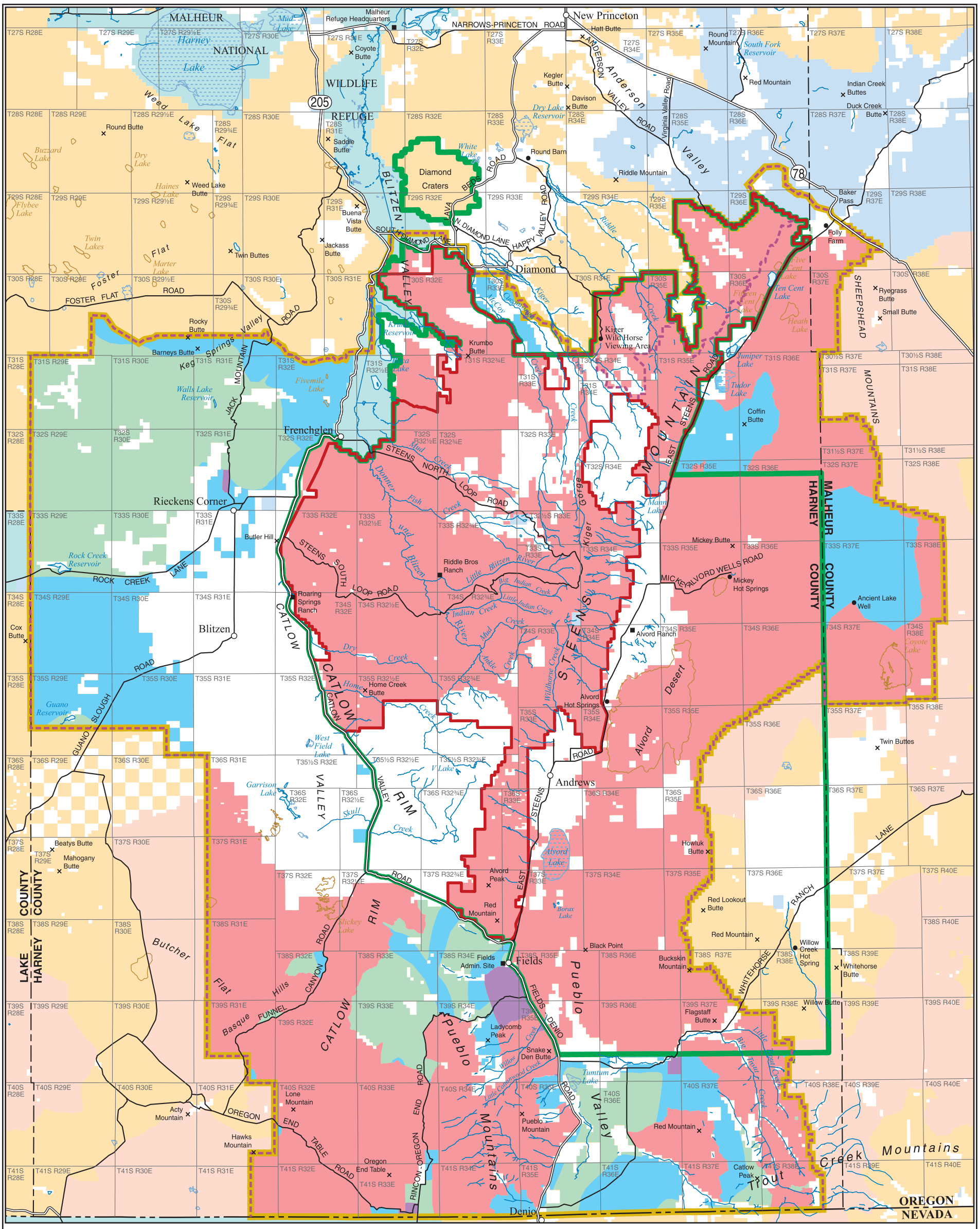


Map 4: Locatable Minerals Open Areas



LEGEND

- Mineral Withdrawal Area
- Not Available due to Steens Mineral Withdrawal Area and WSA IMP
- Open With No Surface Occupancy
- Open With Seasonal or Special Stipulations or Both
- Open With Standard Stipulations
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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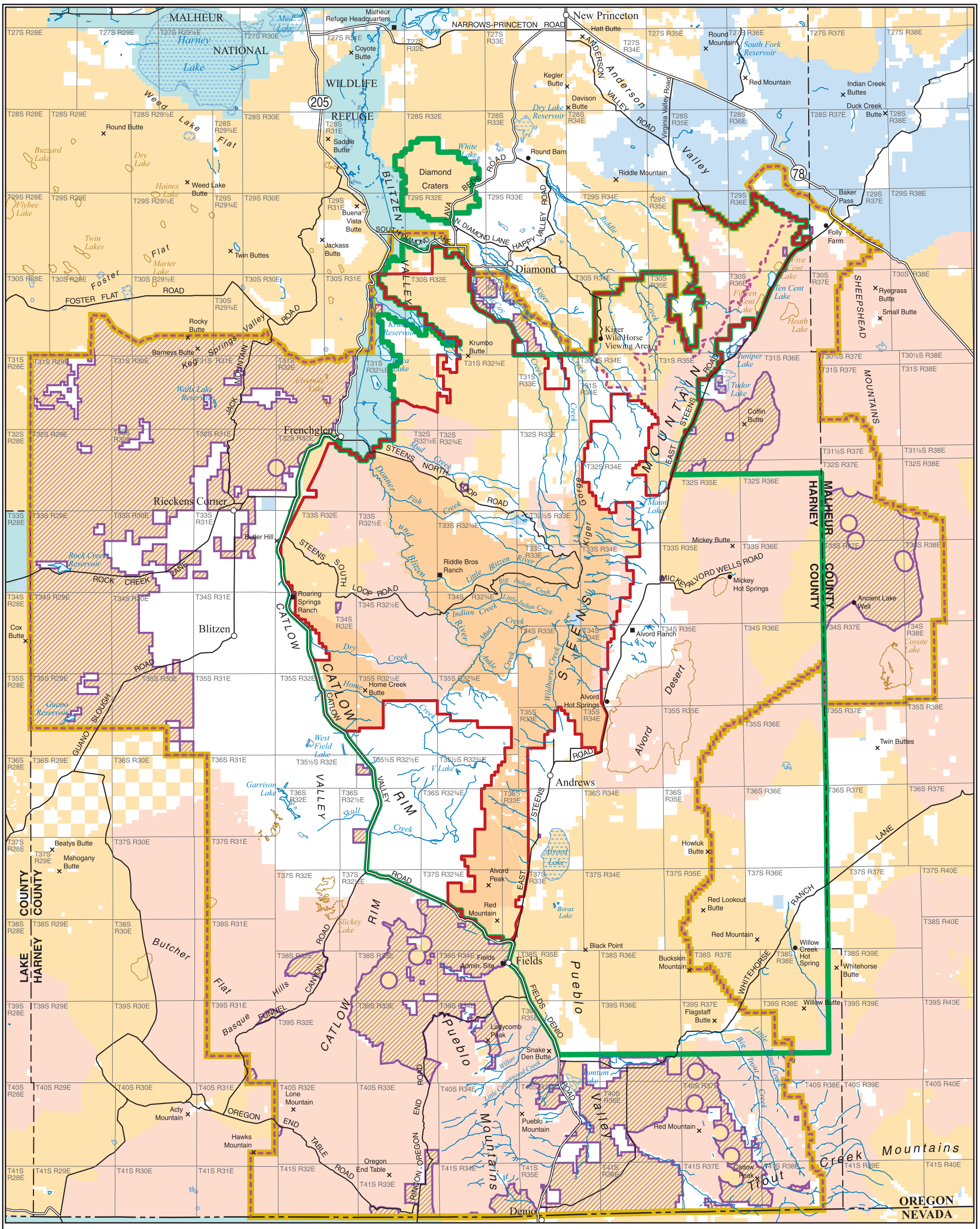
Map 5: Mineral Leasing Categories



LEGEND

- Mineral Withdrawal Area Not Available
- BLM Administered Land
- Wilderness Not Available
- Wilderness Study Area Not Available
- Open
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 6: Saleable Minerals Open Areas

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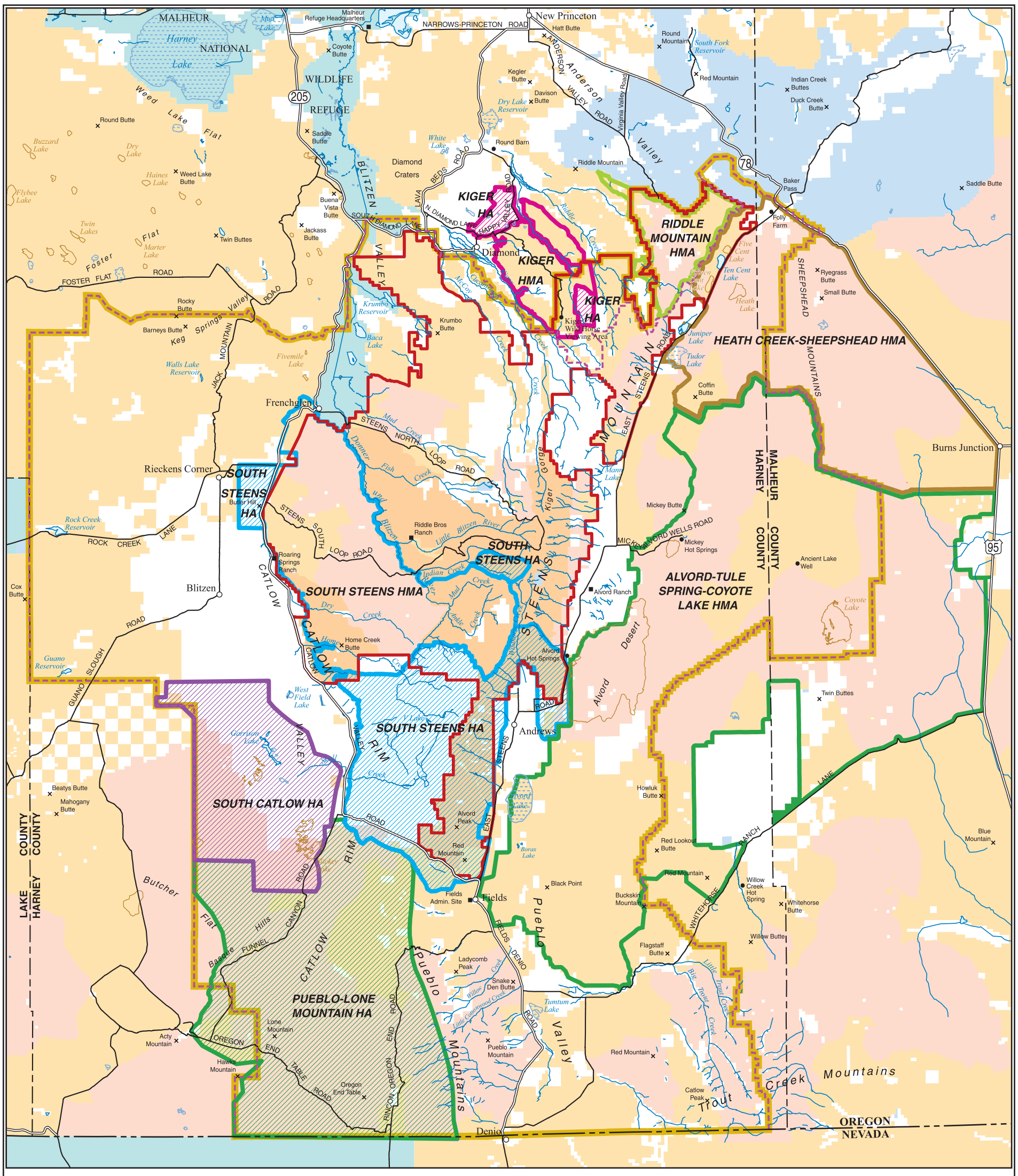

LEGEND

Herd Management Area

- Alvord-Tule Spring-Coyote Lake
- Riddle Mountain
- Kiger
- South Steens
- Heath Creek-Sheepshead

Herd Area

- Pueblo-Lone Mountain
- South Catlow
- Kiger
- South Steens

- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 7: Herd Areas and Herd Management Areas

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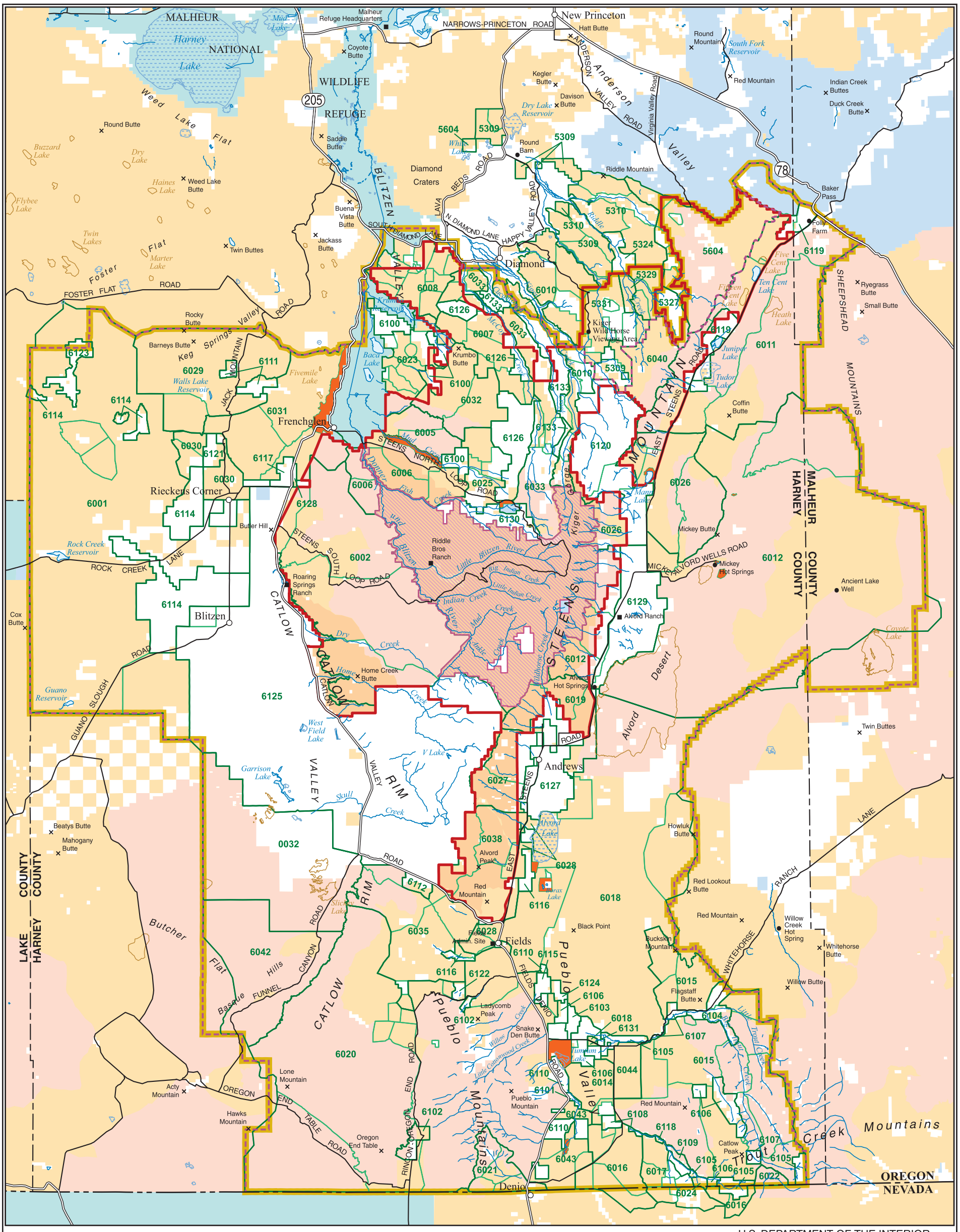

LEGEND

- Pasture Boundary
- 6020 — Grazing Allotment and Number
- Grazing Exclusion Area
- Legislated No Livestock Grazing Area
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- Paved Road
- Non-Paved Road
- BLM Administered Land
  - Wilderness
  - Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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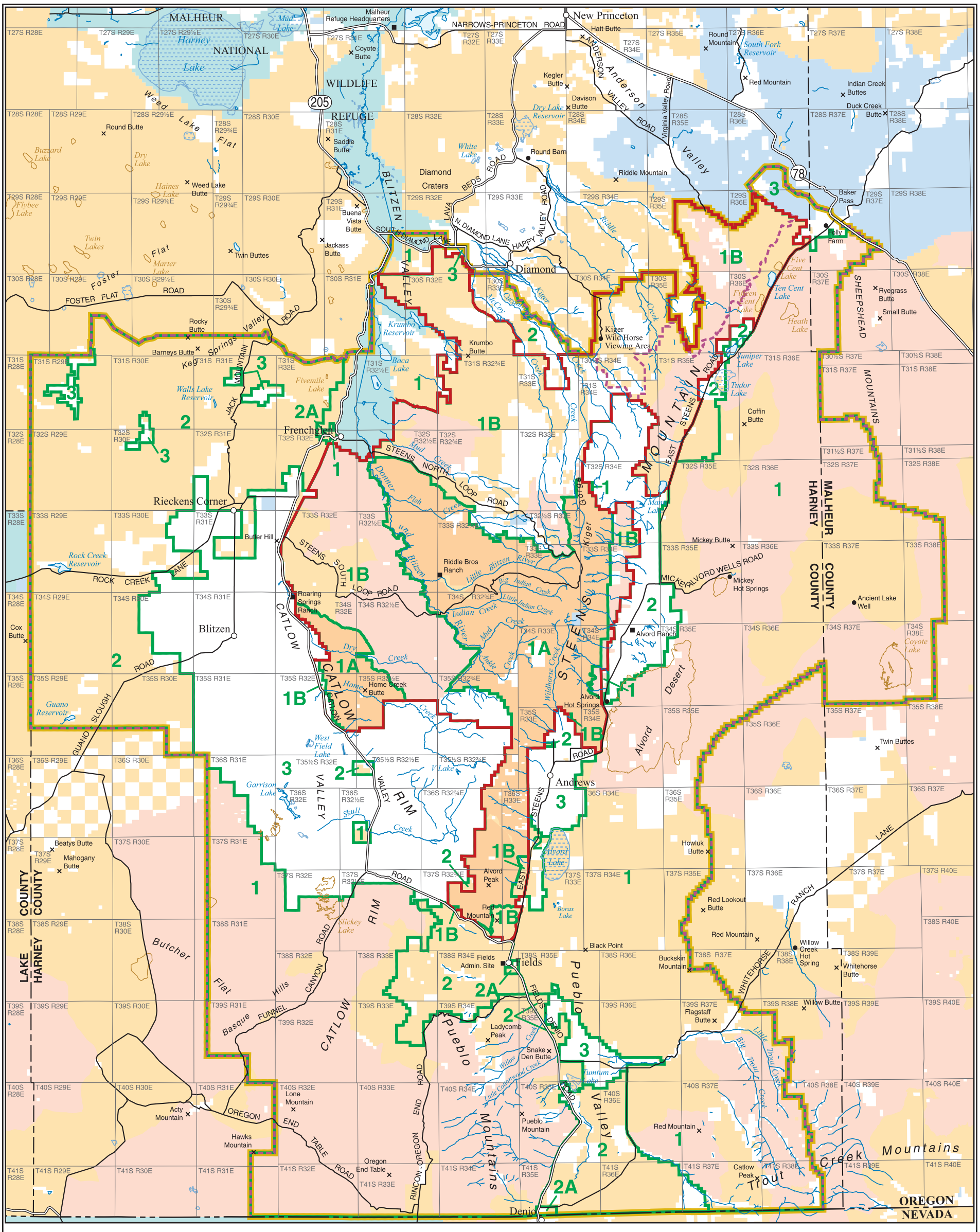
Map 8: Grazing Allotment Boundaries



LEGEND

- Land Tenure Zone
- 1 — Retention / Acquisition
- 1A — Retention / Acquisition Within Steens Mountain Wilderness
- 1B — Retention / Acquisition Within CMPA
- 2 — Disposal by Exchange
- 2A — Community Expansion
- 3 — Disposal
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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BURNS DISTRICT

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2005

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Map 9: Land Tenure Zone Boundaries

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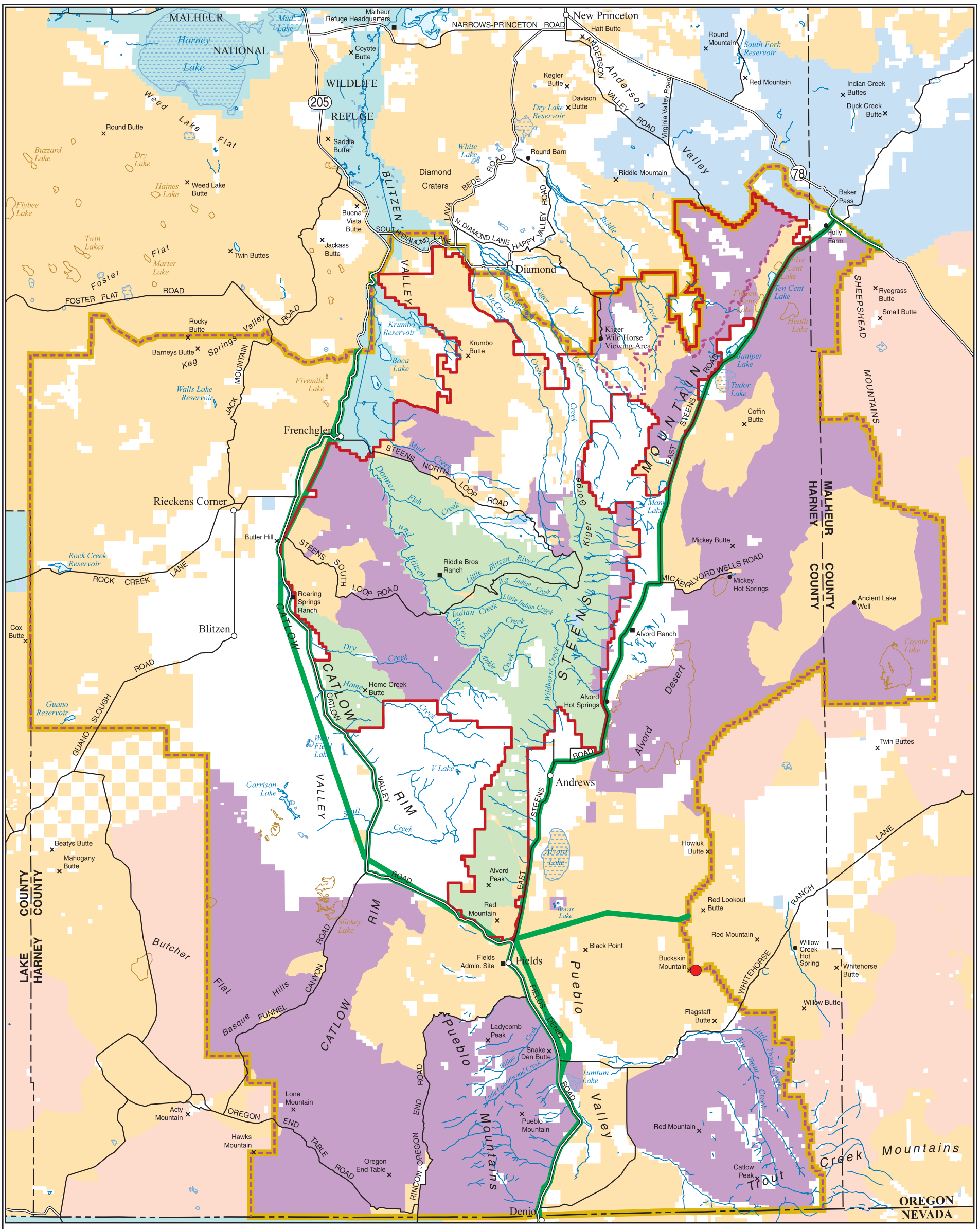

LEGEND

- Right-of-Way Corridor
- BLM Designated Communication Site
- BLM Designated Avoidance Area
- BLM Designated Exclusion Area
- Paved Road
- Non-Paved Road
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 10: Right-of-Way Corridors and Realty Use Authorization Avoidance/Exclusion Areas

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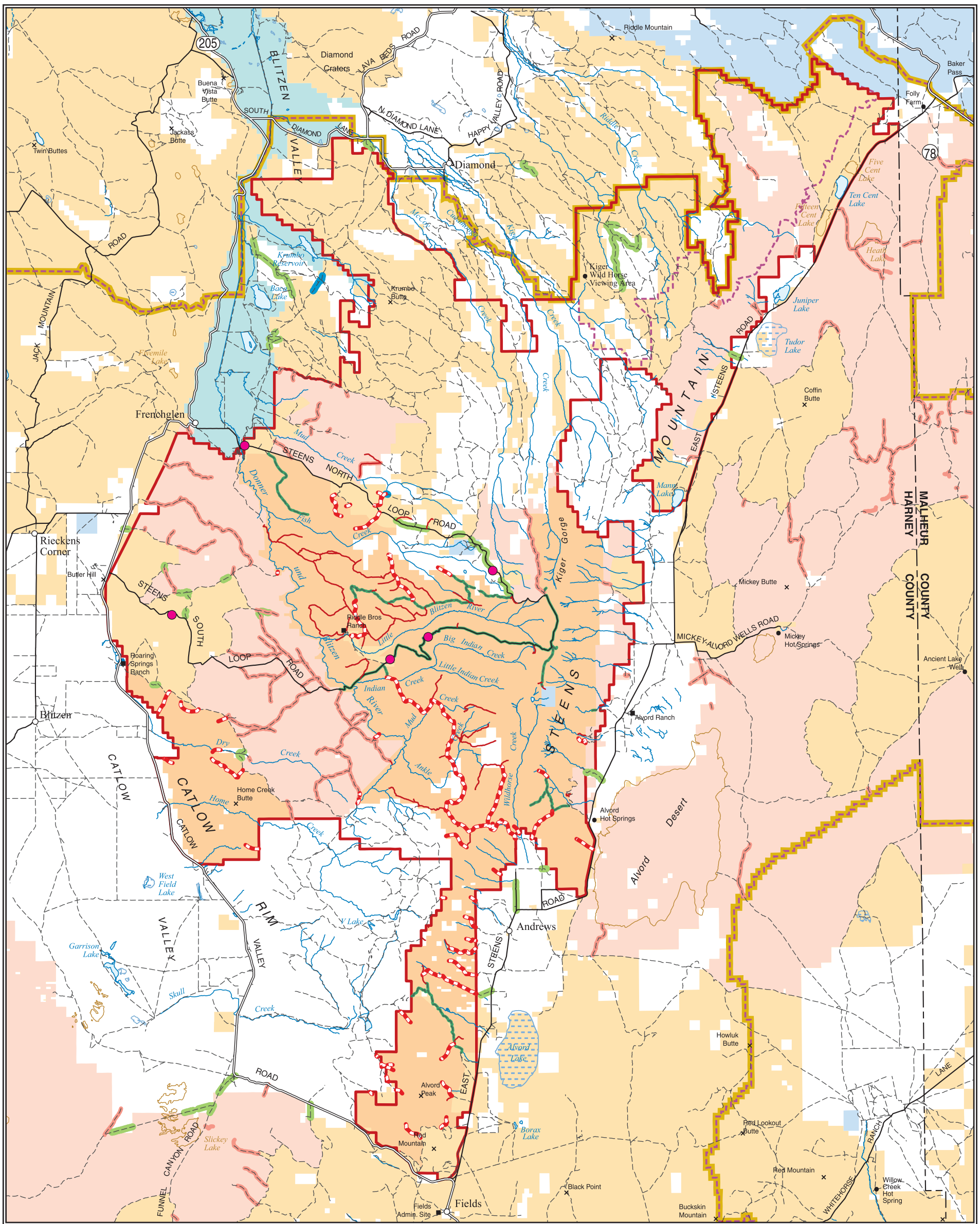

LEGEND

- Gate
- Paved Road
- Non-Paved Road
- Primitive or Unknown Road Condition
- Closed Road
- Way
- Wilderness Cherry Stem Road
- Service/Permit Use Route or Private Property Access Route (Pending EA Decision) Closed to Public Motorized Use
- Public Hiking Trail Easement
- Public Motorized Easement *Easement Access*
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

2.5 0 2.5 5 Miles

2.5 0 2.5 5 Kilometers

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Map 11: Transportation Plan within the Cooperative Management and Protection Area (Existing Condition)

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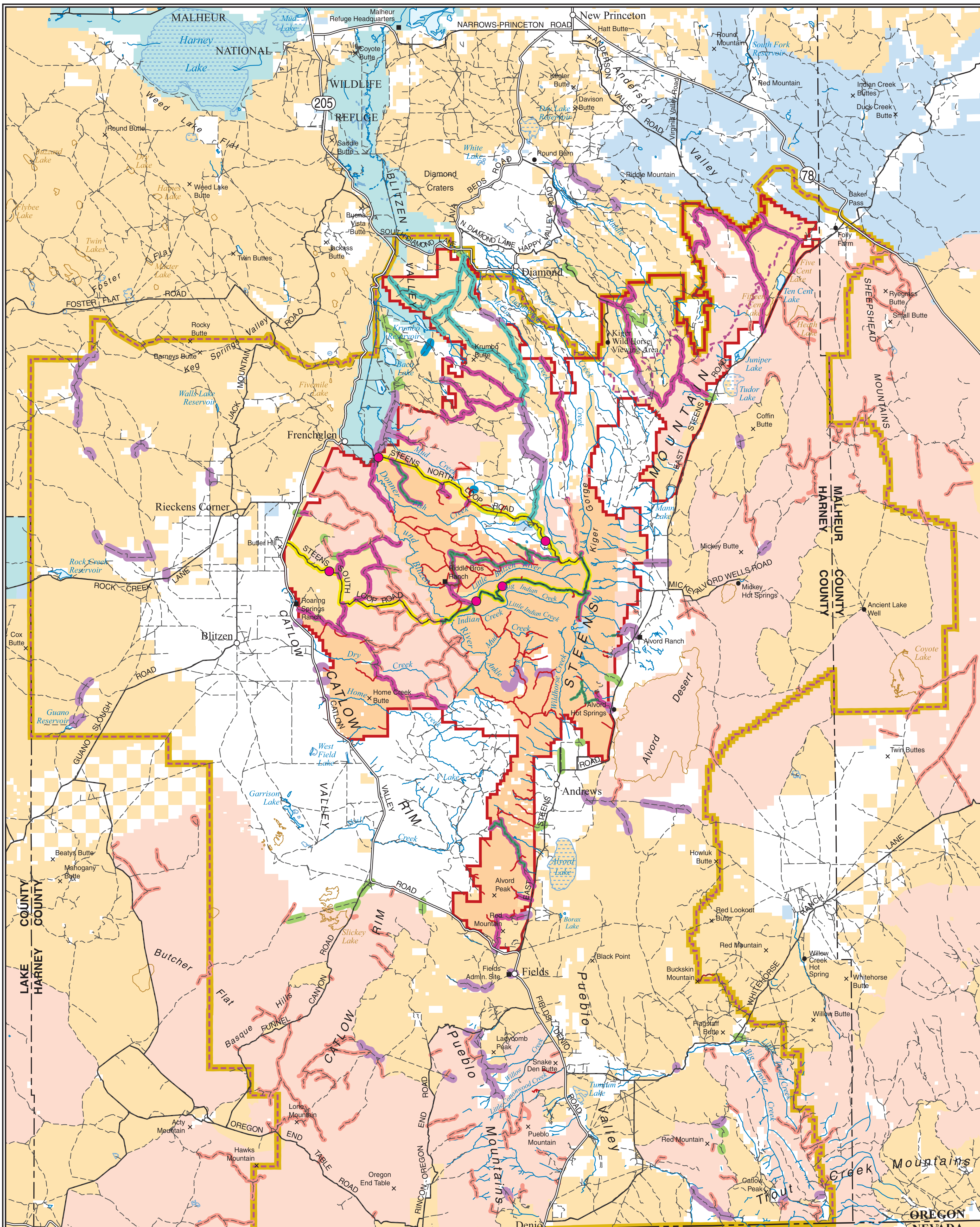

LEGEND

- Paved Road
- Non-Paved Road
- Primitive or Unknown Road Condition
- Closed Road
- Public Hiking Trail Easement
- Public Motorized Easement
  Easement Access
- Potential Easement
- Way
- Wilderness Cherry Stem Road
- Maintenance Level Within the CMPA
  - 2
  - 3
  - 5
- Gate
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
  - Wilderness
  - Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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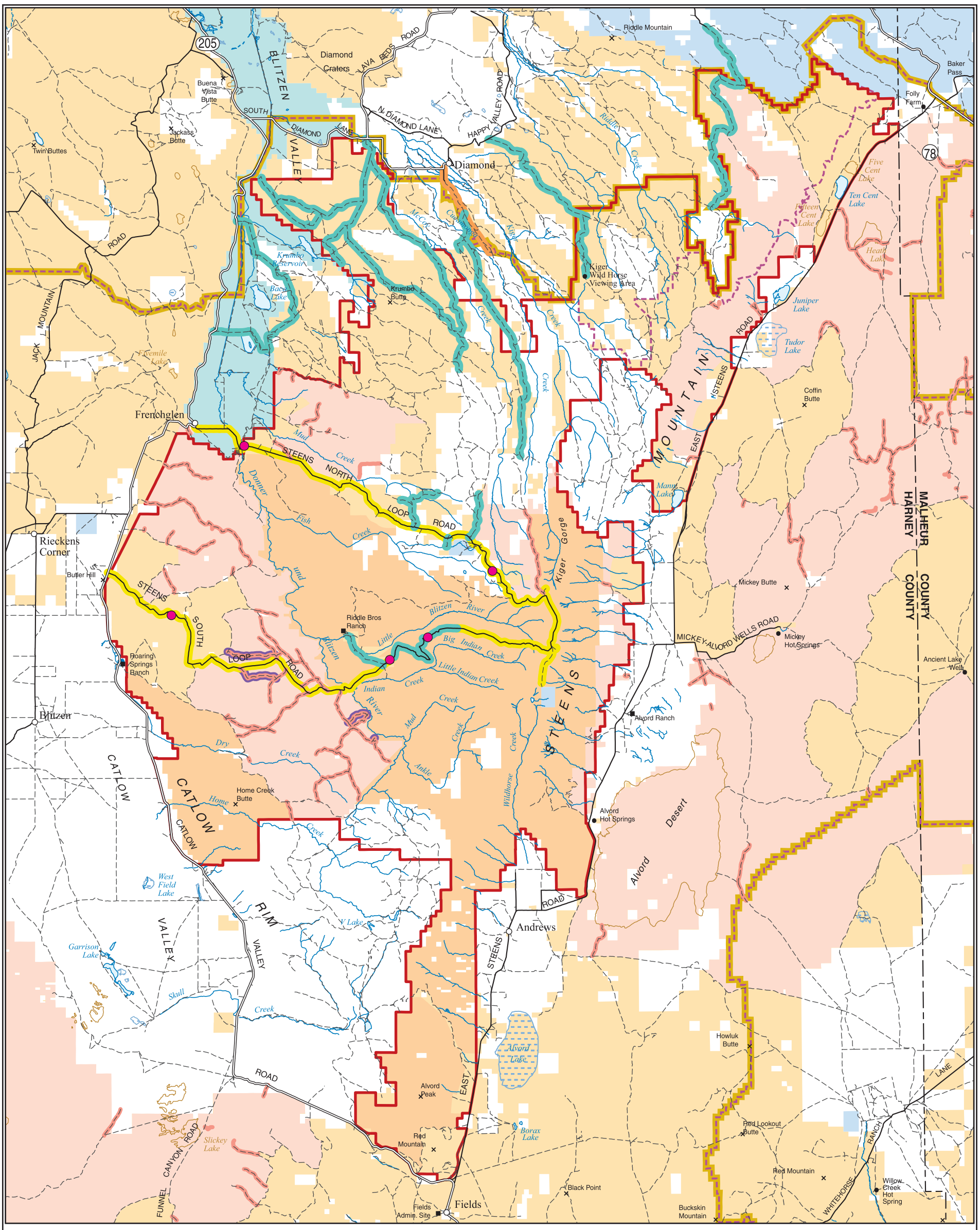
Map 12: Transportation Plan within the Planning Area (Existing Condition)

M05-03-04:PF:042205



LEGEND

- Gate
- Paved Road
- Non-Paved Road
- Primitive or Unknown Road Condition
- Way
- Road Maintenance RMP
  - 1 (Closed)
  - 3
  - 4
  - 5
- *Other CMPA Public Land Routes are Maintenance Level 2*
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
  - Wilderness
  - Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

2.5 0 2.5 5 Miles

2.5 0 2.5 5 Kilometers

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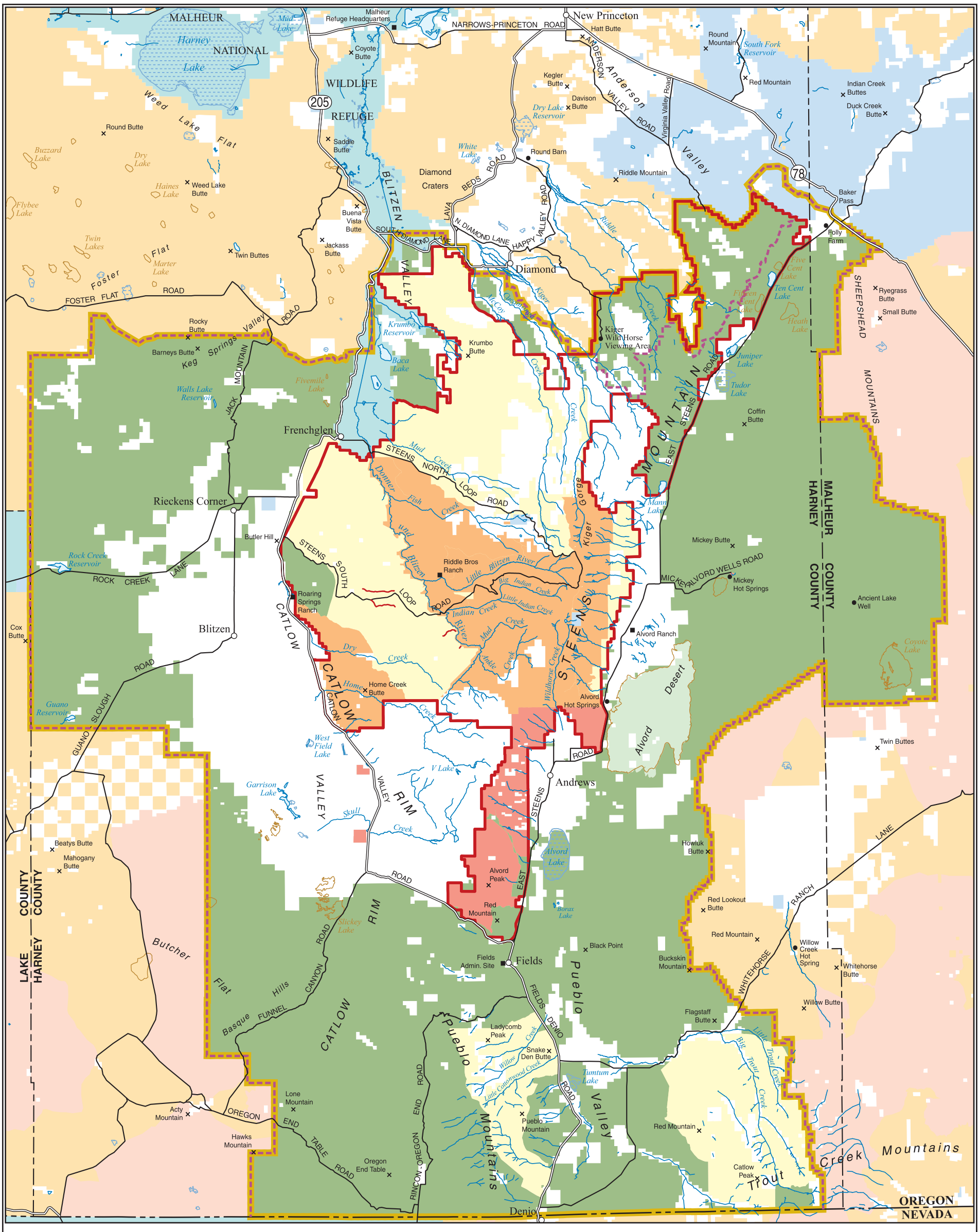
Map 13: Transportation Plan within the Cooperative Management and Protection Area - Implementation

M05-03-04:PF:052005



LEGEND

- Paved Road
- Non-Paved Road
- Closed Road within the CMPA
- Off-Highway Vehicle Designation on BLM Administered Land
  - Closed
  - Limited Designated
  - Limited Seasonally/Closed
  - Limited Seasonally/Designated
  - Open
- Cooperative Management and Protection Area Boundary
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land Outside the Planning Area Boundary
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 14: Off-Highway Vehicle Designations

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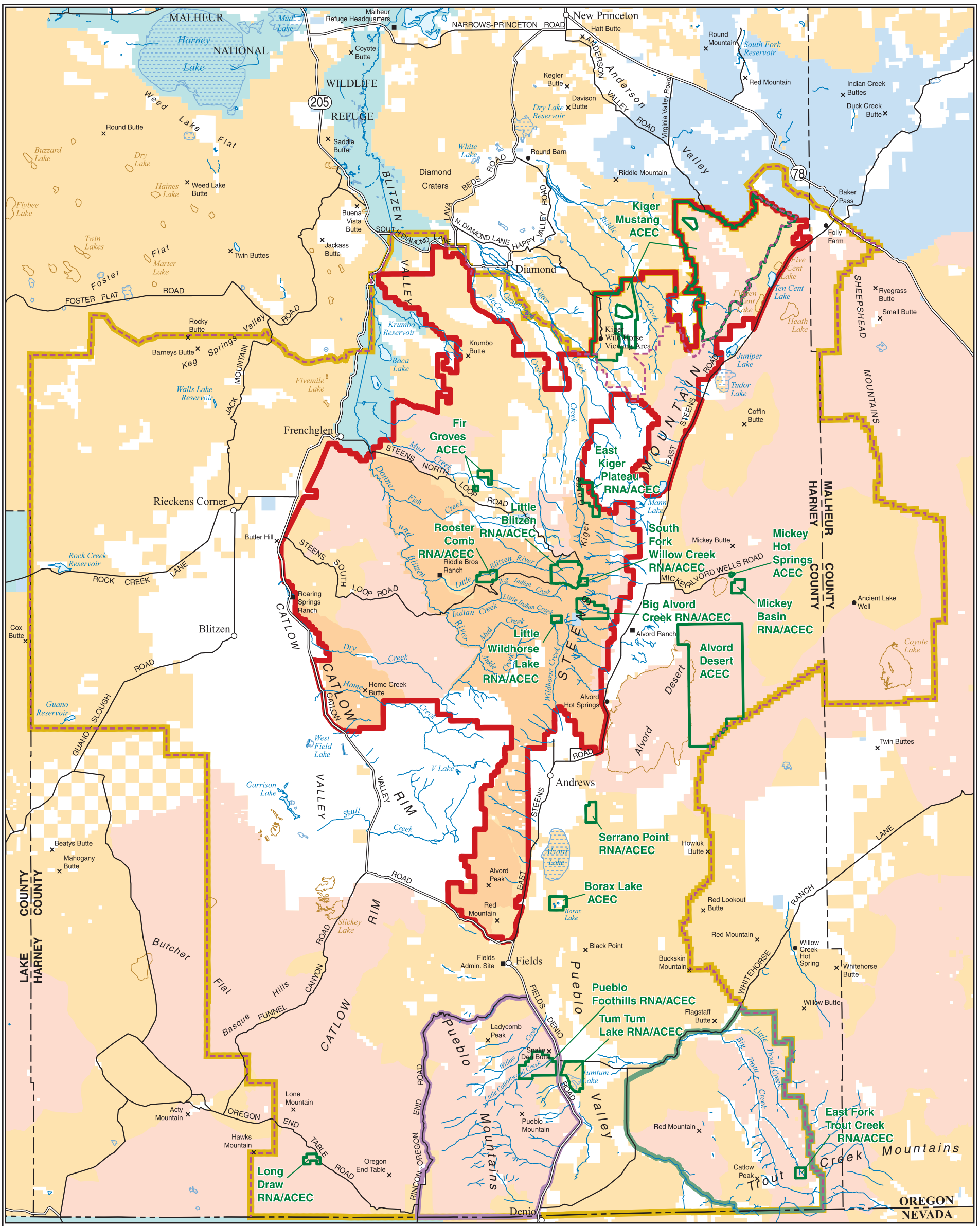

LEGEND

- RNA/ACEC
- SRMA
- Pueblo Mountains
- Steens Mountain (coincident with CMPA)
- Trout Creek Mountains
- Paved Road
- Non-Paved Road
- Planning Area Boundary
- Andrews Resource Area Boundary
- BLM Administered Land
- Wilderness
- Wilderness Study Area
- U.S. Fish and Wildlife Service Land
- State Land
- Private Land

N W E S

5 0 5 10 Miles

5 0 5 10 Kilometers

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Map 15: Areas of Critical Environmental Concern/Research Natural Areas and Special Recreation Management Areas

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Bureau of Land Management
Burns District Office
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Hines, Oregon 97738

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BLM/OR/WA/PL-05/027-1792

ANDREWS / STEENS RESOURCE MANAGEMENT PLAN
APPENDICES (A – O) AND MAPS