ANDREWS MANAGEMENT UNIT/STEENS MOUNTAIN COOPERATIVE MANAGEMENT AND PROTECTION AREA PROPOSED RESOURCE MANAGEMENT PLAN AND FINAL ENVIRONMENTAL IMPACT STATEMENT

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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 / The Planning Area outside of the Steens Mountain CMPA
APHIS	Agricultural Plant and Animal Health Inspection Service
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 Disk
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
NEA	Northwest Economic Associates
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
ONDA	Oregon Natural Desert Association
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
PP&L	Pacific Power and Light
PRIA	Public Rangelands Improvement Act of 1978
PRMP	Proposed Resource Management Plan
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
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 Nonrenewable
TP	Transportation Plan
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
WIS	Wilderness Information Specialist
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

5 CONSULTATION, COORDINATION AND LIST OF PREPARERS

5.1 Introduction

This Proposed RMP/FEIS was prepared by an ID Team of resource specialists from the Burns DO. Preparation of the SEORMP was initiated by the Vale and Burns Districts of the BLM, which initially included the Andrews RA. However, as a result of the Steens Act, the Burns District deemed it appropriate to separate the Andrews RA from the SEORMP and develop a separate plan in order to address changes in land management resulting from mandates of the Steens Act. The planning process began in early 2001 with the writing of the Preparation Plan. A consulting firm was hired in September 2001 to assist the BLM in the RMP/EIS process. Training of the ID Team occurred in February 2002.

5.2 Public Participation

The official start of the preparation of the RMP/EIS was initiated with the publishing of a "Notice of Intent" to prepare an RMP/EIS in the *Federal Register* on December 6, 2001. This notice also included an invitation to the public to suggest issues to be addressed in the RMP and to provide comments concerning the management of public lands. In addition, 1,220 scoping packets providing information about the planning process, outlining the planning schedule, and requesting comments were mailed to individuals, organizations, and agencies. Additional copies of the scoping brochure were made available at the four scoping meetings. News releases and requests for publication or announcement were mailed to 19 media groups including the Burns Times Herald, The Bulletin, The Oregonian, and KZZR Radio. BLM representatives attended meetings with Harney County to inform them of the preparation of the RMP/EIS and to encourage them to make comments, request information, and generally be involved in the process. The same information was distributed to the Burns Paiute Tribal Government. The Notice of Intent, news releases, and other mailings identified the beginning of the EIS scoping period and the location, date, and time of the public scoping meetings. The comment period ran from February through March 2002.

A SBR was conducted prior to completing the AMS or the public scoping. The SBR was a multi-agency collaborative effort to "step down" to the local level the findings and assessments of the ICBEMP. The ICBEMP was established in 1994 to develop and then adopt a scientifically sound ecosystem-based strategy for managing all USFS or BLM administered lands within the interior Columbia Basin. In other words, did the findings from the ICBEMP have any meaning to the planning process? The SBR group determined that many of them did, and these were incorporated into the issues addressed in this plan (Appendix B).

The AMS Summary was prepared after the SBR and mailed to members of the public, local and tribal governments, other federal agencies, and state agencies. It contained a description of the preliminary issues, alternatives, and planning criteria, as well as the resource area profile, existing management situation, and management opportunities. A followup newsletter outlining the primary comments was then mailed to 257 individuals in July 2002. An additional 143 copies of the AMS Summary were sent to interested individuals and organizations by request. The full version of the AMS was published and made available to the public in July 2002.

The public scoping meetings were held in the following cities on the dates listed and with the stated number of attendees.

Burns, Oregon	February 27, 2002	15 attended
Frenchglen, Oregon	March 4, 2002	17 attended
Bend, Oregon	March 6, 2002	55 attended
Portland, Oregon	March 7, 2002	23 attended

As a result of the public scoping meetings, a total of 2,313 scoping letters were received. These included 1,844 letters comprised of three different form letters and 469 letters which included versions of the form letters with supplemental comments added. Each comment was summarized and included in a comment table, which is available for public review at the BLM Burns DO during normal business hours. A total of 3,601 comments were identified, and were sorted into 23 categories. A memorandum and table summarizing the comments received are included in Appendix C. These comments were incorporated into the alternatives and the analysis of this PRMP/FEIS. In addition to public scoping meetings, a number of meetings were conducted with collaborating agencies and other interested parties.

On October 3, 2003, the EPA's Notice of Availability of the DRMP/DEIS was published in the *Federal Register* which initiated a 90-day comment period. A news release was sent to media groups including the Burns Times Herald, The Bulletin, The Oregonian, and KZZR Radio announcing availability of the DRMP/DEIS. Approximately 307 hard copies of the DRMP/DEIS and 80 compact discs were sent to individuals, agencies, and organizations. An RMP newsletter was also distributed to about 538 names on the mailing list announcing the availability of the DRMP/DEIS as well as announcing the public comment period and meeting dates. The DRMP/DEIS was also made available on the Burns

website. During the 90-day public comment period, four public meetings were held in the following cities on the dates listed and with the stated number of attendees.

Portland, Oregon	October 27, 2003	49 attended
Bend, Oregon	October 28, 2003	38 attended
Burns, Oregon	October 29, 2003	6 attended
Frenchglen, Oregon	October 30, 2003	10 attended

The BLM received approximately 5,563 public comment letters on the DRMP/DEIS a majority of which were form letter communications. Approximately 923 letters were individualized letters and 84 letters contained substantive comments which are addressed in Volume 2 of the Proposed RMP/FEIS. Comments made during the SEORMP process that were specific to the Andrews RA were also considered. The comment period ended January 5, 2004. The BLM continued to involve the RAC, the SMAC, and cooperating agencies throughout the process. Table 5.1.1 summarizes the key public involvement events.

Table 5.1.1: Summary of Key Public Involvement Events

Date	Event
10/22/01	SMAC meeting, Hines, Oregon.
12/6/01	Notice of Intent to prepare RMP published in *Federal Register*.
12/17-18/02	SMAC meeting, Hines, Oregon.
1/8/02	Mailed letter to Burns Paiute Tribe requesting time on the Tribal Council agenda to discuss the RMP and an MOU between BLM and Burns Paiute Tribe.
4-25/02	SMAC meeting, Hines, Oregon.
2/02	Scoping brochure mailed to approximately 1,220 individuals, organizations, and agencies.
2/15/02	Issued a press release announcing upcoming public scoping meetings.
2/27/02	Public Scoping Meeting, Burns, Oregon (15 attendees).
2/28-3/1/02	SMAC meeting, Hines, Oregon.
3/4/02	Public Scoping Meeting, Frenchglen, Oregon (17 attendees).
3/6/02	Public Scoping Meeting, Bend, Oregon (55 attendees).
3/7/02	Public Scoping Meeting, Bend, Oregon (23 attendees).
4/3/02	Met with Burns Paiute Tribal Council to discuss possibility of Burns Paiute Tribe becoming a cooperating agency and other planning related issues.
4/4-5/02	SMAC meeting, Hines, Oregon.
5/13/02	Meeting with cooperating agencies and BLM ID team.
6/13-14/02	SMAC meeting, Hines, Oregon.
6/17/02	Meeting with Malheur NWR, DEQ, Burns Paiute Tribe, Harney County, Burns City Manager, and BLM ID team.
7/02/02	RMP Newsletter mailed to the public and distributed to Hines City Hall, Burns City Hall, Harney County Courthouse, Narrows Store and RV Park, Princeton Post Office, Frenchglen Post Office, Denio Post Office, Fields Store, and Emigrant Creek Ranger District.
7/1/02	Meeting with Malheur NWR, DEQ, Burns Paiute Tribe, and BLM ID team.

Date	Event
7/8/02	E-mail message to cooperating agencies regarding timeframes, upcoming meeting, and newsletter.
7/20/02	Issued a press release announcing availability of an RMP Newsletter.
7/25/02	Provided cooperating agencies with management actions.
7/29/02	Meeting with Burns Paiute Tribe, Malheur NWR, USFWS Department of Ecological Services, Burns City Manager, and BLM ID team.
8/14/02	Provided core team meeting notes to cooperating agencies.
8/15-16/02	SMAC meeting, Frenchglen, Oregon.
8/19/02	Meeting with Malheur NWR, USFWS Department of Ecological Services, Burns City Manager, and BLM ID team.
10/21-22/02	SMAC meeting, Bend, Oregon.
10/31/02	Press Release issued announcing availability of the complete AMS.
12/2-3/02	SMAC meeting, Hines, Oregon.
12/11/02	Met with Hines City Manager, and discussed the RMP process and the possibility of the City becoming a cooperating agency. A copy of the AMS was also delivered.
1/13/03	Attended Hines City Council meeting to update them on RMP process and discuss possibility of the City becoming a cooperating agency.
3-24/03	SMAC meeting, Hines, Oregon.
1/28/03	Letters sent to permittees informing them of a WSA proposal and asking for assistance in identifying range improvements, trails, roads, and mining disturbance.
2/26/03	Mailed Chapters 1 and 3, and Chapter 2 Summary Table to SMAC and cooperating agencies for an internal review. Copies were hand delivered to City of Hines, City of Burns, Harney County, and ODFW.
3/3-4/03	SMAC meeting, Hines, Oregon.
3/21/03	Press release issued notifying the public of proposed publishing of the DRMP/DEIS, as well as the opportunity to comment during the 90-day comment period, and the upcoming SMAC meeting.
3/27/03	Meeting with Harney County regarding management actions.
4/2/03	Meeting with Harney County and City of Burns regarding management actions.
4/9-11/03	SMAC meeting, Hines, Oregon.
4/16/03	Meeting with Harney County regarding management actions.
4/21/03	Letter to RAC notifying them the Preliminary DRMP/DEIS would be available the first week in May.
4/23/03	Press release issued notifying the public of proposed publishing date of the DRMP/DEIS, as well as the opportunity to comment during the 90-day comment period, and the upcoming SMAC meeting.
4/23/03	Conference call with State Office Staff.
4/30/03	Preliminary DRMP/DEIS mailed by contractor to the RAC, SMAC, cooperating agencies, Oregon State Office, and Burns DO.

Date	Event
5/8-9/03	SMAC meeting, Hines, Oregon.
5/21/03	Press release issued notifying the public of proposed publishing date of the DRMP/DEIS, as well as the opportunity to comment during the 90-day comment period, and the upcoming SMAC meeting.
6/5-6/03	SMAC meeting, Hines, Oregon. Comments were provided by City of Burns, Harney County, Community Response Team, and Chamber of Commerce regarding Social and Economic Values.
6/17/03	District staff met with Malheur NWR.
6/23/03	District staff met with the ODFW regarding RTR.
7/18/03	Press release issued notifying the public of proposed publishing date of the DRMP/DEIS, as well as the opportunity to comment during the 90-day comment period, and the cancellation of the August SMAC meeting.
9/03	Newsletter mailed to public informing them of the RMP schedule, RMP format, and opportunities for public comment.
9/19/03	Notice of Availability for the DRMP/DEIS published in the *Federal Register*.
9/19/03	Press release issued announcing the availability of the DRMP/DEIS.
9/15-16/03	SMAC meeting, Bend, Oregon.
9/22/03	RAC meeting, Ka nee tah, Oregon.
10/3/03	EPA's Notice of Availability for the DRMP/DEIS published in the *Federal Register*.
10/21/03	Press release issued reminding the public of upcoming public meetings.
10/27/03	Public Meeting, Portland, OR (49 attendees).
10/28/03	Public Meeting, Bend, OR (38 attendees).
10/29/03	Public Meeting, Burns, OR (6 attendees).
10/30/03	Public Meeting, Frenchglen, OR (10 attendees).
11/17-18/03	SMAC meeting, Burns, Oregon.
12/8/04	RAC meeting, Burns, Oregon.
2/13/04	Draft responses to public comments were distributed to the SMAC along with a spreadsheet describing effects to the Proposed RMP/FEIS.
2/17-19/04	SMAC meeting, Burns, Oregon.
2/18/04	Draft responses to public comments were distributed to cooperating agencies, the RAC, and State Office personnel. Cooperating agencies were given the opportunity to meet individually with BLM to discuss changes.
2/19/04	Met with Burns Paiute Tribal SMAC member to ensure the Burns Paiute Tribe had the necessary information regarding the changes to the Proposed RMP/FEIS.
2/20/04	Met with Harney County to discuss proposed changes to the Proposed RMP/FEIS.
2/23/04	RAC meeting, Burns, Oregon.
2/24/04	Attended Hines City Council meeting to update them on the RMP process and allow for additional input.

Date	Event
3/2/04	Met with USFWS Ecological Services, and Malheur NWR, to discuss proposed changes to the Proposed RMP/FEIS.

5.2.1 Tribal Participation

Burns Paiute Tribal Council

5.2.2 Agencies and Organizations Contacted or Consulted

City of Hines
City of Burns
Harney County Chamber of Commerce
Harney County Court
BLM Lakeview District Office
Oregon Department of Environmental Quality
Oregon Department of Water Resources
Oregon Department of Fish and Wildlife
Southeast Oregon Resource Advisory Council
Steens Mountain Advisory Council
U.S. Fish and Wildlife Service, Ecological Services
U.S. Fish and Wildlife Service, Malheur National Wildlife Refuge
BLM Vale District Office

5.2.3 Agencies, Organizations, and Individuals on Mailing List

The BLM mailed the public scoping packet to approximately 1,220 agencies, organizations, and individuals. The "Summary of the Analysis of the Management Situation" was mailed to approximately 208 people and the complete AMS was mailed to approximately 64 people. Three hundred eighty-seven (387) copies of the DRMP/DEIS were mailed along with 538 newsletters announcing the availability of the DRMP/DEIS. The following is a list of the officials, tribal groups, agencies, and organizations to which a copy of this Proposed RMP/FEIS was sent. The list of individuals on the mailing list is not included.

Elected Officials

U.S. Senator Ron Wyden
U.S. Senator Gordon Smith
Congressman Greg Walden
Governor Ted Kulongoski
Harney County Judge Steve Grasty

Tribal Groups

Burns Paiute Tribal Council
Confederated Tribes of the Warm Springs Reservation
Fort McDermitt Tribal Council
Klamath Tribes

Agencies

U.S. Fish and Wildlife Service, Ecological Services, Central Oregon Field Office
U.S. Fish and Wildlife Service, Malheur National Wildlife Refuge
U.S. Fish and Wildlife Service, Oregon State Office
Oregon Department of Fish and Wildlife
U.S. Environmental Protection Agency
Oregon Department of Transportation
Department of Land Conservation and Development
Federal Energy Regulatory Commission

Fremont National Forest
Harney County Chamber of Commerce
Harney County Library
Harney County Soil and Water Conservation District
Harney County Planning Department
Malheur County Planning Department
National Landscape Conservation System
Oregon Department of Geology and Mineral Industries
Oregon Division of State Lands
Oregon State Parks Department
Oregon Natural Resources Council
Animal and Plant Health Inspection Service
U.S. Forest Service, Emigrant Ranger Station
U.S. Forest Service, Malheur National Forest
Eastern Oregon Agricultural Research Center
Natural Resources Conservation Service
Bonneville Power Administration
BLM - Coos Bay District Office
BLM - Lakeview District Office
BLM - Medford District Office
BLM - Oregon State Office
BLM - Prineville District Office
BLM - Salem District Office
BLM - Eugene District Office
BLM - Roseburg District Office
BLM - Spokane District Office
BLM - Vale District Office
Bureau of Reclamation

Organizations

American Alpine Club
Animal Protection Institute
Association of Oregon and California Counties
Central Washington University
Eastern Oregon Sportsmen Association
Evergreen State College
Frenchglen School Board
Frenchglen Community Club
The Fund for Animals, Inc.
Geyser Observation and Study Association
Harney Electric Cooperative
High Desert Outfitters
Hunters for Conservation
Izaak Walton League
National Wildlife Federation
The Nature Conservancy
Northwest Coalition for Alternative to Pesticides
Oregon Cattlemen's Association
Oregon Equestrian Trails
Oregon Farm Bureau
Oregon Guides and Packers
Oregon Grotto
Oregon Hunter's Association
Oregon Llamas
Oregon Natural Desert Association
Oregon State Snowmobile Association, Inc.
Pacific Rivers Council

Portland State University
Sierra Club
Steens Mountain Club
University of Oregon Library
Waterwatch
Water for Life
Western Lands Exchange Project
WHOA
Wild Wilderness
Wilderness Society
Wilderness Watch
Wildlife Management Institute

5.3 List of Preparers

5.3.1 Bureau of Land Management RMP/EIS Team

Team Member	Resource
Gary Foulkes*	Project Lead, Environmental Justice, Air Quality, Socioeconomics
Rick Hall*	ACECs, Special Status Species - Flora, Rangelands, Grazing Management, Soils
Doug Linn	Biological Soil Crusts
Scott Thomas	Cultural, Paleontology, Native American Concerns
Lesley Richman	Noxious Weeds
Jeff Rose	Woodlands/WJMA, Fire Management
Carolyn Freeborn*	Management Representative, Grazing Management
Cam Swisher	Grazing Management
Dave Ward	Grazing Management
Bill Andersen	Grazing Management
Manny Berain	Grazing Management
Jon Collins*	Wild and Scenic Rivers
Laura Graves	Wild and Scenic Rivers
John Neeling*	Wilderness
Evelyn Treiman*	Recreation, OHVs, Visual Resources, Wilderness Study Areas, National Trails
Mark Sherbourne	Transportation
Skip Renchler	Utility/Communication Corridors, Cadastral/Land/Realty, Renewable Energy
Matt Obradovich*	Wildlife, Special Status Species - Fauna, Wetlands, Animal Damage Control, Wild Horses, Riparian Areas, Rangelands
Darren Brumback*	Fisheries, Redband Trout Reserve, Water Resources, Riparian Areas
Dean Bolstad	Wild Horses
Tom Seley	Wild Horses
Cindy Weston	Fisheries, Water Resources, Riparian Areas
Kelly Hazen*	Geographical Information System
Pam Keller	Geographical Information System
Rhonda Karges*	SMAC/Management Support
Terri Geisler	Minerals/Geology, Renewable Energy

*Core Team Member

5.3.2 Enviroscientists, Inc. RMP/EIS Team

Team Member	Resource
Richard DeLong	Project Manager, Air Quality, Environmental Justice, Wilderness
Opal Adams	Assistant Project Manager, Energy and Minerals, Geology, Paleontology, Visual Resource Management
Jennifer Thies	Project Coordinator, Lands and Realty, Transportation and Roads, Off-Highway Vehicles, Social and Economic Values, Recreation, Wilderness Study Areas, ACECs
Adrian Juncosa	Grazing, Rangelands, Fire
Susan Fox	Wildlife, Wild Horses and Burros, Special Status Animal Species

Matt Kiesse	Fisheries, Special Status Fish Species, Redband Trout Reserve, Wild and Scenic Rivers, Water Resources
Joan Reynolds	Vegetation, Soils, Special Status Plant Species, Noxious Weeds, Riparian Areas/Wetlands
Dr. Robert Vierra	Cultural Resources, Native American Traditional Values

5.3.3 Cooperating Agencies

U.S. Fish and Wildlife Service, Ecological Services
U.S. Fish and Wildlife Service, Malheur National Wildlife Refuge
Burns Paiute Tribe
Oregon Department of Environmental Quality
Oregon Department of Fish and Wildlife
Harney County
City of Burns
City of Hines

6 GLOSSARY, BIBLIOGRAPHY, AND INDEX

6.1 Glossary

A complete glossary of Transportation Management terms can be found in Appendix M.

A

Adaptive Management – A type of natural resource management in which decisions are made as part of an ongoing process. Adaptive management involves testing, monitoring, evaluation, and incorporating new knowledge into management approaches based on scientific findings and the needs of society. Results are used to modify management policy.

Advanced ecological status – A biotic community with a high similarity to a defined or perceived potential natural community (PNC) for an ecological site, usually late seral or PNC ecological status.

Allotment – A specific portion of public land allocated for livestock grazing, typically with identifiable or fenced boundaries and permitted for a specified number of livestock.

Allotment (grazing) – Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

Allotment Management Plan (AMP) – A plan for managing livestock grazing on specified public land.

Analysis of the Management Situation (AMS) – Step 4 of the BLM's land use planning process. It is a comprehensive documentation of the present conditions of the resources, current management guidance, and opportunities for change.

Animal unit – One cow, one cow/calf pair, one horse, or five sheep.

Animal Unit Month (AUM) – The forage needed to support one cow, one cow/calf pair, one horse, or five sheep for one month. Approximately 800 pounds of forage.

Appropriate Management Level (AML) – An established population range that represents the number of animals that the designated HMA can sustain and that results in a thriving natural ecological balance with other uses and resources common to the area and avoids deterioration of the public range.

Area of Critical Environmental Concern (ACEC) – Area where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect humans from natural hazards.

Avoidance Areas – Areas with sensitive resource values where rights-of-way and land use authorizations would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible outside the avoidance area.

B

Basalt – A dark, heavy, fine-grained silica-poor igneous rock composed largely of iron and magnesium minerals and calcium-rich plagioclase feldspars.

Basin (river) – In general, the area of land that drains water, sediment, and dissolved materials to a common point along a stream channel. River basins are composed of large river systems. In this EIS, the term refers to the equivalent of a third field hydrologic unit code, an area of about nine million acres, such as the Salmon River basin. It also is used to refer in general to the Interior Columbia River Basin.

Best Management Practices (BMPs) – A set of practices which, when applied during implementation of management actions, ensures that negative impacts to natural resources are minimized. BMPs are applied based on site specific evaluation and represent the most effective and practical means to achieve management goals for a given site.

Biological Soil Crust - Lichens, mosses, green algae, fungi, cyanobacteria, and bacteria growing on or just below the surface of soils.

Bureau of Land Management (BLM) – Government agency with the mandate to manage federal lands under its jurisdiction for multiple uses.

BLM assessment species – Plant and animal species on List 2 of the Oregon Natural Heritage Data Base, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040) that are identified in BLM Instruction Memo OR-91-57 and are not included as federal candidate, state listed, or BLM sensitive species.

BLM sensitive species – Plant or animal species eligible for federal listed, federal candidate, state listed, or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Data Base, or approved for this category by the BLM State Director.

BLM tracking species – Plant and animal species on List 3 and 4 of the Oregon Natural Heritage Data Base, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040) that are identified in BLM Instruction Memo OR-91-57 and are not included as federal candidate, state listed, BLM sensitive, or BLM assessment species.

C

Candidate Species – Any species included in the *Federal Register* Notice of Review that are being considered for listing as threatened or endangered by the US Fish and Wildlife Service.

Canopy – In a forest, the branches from the uppermost layer of trees; on rangeland, the vertical projection downward of the aerial portion of vegetation.

Cell - Unique ecosystem type used by the Natural Heritage Plan to inventory, classify, and evaluate natural areas. Cells contain one or more ecosystem elements (ie., plant communities or ecosystems such as Natural Heritage Resources or special species).

Classification – A process required by law for determining the suitability of public lands for certain types of disposal or lease under the public land laws or for retention in public ownership.

Climax vegetation – The stabilized plant community on a particular site. The plant cover reproduces itself and does not change as long as the environment remains the same.

Colluvium – Soil material, rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Commodities – Goods and services produced by industries which include but are not limited to agriculture, livestock grazing, and mining.

Community – A group of species of plants and/or animals living and interacting at a particular time and place; a group of people residing in the same place and under the same government.

Consultation – (1) An active, affirmative process that (a) identifies issues and seeks input from appropriate American Indian governments, community groups, and individuals; and (b) considers their interests as a necessary and integral part of the BLM's and USFS's decision-making process. (2) The Federal Government has a legal obligation to consult with American Indian Tribes. This legal obligation is based in such laws as the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, and numerous other Executive Orders and statutes. This legal responsibility is, through consultation, to consider Indian interests and account for those interests in the decision. (3) The term also refers to a requirement under Section 7 of the ESA for federal agencies to consult with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service with regard to federal actions that may affect listed threatened and endangered species or critical habitat.

Corridor (landscape) – Landscape elements that connect similar patches of habitat through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a forest.

Custodial management – Management of a group of similar allotments with minimal expenditure of appropriated funds to continue protecting existing resource values.

D

Deep soil – A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Developed recreation – Recreation that requires facilities which in turn result in concentrated use of an area; for example, a campground.

Dispersed recreation – Recreation that does not occur in a developed recreation site; for example, hunting or backpacking.

Disturbance – Refers to events that alter the structure, composition, or function of terrestrial or aquatic habitats. Natural disturbances include, among others, drought, floods, wind, fires, wildlife grazing, insects, and pathogens. Human-caused disturbances include actions such as timber harvest, livestock grazing, roads, and the introduction of exotic species.

E

Ecological Site Inventory (ESI) – The basic inventory of present and potential vegetation on BLM rangelands. Ecological sites are differentiated on the basis of the kind, proportion, or amount of plant species.

Ecological status – The present state of vegetation of a range site in relation to the potential natural community for that site. Four classes are used to express the degree to which the production or composition of the present plant community reflects that of the potential natural community (climax):

Ecological Status (Seral stage)
Percent of Community in Climax Condition:

Potential natural community	76-100
Late seral	51-75
Mid-seral	26-50
Early seral	0-25

Ecosystem – A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Ecosystem Management – The use of a "whole-landscape" approach to achieve multiple-use management of public lands by blending the needs of people and environmental values in such a way that these lands represent diverse, healthy, productive, and sustainable ecosystems.

Endangered Species – Any species defined under the Endangered Species Act (ESA) as being in danger of extinction throughout all or a significant portion of its range. Listings are published in the *Federal Register*.

Environmental Assessment (EA) – One type of document prepared by federal agencies in compliance with the National Environmental Policy Act (NEPA) which portrays the environmental consequences of proposed federal actions which are not expected to have significant effects on the human environment.

Environmental Impact Statement (EIS) – One type of document prepared by federal agencies in compliance with the National Environmental Policy Act (NEPA) which portrays the environmental consequences of proposed major federal actions expected to have significant impacts on the human environment.

Ephemeral stream – A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no continuous supply from melting snow or other source, and its channel is above the water table at all times.

Exclusion Areas – Areas with sensitive resource values where rights-of-way and land use authorizations would not be authorized.

Existing Management Situation – A component of the AMP; a description of the existing management direction governing resource management programs for a Planning Area.

Extensive Recreation Management Area (ERMA) – Area where recreation is unstructured and dispersed with minimal regulatory constraints and where minimal recreation-related investments are required.

F

Federal Land Policy and Management Act of 1976 (FLPMA) – Law mandating that the BLM manage lands under its jurisdiction for multiple uses. Establishes guidelines for its administration; and provides for the management, protection, development, and enhancement of the public lands, among other provisions.

Fire Management Plan (FMP) – A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans.

Fire regime – The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.

Fire return interval – The number of years between fire events for a specified area.

Flood plain – A nearly level alluvial plain that borders a stream and is subject to inundation under flood-stage conditions unless protected artificially. It is usually a constructional landform built of sediment deposited during overflow and lateral migration of the stream.

Forb – Any herbaceous plant that is not a grass or a grasslike species. Broad-leafed plants; includes plants that commonly are called weeds or wildflowers.

Functional at Risk (FAR) - Riparian/Wetland areas that are in functional condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

G

Geographic Information System (GIS) – An information processing technology to input, store, manipulate, analyze, and display data; a system of computer maps with corresponding site specific information that can be combined electronically to provide reports and maps.

H

Herd Area – A geographic area identified as having provided habitat for a wild horse herd in 1971. A Herd Area may be solely the active Herd Management Area, or inactive, where wild horses are no longer managed, or a combination of both.

Herd Management Area (HMA) – A geographic area identified in a Management Framework Plan or Resource Management Plan for the long-term management of a wild horse herd.

Herd Management Area Plan – A plan that prescribes measures for the protection, management, and control of wild horses and their habitat on one or more HMAs, in conformance with decisions made in approved Management Framework or Resource Management Plans.

Hiking Trail - A pathway created and maintained by human foot traffic, saddle or pack stock, or constructed and maintained for these uses.

Hydrologic Unit Code (HUC) – A coding system developed by the U.S. Geological Service to map geographic boundaries of watersheds of various sizes.

Hydrothermal deposit – A mineral deposit formed by hot mineral-laden fluids.

I

Incident commander – Individual responsible for the management of all incident (fire) operations.

Interim Management Policy for Lands Under Wilderness Review (WSA IMP) – Policy for managing public lands under wilderness review. Section 603(c) of the FLPMA states: "During the period of review of such areas and until Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this Act and other applicable laws in a manner so as not to impair the suitability of such areas for preservation as wilderness, subject, however, to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree in which the same was being conducted on the date of approval of this Act: Provided, that, in managing the public lands the Secretary shall by regulation or otherwise take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection."

Intermittent stream – A stream, or reach of a stream, that flows for prolonged periods only when it receives groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Interior Columbia Basin Ecosystem Management Project (ICBEMP) – An on going project examining the effects (on a large regional scale) of past and present land use activities on the Interior Columbia River Basin ecosystem and a small part of the Great Basin ecosystem.

Interior drainage – A system of streams with no outlet to the sea (e.g. Great Basin).

J

K

Known Geothermal Resource Area – "An area in which the geology, nearby discoveries, competitive interest, or other indicia would, in the opinion of the Secretary, engender the belief in men who are experienced in the subject matter that the prospect for extraction of geothermal stream or associated geothermal resources are good enough to warrant expenditures or money for that purpose" (43 CFR 3200.0-5(k)).

L

Land Use Authorizations – Those realty related authorizations such as leases, permits, and easements authorized under 43 CFR2920 and the R&PP Act. Land use authorizations also include any other authorizations with the exception of rights-of-way (43 CFR2800) and Special Recreation Permits (proposed in 43 CFR2930) generally contained in 43 CFR2000 series of regulations.

Leasable Minerals – Minerals that may be leased to private interests by the federal government including oil, gas, geothermal, coal, and sodium compounds.

Locatable Minerals – Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

M

Management Concern – Procedures or land use allocations that do not constitute issues but which are recognized, through the RMP/EIS preparation process, as needing modification or decision regarding management direction.

Management Direction – A statement of goals and objectives, management prescriptions, and associated standards and guidelines for attaining them.

Management Framework Plan (MFP) – BLM land use plan, predecessor to the RMP. Older generation of land use plans developed by the BLM. This generation of planning has been replaced by the Resource Management Plan (RMP).

Management Opportunities – A component of the AMP; actions or management directions that could be taken to resolve issues or management concerns.

Map unit – The basic system of description in a soil survey and delineation on a soil map. Can vary in level of detail.

Medium textured soil - Very fine sandy loam, loam, silt loam, or silt.

Mechanized Equipment - Any machine that uses or is activated by either a living or nonliving power source. This includes, but is not limited to, chain saws, power drills, aircraft, generators, motor vehicles, snow machines, etc. The term does not include shavers, wrist watches or clocks, flashlights, cameras, camp stoves, cell phones, radio transmitters/receivers, GPS units or other similar small hand held or portable equipment.

Mechanized Vehicle (for OHV) - Any vehicle, device, or contrivance that has moving parts for moving people or material in or over land, water, snow, or air. This includes, but is not limited to, sailboats, sailboards, hang gliders, parachutes, bicycles, game carriers, carts, and wagons. It does not include wheelchairs, horses, or other pack stock, skis, snowshoes, nonmotorized river craft, sleds, travois, or similar devices without moving parts.

Migration corridor – The habitat pathway an animal uses to move from one place to another.

Mineral Estate – Refers to the ownership of minerals at or beneath the surface of the land.

Mitigation – Measures designed to counteract environmental impacts or to make impacts less severe.

Monitoring – The periodic and systematic collection of resource data to measure progress toward achieving objectives.

Monitoring and Evaluation – The collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management goals and objectives.

Motor Vehicle - Any vehicle, device, or contrivance which is self-propelled and is used for moving people or materials in or over land, water, snow, or air and is powered by a motor or engine.

Motorized Equipment - Any machine that uses or is activated by a motor, engine, or other power source. This includes, but is not limited to, chain saws, power drills, aircraft, generators, motor vehicles, snow machines, etc. The term does not include shavers, wrist watches or clocks, flashlights, cameras, camp stoves, cell phones, radio transmitters/receivers, GPS units or other similar small hand held or portable equipment.

Multiple Use – Management of public land and its resources to best meet various present and future needs of the American people. This means coordinated management of resources and uses to assure the long-term health of the ecosystem.

N

National Environmental Policy Act of 1969 (NEPA) – Law requiring all federal agencies to evaluate the impacts of proposed major federal actions with respect to their significance on the human environment.

National Wildlife Refuge (NWR) – An area administered by the U.S. Fish and Wildlife Service for the purpose of managing certain fish or wildlife species.

Naturalness (a primary wilderness value) – An area that generally appears to have been affected primarily by the forces of nature with the imprint of people's work substantially unnoticeable.

Noxious Weed – A plant specified by law as being especially undesirable, troublesome, and difficult to control. A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States. According to the Federal Noxious Weed Act (PL 93-639), a noxious weed is one that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.

O

Objectives (management) – In this EIS, refers to indicators used to measure progress toward attainment of goals. They address short- and long-term actions taken to meet goals and the desired ranges of future conditions.

Off-Highway Vehicle (OHV) – Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding the following: 1) any nonamphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly permitted by the authorized officer, or otherwise officially approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies.

P

Perennial – A plant that lives for three or more years.

Perennial stream – A stream in which water is present during all seasons of the year.

Permeability – The quality of the soil that enables water to move downward through the profile, measured as the number of inches per hour that water moves downward through the saturated soil.

pH value – A numerical designation of acidity and alkalinity in soil.

Playa Lake – A shallow lake that is seasonally dry. Soils on the lake bottom are usually quite alkaline.

Pluvial – Referring to a period of greater rainfall.

Pluvial Lake – A lake formed during a period of exceptionally high rainfall (e.g., a time of glacial advance during the Pleistocene epoch) and now either extinct or existing as a remnant, such as Lake Bonneville.

Point source pollution – Pollution that comes from a single identifiable source such as a smokestack, a sewer, or a pipe.

Prescribed burning – Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the fire line intensity and rate of spread required to attain planned resource management objectives.

Prescribed fire – Any fire ignited by management actions to meet specific objectives. A written and approved prescribed fire plan must exist, and NEPA requirements must be met prior to ignition. The introduction of fire to an area under regulated conditions for specific management purposes (usually vegetation manipulation).

Prescribed Natural Fire - A naturally-ignited fire that is managed for resource benefits. Currently called Wildland Fire Use.

Prescription – Written statement defining objectives to be attained, as well as measurable criteria which guide the selection of appropriate management actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social or legal considerations under which the fire will be allowed to burn.

Primary wilderness values – The primary or key wilderness values described in the Wilderness Act by which WSAs and wildernesses are managed to protect and enhance the wilderness resource. Values include roadlessness, naturalness, solitude, primitive and unconfined recreation, and size.

Primitive and unconfined recreation (a primary wilderness value) – nonmotorized and undeveloped types of outdoor recreation activities. Refers to wilderness recreation opportunities such as nature study, hiking, photography, backpacking, fishing, hunting, and other related activities. Does not include the use of motorized vehicles, bicycles, or other mechanized means of travel.

Proper Functioning Condition (PFC) – PFC is both a qualitative method for assessing the physical function of riparian-wetland areas, and a defined condition of a riparian-wetland area.

Public lands – Any land or interest in land owned by the citizens of the United States and administered by the Secretary of the Interior through the BLM as defined in the FLPMA.

Q

R

Rangeland – Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site – An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Record of Decision (ROD) – An official document in which a deciding official states the alternative that will be implemented from a prepared Final EIS.

Recreation site – An area where management actions are required to provide a specific recreation setting and activity opportunities, to protect resource values, provide public visitor safety and health, and/or to meet public recreational use demands and recreation partnership commitments. A site may or may not have permanent facilities.

Recreational river – A river or section of a river that is readily accessible by road or railroad. It may have had some development along the shorelines and may have undergone some impoundments or diversions in the past.

Research Natural Area (RNA) – An area where natural processes predominate and which is preserved for research and education. Under current BLM policy, these areas must meet the relevance and importance criteria of ACECs and are designated as ACECs. An area of significant scientific interest that is designated to protect its resource values for scientific research and study.

Resource advisor – Resource specialist responsible to the incident commander for gathering and analyzing information concerning values-at-risk that may be impacted by fire or fire suppression activities.

Resource Area – The "on-the-ground" management unit of the BLM comprised of BLM administered land within a specific geographic area.

Resource Area Profile – A component of the AMP; a description of the current condition, amount, location, use, and demands of the natural resources in a Resource Area.

Resource Management Plan (RMP) – Current generation of land use plans developed by the BLM under the Federal Land Policy and Management Act. Replaces the older generation Management Framework Plans. Provides long-term (up to 20 years) direction for the management of a particular area of land and its resources, usually corresponding to a BLM Resource Area.

Right-of-way (ROW) – A permit or an easement which authorizes the use of public land for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, reservoirs, etc; also, the reference to the land covered by such an easement or permit.

Right-of-way corridor – A parcel of land that has been identified by law, Secretarial Order, through a land use plan, or by other management decision as being the preferred location for existing and future right-of-way grants and suitable to accommodate one type of right-of-way or one or more rights-of-way which are similar, identical or compatible.

Riparian area – Area with distinctive soil and vegetation between a stream or other body of water and the adjacent upland; includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Risk assessment – Assessing the chance of fire starting, naturally- or human-caused, and its potential risk to life, resources and property.

Road - Constructed or evolved transportation route that is normally maintained for regular use (except during periods of closure) that can be reasonably and prudently driven by motorized or mechanized vehicles.

Route - A linear ground transportation feature such as a way or road.

S

Salable Minerals – High volume, low value mineral resources including common varieties of rock, clay, decorative stone, sand, gravel, and cinder.

Scenic river – A river, or section of a river, that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads.

Scoping – The process of identifying the range of consideration, issues, management concerns, preliminary alternatives, and other components of an environmental impact statement or land-use planning document. It involves both internal and external, or public, involvement.

Section 202 lands – Lands being considered for wilderness designation under Section 202 of the Federal Land Policy and Management Act of 1976.

Sensitive species – Species identified by a Forest Service regional forester, or BLM state director, for which population viability is a concern either (a) because of significant current or predicted downward trends in population numbers or density, or (b) because of significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Seral – Refers to the sequence of transitional plant communities during succession. Early-seral refers to plants that are present soon after a disturbance or at the beginning of a new successional process (such as seedling or sapling growth stages in a forest); mid-seral in a forest would refer to pole or medium sawtimber growth stages; late- or old-seral refers to plants present during a later stage of plant community succession (such as mature and old forest stages).

Seral stage –The developmental phase of a forest stand or rangeland with characteristic structure and plant species composition. The rated departure of a plant community from a described PNC for a specific ecological site. Low-seral stage is an existing plant community which is defined as 0 to 25 percent comparability to the defined PNC; Mid-seral stage is an existing plant community which has 26 to 50 percent comparability to the PNC; Late seral stage is 51 to 75 percent comparable to the PNC; PNC is an existing plant community with 76 to 100 percent comparability to the defined PNC.

Slope – The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Soil association – A group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single soil map unit.

Soil classification – The systematic arrangement of soils into groups or categories on the basis of their characteristics.

Soil compaction – An increase in soil bulk density of 15 percent or more from the undisturbed level.

Soil complex – A map unit of two or more kinds of soils in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping.

Soil Horizon - A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes.

Soil profile – A vertical section of the soil extending through all its horizons and into the parent material.

Soil series - A nationally defined soil type set apart on distinct soil properties that affect use and management. In a soil survey, this includes a group of soils having profiles that are almost alike, except for differences in texture of the surface layer or of the underlying material. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Soil survey – A field investigation resulting in a soil map showing the geographic distribution of various kinds of soil and an accompanying report that describes the soil types and interprets the findings.

Soil texture – The relative proportions of sand, silt, and clay particles in a mass of soil.

Solitude (a primary wilderness value) – The state of being alone or remote from habitations; a lonely, unfrequented, or secluded place. The intent is to evaluate the opportunity for solitude in comparison to habitations of people.

Special Recreation Management Area (SRMA) – An area where recreation is the principal management objective, where intensive recreation management is needed, and where more than minimal recreation related investments are required.

Special Status Species – Plant or animal species known or suspected to be limited in distribution, rare or uncommon within a specific area, and/or vulnerable to activities which may affect their survival. Lists of Special Status Species are prepared by knowledgeable specialists through the State of Oregon; the BLM prepares a list of state sensitive species predominantly based on the list prepared biennially by the ONHP.

Stand – A community of trees occupying a specific area and sufficiently uniform in species, age, spatial arrangement and condition as to be distinguishable from trees on surrounding lands.

State Implementation Plan (SIP) – A document prepared by each state describing existing air quality conditions and measures that will be taken to attain and maintain national ambient air quality standards.

State Listed Species – Any plant or animal species listed by the State of Oregon as threatened or endangered within the state under ORS 496.004, ORS 498.026, or ORS 564.040.

Step-down – The process of applying broad-scale science findings and land use decisions to site specific areas using a hierarchical approach (subbasin review) of understanding current resource conditions, risks, and opportunities.

Stream channel – The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Subalpine – A terrestrial community that is generally found in harsher environments than the montane terrestrial community. Subalpine communities are generally colder than montane and support a unique clustering of wildlife species.

Subbasin review – An interagency collaborative consideration of resources, resource management issues, and management recommendations for one or more subbasins or watershed drainages approximately 800,000 to 1,000,000 acres in size, equivalent to a 4th-field HUC.

Subwatershed – A drainage area of approximately 20,000 acres, equivalent to a 6th-field HUC. Hierarchically, subwatersheds (6th-field HUC) are contained within a watershed (5th-field HUC), which in turn is contained within a subbasin (4th-field HUC).

Succession – A predictable process of changes in structure and composition of plant and animal communities over time. Conditions of the prior plant community or successional stage create conditions that are favorable for the establishment of the next stage. The different stages in succession are often referred to as "seral stages." (See Seral.)

Sustainability – (1) meeting the needs of the present without compromising the abilities of future generations to meet their needs; emphasizing and maintaining the underlying ecological processes that ensure long-term productivity of goods, services, and values without impairing productivity of the land. (2) In commodity production, refers to the yield of a natural resource that can be produced continually at a given intensity of management.

Supplemental wilderness values – Includes ecological (e.g., vegetation, wildlife, and overall biological/botanical processes and values associated with the natural environment), geological, scientific, educational, scenic, and historic values. When present, they can enhance primary wilderness values, but are not mandated by Congress.

Sustained yield – Maintenance of an annual or regular periodic output of a renewable resource from public land consistent with the principles of multiple use.

T

Terrestrial communities – Groups of cover types with similar moisture and temperature regimes, elevational gradients, structures, and used by vertebrate wildlife species.

Threatened Species – Any plant or animal species defined under the ESA as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Listings are published in the *Federal Register*.

Trend – The direction of change in ecological status observed over time. Trend is described as toward or away from the PNC, or as not apparent.

U

Upland (geology) – Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Utilization – The proportion or degree of the current year's forage production that is consumed or destroyed by animals (including insects). Utilization may refer either to a single plant species, a group of species, or to the vegetation as a whole. Utilization is synonymous with use.

V

Values-at-risk – Any or all natural resources, improvements, or other values which may be jeopardized if a fire occurs (value-at-risk, risk of resource values).

Visual Resource Management (VRM) Objectives
Class I - The objective of this classification is to preserve the existing character of the landscape. This class provides for natural ecological changes and limited management activity. The level of change should be very low and must not attract attention. Class I is assigned to those areas where a management decision has been made to preserve a natural landscape.

Class II-The objective of this classification is to retain the existing character of the landscape. The level of change to landscape characteristics should be low. Management activities may be seen but should not attract the attention of a casual observer. Any changes must conform to the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. This class represents the minimum level of VRM for WSAs.

Class III-The objective of Class III is to partially retain the existing character of the landscape. Moderate levels of change are acceptable. Management activities may attract attention but should not dominate the view of a casual observer. Changes should conform to the basic elements of the predominant natural features of the characteristic landscape.

Class IV-The objective of Class IV is to provide for management activities that require major modification of the landscape. These management activities may dominate the view and become the focus of viewer attention; however, every effort should be made to minimize the impact of these projects by carefully locating activities, minimizing disturbance, and designing the projects to conform to the characteristic landscape.

W

Way - A travel route in a WSA maintained solely by the passage of vehicles which has not been improved and/or maintained by mechanical means to ensure relatively regular and continuous use.

Wild River - A river or section of a river that is free of impoundments and generally inaccessible except by trail, with watersheds and shorelines essentially primitive and waters unpolluted.

Wildland Fire - A general category of lightning or human-ignited fire in natural vegetation. Includes wildland fires, prescribed fires, and fire managed for resource benefits.

Wildland Fire Use - An unplanned ignition that is managed for resource benefits. Formally called Prescribed Natural Fire.

Withdrawal – Withholding an area of federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of federal land, other than "property" governed by the Federal Property and Administrative Services Act, as amended (40U.S.C.472) from one department, bureau, or agency to another department, bureau, or agency.

6.2 Bibliography

Adams, A.W. 1975. *A Brief History of Juniper and Shrub Populations in Southern Oregon*. Resources Division, Oregon Wildlife Commission Research Report No. 6, Pittman Robertson Project W-53-R.

Aikens, C. Melvin. 1993. *Archaeology of Oregon.* U.S. Department of the Interior, Bureau of Land Management, Portland, Oregon.

Allendorf, F.W. 1975. *Genetic Variability in a Species Possessing Extensive Gene Duplication: Genetic Interpretation of Duplicate Loci and Examination of Genetic Variation in Populations of Rainbow Trout.* Ph.D. Dissertation, University of Washington, Seattle, Washington.

Allendorf, F. and F. Utter. 1979. *Population Genetics.* Fish Physiology, Volume 8: 407-454. Academic Press, New York, New York.

Allison, I. and C. Bond. 1983. *Identity and Probable Age of Salmonids from Surface Deposits at Fossil Lake, Oregon.* Copeia. 1983, 2: 563-564.

Ashley, G.A., D. English, and H.K. Cordell. 1993. *Economic Effects of the Steens Mountain Recreation Lands on Local Economics (Draft).* Outdoor Recreation and Wilderness Assessment Group, Southeastern Forest Experiment Station, U.S. Department of Agriculture, Forest Service, Athens, Georgia.

Bailey, R.M. and C.E. Bond. 1963. *Four Species of Freshwater Sculpins, Genus Cottus, From Western North America*. Occasional Paper of the Museum of Zoology, University of Michigan. 634:1-27.

Bartos, D.L. and W.F. Mueggler. 1981. *Early Succession in Aspen Communities Following Fires in Western Wyoming.* Journal of Range Management, 34:315-318.

Bartos, D.L. and R.B. Campbell. 1998. *Decline of Quaking Aspen in the Interior West - Examples from Utah.* Rangelands, 20:17-25.

Bates, R.L. and J.A. Jackson. 1987. *Glossary of Geology*, 3rd ed. American Geological Institute, Alexandria, Virginia. 788 pp.

Beckman, S.D. 1995. *National Register Nomination for the Birch Creek Ranch Rural Historic Landscape.* Manuscript on file at the BLM Vale District Office, Vale, Oregon.

Behnke, R.J. 1992. *Native Trout of Western North America.* American Fisheries Society Symposium 17. Bethesda, Maryland.

Benke, A.C., R.L. Henry III, D.M. Gillespie, and R.J. Hunter. 1985. *Importance of Snag Habitat for Animal Production in Southeastern Streams.* Fisheries 10: 8-13.

Belnap. 2003. http://www.soilcrust.org/ and http://www.soilcrust.org/crust101.htm. USGS Canyonlands Field Station, Southwest Biological Science Center, 2290 SW Resource Blvd., Moab, UT 84532 (435)719-2331

Benedict, E.M. approx. 1978. *Self-guided tour of Diamond Craters, Oregon's Geologic Gem*. U.S. Department of the Interior, Bureau of Land Management brochure.

Berg, R.J. 1987. *Genetic Characteristics of an Enigma: What is a Redband Trout.* Chapter 4 in Evolutionary Genetics of Rainbow Trout. Ph.D. Thesis. University of California, Davis, California.

Bills, F.T. 1977. *Taxonomic Status of the Isolated Populations of Tui Chub Referred to Gila bicolor oregonensis*. Master's Thesis, Oregon State University. Corvallis, Oregon.

Bond, C.E. 1974. Fishes. *Endangered Plants and Animals of Oregon*: 1. Special Report No. 205. Oregon State University Agricultural Experiment Station. Corvallis, Oregon.

Bottom, D.L., P.J. Howell, and J.D. Rodgers, 1985. *The Effects of Stream Alterations on Salmon and Trout Habitat in Oregon*. Oregon Department of Fish and Wildlife. Portland, Oregon.

Bowers, Wayne, Bill Hosford, Art Oakley, and Carl Bond. 1979. *Wildlife Habitats in Managed Rangelands - The Great Basin of Southeastern Oregon (Native Trout).* General Technical Report PNW-84. Pacific Northwest Research Station. USDA Forest Service.

Braun, C.E., T. Britt, and R.O. Wallestad. 1977. *Guidelines for Maintenance of Sage Grouse Habitats*. Wildlife Society Bulletin 5:99-106.

Bright, Ruth McGilvra. 1979. *Prehistory and History of the Harney Area: A Cultural Resources Overview*. Manuscript on file at the Burns BLM District Office, Hines, Oregon.

Bright, R.M. 1979. *Harney Area Cultural Resources Class I Inventory: a Cultural Resources Overview.* Manuscript on file at the BLM Burns District Office, Hines, Oregon.

Brooks, Howard C. 1963. *Quicksilver in Oregon:* Oregon Department of Geology and Mineral Industries Bulletin No. 55, 223 pages and eight plates.

Buckhouse, J.C. and J.L. Mattison. 1980. *Potential Soil Erosion of Selected Habitat Types in the High Desert Region of Central Oregon.* Journal of Range Management 33:282-285.

Bunting, S.C., B.M. Kilgore, and C.L. Bushey. 1987. *Guidelines for Prescribed Burning Sagebrush-Grass Rangelands in the Northern Great Basin.* U.S. Department of Agriculture, Forest Service Intermountain Research Station General Technical Report INT-231. Ogden, Utah. 33 pp.

Burkhardt, J.W. and E.W. Tisdale. 1969. *Nature and Successional Status of Western Juniper Vegetation in Idaho.* Journal of Range Management, 22:264-270.

Campton, D.E. and J.M. Johnston. 1985. *Electrophoretic Evidence for a Genetic Admixture of Native and Nonnative Rainbow Trout in the Yakima River, Washington*. Transactions of the American Fisheries Society. 114:782-93.

Connelly, J.W. 1982. *An Ecological Study of Sage Grouse in Southeastern Idaho*. PhD. Dissertation, Washington State University, Pullman, Washington. 84 pp.

Connelly, J.W. and C.E. Braun. 1997. *Long-Term Changes in Sage Grouse Centrocercus Urophasianus Populations in Western North America*. Wildlife Biology 3:123-128.

Connelly, J.W., H.W. Browers, and R.J. Gates. 1988. *Seasonal Movements of Sage Grouse in Southeastern Idaho.* Journal of Wildlife Management 52:116-122.

Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. *Guidelines to Manage Sage Grouse Populations and Their Habitats.* Wildlife Society Bulletin 28(4):967-985.

Copeland, C. 1997. *Congressional Research Service Report for Congress; Clean Water Act and TMDLs*. Environmental and Natural Resources Policy Division. September 1997.

Crawford, J.A. and R.S. Lutz. 1985. *Sage Grouse Populations in Oregon, 1941-1983.* Murrelet 66:69-74.

Crespin, B. 1990. *The Riddle Brothers Ranch Historic District Cultural Resources Management Plan*. Manuscript on file at the BLM Burns District Office, Hines, Oregon.

Crowe, E. 1996. *Quaking Aspen and Black Cottonwood: Historical and Present-day Distribution in the Blue Mountains*. In: Natural Resources News. Blue Mountains Natural Resource Institute. January 1996.

Currens, K. *Genetic Variation in Two Populations of Rainbow Trout in the Donner und Blitzen River, Oregon.* Unpublished report on file at Oregon Department of Fish and Wildlife.

Dambacher, J.M., K.K. Jones, and H.W. Li. 2000. *Assessment of Stream Populations and Habitat of Great Basin Redband Trout.* Completion Report Fish Research Project #99HQAG0047. Oregon Department of Fish and Wildlife, Portland, Oregon.

Dambacher, J.M., K.K. Jones, and H.W. Li. 2001. *The Distribution and Abundance of Great Basin Redband Trout: an application of variable probability sampling in a 1999 status review.* Oregon Department of Fish and Wildlife.

Dayton, William. 1960. *Notes on Western Range Forbs*. U.S. Government Printing Office, Agriculture Handbook 161.

Dean Runyon and Associates, SMH Architecture, P.C., Jean Jacques Andre Consultants, Ltd., and Stephen Dow Beckham, PhD. 1994. *Oregon High Desert Interpretive Center Economic Feasibility and Impact Analysis*. Harney County, Oregon.

DeByle, N.V. 1985. Animal Impacts. In *Aspen: Ecology and Management in the Western United States,* eds. N.V. DeByle and R.P. Winokur, 115-123. USDA Forest Service General Technical Report RM-119.

Dennis, W.B. 1902. *A Borax Mine in Southern Oregon*. The Engineering and Mining Journal, April 26, 1902, p. 581.

Eddleman, L.E. 1987. *Establishment of Western Juniper in Central Oregon*. In: Everett, R.L. compiler. Proceedings, Pinyon Juniper Conference Reno, Nevada, January 1986. General Technical Report INT-215, 255-259 U.S. Department of Agriculture, Forest Service Intermountain Research Station, Ogden, Utah.

Eddleman, L.E. 1984. *Ecological Studies on Western Juniper in Central Oregon*. In: Oregon State University Extension Service, Proceedings, Western Juniper Management Short Course, pp. 27-35. Bend, Oregon. October 15-16.

Eddleman, L.E., P.M. Miller, and P.L. Dysart. 1994. *Western Juniper Woodlands of the Pacific Northwest, Science Assessment, Scientific Contract Report*. Interior Columbia Basin Ecosystem Management Project, Science Integration Team, Terrestrial Staff, Range Task Group.

Elmore, W. 1992. *Riparian Responses to Grazing Practices*. In: Naiman, R.G. ed., Watershed Management: Balancing Sustainability and Environmental Change, pp. 443-445. Springer Verlag, New York.

Elmore, E. and B. Kauffman. 1993. *Riparian and Watershed Systems: Degradation and Restoration*. Ecological Implications of Livestock Herbivores in the West, pp. 212-231.

Evans, J.G. 1994. *Geology of the Malheur, Jordan, and Andrews Resource Areas, Malheur and Harney Counties, Oregon*. In: Smith, C.L. Mineral and Energy Resources of the BLM Malheur-Jordan Resource Areas, Southeastern Oregon, A1-A43. U.S. Geological Survey.

Fausch, K.D. 1988. *Tests of Competition Between Native and Introduced Salmonids in Streams: What Have We Learned?* Canadian Journal of Fisheries and Aquatic Sciences. 45:2238-2246.

Ferns, M.L. and D.F. Huber. 1984. *Mineral Resources Map of Oregon*. Geological Map Series GMS-36, Scale 1:500,000. Oregon Department of Geology and Mineral Industries.

Ferns, M.L., H.C. Brooks, and J.G. Evans. 1993. *Geologic map of the Vale 30 X 60 Minute Quadrangle, Malheur County, Oregon and Owyhee County, Idaho*. Geological Map Series GMS-77, Scale 1:100,000. Oregon Department of Geology and Mineral Industries.

Ferns, M.L., H.C. Brooks, and J.G. Evans. 1993. *Geologic map of the Mahogany Mountain 30 X 60 Minute Quadrangle, Malheur County, Oregon and Owyhee County, Idaho*. Geological Map Series GMS-78, Scale 1:100,000. Oregon Department of Geology and Mineral Industries.

Fiero, Bill. 1986. *Geology of the Great Basin*. University of Nevada Press, Reno, Nevada. see especially pp. 6-10, 123-138.

Franklin, J.R. and C.T. Dyrness. 1973. *Natural Vegetation of Oregon and Washington*. General Technical Report PNW-8. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, Oregon.

Frewing-Runyon, L. 1995. *The Importance and Dependency of the Livestock Industry on Federal Lands in the Columbia River Basin*. Unpublished manuscript circulated April 10, 1995, for public review. U.S. Department of Agriculture, Forest Service, and U.S. Department of the Interior, Bureau of Land Management, Interior Columbia River Basin Ecosystem Management Project, Walla Walla, Washington. 59 pp.

Frewing-Runyon, Leslie. 1999. *Environmental Justice Screening in NEPA Analysis for Oregon, Washington, and Northern California*. Oregon State Office. Portland, Oregon. March 1999. 17 pp.

Friedman, Irving and Norman Peterson. 1971. *Obsidian Hydration Dating Applied to Dating of Basaltic Volcanic Activity*: Science, vol. 172, p. 1028, June 4, 1971 and reprinted in The Ore Bin, August 1971, vol. 33, no. 8, pp. 158-159.

Gamperl, K.C. and K. Rodnick. 2003. *Metabolic and Thermal Physiology of Eastern Oregon Redband Trout: Recommendations for Appropriate Numeric Temperature Criteria.* Final Report for Oregon Department of Environmental Quality.

Ganskopp, D.C. 1984. *Habitat Use and Spatial Interactions of Cattle, Wild Horses, Mule Deer and California Bighorn Sheep in the Owyhee Breaks of Southeast Oregon.* Ph.D. Dissertation, Oregon State University, Corvallis, OR.

Gates, R.J. 1983. *Sage Grouse, Lagomorph and Pronghorn Use of a Sagebrush Grassland Burn Site on the Idaho National Engineering Laboratory*. Master's Thesis, Montana State University, Bozeman, Montana. 135 pp.

Gill, R.B. 1965. *Distribution and Abundance of a Population of Sage Grouse in North Park, Colorado.* Master's Thesis, Colorado State University, Fort Collins, Colorado.

Godwin, L.H., W.H. Lee, and S. Moore. 1980. *Lands Valuable for Geothermal Resources – Oregon, Revised*. Classification Map, scale 1:500,000. U.S. Geological Survey, Conservation Division, Western Region.

Grayson, D.K. 1993. *The Desert's Past, a Natural Prehistory of the Great Basin*. Smithsonian Institution Press, Washington and London, see especially pp. 102-111, 212-213.

Hanski, I. and M. Gilpin. 1991. *Metapopulation Dynamics: Brief History and Conceptual Domain*. Biological Journal of the Linnean Society. 42:3-16.

Hanson, M.L., W. Bowers, and R. Perkins. 1993. *Lahontan Subbasins Fish Management Plan*. Oregon Department of Fish and Wildlife. Portland, Oregon.

Harney County Website - www.harneycounty.com 2003.

Harney County. *Harney County Comprehensive Plan*. Harney County, Oregon. 2004.

Harney County Community Response Team. *Harney County Strategic Plan*. 2002. Harney County, Oregon. 2002.

Hemphill-Haley, Mark. 1987. *Quaternary Stratigraphy and Late Holocene Faulting along the Base of the Astern Escarpment of Steens Mountain, Southeast Oregon*. Humboldt State University Master's Thesis, 77 pp., Humboldt, California.

Hemphill-Haley, M.A., W.D. Page, R. Burke, and G.A. Carver. 1989. *Holocene Activity of the Alvord Fault, Steens Mountain, Southeast Oregon*. Woodward-Clyde Consultants, Oakland, California for U.S. Geological Survey Grant No. 14-08-0001-G1333.

House Report 101-405 (Arizona Desert Wilderness Act of 1990). Appendix A, Grazing Guidelines.

Hupp, J.W. and C.E. Braun. 1989. *Topographic Distribution of Sage Grouse Foraging in Winter*. Journal of Wildlife Management 53:823-829.

Idaho Department of Fish and Game, *W-160-R-21*, Sept. 1994.

Johnson, J.A. 1994. *Geologic Map of the Krumbo Reservoir Quadrangle, Harney County, Southeastern Oregon*. U.S. Geological Survey Miscellaneous Field Studies Map MF-2267, see especially the 11-page booklet that accompanies the map.

Johnson, D., D. Richard Lycan, J. Sweet, M. Heuhaus, and A. Schaedel. 1985. *Atlas of Oregon Lakes.* Oregon State University Press, Corvallis, Oregon.

Johnson, R., V. Litz, and K.A. Cheek. 1995. *Assessing the Economic Impacts of Outdoor Recreation in Oregon*. College of Forestry, Oregon State University, Corvallis, Oregon.

Kagan, J. and S. Caicco. 1996. *Manual of Oregon Actual Vegetation*. Oregon National Heritage Program, Portland, Oregon.

Karl, M.G. and S.G. Leonard. 1996. *Western Juniper (Juniperus Occidentalis Ssp. occidentalis) in the Interior Columbia Basin and Portions of the Klamath and Great Basin: Science Assessment*. Review Draft. Interior Columbia Basin Ecosystem Management Project, Science Integration Team, Terrestrial Staff Range Task Group. Walla Walla, Washington.

Kinch, G. 1989. *Riparian Area Management: Grazing Management in Riparian Areas*. USDI 1737-4, Bureau of Land Management. Denver, Colorado. 44 pp.

Klebenow, P.A. 1969. *Sage Grouse Nesting and Brood Habitat in Idaho*. Journal of Wildlife Management 33:649-661.

Kochert, M.N., et al. 1989. *Responses of Raptors to Livestock Grazing in the Western United States*. In: Proceedings, Western Raptor Management Symposium and Workshop. National Wildlife Federation, Washington, D.C. 320 pp.

Kunkel, C.M. 1976. *Biology and Production of the Redband Trout in Four Southeastern Oregon Streams.* Master's Thesis, Oregon State University, Corvallis, Oregon.

Leckenby, D.A., A.W. Adams, and R.W. Roberts. 1971. *Mule Deer Winter Range Ecology and Management*. Oregon State Game Commission. Pittman Robertson Project Report W-70-R-1.

Li, H.W., G.A. Lamberti, T. Pearsons, C.Tait, J. Li, and J. Buckhouse. 1994. *Cumulative Effects of Riparian Distribution along High Desert Trout Streams of the John Day Basin, Oregon*. Transactions of the American Fisheries Society.

Libbey, F.W. 1960. *Boron in Alvord Valley, Harney County, Oregon*. The Ore Bin, vol. 22, no. 10, pp. 97-105.

Logan, B. and B. Clinch. 1991. *Montana Forestry BMPs*. Montana Department of State Lands, Missoula, Montana.

Loomis, John B. 2000. Economic Values of Wilderness Recreation and Passive Use: What We Think We know at the Beginning of the 21st Century. USDA Forest Service Proceedings. RMRS, Volume 2, Page 15. 2000.

Loomis, John B. and Robert Richardson. 2001. Economic Values of the U.S. Wilderness System. International Journal of Wilderness. Volume 7, Number 1. April 2001.

Lorah, Paul A. 2000. Population Growth, Economic Security, and Cultural Change in Wilderness Counties. USDA Forest Service Proceedings. RMRS, Volume 2, Page 15. 2000.

Mackie, R.J. 1970. *Range Ecology and Relationships of Mule Deer, Elk, and Cattle in the Missouri River Breaks, Montana*. Wildlife Monogram 20. 79 pp.

Mansfield, Donald H. 1995. *Vascular Flora of Steens Mountain, Oregon*. Journal of the Idaho Academy of Science. Vol. 31 - No. 2. December, 1995.

Markle, D.F. and D.L. Hill, Jr. 2000. *Taxonomy and Distribution of the Malheur Mottled Sculpin, Cottus benderei*. Northwest Science 74(3):202-211.

Martin, Robert E. 1982. *Fire History and Its Role in Succession*.

Maser, C. et al. 1984. *Wildlife Habitats in Managed Rangelands–The Great Basins of Southeastern Oregon.* Gen. Tech. Report PNW-172. Pacific Northwest Forest and Range Experiment Station. USDA Forest Service.

McDonald, F. 1994. *The Riddle Brothers Ranch Historic District Cultural Resources Management Plan, Environmental Assessment*. Manuscript on file at the BLM Burns District Office, Hines, Oregon.

McDonough, W.T. 1979. *Quaking Aspen Seed Germination and Early Seedling Growth.* USDA Forest Service. Research Paper INT-234. Intermountain Forest and Range Experiment Station. Ogden, UT. 13 pp.

Meehan, W.R., ed. 1991. *Influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats*. Special Publication 19. Bethesda, MD: American Fisheries Society. 751 pp.

Meeuwig, R.O. 1970. *Sheet Erosion on Intermountain Summer Ranges*. U.S. Department of Agriculture, Forest Service, Research Paper INT-85.

Miller, R.F. and P.E. Weigan. 1994. *Holocene Changes in Semiarid Pinyon-juniper Woodlands*. Bioscience 44:465-474.

Miller, R.F. and J.A. Rose. 1995. *Historical Expansion of Juniperus occidentalis (western juniper) in Southeastern Oregon*. Great Basin Naturalist 55:37-45.

Miller, R.F., T. Svejcar, M. Willis, and L. Eddleman. 1996. *History, Ecology and Management of Western Juniper Woodlands and Associated Shrublands: an Annual Report of Preliminary Results and Progress for 1995.* Eastern Oregon Agricultural Research Center. 33 pp.

Miller, R.F. and J.A. Rose. 1999. *Fire History and Juniperus Occidentalis Hook. Encroachment in Artemesia Steppe*. American Midland Naturalist. In submission.

Miller, R.F., T.J. Svejcar, and J.A. Rose. 1999. *Impacts of Western Juniper Encroachment in Sagebrush Steppe.* Journal of Range Management, 53:550-585.

Minor, S.A., J.J. Rytuba, J.J. Grubensky, D.B. Vander Meulen, C.A. Goeldner, and K.J. Tegtmeyer. 1987. *Geologic Map of the High Steens and Little Blitzen Gorge Wilderness Study Areas, Harney County, Oregon*. U.S. Geological Survey, Miscellaneous Field Studies Map MF-1876.

Minor, S.A., Donald Plouff, L.E. Esparza, and T.J. Peters. 1987. *Mineral Resources of the High Steens and Little Blitzen Gorge Wilderness Study Areas, Harney County, Oregon*. U.S. Geological Survey Bulletin 1740-A. 21 pp.

Moskowitz, D. and G. Rahr. 1994. *Native Trout Report: an Analysis of the Status and Management of Oregon's Native Trout with Management Recommendations for Conservation.* Native Trout Conservation Council. Portland, Oregon.

Mueggler, W.F. 1985. Vegetation associations. In *Aspen: Ecology and Management in the Western United States,* eds. N.V. DeByle and R.P. Winokur, 45-55. USDA Forest Service. General Technical Report RM-119.

Myers, L.H. 1989. *Grazing and Riparian Management in Southwestern Montana*. pp. 117-120 In: Gresswell R.E., Barton, B.A., and Kerschner, J.L., eds. Practical Approaches to Riparian Resource Management: an Educational Workshop. Bureau of Land Management, Billings, Montana.

National Park Service, USDA Forest Service, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, and Bureau of Land Management. 1998 *Wildland and Prescribed Fire Management Policy; Implementation Procedures Reference Guide*. National Interagency Fire Center. Boise, Idaho.

Northwest Economic Associates. 2002. *Regional Economic Benefits of Ecotourism and Operations Associated with the Malheur National Wildlife Refuge.* Vancouver, Washington.

Nussbaum, R.A., E.E. Brodie, Jr., and R.M. Stor. 1983. *Amphibians and Reptiles of the Pacific Northwest*. University of Idaho Press, Moscow. 332 pp.

Oregon Agricultural Information Network (OAIN). 2002.

Oregon Department of Agriculture (ODA). 1997. *Noxious Weed Policy and Classification System*. Oregon Department of Agriculture. Salem, Oregon.

1997 Census of Agriculture. 2002. Oregon State University Libraries, Corvallis, OR.

Oregon Department of Environmental Quality. *Water Quality Limited Streams Database*.

____. 1988. Water Quality Division, Planning and Monitoring Section, Portland, Oregon. *Oregon Statewide Assessment of Nonpoint Sources of Water Pollution*.

Oregon Department of Fish and Wildlife. 1980. *Trout Management Plan Blitzen River.* Unpublished report.

____. 1983. *Blitzen River Redband Trout Evaluation.* Information Reports No. 83-9.

____. 1990. *Mule Deer Plan*.

____. 1992-1997. *Oregon's Bighorn Sheep Management Plan*. 1992-1997. Portland, Oregon.

____. 1992. *Oregon's Elk Management* Plan. July 1992. Portland, Oregon.

____. 1993. *Oregon Cougar Management Plan. Public Review Draft*. Proposed for Adoption, March 1993.

____. 1997. *Oregon Department of Fish and Wildlife Sensitive Species*. December 1997.

____. 1997. *Catlow Redband Trout and Catlow Tui Chub Conservation Agreement and Strategy*.

____. 1999. *Conservation Status of Oregon Basin Redband Trout*. Public Review Draft 4-12-99.

____. 2002. *Hunter Surveys 2001.* Portland, Oregon.

____. 2003a. *Oregon's Mule Deer Management Plan*. February 2003. Portland, Oregon.

____. 2003b. *Oregon's Elk Management Plan*. February 2003. Portland, Oregon.

Oregon Department of Land Conservation Development. 1995. *Oregon's Statewide Planning Goals*.

Oregon Economic and Community Development Department. 2001. *Economic Data*. State of Oregon, Salem, Oregon.

____. Oregon Resident Labor Force, Unemployment and Employment Tables, Various Years. Portland, Oregon.

Oregon Employment Department. 2002. Unemployment and Employment Data.

____. 2003. Workforce Analysis; Eastern Oregon Labor Trends. June 2003.

Oregon Natural Heritage Advisory Council. 1995. *Rare, Threatened and Endangered Plants and Animals of Oregon*. Oregon Natural Heritage Program, Portland, Oregon. 84 pp.

____. 1998. *Rare, Threatened and Endangered Species of Oregon*. March, 1998.

____. 1998. *Oregon Natural Heritage Plan*. Natural Heritage Advisory Council to the State Land Board, Salem, Oregon. 137 pp.

Oregon Parks and Recreation Department. 2000. *Southeast Oregon Recreation Plan for Harney, Lake and Malheur Counties*.

____. 1994. Oregon Outdoor Recreation Plan 1994-1999. Portland, Oregon.

____. 2002. Oregon Outdoor Recreation Plan 2002 Draft. Portland, Oregon.

Oregon State University Extension Economic Information Office. 2000. *2000 Oregon County and State Agricultural Estimates*. Oregon State University, Corvallis, Oregon.

Oregon Tourism Commission, Salem, OR.. *Oregon Travel Impacts*, 1999-2000; Detailed County Estimates. November 2001.

Oregon Tourism Commission, Salem, OR.. *Oregon Travel Impacts*, 1991-2001; Detailed County Estimates. November 2002.

Orr, E.L., W.N. Orr, and E.M. Baldwin. 1992. *Geology of Oregon*, 4th ed. Kendall/Hunt Publishing, Dubuque, Iowa. 254 pp.

Peters, S.G., G.T. Spanski, H.C. Brooks, J.G. Evans, R.R. Carlson, G.K. Lee, K.A. Connors, J.J. Rytuba, A. Griscom, G.V. Albino and P.F. Halvorson. 1996. *Deposit Models, Tracts, and Estimation of Endowment for Undiscovered Metallic Resources in the BLM's Malheur, Jordan, and Andrews Resources Areas, Southeastern Oregon:* U.S. Geological Survey Administrative Report to the Bureau of Land Management. 70 pp.

Proceedings, BLM Workshop: *"The Ecology and Management of Microbiotic Soil Crusts in the Great Basin and Snake River Plain"* Oct. 29-30, 1996. Boise, Idaho.

Puchy, Claire A. and David B. Marshall. 1993. *Oregon Wildlife Diversity Plan*, 2nd ed. Oregon Department of Fish and Wildlife, Portland, Oregon.

Quigley, Thomas M., Richard W. Haynes, and Russell T. Graham, tech. eds. September 1996. *Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin and Portions of the Klamath and Great Basins*. PNW-GTR-385. USDA, Forest Service, Pacific Northwest Research Station.

Quigley, Thomas M. and S.J. Arbelbide Jr., tech. eds. 1997. *An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins*. Gen. Tech. Rep. PNW-GTR-504. Four vols. USDA, Forest Service, Pacific Northwest Research Station.

Reed-Jerofke, Linda. 1999. Personal Communication.

Reformatted Comprehensive Plan for the City of Burns, Oregon. August, 1977.

Reyna, N. 1998. *Economic and Social Conditions of Communities: Economic and Social Characteristics of Interior Columbia Basin Communities and an Estimation of Effects on Communities from the Alternatives of the Eastside and Upper Columbia River Basin Draft Environmental Impact Statements.*

Reisenbichler, R.R. 1977. *Effects of Artificial Propogation of Anadromous Salmonids on Wild Populations*. In Hassler, T.J. and R.R. Vankirk, eds. Genetic Implications of Steelhead Management. Special Report 77-1. California Cooperative Fishery Research Unit: 2-3. Arcata, California.

Rieman, B., D. Lee., et al. 1993 *Consideration of Extinction Risks for Salmonids*. Fish Habitat Relationships Technical Bulletin Number 14. U.S. Department of Agriculture, Forest Service. Eureka, California.

Roberts, B.C. 1995. *Best Management Practices of Erosion and Sediment Control*.

Roché, C. and L.C. Burrill. 1992. *Squarrose Knapweed*. Pacific Northwest Extension Publication PNW 422. Corvallis, Oregon. 2 pp.

Roché, B.F., C.T. Roché, and R.C. Chapman. 1994. *Impacts of Grassland Habitat on Yellow Starthistle (Centarua solstitialis) Invasion*. Northwest Science 68(2):86-96.

Rudzitis, Gundars and Rebecca Johnson. 2000. The Impact of Wilderness and Other Wildlands on Local Economies and Regional Development Trends. USDA Forest Service Proceedings. RMRS, Volume 2, Page 15. 2000.

Schlosser, I.J. 1982. *Trophic Structure, Reproductive Success and Growth Rate of Fishes in a Natural and Modified Headwater Stream.* Canadian Journal of Fisheries and Aquatic Sciences. 39:968-978.

Scott, W.B. and E.J. Crossman. 1973. *Freshwater Fishes of Canada*. Bulletin 184, Fisheries Research Board of Canada. Ottawa, Canada.

Severson, K.E. and J.N. Rinne. 1988. *Increasing Habitat Diversity in Southwestern Forests and Woodlands via Prescribed Fire*.

Sigler, W.F. and J.W. Sigler. 1987. *Fishes of the Great Basin - A Natural History.* University of Nevada Press. Reno, NV. 425 pp.

Smith, Cole L., ed. 1994. *Mineral and Energy Resources of the BLM's Malheur, Jordan, and Andrews Resource Areas, Southeastern Oregon*: U.S. Geological Survey Administrative Report to the Bureau of Land Management. 232 pp.

St. Clair, L. and J. Johansen. 1993. *Introduction to the Symposium on Soil Crust Communities*. Great Basin Naturalist. Vol. 53.

State of Oregon, Department of Forestry. *Various Annual Reports, 1985-1998.* Oregon Timber Harvest Report. Salem, Oregon. One p.

Stearley, R.F. and G.R. Smith. 1983. *Phylogeny of the Pacific Trouts and Salmons (Oncorhynchus) and genera of the Family Salmonidae*. Transactions of the American Fisheries Society. 122:1-33.

Stohlgren, T.J., Y.Otsuki, C.A. Villa, M. Lee, and J. Belnap 2001. *Patterns of Plant Invasions: A Case Example in Native Species Hotspots and Rare Habitats*. 3 Biological Invasions 37-50.

Tait, C.K., J. Li, G. Lamberti, T. Pearsons, and H. Li. 1994. Relationships between Riparian Cover and the Community Structure of High Desert Streams. Journal of the North American Benthological Society. 13: 45-56.

Thomas, J.W. et al. *Wildlife Habitats in Managed Rangelands - The Great Basin of Southeastern Oregon.*

Thurow, R. 1988. *Wood River Fisheries Investigations.* Job Performance Report. Project F-73-R-10. Idaho Department of Fish and Game. Boise, Idaho.

Trainer, C.E., J. Lemos, T.P. Kistner, W.C. Lightfoot, and D.E. Toweil. 1981. *Mortality of Mule Deer Fawns in Southeastern Oregon, 1968-1979.* Oregon Department of Fish and Wildlife Research Report 10. 113 pp.

U.S. Department of Agriculture (APHIS). 1994. *Animal Damage Control. Final Environmental Impact Statement.* Three Volumes. Washington, D.C.

U.S. Department of Agriculture/U.S. Department of Interior. 1996. U.S. Forest Service (USFS)/ Bureau of Land Management (BLM). *Status of the Interior Columbia Basin, Summary of Scientific Findings*. U.S. Department of Agriculture, Forest Service General Technical Report PNW-GTR-385, Portland, Oregon. 144 pp.

____. 1996. *Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin*. Portland, Oregon.

____. 1997. *Interior Columbia Basin Ecosystem Management Project Eastside Draft Environmental Impact Statement*. Walla Walla, Washington.

____. 1999. *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters*. Version 2. May 1999. Portland Oregon.

____. 2000a. *Interior Columbia Basin Final Environmental Impact Statement*. December 2000. Portland, Oregon.

____. 2000b. *Interior Columbia Basin Final Environmental Impact Statement Supplemental Draft.* March 2000. Portland, Oregon.

____. 2000c. *Interior Columbia Basin Final Environmental Impact Statement Proposed Record of Decision.*

____. 2003. *Interior Columbia Basin Strategy; A Strategy for Applying the Knowledge Gained by the Interior Columbia Basin Ecosystem Management Project to the Revision of Forest and Resource Management Plans and Project Implementation.* February 2003. Portland, Oregon.

U.S. Department of Commerce. 2002. *2000 Census of Population and Housing*. U.S. Census Bureau.

U. S. Department of the Interior. 1977. Bureau of Land Management. *Grazing Management for Riparian-wetland Areas*. USDI 1737-14. Denver, Colorado. 63 pp.

____. BLM. *BLM's Recreation 2000 Plan & Update.*

____. 1980. BLM. *Visual Resource Management Program. GPO 0-302-993.* Washington Office, Washington, D.C.

____. 1981. BLM. *Paleontological Sites on or near Bureau of Land Management Administered Lands in Oregon: a Preliminary Catalogue*. Oregon State Office, Portland, Oregon.

____. 1982. USFWS. *Pacific Coast American Peregrine Falcon Recovery Team.*

____. 1982a. BLM. *Andrews Management Framework Plan*.

____. 1982b. BLM. *Andrews Grazing Management Program EIS*. September 1982.

____. 1983. BLM Manual 8560. *Management of Designated Wilderness Areas.* Washington Office, Washington, DC.

____. 1984. BLM Manual 8400. *Visual Resource Management*. Washington Office, Washington, DC.

____. 1985. BLM. *Steens Mountain Final Recreation Area Management Plan*. Burns District Office, Burns, Oregon.

____. 1986a. BLM. *Andrews Rangeland Program Summary Update.* Burns District Office, Burns, Oregon. December 1986.

____. 1986b. BLM. *Recovery Plan for the Pacific Bald Eagle*.

____. 1986. BLM Manual Handbook 8410-1. *Visual Resource Inventory*. Washington Office, Washington, DC. 20 pp.

____. 1986. BLM. *Andrews Rangeland Program Summary (May 1984) and update allotment map (December 1986, showing about 25 allotments).*

____. 1987. BLM. *Supplement to the Northwest Area Noxious Weed Control Program Final Environmental Impact Statement*. Oregon State Office, Portland, Oregon.

____. 1987. USFWS. *Recovery Plan for the Borax Lake Chub, Gila boraxobius.*

____. 1988a. BLM. *The Land Tenure Adjustment Plan Amendment for the Andrews and Drewsey MFPs.*

____. 1988b. BLM Manual 1613. *Areas of Critical Environmental Concern Resource Management Planning Guidance.* Washington Office, Washington, DC. 28 pp.

____. 1988c. BLM. *National Environmental Policy Act. Handbook H-1790-1.* October 25, 1988.

____. 1988. BLM. *1613 - Areas of Critical Environmental Concern. Resource Management Planning Guidance*. Washington Office, Washington, D.C. 22 pp.

____. 1988. BLM Manual 8110. *Cultural Resource Identification*. Washington Office, Washington, DC.

____. 1989a. BLM. *Oregon Wilderness Final Environmental Impact Statement*. December 1989.

____. 1989b. BLM. *Oregon Wilderness Environmental Impact Statement.* Volume III. Includes Appendices for all WSAs beginning with OR-2 plus OR-3-114. Oregon State Office, Portland, Oregon. December 1989.

____. 1989c. *Oregon Wilderness Environmental Impact Statement*. Volume I - Statewide. Oregon State Office, Portland, Oregon. December 1989.

____. 1990. Bureau of Land Management and Oregon Department of Environmental Quality. *Memorandum of Agreement*.

____. 1990. BLM Manual 8160. *Native American Coordination and Consultation*. Washington Office, Washington, DC.

____. 1990. BLM Manual 8300. *Recreation Management*. Washington Office, Washington, DC. 17 pp.

____. 1991a. BLM. *Vegetation Treatment on BLM Lands in Thirteen Western States. Final Environmental Impact Statement. BLM-WY-ES-91-022-4320.* Wyoming State Office, Cheyenne, Wyoming.

____. 1991b. BLM. *Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species, Proposed Rules*. *Federal Register*, 56 (115):58804-58836.

____. 1991. BLM. *Endangered and Threatened Wildlife and Plants*. 50 CFR 17.11. GPO, Washington, D.C.

____. 1991. BLM. *Wilderness Study Report*. Volume I. Oregon State Office, Portland, Oregon. October 1991.

____. 1992a. BLM. *Three Rivers Resource Management Plan, Record of Decision, and Rangeland Program Summary*. Burns District Office, Hines, Oregon. September 1992.

____. 1992b. BLM. *National Wild & Scenic River Donner und Blitzen Management Plan Environmental Assessment*. Burns District Office, Hines, Oregon. June 1992.

____. 1992. BLM. *Procedures for Ecological Site Inventory.* Tech. Ref. 1737-7.

____. 1993a. BLM. *Donner und Blitzen National Wild and Scenic River Management Plan Environmental Assessment*. Burns District Office, Hines, Oregon. May 1993.

____. 1993b. BLM. *Andrews Plan Amendment for Recreation Access Surrounding the Steens Mountain Loop Road*. Burns District Office, Hines, Oregon. June 1993.

____. 1993. BLM. *Process for Assessing Proper Functioning Condition. BLM Technical Reference 1737-9.* Washington Office, Washington, D.C.

____. 1994a. BLM. *The Riddle Brothers Ranch Historical Cultural Management Plan, Environmental Assessment.*

____. 1994b. BLM. *Rangeland Reform '94, Draft Environmental Impact Statement Executive Summary.*

____. 1994. BLM. *A partial Inventory of Meadows on Public Land in the Pueblo Mountains (Pueblo-Lone Mountain Allotment*. Burns D.O.

____. 1995a. BLM. *Pueblo-Lone Mountain Management Plan EA.* August 1995.

____. 1995b. BLM. *Interim Management Policy for Lands under Wilderness Review H-8550-1.*

____. 1995. BLM. *Mountain Sheep Ecosystem Management Strategy in 11 Western States & Alaska.*

____. 1995. BLM. *Southeastern Oregon Resource Management Plan (SEORMP) Process and Preliminary Issues*. Vale District Office, Vale, Oregon. August 1995.

____. 1995. BLM. *Pueblo-Lone Mountain Allotment Management Plan*. Burns District, Hines, Oregon.

____. 1995. *U.S. Geological Survey Water Data Report OR-95-1, Water Resources Data, Oregon, Water Year 1995*. Water Resources Division, Portland, Oregon.

____. 1995a. USFWS. *Biological Opinions - Section 7 Consultation for the 1995-1996 Grazing Authorization on the Alvord and Mann Lake Allotments and Lahontan Cutthroat Trout*. U.S. Fish and Wildlife Service.

____. 1995b. USFWS. *Recovery Plan for the Lahontan Cutthroat Trout.* U.S. Fish and Wildlife Service.

____. 1996a. BLM. *Kiger Mustang Area of Critical Concern Management Plan*.

____. 1996b. BLM. *Riddle Mountain and Kiger Wild Horse Herd Management Area Plan*.

____. 1997a. USFWS. *Recovery Plan for the Borax Lake Chub, Gila boraxobius*. Portland, Oregon. February 4, 1997.

____. 1997b. BLM. *Upper Columbia River Basin Draft Environmental Impact Statement*. Volume 1. May 1997.

____. 1997. BLM. *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington*. August 1997.

____. 1997. Fish and Wildlife Service (USFWS). *Catlow Redband Trout and Catlow Tui Chub Conservation Agreement and Strategy.*

____. 1998a. BLM. *Noxious Weed Management Project Environmental Assessment EA No. OR-020-98-05*. Hines, Oregon. April 16, 1998.

____. 1998b. BLM. *Draft Southeast Oregon Resource Management Plan and Environmental Impact Statement*. Vale, Oregon. October 1998.

____. 1998. BLM. *Proper Functioning Condition Assessments*.

____. 1998. BLM. *A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas*. USDI 1737-15. Denver, Colorado. 126p.

____. 1998. BLM. *EA #OR-010-98-05 Mining Use & Occupancy - Sunstone Mining Area*.

____. 1998. BLM. 1998 Revised Guidelines for Domestic Sheep and Goat Management in Native Wild Sheep Habitats. Washington D.C.

____. 1999. BLM. *Burns District Environmental Assessment for Commercial Day Use Activities. OR-020-EA-99-24*

____. 1999. BLM. *A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas*. USDI 1737-16. Denver, Colorado. 109 pp.

____. 1999. BLM. *Proper Functioning Condition Assessments*.

____. 1999. USFWS. *Biological Opinions - Section 7 Consultation for the 1999-2004 Grazing Activities on the Pueblo Mountain Allotment.* United States Fish and Wildlife Service.

____. 2000a. BLM. *Proposed Southeast Oregon Resource Management Plan and Final Environmental Impact Statement*. Volume 1 of 3 - Text. Vale District Office, Oregon. December 2000.

____. 2000b. BLM, USFWS, USDA-USFS, Oregon Department of Fish and Wildlife, and Oregon Division of State Lands. *Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines.* August 21, 2000. Oregon State Office, Portland, Oregon BLM. 27 pp.

____. 2000c. BLM. *Draft Washington and Eastern Oregon Transportation Plan.*

____. 2000. USFWS. *Status Review for Great Basin Redband Trout*. Portland, Oregon. February 2000.

____. 2000. BLM. *Record of Decision for the Proposed Southeast Oregon Resource Management Plan and Final Environmental Impact Statement*. Vale District Office, Oregon. December 2000.

____. 2001a. BLM. *Steens Mountain Cooperative Management Planning Area Interim Management Policy*. April 20, 2001.

____. 2001b. BLM. *Final Decision Record for Projects for Implementation of the Steens Mountain Cooperative Management and Protection Act of 2000 Environmental Assessment, EA-OR-027-01-27.* Burns District Office, Hines, Oregon.

____. 2001c. BLM. *Decision Record and Finding of No Significant Impact for Steens Mountain Trail Maintenance.* Burns District Office, Hines, Oregon.

____. 2001d. BLM. *Land Use Planning Handbook. H-1601-1.* Last updated: January 5, 2001.

____. 2001e. BLM. *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands.* Washington, D.C. January 19, 2001.

____. 2001f. BLM. *Wilderness Management*.

____. 2001g. BLM. *Wilderness Management: Final Rule*. January 16, 2001.

____. 2001. BLM. *Steens Mountain in the Summer* (http://www.or/blm/gov/steens/background/background_page.htm).

____. 2001. BLM. *Steens Mountain Area Resources Document prepared for the Steens Mountain Advisory Council.*

____. 2001. BLM. GIS Map: *Baseline PFC Map*.

____. 2001. BLM. GIS Map: *ACEC Map with Potentials*.

____. 2001. BLM. GIS Map: *Range Improvements*.

____. 2001. BLM. GIS Map: *Noxious Weeds*.

____. 2001. BLM. GIS Map: *Current Geologic Map*.

____. 2001. BLM. GIS Map: *Grazing Allotments*.

____. 2001. BLM. GIS Map: *Area Closed to Mineral Leasing Including Interim WSR Corridor*.

____. 2001. BLM. GIS Map: *Fire*.

____. 2001. BLM. GIS Map: *CMPA Top 10 Landowners Not in Exchanges Plus Pre-Exchange Owners and Acres Per Title Plat*.

____. 2001.BLM. GIS Map: *Sensitive Plants*.

____. 2001. BLM. GIS Map: *Burns District Base Map*.

____. 2001. BLM. GIS Map: *General Vegetation*.

____. 2001. BLM. GIS Map: *General Soils*.

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____. 2001. BLM. GIS Map: *WSAs pre- and post-act (smaller size)*.

____. 2001. BLM. GIS Map: *Steens Mountain w/Boundaries and Exchanges*.

____. 2001. BLM. GIS Map: 8.5 x 11 *Boundaries of Bureau of Land Management (BLM) RAs in Oregon.*

____. 2001. BLM. GIS Map: *Wildlife*.

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____. 2001. BLM. GIS Map: *Cultural Resources*.

____. 2001. BLM. GIS Map: *Smaller Map of all WSAs and Boundaries*.

____. 2001. BLM. GIS Map: *Minerals Potential and Withdrawal Area*.

____. 2001. USFWS. *Biological Opinions - Section 7 Consultation for Ongoing Implementation of the Pueblo-Lone Mountain Allotment Management Plan.* United States Fish and Wildlife Service.

____. 2001. *Federal Wildland Fire Management Policy*. USDA, Department of Defense, Department of Energy, Department of Commerce, U.S. Environmental Protection Agency, Federal Emergency Management Agency, and Nationsl Association of State Foresters. 32 p.

____. 2002. BLM. *Analysis of the Management Situation.* January 2002. Hines, Oregon

____. 2002. BLM. *Summary of the Analysis of the Management Situation*. April 2002. Hines, Oregon.

____. 2002. BLM. *National Mountain Bicycling Strategic Action Plan*. November 2002. Washington, D.C.

____. Undated. BLM. *Selected Noxious Weeds of Oregon*.

____. 2003. *BLM Manual Handbook H-2930-1 - Recreation Permit Administration*. October 7, 2003.

____. 2003. USFWS and U.S. Department of Commerce, U.S. Census Bureau. *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.* Revised March 2003. Washington D.C.

U.S. Department of Transportation Report. 1994. *No. FHWA-FLP-94-005*. National Technical Information Service, Springfield, Virginia.

U.S. Environmental Protection Agency. 1998. Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses.

Vavra, L.A. and F.A. Sneva. 1978. *Diets of Grazing Animals Using Common Range in Eastern Oregon.*

Volland, L.A. and J.D. Dell. 1981. *Fire Effects on Pacific Northwest Forest and Range Vegetation*. U.S. Department of Agriculture, Forest Service, Pacific Norwest Region Rangeland Management/Aviation and Fire Management Report. R6 RM 067. Portland, Oregon. 23 pp.

Walker, G.W. and N.S. MacLeod. 1991. *Geologic Map of Oregon, scale 1:500,000.* U.S. Geological Survey. Portland, Oregon.

Wall, T.G. 1999. *Juniper Encroachment into Quaking Aspen (*Populus tremuloides) *Communities in the Northern Great Basin.* Oregon State University M.S. Thesis, Corvallis. 72 pp.

Wall, T.G., R.F. Miller, and T.J. Svejcar. 2001. *Juniper Encroachment into Aspen in the Northwest Great Basin.* Journal of Range Management. 54:691-698.

Wallace, R.L. 1981. *Morphological Study of Native trout Populations of Owyhee County, Idaho.* Final Report Contract ID-010-DT0-002. Department of the Interior, Bureau of Land Management. Boise, Idaho. 49 pp.

Wallestad, R.O. and D.B. Pyrah. 1974. *Movement and Nesting of Sage Grouse Hens in Central Montana*. Journal of Wildlife Management 38:630-633.

Wayland, R.G. and W.H. Lee. 1980. *Lands Valuable for Sodium and Potassium – Oregon, Revised*. Map scale 1:500,000. U.S. Geological Survey, Conservation Division, Western Region. Portland, Oregon.

Weissenborn, ed. 1969. *Mineral and Water Resources of Oregon*: Oregon Department of Geology and Mineral Industries Bulletin 64. see especially pp. 157 and 184.

West, N.E. 1984. *Successional Patterns and Productivity Potentials of Pinyon-juniper Ecosystems*. In: Developing strategies for rangeland management. National Research Council/National Academy of Sciences, 1301-1332. Westview Press, Boulder, Colorado.

Whitelaw, Ed, ed. 2003. *A Letter from Economists to President Bush and the Governors of Eleven Western States Regarding the Economic Importance of the West's Natural Environment.*

Williams, Howel and Robert R. Compton. 1953. *Quicksilver Deposits of Steens Mountain and Pueblo Mountains, Southeast Oregon*: U.S. Geological Survey Bulletin 995-B, 76 pages and three plates.

Williams, J.E. 1995. *Threatened Fish of the World: Gila boraxobius Williams and Bond, 1980 (Cyprinidae).* Environmental Biology of Fishes. 43: 294.

Williams, J.E. and C.E. Bond. 1983. *Status and Life History Notes on the Native Fishes of the Alvord Basin, Oregon and Nevada.* Great Basin Naturalist. 43(3):409-420.

Williams, J.E., J.E. Johnson, D.A Hendrickson et al. 1989. *Fishes of North America Endangered, Threatened or of Special Concern*. American Fisheries Society. Bethesda, Maryland. 14(6): 2-20.

Williams, R.N. 1991. *Genetic Analysis and Taxonomic Status of Cutthroat Trout from Willow Creek and Whitehorse Creek in Southeastern Oregon*. Evolutionary genetics Lab Report 91-3. Boise State University. Boise, Idaho.

Williams, T.R. and M.S. Bedinger. 1984. *Selected Geologic and Hydrologic Characteristics of the Basin and Range Province, Western United States, Pleistocene Lakes and Marshes*: U.S. Geological Survey Miscellaneous Investigations Series Map I-1522-D, scale 1:2,500,000.

Willis, M.J. 1993. *Sage Grouse in Oregon*. Oregon Department of Fish and Wildlife Research Report No. 15. 54 pp.

Wright, H.A. and C.M. Britton. 1976. *Fire Effects on Vegetation in Western Rangeland Communities*.

Zoellick, B. 1995. *Summer Water Temperatures and the Distribution of Redband Trout in Four Streams in the Owyhee Mountains*. Unpublished information presented at Idaho Chapter Annual Meeting of American Fisheries Society. Boise, Idaho.

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Appendix A - Steens Mountain Cooperative Management and Protection Act of 2000 (P.L. 106-399)

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.

(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.

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(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 - Subbasin Review Report - Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area

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 lands 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 hydrologic unit codes (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 million acres. Land ownership 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 lands. 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 Inter Disciplinary (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 lands (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 Native American traditional values, and are therefore 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 lands 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 Forest Service-administered lands, the primary water quality problems are sedimentation, turbidity, flow alteration, and elevated temperatures. On BLM administered lands, 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 lands are either "not meeting objectives," "non-functioning," 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 lands.
- Development for a growing human population is encroaching on previously undeveloped areas adjacent to lands 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 lands 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 lands, primarily to serve commodity uses.

- For those counties that have benefitted from federal sharing of gross receipts from commodity sales on agency lands, 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 Forest Service-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 lands 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 lands.
- Lands now administered by the BLM make 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 lands.
- American Indian values on federal lands 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 harvest able 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 lands 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 lands.

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 lands administered by the Forest Service 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 Forest Service-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 lands 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 lands.

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 lands.

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 harvest able 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 harvest able 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 (AMR) on all wildland fires, with emphasis on fire fighter 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 Act and BLM regulations. The RMP will include the Standards for Rangeland Health and Guidelines for grazing management which apply to all BLM lands 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, land forms, 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 6.1: 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 subbasin review 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.	Subbasin Review Report (Document the subbasin review 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 C - Summary of Public Scoping Comments for the Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Postmarked or Delivered by April 15, 2002

Introduction

A total of 469 different scoping letters were received (this includes an original version of each form letter) and 1,844 copies of various form letters. Each individual scoping letter and one of each form letter were numbered and each comment in each letter was numbered. Then each comment was summarized and included in a comment table that will be used to track how the comment will be addressed in the Resource Management Plan (RMP)/Environmental Impact Statement(EIS). A total of 3,601 comments were identified. The comments were categorized into the following 23 categories: Alternative Choices; Cultural; Development Issues; Fire; Fish/Wildlife/Wild Horses; Geology/Mining/Energy; Lakes/Springs; Lands; Livestock Grazing; Noxious Weeds; Off-Highway Vehicles/Snowmobiles (OHV); Planning and Process Issues; Recreation; Roads/Access; Special Management Areas/Areas of Critical Environmental Concern; Socioeconomics; Special Recreation; Vegetative Ecosystems; Water Quality/Water Quantity; Wilderness/Wilderness Study Areas (WSA); Wild and Scenic Rivers; Soils; and, Other. Less than two percent of the comments (Other) listed in the table were considered beyond the scope of this planning process and will not be addressed in the RMP/EIS.

The following is a bulleted summary of comments listed by category with the exception of the comments categorized as Other, which are not further addressed in this summary.

<u>Alternative Choices</u>

- There was support for currently proposed Alternatives A, B, C and D.
- Cooperative management and promoting current and historical uses that are sustainable need to be focus of all alternatives.
- An Alternative E (No discretionary commercial use) should be proposed.
- All alternatives should meet the legislative requirements for the CMPA mandated by the Act and other laws and regulations.
- RMP should cover an adequate range of alternatives that are comprehensive and reasonable as required by NEPA.
- Alternatives should balance resource uses and ecological integrity.
- The BLM must evaluate a reasonable range of alternatives in the Draft EIS.
- Alternatives should be considered simply and within the intent of the legislation.
- Alternatives should be framed around the Steens Act Section 102 and meet the objectives of Sections 102 and 111.
- The “no grazing alternative” is not possible within the CMPA based on the Steens Act.
- Socioeconomics must be analyzed in all of the alternatives.

<u>Cultural</u>

- Interest in protection, preservation and interpretation of cultural resources.
- Cultural Resource sites should be closed to off road vehicles.
- The RMP should consider the Archaeological Resources Protection Act, provide for further inventory of the Planning Area, and protect known and reasonably inferred resources within the area.

<u>Development Issues (commercial, recreation, signs, trails campgrounds, toilets)</u>

- No development on Steens Mountain and keep everything primitive.
- The BLM should minimize recreational development including new trails and signage.
- Post rules or educational signs only at the entrance and/or down in the low areas.
- Consider another campground on the east side of Steens Mountain in the vicinity of Alvord Playa and Pike Creek.

- Hiking trails in wilderness/WSAs should not be initiated, but existing recognized trails could be maintained in a manner that keeps the path primitive.
- No new fences or other developments should be allowed and existing developments should be removed unless specifically authorized by the establishing legislation.
- No commercial development, no resort or concessionaire, no concrete parking lots, no RV parks and no housing developments.
- Don't pave the road or build a visitors center or anything like that.
- Construct an information booth or kiosk with bathrooms in Frenchglen or somewhere in that area.
- Develop a short walking trail in the Page Springs Campground.
- Develop the Fir Grove trail that was originally proposed in the SEORMP.
- More campgrounds along Fields/Denio Road especially along east face of Steens.
- Focus development on passive recreation, such as hiking and nature study, over destructive activities such as hunting and vehicular recreation.
- No more roads or campgrounds but a pit toilet on top and a few trails might be good (trails into Wildhorse Lake, Kiger, Blitzen and Big Indian and along summit rim).
- Make it very difficult to get permits for habitation or any damaging mining, logging, or drilling.
- A proactive and comprehensive plan to prevent recreational and commercial development except in very limited areas must be included in the RMP.
- Pursue land exchanges and conservation easements; work with landowners to prevent development of lodges, condos, summer homes, etc.
- Trailheads and campgrounds should be designated and constructed with the historic and current equestrian use in mind. Turn-arounds, trailer parking spaces, and camping areas must be designed with stock use and today's large stock trailers in mind.
- Pullout places should be provided along the roads to accommodate day use or camping.
- Please consider developing new campsites away from the mountain and in areas where increased use will not adversely affect the environment.
- Utilize fences to manage lands, designate wilderness.
- Maintenance and development of water developments should continue.
- Any development in the area must comply with the Wilderness Act.
- Any permanent recreational structures should be located outside the wilderness boundary.
- Avoid overdevelopment of trailheads and upgrading of wilderness access roads.
- Some areas within WSAs may warrant minimal developments such as pit toilets, garbage cans, fire rings and appropriate signage.
- Management decisions could include maximum number of designated campsites allowed within a certain distance.

Fire

- Fire rehabilitation deemed necessary should only be done to prevent ecological degradation.
- RMP must give specific direction on a natural/prescribed burn plan.
- Fire management policies must emphasize grazing as a superior alternative to burning.
- Designated replacement grazing acres must be incorporated into any prescribed fire management plans to minimize economic loss to grazing permittees.
- Wildfires should meet a specified prescription to be allowed to burn especially in Wilderness, WSAs and RNAs.
- Develop fire suppression techniques to reduce damage caused by suppression equipment. Vehicles and equipment should especially be restricted in wilderness, WSAs, ACECs/RNAs.
- Burned areas must be rested from livestock grazing and other activities for at least ten years following a fire.
- Prescribed fires, especially in Wilderness, WSAs, and RNAs, should only be done when fire ecology is better understood.
- Fire/fuels management must continue.
- The RMP/EIS must address how the rehabilitation plans will deal with cheatgrass invasions.
- The RMP/EIS must be explicit in the criteria to be used to decide when and where prescribed fire will be used.
- Construct the policy for fire rehabilitation with regard to critical wildlife habitats.
- Prescribed burning should occur in the summer, when wildfires normally occur.

Fish/Wildlife/Wild Horses

- Leave wild horses alone, maintain herds, manage them in a sustainable manner through capture and adoption, keep them off grazing allotments, address wild horse herd management in the RMP and adhere to the 1971 Wild and Free Roaming Horse and Burro Act.
- No dams, protect the native trout and address fisheries management issues concerning the trout preserve.
- Areas containing redband trout should be catch and release.
- Biodiversity should be the first management concern and inventories and monitoring should be conducted.
- Animal damage control activites should be held to the same restrictions as other activities in Wilderness, WSAs and in ACECs.
- The no livestock grazing area should remain open to wild horses.
- Consider expanding South Steens HMA to include Fish Creek/Big Indian Allotment.
- Wildlife management requires cooperation with private property owners.
- Predator control program must continue.
- When dealing with Special Management Areas (SMAs), USDA WS will use the preferred method of choice (aerial hunting) for coyotes, which in most cases is the least intrusive to these sites.
- Wildlife habitat must be managed in a method consistent with livestock grazing and production of forage for wild and domestic ungulates.
- No predator control is the greatest threat to sage grouse populations.
- The option to protect game or threatened and endangered species from predation as well as address wildlife threats to human health and safety should be present in the plan as well.
- The RMP/EIS should include measures to improve the likelihood of persistence of sage grouse and other species dependent on sagebrush and rangeland habitats.
- The draft plan should clearly state how it will adhere to "Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines" (2000).
- The RMP/EIS should comply fully with the BLM National Policy on Special Status Species (BLM 6840 Manual).
- It is critical that the RMP/EIS incorporate recently adopted sage grouse guidelines that were developed by the Western Association of Fish and Wildlife Agencies and published in the *Wildlife Society Bulletin* (28:967-985).
- Important parameters such as grass residues for sage grouse nesting cover must be addressed and the BLM must make some hard and needed changes to improve the sage grouse's plight.
- Special status species on the Andrews RA should be covered under the RMP so that their priority habitats are clearly identified and management standards and guidelines are adopted.
- The RMP should specify that transplanting to or removing game from wilderness should not entail the use of motorized equipment.
- In Wilderness, the RMP should not allow manipulation of native wildlife populations for purposes of artificially augmenting hunting or fishing opportunities.
- The mainstem Donner und Blitzen and its tributaries should be limited to catch and release, barbless flies and lures only.
- If the redbands are going to be protected and the resource improved, people should not be allowed to fish with bait or kill redbands.
- If anglers want to kill and eat fish, that should be limited to the lakes in the area.
- The weir at Page Springs should be removed or altered for better fish passage.
- There is room for habitat improvement on the stretch of river below Page Springs to Krumbo Reservoir.

Geology/Mining/Energy

- Prohibit all mining and geothermal exploration or development and prohibit all oil and gas development.
- Leave the 1872 mining law alone.
- Since 900,000 acres of the planning area have been withdrawn from mineral production, emphasis on development of mineral resources must be a priority for the remaining acres.
- Address potential development by geothermal power within the resource boundary.
- Energy and Mineral lands may be necessary in the near future and should be considered.

Lands (private, exchanges, easements)

- Address Native American lands, private property and mineral rights and property sales.
- Discourage the development of private land and secure private property to consolidate federal lands through exchange, sale or donation of remote, non-contiguous or land-locked holdings.
- Specific concerns about private parcels and how private landowners will be affected (see Scoping Table).
- Concerned that if the public is restricted from recreating on public land they may be forced onto private land and then private landowners will restrict access to their lands.
- Transfer private lands out of "Fork Big Trout Creek" valley.
- McClains cabin area and Reschene Spring should be transferred to BLM to block up area with proposed wilderness area.
- Transfer Denio Basin private land out to become public land.
- Private lands and realty should remain in place or traded for equal value. Public lands do not support the economy of Harney County. Private businesses do.
- The private lands in the wilderness earmarked to be acquired and exchanged, should be acquired. and exchanged.
- Protection of private lands should be a priority.
- Private property rights should be recognized in the RMP and the interrelationship with BLM lands should be addressed.

Livestock Grazing

- No grazing on the mountain.
- AMPs need to be re-assessed from an ecosystem viewpoint.
- BLM should identify and close all grazing allotments in the Andrews RA, that are not suitable for grazing.
- BLM should identify special management areas that would allow for closure of allotments where a grazing permit is voluntarily relinquished.
- Assess conflict between livestock grazing and wildlife forage.
- Please keep cattle off sensitive areas subject to harm by grazing.
- Phase out all grazing in all wilderness and WSAs asap.
- No new areas should be opened for grazing.
- I would like to continue the grazing rotation system that we are using in the riparian area of Riddle Creek and Coyote Creek. It has improved the area in the last ten years.
- Why isn't livestock grazing an "issue"?
- Address whether livestock grazing should be used as a tool to mitigate and/or to abate potential wildfire.
- Please use the grazing standards used in the conservation ranches in New Mexico where cows are moved very often and have their own water holes.
- Soil stability and impact on native vegetation and Redband trout should be crucial factors when considering grazing management issues.
- The BLM should provide for automatic plan amendments (decided under a categorical exclusion [no need for supplementary NEPA]) to define grazing allotments as unsuitable if a permittee participates in a permit buyout deal with a conservation group or other agency that wishes to permanently retire an allotment from grazing.
- The RMP/EIS must address how individual grazing allotment plans will be incorporated into the overall plan.
- Stocking rates of all herbivores must be addressed.
- During the Scoping Process, the "Big Field" in the Riddle Ranch, Inc. allotment was divided in half length-wise, the line running north and south. If ever this line is fenced, there is no livestock water in the east half.
- In a land trade, a third party's grazing permit should not have been deeded to another without his/her permission. In cases where this has happened and cannot be revoked, the permittee losing the permit should be given equal AUMs elsewhere.
- The area of Riddle and Coyote Creeks are included in the CMPA with the line even going through the middle of one field. All of this area plus the connecting land are in one permit of one ranch. The entire permit in the Three Rivers District is presently under a management plan that is showing improvement and its rotation system is successful, therefore, the entire permit should continue to be managed under the plan in place.
- Riparian and wetland areas should be grazed. Grazing is necessary for wildlife management.
- I suggest you consider allowing a rancher to graze buffalo within the "No Livestock Grazing Area".
- Cows should only be grazing on lands that receive more than 12 inches of precipitation per year.
- It would be helpful to publish pasture use dates once a month in the local newspaper.

- I would like to see the BLM print individual maps and construct large map bulletin boards showing allotment and pasture boundaries and the authorized grazing dates.
- The grazing season in the desert pasture in the Pueblo-Lone Mountain allotment and areas north, Mahogany point and Fields Basin, need to be shortened. The season of use should end September 1 or mid August.
- The Pueblo-Lone Mountain allotment three year re-evaluation that was to have been started at the end of the 1998 grazing season needs to happen.
- The Andrews/Steens Resource Management Plan needs to recognize the need to protect livestock that legally graze on or adjacent to legal federal grazing allotments.
- I am a firm believer in striking a balance between ranching and protecting the environment.
- Set up a process to reassess livestock grazing and permit it only as it supports the restoration of ecosystem health as part of an ecosystem management plan.
- The BLM must stop permitting the grazing of livestock where riparian habitats are no longer functioning at their full capacity, where grazing is causing or contributing to violations of water quality standards, where grazing is damaging soil health and where grazing is degrading or prohibiting recovery of microbiotic crusts.
- We recommend that information and data on range condition and frequency of allotment evaluations be tabulated and displayed for easy review by the public.
- Clear data on range condition should be compiled and listed so that information on the category (I, M, or C) is listed along with the dates and results of all allotment inspections.
- Livestock grazing will be allowed only where it has been found to be suitable and the lands chiefly valuable for livestock grazing.
- Ranching interests depending on the land in the area must be allowed to continue to use the lands as they have in the past unless they choose to change.
- Whenever adequate monitoring is not carried out, or evaluation of the monitoring cannot take place within a year of data collection, then livestock grazing must be immediately terminated pending completion of monitoring and evaluation.
- Livestock grazing shall be terminated or otherwise reduced unless it can be shown that grazing does not cause or contribute to the spread of invasive weeds.
- Livestock grazing shall be terminated or otherwise reduced unless it can be shown that grazing does not cause the destruction of microbiotic crust or retard the restoration of microbiotic crust.
- All temporary non-renewable permits shall be permanently withdrawn.
- The Oregon Farm Bureau would support only a plan that allows livestock grazing to continue on the area as it was prior to the creation of the CMPA.
- The BLM must assemble the information to understand the impacts of grazing and present and analyze that information in the RMP/EIS.
- BLM should allow for the voluntary relinquishment of a grazing permit for conservation.
- The BLM must consider whether an allotment is meeting the Standards and Guidelines.
- The BLM must address grazing suitability at the RMP level.
- Please ensure the RMP/EIS discloses adequate criteria for the BLM's assessment of acres suitable for livestock grazing.
- Promotion of viable and sustainable grazing is one purpose of the Steens Act.

Lakes/Springs

- No camping at Wildhorse Lake or at Mickey Hot Springs.
- Improve Mann Lake and protect Borax Lake and Springs.
- Install outhouses at Frog Spring.

Noxious Weeds

- BLM should engage in an aggressive policy of weed eradication using chemical, grazing and biological techniques.
- Perhaps the noxious weeds could be eradicated by benefit of companion planting which would thereby eliminate them without the utilization of harmful chemical intervention.
- Tell people to quit bringing them in. Catch the people who are bringing them in.

- Noxious weeds must be controlled by burning or spraying.
- The BLM must comply with the Executive Order on Invasive Species.

OHV/Snowmobiles

- Eliminate winter motorized use (snowmobiles) on Steens.
- Eliminate snowmobile use access to the Steens.
- Snowmobiles should not be allowed in wilderness or WSAs.
- Eliminate ATV travel on all roads except maybe the Loop Road.
- Assess ORV designations and limit use throughout the Andrews RA.
- I strongly support the designation of snowmobile play areas within the WSAs on the Steens consistent with historical use before the Act.
- No snowmobiles at Fish Lake.
- Off-road vehicle use should be banned in all existing Wilderness Study Areas (WSAs) and trails where such use conflicts with other resourse values.
- I request that off road vehicles be restricted to designated roads.
- OHV and snowmobiles are the perfect way for AMERICANS to visit OUR public lands.
- Regulate and monitor ORV use in non-wilderness areas.
- Whenever ORV's are discussed, the OHV strategy is referred to as guidance. While it is indeed a handbook for BLM staff use, appropriate laws, regulations and executive orders are the ones that establish criteria that will hold up in courts.
- OHV use should be classified as limited or closed in the Steens area covered by the Act. Limit OHV use to recognized routes and in some places seasonal restrictions should be applied to reduce or eliminate damage to roads - to the same for the Pueblos and Trout Creek Mountains. Close the main Trout Creek loop road in the winter along with most of higher elevation routes in the Pueblos. Close OHV use in RNAs and Wilderness. There could be some open areas like in the Catlow Valley. An analysis or research should be conducted to determine the legality of allowing OHV use to occur in the Alvord Playa.
- Areas that have been open to snowmobiles should remain as such as long as they stay over the roads.
- When discussing ORV designations, the Preplan says that the CMPA outside the Wilderness will be "limited to existing roads" but Sec. 112(b)(1)[B] of the Steens legislation requires 'designation' of any roads that are to be used in the transportation plan. Designated vs. existing is an important distinction.
- You can limit access of snowmobiles to the areas least likely to be damaged or destroyed by them.
- I am very concerned about BLM's interpretation of the Steens Mountain Act as to the use of snowmobiles within the management area.
- I am asking that BLM work with all the snowmobilers of Oregon and develop a sound plan that will allow us to have trail and play areas and to be able to continue to enjoy our sport in the Steens Mountain.
- As part of a recreation plan, BLM should evaluate designating trails for motorized use both summer and winter. BLM should fully evaluate designating a trail area for a snowmobile play area.
- The Alvord Desert WSA was not grandfathered in by FLPMA as an open dune and Burns BLM has been in violation of regulations by allowing open use. This RMP is the appropriate place to correct this error.
- The RMP/EIS must address an adequate range of alternatives with respect to OHV use; must manage OHVs pursuant to FLPMA's principles of multiple use and in accordance with FLPMA's requirement to prevent unnecessary and undue degradation of the public lands; and must conform to Executive Orders 11644, 11989, the BLM's "National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands," and the BLM's OHV regulations.
- Areas open to OHV use must minimize harassment of wildlife and disruption of wildlife habitats and minimize conflicts with other recreational users of the public lands.
- The BLM must present inventories and evaluations of the effects of OHVs in ecosystems and specific ecosystem components such as soils, microbiotic crusts, fish and wildlife and their habitat, native vegetation, and the spread of weeds. Unless and until the BLM provides this information, the public lands should be closed to OHV use unless specifically designated as open.
- OHV use must be allowed for managing allotments and public lands.
- SMAs should be closed to OHVs.
- OHV use should not be restricted outside of CMPA unless monitoring indicates permanent damage from use.

Planning Process Issues (RMP/EIS, Scoping)

- In the scoping meetings explain many features that are unique in the Steens Act.
- Information was received too late to avail the use of public meeting dates.
- The amount of information provided and the willingness of the representatives to answer my questions at the scoping meeting was impressive. The graphic presentations and maps at the scoping meeting were very well done.
- I urge you to welcome constructive public involvement in any form. Use the comments to demonstrate that this area is of national interest, and to support BLM's best efforts to fully protect the wilderness character and native ecosystems of the Steens area.
- Each letter is unique as it is sent from a different person, please treat each letter individually and do not diminish the voice of the public.
- We support this open process of comment and review.
- Plan should be comprehensive and written to be understood by a lay person.
- The Andrews Management Plan and Steens Management Plan should be separate.
- The RMP should be site specific and not include the SEORMP or ICBEMP.
- The comment process should be extended until June.
- Intent of the Steens Act is to emphasize Cooperative Management. Purposes 1, 5, 10, 11, 12, and 13 of Section 1(b) of the Steens Act should guide the process.
- Baseline data must be collected.
- The Proposed SEORMP says that the comments received when the Andrews RA was included in the SEORMP process would be used in the RMP for Andrews.
- I recommend reviewing the Protest filed by ONDA, et. Al., on the PSEORMP to see the way in which the environmental community might react to proposals put forth within this RMP.
- There are fewer and fewer places left in Oregon that have not been destroyed by improper use and over-use. It is late in the game, but it is time to call a halt to the abuse of public lands. We must learn to live with nature, not try to mold it for our short-term profits. We plead with you to include these concepts into the planning process.
- Item 9 on page 13 [Preplan] says the Science Advisory Committee will be established, but the legislation seems less conclusive on whether one is mandatory.
- BLM is contending that it cannot meet the legislated deadline for completing the Andrews RMP if it were to try to analyze limiting recreational and ORV use and to assess AMPs. Given the importance of these issues however, BLM needs either to hire consultants or establish a schedule for handling them through separate EISs to be completed after the LUP.
- Address issues 4 [wildlife habitat], 6 [energy and minerals], 9 [recreation management], 10 [lands and realty], and 14 [OHV management].
- You are the trustee of a very special place belonging to all American citizens. Please ensure that the interests of all citizens of this country are recognized in development of the RMP.
- Monitoring must be conducted.
- Effectiveness monitoring and evaluation should be integrated with land use and implementation plans to establish thresholds for various resource parameters that have been identified as triggers or indicators that a new decision is required. We recommend that this process, which provides an objective, science-based means of determining whether a new plan decision is required, should be used in the Andrews/Steens RMP.
- It is important that plans be current and address pressing issues such as fire rehabilitation and conservation of sage steppe habitats. It also is important that plans be based on the direction provided by the Interior Columbia Basin Management Project (ICBEMP) as well as the latest federal laws, regulations, standards, guidelines, and policies.
- Management under the new RMP should be conducted as an experiment so that ten years from now we will have learned as much as possible about the effects of our land management activities.
- We believe the BLM must plan for long-term stewardship responsibilities that do not permit an irreplaceable or irretrievable loss of resources.
- Much of the CMPA boundary was drawn on section and township lines. In several places this isn't compatible with the topography, permits, and/or existing fences.
- We ask that the RMP clearly reiterate the clear intent of Section 121, which is that the Secretary may enter into cooperative management agreements with local interests only if doing so is appropriate to achieving resource or land use management objectives.
- The RMP/EIS must provide meaningful objective, numerical standards for management of rangelands and their associated vegetative and soil resources. NEPA requires that resource management plans inform the public and decision makers how the resources will be managed in the future.

- There has been considerable controversy over the "cooperative management" language in the Steens Act. We request that the RMP address this language straight-on so as to clarify any confusion regarding how it will affect management of the CMPA and wilderness.
- The High Desert Committee would like the Burns BLM to keep in mind that the time line mandated in the Act for the CMPA does not apply to the Andrews MU. We understand combining these plans, however, we do not want important aspects of the land use planning process to inadequately addressed as a result. The Andrews MU can be pulled out and dealt with separately, contractors can be hired to provide more assistance, or parts of the process can be mandated to be dealt with by separate EISs within a specific period after the RMP is completed.
- True standards having a definite timeline shall be incorporated.
- In order to fulfill NEPA and FLPMA directives, the BLM must consider and give credence to the overall goal of landscape level health and properly functioning ecosystems.
- Adaptive management requires that well developed and statistically valid monitoring programs be in place to identify the positive and negative effects of management.
- We urge the RMP to adopt the following analysis of what the Act meant by establishing the potential for cooperative agreements: all cooperative agreements with any party must still be governed by existing law, policy and regulation; it is common policy across the federal land management agencies to reach out cooperatively to local communities and interests when formulating management direction.

Recreation (hiking, birdwatching, camping, hunting)

- Limit recreational use to protect solitude.
- Work with the State of Oregon Wildlife folks to reduce hunting permits issued on the Steens.
- The existing wildlife populations must be of paramount concern for recreation management.
- BLM should consider limiting party size and perhaps imposing quotas on permits for especially sensitive areas.
- The ad hoc campground across the road from the Alvord Hot Springs has to be prevented.
- Camping etiquette should be a priority.
- The best use of the vast majority of the lands is for dispersed recreation.
- Install a horse unloading facility near the Little Blitzen trail head on the north side of the Loop Road to reduce horse and traffic conflicts.
- Monitor dispersed camping in sensitive areas for signs of high/negative impact and regulate if necessary.
- Design new facilities for management (not promotion) of recreation.
- Overnight camping at Wildhorse and Little Wildhorse Lake should not be allowed.
- I support winter recreation on Steens Mountain. I think opportunities should be expanded to provided public access to use public land near or on both the North and South Loop Roads and I support the designation of trails within the CMPA for year-round motorized use.
- Encourage and promote primitive recreation and the enjoyment of the areas scenery and solitude.
- Recreation management plans must emphasize public access, maintenance of public roads and trails, including RS2477 public roads.
- Establish a recreation use carrying capacity especially in Wilderness and ACECs.
- Please keep the Steens open to horse and equestrian use. Don't close the horse camp.
- Address signage and trailhead parking areas for Pueblo Mountains area and Trout Creek Mountains area.
- Recreational sites can be defined in the RMP as something quite different from Wilderness and should be described to eliminate those activities which undermine those natural and primitive qualities provided by wilderness experience.
- No horse or pack animals should be allowed in the Wildhorse/Little Wildhorse Canyons.
- The plan should establish group size limits that apply equally to private visitors and commercial outfitters.
- BLM should fully engage in a recreational plan for the CMPA as part of the RMP/EIS.
- Regulations should not reduce the number of recreational stock use days below approximate levels existing at the time the Steens Mountain Wilderness was designated.
- If total use is allowed to increase beyond that which existed at the time of classification as Wilderness, recreational stock use should be allowed to increase at a proportionate rate to which existed at the time of classification.
- I am interested in your treatment of the Donner und Blitzen River in your RMP. With all the other wonderful things the Steens are, it is also an excellent whitewater experience for the few who run it.

- We presume then, that provisions in the 1964 Act recognizing the public purposes of "recreational, scenic, scientific, educational, conservation, and historical uses," and the mandate to preserve the character and conditions that existed at the time the area was included in the National Wilderness Preservation System, will apply to recreational stock use and grazing will be allowed and managed, as a component of total use, as necessary to achieve that mandate.
- Proposed regulations that further restrict recreational or historical use must be based on verifiable evidence that such use is resulting in a deterioration of wilderness character and conditions.
- It is critical that current baseline data be collected and added to that which is already available.
- Camping should be restricted to sites designated with fire rings.
- If a maximum party size is determined to be necessary, in consideration of the use that has occurred in the Steens in the past, we suggest that it be set at a relatively high level. We recommend a standard similar to the USFS Region 5 maximum party size in their larger northern wilderness areas, 25 people without consideration for animals to start with.
- The BLM needs to consider how to keep people on developed trails around popular overlooks such as Kiger Gorge.
- I am concerned about the future of recreation on the Steens Mountain. I am very concerned about BLM's interpretation of the Steens Mountain Act as to the use of snowmobiles within the management area.
- We are very concerned that agency administrators will react to pressure from extremist elements of the Wilderness community and impose unnecessarily restrictive limits or regulations based on their perceptions of recreational impact or their personal values and preferences.
- We insist that the following statement (which should have been included in the Actof 2000) is included in the Management Plan: "Traditional recreation saddle and pack stock use is an appropriate, current, and historical use of the Steens Mountain Wilderness."
- It would be premature to propose limits on recreation use until a baseline inventory of existing conditions is completed and monitored for an adequate period to determine if recreation use is resulting in unacceptable levels of impact.
- Neither the Wilderness Act nor the Steens Act mandate improvement of the condition in the designated Wilderness area to a higher standard than existed at the time the Wilderness was created. Both, however, require that traditional forms of recreation be preserved.
- Broken Trails would like the BLM to maintain quality recreation opportunities in the Andrews Resource Area for individuals as well as commercially guided groups.
- I strongly support the designation of trails and play areas within the management area including the WSAs. I believe this would be consistent with the historic trails and play areas historically used before the Act was passed.
- The BLM needs to curb illegal recreating use, guided or otherwise.
- I do not want my uses on public lands, motorized and non motorized, to be restricted, or if restricted to be no more than is actually necessary within the spirit and intent of the Act.
- The BLM needs to avoid "parklike" management practices, i.e. designated campsites, toll fees, BLM ranger guided tours for a fee.
- Non-motorized recreational use should be allowed on the loop road.
- We believe you will need a permit system for camping and overnight use to encourage registering, control numbers and to provide information on user ethics.
- Campfires are a difficult issue and should be decided based on the resource (is there enough wood, what is the fire danger). We are in favor of requiring camp stoves.
- Include a provision that camping areas and trails may have closures when the resource is impacted beyond acceptable levels.
- Hunting, fishing and recreation are historic use and should be continued.

Roads/Access

- Eliminating roads due to inaccurate classifications as "ways" is bureaucratic manipulation.
- The BLM should make a seasonal closure on the Moon Hill road from the end of elk season to the middle of March as goose hunters and snowmobilers tear up the road to where it is impassible.
- Vehicle use should be limited to established roads.
- Close all the cherry stems in the Wilderness to as part of the Transportation Plan.
- No new roads should ever be built on that mountain.
- Allow reasonable access for inholders and ranchers, but only that minimally necessary under the Wilderness Act and establishing legislation.
- Maintaining access to recreating areas and private property is essential in the management plan.

- Please restrict motorized use to designated roads and close all trails where conflicts with other resource values exist.
- Address land use and public access.
- Maintain motorized access as currently regulated.
- As a handicapped senior citizen, the only way I'm able to enjoy and visit the Steens area is by motorized transportation. I would like this area to be kept open for motorized use on existing trails and roads.
- Address closure of "ways" to vehicular traffic to limit the spread of noxious weeds.
- I would like to see the north and south loop roads designated for winter trails and some play areas for hill climbing.
- Please leave unroaded areas road- and vehicle-free.
- I would encourage another look at the application of your agency's definitions for what a road is and what a "way" is. Seems to me that there are many roads (now) defined as "ways". Obviously this by itself has substantial "restrictive"impacts.
- All the jeep roads should be closed except to nonmotorized transportation.
- Establish the roads for other vehicles outside the Wilderness area.
- Do not pave the Loop road.
- We would like to see the South Loop Road in the vicinity of the Rooster Comb section to remain rough or better yet, closed and rehabilitated.
- Close Arizona Creek Road from east WSA boundary to Stergen Meadows.
- I would like to see more access for hiking and birdwatching on the eastern side of the Steens, can some public easement be worked out to provide access for hikers and climbers to access high eastside basins. I oppose ORV access and am only talking about pedestrian access.
- I do not want my uses on public lands (motorized and non-motorized) to be restricted, or more restricted than is actually necessary within the spirit and intent of the Act.
- You should encourage the building of trails with good signs while reducing areas accessible to vehicles.
- I would like to be able to drive anywhere that is needed on my grazing permit. So I can fix fence, repair reservoirs, scatter salt or do whatever is needed.
- The BLM now sanctions some motor vehicle use in the Wilderness allowing an outfitter motorized access to leased land within the Wilderness and for a realtor to drive clients to a parcel of private land also within the Wilderness. This type of motor vehicle access must be denied.
- Decisions on access to private inholdings should be evaluated on a case-by-case basis with opportunities for public comment. Past modes of transportation should not be used as the main criteria for determining access. Instead, foot and horseback access should receive priority consideration to protect the area's wilderness values.
- I would like to see part of the Alvord Desert be closed to motor vehicles.
- One mile of open road per six square miles of land is acceptable for both hunting and wildlife enjoyment.
- Take hunter access into account when you are closing roads (for those who do not have horses or ATVs).
- Continue to close Loop road in winter.
- Allow vehicle travel only on roads that are posted open.
- Administrative use of motorized vehicles should be addressed in Wilderness, WSAs, and RNAs. While certain administrative use is permitted, it should not be just for convenience. Hiking or horseback activity should be a rule for administrative use with only rare exceptions permitted.
- The industries that create all new wealth and harvest resources ... must be allowed access and use of the land.
- The Steens Mountain CMP Act guarantees landowners reasonable access to their private lands with the CMPA including lands and interest therein within the Wilderness. Since the private lands within the CMPA were homesteaded, landowners have had the right to free, unrestricted and unfettered access to their lands. According to PL 106-399, BLM cannot make any decision which affects these rights to real property. Any attempt to change the private landowner's, and interests therein, current and historic access would be a violation of at least four different parts of the Steens Mountain CMP Act.
- We recommend the BLM complete a road and trail atlas (inventory) and a transportation plan for the Andrews/Steens planning area.
- As part of the winter recreation planning, BLM should evaluate ways in which more of the public lands can be accessible for all public use.
- The Transportation Plan and the final decisions on open and closed roads are very important to current and historic recreational and other public use is protected including dispersed use camping areas, pull-outs and other areas of use which may not be considered within the boundaries of a "road".
- BLM will have to identify and allow for at least the minimum road maintenance required to ensure the agency meets its obligation of allowing access to both private and public lands.

- Please consider limiting access to roads that can be maintained and that access to unique and sensitive habitats such as wetlands and riparian areas be limited.
- Access should be controlled by permit to assure that the wilderness experience is maintained.
- End motorized access of inholdings.
- Transportation plan may find it necessary to bus more and more people to the high Steens and other popular areas, as visitor numbers increase.
- All minor roads, unnecessary for BLM management, should be closed.
- Assess the desirable practicality of leaving existing roads and ways open as cherry stemmed access ways for the motorized recreationist.
- We are not happy with restricting access within the management area.
- Regarding access to private property, landowners need the security of permanent general easements that remain intact even with land ownership changes. Easement location should be economical for the private landowner to create or maintain. Access by permit would be a constant concern to the landowner, as permits can be challenged and/or eliminated.
- Close/block access to jeep tracks and post open roads to inform people that unless posted as open, any road/track is closed to vehicle use.
- Carefully control motorized access to private inholdings so as to minimize disturbance to wildlife, fragile alpine vegetation, scenic vistas and the quiet enjoyment of this wonderful mountain environment.
- Any ways that have deteriorated from non-use to the extent no longer easily visible, should specifically be excluded from use by anyone working in WSAs.
- The RMP should identify the size and location of all state and private inholdings within the Steens Mountain Wilderness and specifically stipulate that individual special use permits will be required for any proposed motorized access to inholdings, as required by 43 CFR part 2920 regulations. The RMP should also state that special use permits will be evaluated within a NEPA process and the RMP should reiterate the three criteria for determining access to inholdings as described in national BLM regulations (43 CFR Part 6305).
- During winter the loop road should be closed to all motorized use.
- We ask that the RMP confirm, as an important statement of policy, that a special use permit will be required for each livestock permittee requesting motorized access into the wilderness. The RMP should specify that the special use permitting process must include a site-specific minimum requirement and tool analysis using the Carhart model.
- Trailhead parking areas should be kept to a fairly small size to discourage future crowding and loss of wilderness solitude.
- The Transportation Plan should be the second priority in planning after economics.
- Law enforcement must be addressed in the Transportation Plan.
- Access should be provided unless substantial impairment or damage occurs.
- It is not consistent with the Steens Act to require permits to access inholdings within the wilderness, plan should utilize notice of reasonable and normal access.
- Designate roads as private property access roads.

SMAs/ACECs

- Establish more RNAs for native plant communities.
- Each native plant association/community type should be represented in more than one RNA
- What does this do to the rights of landowners. Who manages the area? How is the management paid for?
- An inventory of the lands within the Andrews Resource Area should be undertaken to identify "areas of critical environmental concern in accordance with 43 USC 1711(a).
- A new plan for the Andrews RA should give priority to areas of critical environmental concern.
- In ACECs/RNAs a recommended goal where unique plants, wildlife or scenic attributes are involved could read, “Activities are allowed that enhance the values that made the area unique.”

Socioeconomics

- Steens Mountain’s greatest economic value is as a destination for tourists.
- Concern about maintaining the economic base of local communities as is required of federal land management agencies under the federal code of regulations and various federal statutes.
- Riparian and wetland areas must be managed for production of forage for domestic wildlife woodland management resulting in a sustained output of goods and services that can be captured by local communities, recreation, mining and off-road vehicle use.

- Socioeconomic considerations must emphasize sustainable local communities. Emphasis must be management alternatives selected to sustain, maintain and enhance commercial, value added and job creating opportunities.
- The needs of the local citizens must take priority over all other interests.
- If WS wildlife management activity is reduced in magnitude or not allowed at all, there would be an adverse effect on the local rural economy.
- The draft RMP/EIS should focus closely on the economic needs, both current and future, of Harney County and its residents.
- Every effort should be made to protect the natural resource economies of the communities which will be potentially affected by the management of the Andrews/Steens Planning Area.
- Consider economic feasibility and impacts throughout the RMP.
- The number one issue should be the economic health of Harney County.

Special Recreation (SRPs, outfitters, running camp)

- Establish a good base line of data before issuing any new permits.
- Consider repercussions of permitting entities that have been illegally outfitting for years.
- Permitted outfitters should be allowed at present levels providing they are also included with any equation used to establish carrying capacity.
- The summer running camp Big Indian should be discontinued or be subject to any group limitations and should be off limits in RNAs.
- Limits of Acceptable Change might be a good management avenue to figure out use and activity, especially in Wilderness/WSAs.
- Any group that the agency plans to permit needs to be licensed in the state of Oregon as a guide.

Vegetative Ecosystems (upland, woodland, riparian)

- Emphasize conservation of biological diversity, ecological processes, plant community restoration.
- Management actions should not keep or place plant communities (seral stages) outside the range of natural variation, or further degrade them.
- BLM doesn't have the money or time to manage resources to improve and maintain the integrity of upland or riparian ecological communities.
- Woodland management should emphasize juniper eradication, with strong emphasis on the capture of fish, fuel wood and primary forest products utilization. Reforestation and afforestation should also be emphasized.
- No vegetation manipulation in Wilderness or WSAs.
- Need to manage high desert vegetation now, before noxious weeds replace distinctive flora.
- The key objective of the RMP/EIS should be maintenance of the sagebrush steppe ecosystem so that important ecosystem functions continue.
- The bottom line of the RMP/EIS should be to ensure that soil stability, watershed health, and ground cover all are within ranges that promote sound ecosystem function.
- The RMP/EIS should consider providing greater emphasis on restoring rangeland habitat.
- Rangelands should only be replanted with native species.
- All rangelands in poor or fair condition should be withdrawn from livestock grazing until they have developed an adequate herbaceous layer and a healthy microbiotic crust.
- All rangelands in excellent condition should be permanently withdrawn from livestock grazing to allow baseline conditions to be studied and to act as a genetic reservoir of native species that are necessary for future reintroductions into degraded rangelands of the region.
- Provide whatever evidence and data that pertains to the causes of unsatisfactory range condition.
- The plan needs to assure that the BLM can continue the effort to manage western juniper over the whole management area, including the Steens CMPA.
- The RMP/EIS must provide objective and numerical standards for management of rangelands and their associated vegetative and soil resources.
- Vegetation management must address ongoing scientific studies.
- Riparian and wetland areas must be managed as dynamic communities.
- Juniper must be controlled.

Water Quality/Water Quantity

- Maintain water sources, protect and restore watersheds, save streams and limit fishing and boating.
- It is imperative that the use of water resources be fairly apportioned in ways that sustain economic values that can be captured by individuals holding valid water rights and grazing permits, and for other uses, including mining and recreation.
- Eliminate grazing from entire planning area, WSAs and adjoining areas in the contiguous ecosystem to improve water quality and riparian habitat.
- Develop a management plan that would prevent pollution of the water or erosion of the banks.
- Do not allow development, grazing or camping near the streams.
- The water taken from Dip Creek could be replaced by the present well on Rincon Flat or by a newly drilled well.
- Taking water via pipeline from any riparian area should not be a part of any BLM projects.
- A comprehensive program of annual water quality monitoring for all major waterways and their tributaries should be implemented immediately including actions to reverse, and then restore water quality through the resource area. BLM should abandon the pipeline taking water from Dip Springs (Pueblo Mountains).
- We recommend setbacks from water for tethered animals, but free roaming animals should not be restricted except around springs.
- We recommend that springs/seeps outside the "No Grazing" designation be fenced with stock water available outside the fence.
- Water developments should be required to function during the hot summer and early fall months after removal of livestock.
- To improve the historic riparian area at Dip Creek, I would propose that the South Rincon reseeding well (identified on the enclosed map) be redeveloped. Another option would be drilling a new well to supply the existing tank and pipeline. The BLM should take over maintenance responsibilities at the Rincon seedings water system.
- Water quality, aquatic resources and fisheries should be managed with common sense with all affected parties involved.
- I urge you to consider accelerating your water development efforts on the lands you manage.
- The draft RMP/EIS must provide for compliance with water quality standards by providing for objective standards with definite triggers and responses to water quality problems. TMDLs should be developed to insure water quality is improved and impaired waters de-listed.
- The draft RMP/EIS should avoid issuance of grazing permits for grazing allotments adjacent to water quality limited streams.
- We urge the Burns BLM District to make the production of high quality water a very high priority.
- The draft RMP/EIS should acknowledge that the primary cause of water quality degradation on the public lands is pollution from nonpoint sources.
- To meet standards and guidelines as well as to avoid violations of the CWA, the plan should include a specific, immediate promise to address water quality standards violations.
- Cooperative riparian management should be addressed.
- Water quality should be addressed in the plan only to the extent that it is authorized by the state.

Wilderness/WSAs

- Steens Mountain should be managed for its primitive and natural conditions through strong enforcement of the Wilderness Act.
- The wilderness and the rest of Steens Mountain should receive a high level of protection.
- The [Wilderness] Act must take precedence over the extremely broad interpretation of the "cooperative and historical" language in the Steens Mountain agreement that interest groups are attempting to impose.
- The BLM should re-inventory wildlands not designated as WSAs for wilderness suitability.
- BLM needs to survey all lands outside WSAs for suitability for wilderness designation, especially since BLM regulations call for this inventory to be done as part of the LUP process.
- The BLM has its present wilderness regulations that should not be circumvented.
- Trailhead signboards should stress the importance of leave-no-trace camping techniques and educate visitors about the special restrictions that apply to traveling in a Wilderness.
- We recommend that land restoration activities be initiated within WSAs where it is deemed natural characteristics have been compromised, unnatural features in a specific area exist, or where wilderness qualities can be enhanced.

- Manage all WSAs and Wilderness as primitive (as described in the Recreation Opportunity Spectrum (ROS) system.
- Trout Creek Mountains and Pueblo Mountains should be made into wilderness areas.
- Protect other lands within the Andrews RA that have not yet received the official "wilderness" designation - Alvord Desert, Pueblo Mountains and Trout Creek Mountains.
- I am opposed to any plan that creates any more useless-wasted wilderness that no one can visit.
- Campfires in Wilderness/WSAs should be discouraged and if monitoring indicates a problem they may need to be excluded.
- In WSAs, not only does FLPMA section 603 and the subsequent IMP need to be followed, but we would like to see the following goal be included: "The quality of wilderness values and attributes would not be diminished."
- Some fences were said to be removed should wilderness designation occur as outlined in EAs. If this hasn't been done it now needs to be initiated.
- In its most primitive definition, the term "Untrammeled" is violated in Wilderness and WSAs when fencing is erected because it adversely restricts "Free movement." Wilderness is also supposed to be areas of "undeveloped Federal land", but construction of new fences infringe on this mandate - it does not matter if fences were existing before it was a wilderness because the designation of wilderness constitutes a new and different method of land use administration.
- Steens Mountain Wilderness should be managed for its primitive and natural conditions through strong enforcement of the Wilderness Act.
- Assuming that the tiny orphans [of wilderness] created by the Steens Legislation can not be managed as wilderness they should be dealt with appropriately.
- This RMP must prioritize the wilderness values of these public lands.
- Assuming that all of the land exchanges can be completed, we will end up with a number of new Wilderness units that deserve their place within the Wilderness preservation System. The left-over scraps of "wilderness" created by this legislation need to be re-evaluated.
- Adjacent lands excluded from the WSAs should be inventoried for additional wilderness inclusion, as suitable.
- I would like to see current wilderness preserved and expanded a little over the years into the fish Lake creek drainage and down further into Kiger Gorge.
- The Steens Wilderness is an inappropriate name and misleading name ... as there are either 8 or 9 separate and distinct units. It does harm to the concept of Wilderness for the public to think of Steens Wilderness areas as a single wilderness. In reality, what we are dealing with is a number of wilderness areas separated by roads. It is a travesty for people to continue to speak of "The 175,000 acre Wilderness" created by the Steens Legislation and I hope this practice will end sooner than later.
- Strong and active enforcement of the Wilderness Act from low over flights to keeping an eye on pre-existing mining claims.
- Wilderness quality lands on the Alvord Desert, Pueblo Mountains and Trout Creek Mountains must be designated as WSAs.
- Your new RMP for the Andrews RA (including Steens) must emphasize conservation and protection of wilderness values.
- All land within the RMP not originally inventoried for Wilderness potential during the original review required by FLPMA should be surveyed now (pg. 35 discussion says "could") and any lands originally surveyed should be reviewed for changes that might have occurred to allow them consideration now. This would seem to be required by the new Land Use Planning Handbook and Manual 1600, and the Wilderness Inventory Handbook H-6310-1.
- Wilderness is not the same as a recreation site.
- I am opposed to any plan to help create more Wilderness in Oregon.
- Future management must not detract from the primitive wilderness experience.
- The BLM should continue to avoid management actions that detract from the primitive wilderness experience.
- Section 2(a) of the Wilderness Act refers to wilderness as a singular entity in its own right when it describes "an enduring resource of wilderness." The analysis of impacts and the affected environment in the RMP should therefore evaluate impacts to wilderness as a separate resource category.
- The RMP/EIS must adequately protect WSAs from adverse impacts from livestock grazing, off-highway vehicles, and actions on lands adjacent to WSAs.
- We urge the BLM to adopt an alternative in its final RMP that adequately addresses grazing pressures within WSAs.
- We request livestock grazing be suspended in WSAs where monitoring shows a decline in ecological condition.

- We request structures, such as fences and water developments, be prohibited from WSAs.
- OHVs should be prohibited from use within WSAs.
- Provisions for strict compliance with legal mandates for wilderness protection and management should be incorporated into the RMP.
- While the BLM has argued elsewhere that recommended WSAs submitted by the President to Congress in 1991 need not be re-inventoried this assumption runs counter to FLPMA and is particularly erroneous with respect to WSA acreages not so recommended in the 1989 and 1991 documents. The BLM must continue to inventory these lands with respect to their wilderness suitability of those non-recommended areas that may have occurred in the past ten-plus years.
- We also ask that the RMP emphasize that the statutory land use management objective for designated wilderness is the preservation of wilderness character.
- The RMP should adopt a minimum requirement and minimum tool analysis model that will be applied in writing to all administrative actions in wilderness that propose any of the actions prohibited by Section 4(c) of the Wilderness Act.
- The overarching mandate of the 1964 Wilderness Act to land managers is to preserve an area's wilderness character in at least the same quality or better as existed at the time of wilderness designation. We ask that the RMP specifically acknowledge this management mandate to preserve wilderness character in its discussions of topics affecting the Steens Mountain Wilderness and to recognize that wilderness character is comprised of both tangible and intangible qualities which cannot be fully assessed simply by discussing biophysical resources.
- Management methods used in the wilderness should have the least possible impact on recreational users while assuring wilderness values are not impaired.
- Management must be consistent with Steens Act to recognize and allow current and historic recreational use.

<u>WSRs</u>

- Recommend waterways eligible for inclusion in the National Wild and Scenic River System.
- All rivers and streams in the planning area should be designated WSR.
- I am opposed to any plan to designate any stream or river as wild & scenic.
- If all rivers cannot be considered for WSR designation at this time, they should be managed as WSR until the studies can be done.
- Please extend WSR protection to all the tributaries and creeks of Kiger, Wildhorse, Fish, Donner and Blitzen Rivers.
- The Wild and Scenic Rivers Act requires that the administering agency must develop a comprehensive management plan for designated river corridors within three years after the date of designation. This means the Wildhorse and Kiger Creeks plan must be completed by October 30, 2003.
- BLM should utilize this opportunity to inventory and recommend streams in the Pueblo and Trout Creek Mountains as well as streams on Steens which have previously gone unconsidered.

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Appendix D - 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 lands.
   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 areas of critical environmental concern (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 lands.
   d. Sec. 202 (c) (9) requires that land use plans for BLM lands be consistent with tribal plans and, to the maximum extent consistent with applicable federal laws, with state and local plans.
   e. Sec. 202 (d) provides that all public lands, regardless of classification, are subject to inclusion in land use plans, and that the Secretary may modify or terminate classifications consistent with land use plans.
   f. Sec. 202 (f) and Sec. 309 (e) provide that federal, state, and local governments and the public be given adequate notice and an opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of the public lands.
   g. Sec. 302 (a) requires the Secretary to manage the BLM lands under the principles of multiple use and sustained yield, in accordance with, when available, land use plans developed under Sec. 202 of FLPMA, except that where a tract of BLM lands has been dedicated to specific uses according to any other provisions of law, it shall be managed in accordance with such laws.
   h. Sec. 302 (b) recognizes the entry and development rights of mining claimants, while directing the Secretary to prevent unnecessary or undue degradation of the public lands.

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 lands 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 lands and authorizes the President to designate National Monuments on federal lands.

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 lands 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 lands 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, "[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 lands 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 lands.

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 of Indian lands, tribal trust resources, or the exercise of American Indian tribal rights.

An additional legal authority specific to the CMPA Proposed RMP/FEIS 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 lands 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 lands.
- authorize the purchase of land as well as development and non-development 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 lands 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 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 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 lands 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 EA 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); and The Riddle Brothers Ranch Historic District Cultural Resources Management Plan, Environmental Assessment (BLM 1994b).

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 lands 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.

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Appendix E - 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 insures 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 Lands - To preserve and maintain agricultural lands.

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 fo 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 destinations 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 lands:

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 lands 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 theland 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 nonmitgatable impacts on watershed integrity, and natural, cultural, and archeological 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 F - Best Management Practices

Introduction

Best management practices (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 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 minimal damage to the environment.

3. Locate roads on stable terrain such as ridge tops, natural benches, and flatter transitional slopes near ridges; valley bottoms and moderate sideslopes; 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.

4. Construct cut and fill slopes to be approximately 3(h):1(v) or flatter where feasible. Locate roads to minimize heights of cutbanks. Avoid high, steeply sloping cutbanks in highly fractured bedrock.

5. Avoid head walls, midslope locations on steep, unstable slopes, fragile soils, seeps, old landslides, sideslopes 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 can not be avoided.

6. Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars or 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 traffic volume 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 sideslopes 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. When constructing roads, minimize excavation through the use of balanced earthwork, narrowing road widths, and end hauling where sideslopes 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 three 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 these areas only if the roads do not interfere with the attainment of PFC.

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 stream crossing is necessary, design the approach and crossing perpendicular to the channel where practical. 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 would not present a safety issue. Locate drainage dips in such a way that water would 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, to provide for minimum effects 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 dissipators 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 head walls 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 water flow and reduce erosion.

25. Establish adapted vegetation on all cuts and fill immediately following road construction and maintenance.

26. Remove berms from the down slope 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 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 ACECs and WSAs, according to the ACEC Management Plan or the WSA IMP. Retain roads within existing disturbed areas and sidecast material away from the ACEC or WSA.

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. Above ground 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 six 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. Rights-of-way 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 RDWs and utility corridors, and across the full width of the disturbed areas, as directed by the authorized officer.

3. Disturbed areas within road RDWs 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 three 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 (three to eight 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 five 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 one 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 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 (Allotment Management 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 q2uantifiable, 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 leased 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 interdisciplinary 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 our 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 interdisciplinary 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 judgement, supported by interdisciplinary 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 interdisciplinary 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 principle components; the uplands, riparia/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 ir 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 revers, 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 interdisciplinary 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

1. 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.

2. 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

1. 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 ir 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.

2. 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.

3. 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.

<u>Rangelands Glossary</u>

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 interdisciplinary 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 - site 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 stream, 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 proposes 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 be 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.

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Appendix H - Herbicides Approved for Use Against Noxious Weeds Listed in "Vegetation Treatment on BLM Lands in Thirteen Western States EIS and ROD"

- Atrazine
- Bromacil
- Bromacil + Diuron
- Chlorsulfuron
- Clopyralid
- Clopyralid + 2,4-D
- 2,4-D*
- Dicamba*
- Dicamba + 2,4-D*
- Diuron
- Diuron + Imazapyr
- Diuron + Tebuthiuron
- Fosamine Ammonium
- Glyphosate*
- Glyphosate + 2,4-D*
- Glyphosate + Dicamba*
- Hexazinone
- Imazapyr
- Metfluidide
- Metsulfuron Methyl
- Picloram*
- Picloram + 2,4-D*
- Simazine
- Sulfometuron Methyl
- Tebuthiuron
- Triclopyr
- Triclopyr + 2,4-D
- Triclopyr + Clopyralid

*chemicals currently approved for noxious weed control in Oregon

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Appendix I - 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's 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)

Table I-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 (1each)

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 miles)

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, Proposed Mickey Hot Springs ACEC, Proposed 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	-	-	-	-

[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.

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
- Proposed East Fork Trout Creek RNA/ACEC
- Noxious weeds
- Riparian
- Recreation

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 Proposed 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:
- 4 miles of fence
- 500 acres of juniper cutting

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 Yr AMP Implemented: 1996 Season of Use: sp,su,fa,wi Yr S & G Assessment: None Active AUMS: 13,149 Suspended AUMs: 0 Total Permitted AUMs: 13,149	Public Land acres: 218,995 Private acres: 5,256 State acres: 0 Other Federal Acres: 0 Total Acres: 224,251	Other Forage Allocations (AUMs) Deer 346 Antelope 35 Elk 0 Wild Horses 0 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	Public Land acres:	1,771	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	0	Deer	10
Season of Use:	su,fa	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal Acres:	0	Elk	0
Active AUMS:	113			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,771		
Total Permitted AUMs:	113			Total	10

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[24]
Kings River	1,771	100	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)
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	Public Land acres:	381	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1986	Private acres:	138	Deer	1
Season of Use:	sp	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:	519		
Total Permitted AUMs:	40			Total	1

Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[26]
South Fork	519	73	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)
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		Public Land acres: 8,841		Other Forage Allocations (AUMs)	
Yr AMP Implemented: 1991		Private acres: 999		Deer	3
Season of Use: sp,su,fa		State acres: 0		Antelope	4
Yr S & G Assessment: None		Other Federal Acres: 0		Elk	0
Active AUMS: 688				Wild Horses	0
Suspended AUMs: 0		Total Acres: 9,840			
Total Permitted AUMs: 688				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
- Pickett Rim ACEC,
- 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
- Alvord Peak ACEC
- 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		Public Land acres:	9,768	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	1996	Private acres:	7	Deer	2
Season of Use:	wi	State acres:	0	Antelope	2
Yr S & G Assessment:	None	Other Federal Acres:	0	Elk	0
Active AUMS:	1,400			Wild Horses	0
Suspended AUMs:	0	Total Acres:	9,775		
Total Permitted AUMs:	1,400			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	Public Land acres: 5,867		Other Forage Allocations (AUMs)		
Yr AMP Implemented: 1989	Private acres: 19		Deer 1		
Season of Use: wi	State acres: 0		Antelope 1		
Yr S & G Assessment: 2000	Other Federal Acres: 0		Elk 0		
Active AUMS: 500			Wild Horses 0		
Suspended AUMs: 0	Total Acres: 5,886				
Total Permitted AUMs: 500			Total 2		
Pasture/Area	Acres	% Public	Condition	Upland Trend	Objective[42]
Lower Antelope	5,886	100	late seral	up	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 Yr AMP Implemented: None Season of Use: None Yr S & G Assessment: None Active AUMS: 6 Suspended AUMs: 0 Total Permitted AUMs: 6	Public Land acres: 29 Private acres: 1,145 State acres: 0 Other Federal Acres: 0 Total Acres: 1,174	Other Forage Allocations (AUMs) Deer 0 Antelope 0 Elk 0 Wild Horses 0 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	Public Land acres:	40	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	1,578	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal Acres:	0	Elk	0
Active AUMS:	5			Wild Horses	0
Suspended AUMs:	0	Total Acres:	1,618		
Total Permitted AUMs:	5			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	Public Land acres:	194	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	584	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal Acres:	0	Elk	0
Active AUMS:	9			Wild Horses	0
Suspended AUMs:	0	Total Acres:	778		
Total Permitted AUMs:	9			Total	0

Pasture/Area	Acres	% Public Domain	Objective[64]
Starr Place	778	25	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	Public Land acres:	183	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	3,591	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:	3,774		
Total Permitted AUMs:	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	Public Land acres:	80	Other Forage Allocations (AUMs)	
Yr AMP Implemented:	None	Private acres:	285	Deer	0
Season of Use:	None	State acres:	0	Antelope	0
Yr S & G Assessment:	None	Other Federal Acres:	0	Elk	0
Active AUMS:	10			Wild Horses	0
Suspended AUMs:	0	Total Acres:	365		
Total Permitted AUMs:	10			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.

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Appendix J - Land Tenure Adjustment Criteria and Legal Requirements

The Land Tenure Maps for the various alternatives depict three 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 ". . . 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 Mountain Cooperative Management and Protection Act of 2000 provides additional limitations on disposals of land within the CMPA boundary by withdrawing "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 purposes and objectives specified in Section 102" General management guidelines for each zone are described below Specific direction for each Zone is contained within the description of each alternative.

Zone 1: Retention/Acquisition (Includes Zone 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. Exchange, and, in some cases, sales of Zone 1 lands may be considered in some alternatives 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 lands in other zones (depending upon the alternative) for nonfederal land with high resource values. Zone 2 public land generally includes well-blocked or fragmented BLM administered lands outside of Zone 1. Generally, Zone 2 lands possess relatively lower resource values than are present in Zone 1. These are areas where, dependent upon the alternative, 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 lands may be considered in some alternatives 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 animals 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 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 this 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 lands may serve if retained in federal ownership are not more than the values of the nonfederal lands and the public objectives they could serve if acquired Further, the CMPA provides that exchanges of land within the CMPA must further the purpose and objectives specified in Section 102 of the Act.

Direct purchases of nonfederal lands may be used when the same public interest criteria apply as described for land exchanges above.

Public lands 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:

A. BLM and other federal jurisdictional transfers.
B. Transfers to state and local agencies (e.g., R&PP patents, in-lieu selections, airport patents).
C. State exchanges.
D. Private exchanges.
E. Sales.
F. American Indian allotments.
G. 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.

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Appendix K - Areas of Critical Environmental Concern (ACECs) Descriptions

Alvord Desert ACEC (Existing and Potential Addition)

Description and values: The existing and potential 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 17,933 acres at the edge of a popular recreation use area in the Alvord Desert Playa. Many kinds of All-Terrain Vehicles 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 one 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.

Alvord Peak ACEC (Existing)

Description and values: The Alvord Peak ACEC is located on the southern end of Steens Mountain about three miles north of Fields, Oregon. One parcel of private land totaling 80 acres is situated in the middle of the 14,040 acre ACEC.

The relevant and important values associated with this ACEC are the resident bighorn sheep and their habitat. The area was designated to protect and maintain bighorn sheep habitat and to protect the sheep from competition with wild horses for forage and water. Wild horses have since been removed from the ACEC, eliminating the threat. The dominant vegetation is big sagebrush/bunchgrass with large stands of bitterbrush.

The area is entirely within the Steens Mountain Wilderness and is managed under the direction provided by the Wilderness Act.

Some of the human-made developments include seven stock ponds, four spring developments with exclosures, two wildlife guzzlers, about 0.75 mile of water pipeline, about one mile of fence, and six miles of access and old mining roads. The area is located within the Alvord Peak grazing allotment. The area is withdrawn from mineral entry.

Borax Lake ACEC (Existing and Potential Addition)

Description and values: The Borax Lake ACEC is located in the Pueblo Valley, about six miles northeast of Fields, Oregon. Borax Lake itself is situated on private land owned by TNC in the middle of the 520-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.

The area is located within one grazing allotment. The ACEC is fenced, except for 120 acres on the east. About one 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 ACEC/RNA (Existing)

Description and values: The 1,216-acre East Kiger Plateau ACEC/RNA, located on the ridge that forms the east side of Kiger Gorge on Steens Mountain, consists of a ridgetop gently sloping to the north and steep slopes on both sides of the ridge.

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 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.

A portion of the area is within the Steens Mountain ACEC. The ACEC/RNA is also located within the High Steens WSA (2-85F) and the Steens Mountain Wilderness.

There are no roads or other human-made developments within this natural area. The area is located within two grazing allotments, although no livestock graze the site due to topographic barriers. A small portion of the area is within the No Livestock Grazing Area on Steens Mountain. The ACEC/RNA is withdrawn from mineral entry.

Kiger Mustang ACEC (Existing)

Description and values: 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 ten miles east of Diamond, Oregon. The entire ACEC is 66,244 acres in size, 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 lands 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 ACEC/RNA (Existing and Potential Deletion)

Description and values: The existing Little Blitzen ACEC/RNA covers 2,530 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 ACEC/RNA 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 ACEC/RNA 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 ACEC/RNA is located within the No Livestock Grazing Area on Steens Mountain. The human-made developments within this ACEC/RNA include three miles of the Steens Loop Road and a memorial plaque. The area is withdrawn from mineral entry.

Little Wildhorse Lake ACEC/RNA (Existing)

Description and values: The existing 241-acre Little Wildhorse Lake ACEC/RNA 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 ACEC/RNA 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 ACEC/RNA is located within the Steens Mountain Wilderness and is managed under the provisions of the Wilderness Act. It is also located within the Steens Mountain ACEC designated for scenic values.

This ACEC/RNA is located within the No Livestock Grazing Area on Steens Mountain and is withdrawn from mineral entry.

Long Draw ACEC/RNA (Existing)

Description and values: The existing 441-acre ACEC/RNA is located in southwest Harney County about four miles from the Nevada border. The site is about two miles south of Lone Mountain and about three 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 ACEC/RNA was designated to protect a unique terrestrial ecosystem (ONHP cell) containing Indian ricegrass and needle-and-thread in association with Wyoming big sagebrush. The drainages within the natural area contain the key elements or values of the ACEC/RNA, and the ridgetops are a Wyoming big sagebrush/bottlebrush squirreltail plant community.

The entire ACEC/RNA 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 Congerss makes a decision on wilderness designation.

The one human-made development within this area is 0.5 mile of road. The ACEC/RNA is located within the Pueblo-Lone Mountain grazing allotment.

A portion of the existing ACEC/RNA 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 ACEC/RNA (Existing)

Description and values: The existing 560-acre ACEC/RNA is located in the north end of the Alvord Valley about 35 miles north of Fields and about four 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 ACEC/RNA was designated to protect an ecosystem consisting of a winterfat plant community growing in a nearly pure stand on ash soils. This vegetation type is listed in the ONHP as a cell that is uncommon in the Basin and Range Physiographic Province and is in need of protection and recognition as a natural area.

The entire ACEC/RNA 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 one mile of fence and 0.75 mile of road. The ACEC/RNA is located within the Alvord grazing allotment. The area is also within the Alvord-Tule Springs HMA and is withdrawn from mineral entry.

Pickett Rim ACEC (Existing)

Description and values: The existing Pickett Rim 3,941-acre ACEC is situated around the large rim system about two miles west and north of Frenchglen, Oregon. The area is steep and rocky, with talus slopes, vertical rims, and benches.

Relevant and important values include birds of prey and their habitat. The area is designated to protect important nesting areas and habitat for many kinds of raptors such as hawks, eagles, and vultures. The Pickett Rim area is not unique. There are other significant areas where raptors nest at the edge of the Catlow Valley. The relevance and importance of habitat for nesting raptors is questionable because there is a lot of habitat in the area and the habitat is automatically protected from actions that could cause disturbance.

The human-made developments existing in the ACEC are limited to about one mile of road. The ACEC is located within the LaVoy Tables grazing allotment.

This area has little or no potential for the occurrence of mineral resources.

Pueblo Foothills ACEC/RNA (Existing and Potential Deletion)

Description and values: The existing 2,503-acre Pueblo Foothills ACEC/RNA is located on the lowest reach of Cottonwood Creek, about seven 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 ACEC/RNA 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 existing ACEC/RNA 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 ACEC/RNA is located within the Pueblo-Lone Mountain grazing allotment.

The existing ACEC/RNA has a high potential for the occurrence of epithermal-related gold/silver/mercury deposits. A portion of the ACEC/RNA 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 ACEC/RNA (Existing and Potential Deletion)

Description and values: The existing 716-acre ACEC/RNA 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 ACEC/RNA 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 ACEC/RNA 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.

Human-made developments within this ACEC/RNA include about 0.5 mile of road and 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 ACEC/RNA (Existing and Potential Deletion)

Description and values: The 231-acre existing South Fork Willow Creek ACEC/RNA is the upper part of a glacial cirque located 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. The East Rim Viewpoint lies just on the south edge of the natural area.

Relevant and important values for which the ACEC/RNA 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 ACEC/RNA is located within the Steens Mountain Wilderness and is managed in accordance with the Wilderness Act.

The ACEC/RNA is located within the No Livestock Grazing Area on Steens Mountain. Human-made developments within this ACEC/RNA include less than 0.25 mile of the Steens Loop Road and the East Rim Viewpoint.

The area is withdrawn from mineral entry.

Steens Mountain ACEC (Existing)

Description and values: The existing Steens Mountain ACEC currently covers 57,501 acres and is located on the highest part of Steens Mountain about 80 miles south of Burns, Oregon. Included within the ACEC are the major topographic features that make the area a scenic attraction, such as the Little Blitzen Gorge, Big Indian Gorge, Kiger Gorge, Wildhorse Canyon, and the East Face. Other attractions include Wildhorse Lake, Little Wildhorse Lake, subalpine ecosystems, and pristine, high-gradient streams.

Relevant and important values include the high scenic values on Steens Mountain, including the craggy base of the Steens Escarpment, vista of the East Rim, and the glacial cirques and valleys. The area ranges from an elevation of 4,400 feet near the Alvord Desert to 9,730 feet at the top of the East Rim Viewpoint.

Several other special designations are included within the boundary of the ACEC including the Steens Mountain Wilderness and the High Steens WSA (2-85F).

Some of the human-made developments in the ACEC include about 20 miles of road, some of which is the Steens Loop Road, and about four miles of fence. The area is located within several grazing allotments and the No Livestock Grazing Area on Steens Mountain.

Tum Tum Lake ACEC/RNA (Existing and Potential Deletion)

Description and values: The existing 2,064-acre Tum Tum Lake ACEC/RNA is located in Pueblo Valley about ten 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 ACEC/RNA 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 plants occurring on this site are iodinebush, salt heliotrope, and verrucose seapurslane, which are very salt tolerant species. The lake is also a valuable waterfowl rearing area as well as habitat for the Alvord chub, a Special Status fish species.

The area is located within the Pueblo-Lone Mountain grazing allotment. Two major utility corridors run through the northern part, and it contains about two miles of road and one mile of fence.

The existing ACEC/RNA has high potential for epithermal-related gold/silver/mercury deposits. A saleable minerals site is present in the northwest part of the area. The area has had mining claims in the past, but no claims are present now.

Big Alvord Creek ACEC/RNA (Potential)

Description and values: The potential Big Alvord Creek ACEC/RNA 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 ACEC and the Steens Mountain Wilderness.

The area is also within the No Livestock Grazing Area on Steens Mountain. There are no roads within the potential ACEC/RNA, and the area is withdrawn from mineral entry.

Catlow Redband Trout ACEC (Potential)

Description and values: The potential Catlow Redband Trout ACEC is located in the southern Steens Mountain foothills on the Home and Threemile Creek watersheds. This area totals 6,800 acres and is about 20 miles south of Frenchglen, Oregon.

Relevant and important values include Special Status fish species and habitat. Home and Threemile Creeks are habitat for the Catlow Valley redband trout and the Catlow tui chub. This area would be designated to protect the fish and habitat.

The area is within the Steens Mountain Wilderness and is managed in accordance with the Wilderness Act.

The area is located within the South Steens grazing allotment, and is withdrawn from mineral entry.

East Fork Trout Creek ACEC/RNA (Potential)

Description and values: The potential East Fork Trout Creek ACEC/RNA 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 that would be 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 potential ACEC/RNA 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 also located within the Trout Creek Mountain grazing allotment. Approximately 0.5 mile of road is located in the northeast quarter of the area.

The proposed ACEC/RNA 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 (Potential)

Description and values: The potential Fir Groves ACEC, totaling 477 acres, is located two miles north of the North Steens Loop Road on Steens Mountain on Little Fir and Fence Creeks. 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 potential ACEC consists of two separate parcels: one contains an old growth stand of trees and the other a mix of old and young trees. This area is one of the last places on Steens Mountain containing grand fir.

One of the potential ACEC parcels is within the Hardie Summer grazing allotment and the other is within a FFR grazing allotment composed mostly of private land.

The proposed ACEC is withdrawn from mineral entry.

Mickey Hot Springs ACEC (Potential)

Description and values: The potential Mickey Hot Springs ACEC, totaling 42 acres, is located in the Alvord Valley about five miles north of the Alvord Desert and about 35 miles north of Fields, Oregon.

Relevant and important values include hot springs and 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 potential 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 HMA. The area is part of the Alvord grazing allotment, and is withdrawn from mineral entry.

Serrano Point ACEC/RNA (Potential)

Description and values: The potential Serrano Point ACEC/RNA, totaling 679 acres, is located in southern Harney County, about two 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 potential ACEC/RNA is located within the Tule Springs grazing allotment. A portion of the Oregon High Desert National Recreation Trail runs through the area.

The proposed ACEC/RNA is in an area withdrawn from mineral entry.

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Appendix L - Common and Scientific Names for Plants and Animals Cited in the Document

Common Name	Scientific Name
PLANT SPECIES	
Forbs	
Alvord milkvetch	*Astragalus alvordensis*
American bistort	*Polygonum bistortoides*
alpine lily	*Lloydia serotina*
aster	*Aster spp.*
balloon-pod milkvetch	*Astragalus whitneyi*
balsamroot	*Balsamorhiza spp.*
bedstraw	*Galium spp.*
Biddle's lupine	*Lupinus biddlei*
Bigelow's four-o'clock	*Mirabilis bigelovii v. retrorsa*
bindweed	*Convolvulus arvensis*
biscuitroot	*Lomatium spp.*
bitterroot	*Lewisia rediviva*
black henbane	*Hyoscyamus niger*
buckwheat	*Eriogonum spp.*
bull thistle	*Cirsium vulgare*
burr buttercup	*Ranunculus testiculatus*
buttercup	*Ranunculus spp.*
butterweed	*Senecio spp.*
camas	*Camassia quamash*
Canada thistle	*Cirsium arvense*
cattail	*Typha latifolia*
cinquefoil	*Potentilla spp.*
clasping peppergrass	*Lepidium perfoliatum*
Cusick's draba	*Draba cusickii*
Cusick's hyssop	*Agastache cusickii*
cut-leaf daisy	*Erigeron compositus*
dalmation toadflax	*Linaria dalmatica*
Davidson's penstemon	*Penstemon davidsonii v. praeteritus*
Davis' peppergrass	*Lepidium davisii*
desert chaenactis	*Chaenactis xantiana*
diffuse knapweed	*Centaurea diffusa*
discoid goldenweed	*Ericameria discoidea v. discoidea*
dwarf evening primrose	*Camissonia pygmaea*

Common Name	**Scientific Name**
elephant's head	*Pedicularis spp.*
ephemeral monkey flower	*Mimulus evanescens*
filaree	*Erodium cicutarium*
flowering quillwort	*Lilaea scilloides*
fourwing milkvetch	*Astragalus tetrapterus*
geranium	*Geranium viscosissimum*
gray moonwort	*Botrychium minganense*
hairy wild cabbage	*Caulanthus pilosus*
halogeton	*Halogeton glomeratus*
Hayden's cymopterus	*Cymopterus nivalis*
hedgehog cactus	*Pediocactus simpsonii v. robustior*
Indian carrot	*Perideridia spp.*
iodine bush	*Allenrolfea occidentalis*
Janish's penstemon	*Penstemon janishiae*
Kruckeberg's holly fern	*Polystichum kruckebergii*
lance-leaved grapefern	*Botrychium lanceolatum*
large-flowered chaenactis	*Chaenactis macrantha*
leafy spurge	*Euphorbia esula*
lomatium	*Lomatium spp.*
lupine	*Lupinus spp.*
lyrate malacothrix	*Malacothrix sonchoides*
Malheur cryptantha	*Cryptantha propria*
meadow rue	*Thalictrum spp.*
Mediterranean sage	*Salvia aethiopis*
milkvetch	*Astragalus spp.*
monkeyflower	*Mimulus spp.*
montane pepperwort	*Lepidium montanum v. nevadense*
moonwort	*Botrychium lunaria*
moss gentain	*Gentiana prostrata*
musk thistle	*Carduus nutans*
naked-stemmed phacelia	*Phacelia gymnoclada*
ochre-headed buckwheat	*Eriogonum ochrocephalum s. calcareum*
onion	*Allium spp.*
pale paintbrush	*Castilleja pallescens v. inverta*
peavine	*Lathyrus spp.*
perennial pepperweed	*Lepidium latifolium*
phacelia	*Phacelia spp.*
phlox	*Phlox spp.*

Common Name	Scientific Name
pinnate grapefern	*Botrychium pinnatum*
prairie sandwort	*Arenaria aculeata*
prickly poppy	*Argemone munita s. rotundata*
puncturevine	*Tribulus terrestris*
purple loosestrife	*Lythrum salicaria*
purple cymopterus	*Cymopterus purpurascens*
pussytoes	*Antennaria spp.*
Rafinesque's pondweed	*Potamogeton diversifolius*
Raven's lomatium	*Lomatium ravenii*
Rocky Mtn. helianthella	*Helianthella uniflora v. uniflora*
rush skeletonweed	*Chondrilla juncea*
Russian knapweed	*Acroptilon repens*
salt heliotrope	*Heliotropium curassavicum*
scotch broom	*Cytisus scoparius*
scotch thistle	*Onopordum acanthium*
short-lobed penstemon	*Penstemon seorsus*
Siberian water-milfoil	*Myriophyllum sibiricum*
Sierran springbeauty	*Claytonia nevadensis*
sky pilot	*Polemonium viscosum*
slender gentian	*Gentianella tenella*
slender wild cabbage	*Caulanthus major v. nevadensis*
speedwell	*Veronica spp.*
spotted knapweed	*Centaurea maculosa*
squarrose knapweed	*Centaurea virgata*
St. John's wort	*Hypericum perforatum*
Steens Mountain paintbrush	*Castilleja pilosa v. steenensis*
sulfur-flowered buckwheat	*Eriogonum umbellatum*
sumac	*Rhus spp.*
sweet cicely	*Osmorhiza occidentalis*
tansy ragwort	*Senecio jacobaea*
thick-stemmed wild cabbage	*Caulanthus crassicaulis*
Torrey's malacothrix	*Malacothrix torreyi*
tumble mustard	*Sisymbrium altissimum*
tumble weed	*Salsola tragus*
two-stemmed onion	*Allium bisceptrum*
verrucose seapurslane	*Sesuvium verrucosum*
weak-stemmed stonecrop	*Sedum debile*
wedge-leaf saxifrage	*Saxifraga adscendens v. oregonensis*

Common Name	Scientific Name
white-flowered penstemon	*Penstemon pratensis*
whitetop	*Cardaria draba*
yarrow	*Achillea millefolium*
yellow toadflax	*Linaria vulgaris*
yellow starthistle	*Centaurea solstitialis*
Grasses and grasslikes	
alpine fescue	*Festuca brachyphylla*
awned sedge	*Carex atherodes*
Back's sedge	*Carex cordillerana*
basin wildrye	*Leymus cinereus*
Bellard's kobresia	*Kobresia bellardii*
bluebunch wheatgrass	*Pseudoroegneria spicata*
bottlebrush squirreltail	*Elymus elymoides*
capitate sedge	*Carex capitata*
cheatgrass	*Bromus tectorum*
crested wheatgrass	*Agropyron cristatum*
dark alpine sedge	*Carex subnigricans*
desert needlegrass	*Achnatherum speciosum*
foetid sedge	*Carex vernacular*
hairstemmed rush	*Juncus capillaris*
Hayden's sedge	*Carex haydeniana*
Idaho fescue	*Festuca idahoensis*
Indian ricegrass	*Achnatherum hymenoides*
June grass	*Koeleria macrantha*
least rush	*Juncus hemiendytus v. abjectus*
Lemmon's needlegrass	*Achnatherum lemmonii*
medusahead rye	*Taeniatherum caput-medusae*
mosslike dwarf rush	*Juncus bryoides*
mountain brome	*Bromus carinatus*
needle and thread needlegrass	*Hesperostipa comata*
Nevada bluegrass	*Poa nevadensis*
new sedge	*Carex nova*
nodding melic	*Melica stricta*
redtop	*Agrostis spp.*
rush	*Juncus spp.*
saltgrass	*Distichlis spicata*
Sandberg's bluegrass	*Poa secunda*
sedge	*Carex spp.*

Common Name	Scientific Name
sheep fescue	*Festuca ovina*
teacher's sedge	*Carex praeceptorum*
Thurber's needlegrass	*Achnatherum thurberiana*
Tiehm's rush	*Juncus tiehmii*
tufted hairgrass	*Deschampsia cespitosa*
western needlegrass	*Achnatherum occidentalis*
Shrubs and Trees	
barberry	*Mahonia reticulata*
basin big sagebrush	*Artemisia tridentata s. tridentata*
big sagebrush	*Artemisia tridentata*
bitter cherry	*Prunus emarginata*
bitterbrush	*Purshia tridentata*
black greasewood	*Sarcobatus vermiculatus*
black sagebrush	*Artemisia nova*
black cottonwood	*Populus trichocarpa*
buckbrush	*Ceanothus spp.*
bud sage	*Artemisia spinescens*
chokecherry	*Prunus virginiana*
currant	*Ribes spp.*
dogwood	*Cornus stolonifera*
Douglas fir	*Pseudotsuga menziesii*
Drummond Willow	*Salix drummondiana*
elderberry	*Sambucus mexicana*
fourwing saltbush	*Atriplex canescens*
grand fir	*Abies grandis*
gray rabbitbrush	*Ericameria nauseosus*
green rabbitbrush	*Ericameria viscidiflorus*
hornbeam	*Carpinus grandis*
horsebrush	*Tetradymia spp.*
indigo bush	*Amorpha condoni*
long-flowered snowberry	*Symphoricarpos longiflorus*
low sagebrush	*Artemisia arbuscula*
madrone	*Arbutus spp.*
maple	*Acer spp.*
mountain ash	*Sorbus harneyensis*
mountain alder	*Alnus incana*
mountain mahogany	*Cercocarpus ledifolius*
mountain big sagebrush	*Artemisia tridentata s. vaseyana*

Common Name	**Scientific Name**
narrowleaf cottonwood	*Populus angustifolia*
ocean spray	*Holodiscus dumosus*
Oregon grape	*Berberis repens*
pine	*Pinus spp.*
quaking aspen	*Populus tremuloides*
rose	*Rosa woodsii*
salt cedar	*Tamarix ramosissima*
serviceberry	*Amelanchier utahensis*
shadscale	*Atriplex confertifolia*
short-fruited willow	*Salix brachycarpa var brachycarpa*
Sierra willow	*Salix orestera*
silver sagebrush	*Artemisia cana*
snowberry	*Symphoricarpos rotundifolius*
spiny hopsage	*Grayia spinosa*
spruce	*Picea spp.*
true fir	*Abies spp.*
wax currant	*Ribes cereum*
western juniper	*Juniperus occidentalis*
willow	*Salix spp.*
winterfat	*Ceratoides lanata*
Wyoming big sagebrush	*Artemisia tridentata s. wyomingensis*
ANIMAL SPECIES	
Amphibians	
Columbia spotted frog	*Rana luteiventris*
western toad	*Bufo boreas*
Birds	
American avocet	*Recurvirostra americana*
American kestrel	*Falco sparverius*
American robin	*Turdus migratorius*
American white pelican	*Pelecanus erythrorhynchos*
bank swallow	*Riparia riparia*
black rosy finch	*Leucosticte atrata*
black tern	*Chlidonias niger*
black-throated sparrow	*Amphispiza bilineata*
bobolink	*Dolichonyx oryzivorus*
Brewer's sparrow	*Spizella breweri*
broad-tailed hummingbird	*Selasphorus platycercus*
Bullock's oriole	*Icterus galbula bullockii*

Common Name	Scientific Name
Canada goose	*Branta canadensis*
Cassin's finch	*Carpodacus cassinii*
Chipping sparrow	*Spizella passerina*
cinnamon teal	*Anas cyanoptera*
Columbia sharp-tailed grouse	*Tympanuchus phasianellus columbianus*
Cooper's hawk	*Accipiter cooperii*
downy woodpecker	*Picoides pubescens*
dusky flycatcher	*Empidonax oberholseri*
ferruginous hawk	*Buteo regalis*
flammulated owl	*Otus flammeolus*
Forster's tern	*Sterna forsteri*
Franklin's gull	*Larus pipixcan*
gadwall	*Anas strepera*
golden eagle	*Aquila chrysaetos*
great blue heron	*Ardea herodias*
great egret	*Casmerodius albus*
Greater sage-grouse	*Centrocercus urophasianus*
greater sandhill crane	*Grus canadensis ssp.*
hairy woodpecker	*Picoides villosus*
horned grebe	*Podiceps auritus*
least bittern	*Ixobrychus exilis*
lesser goldfinch	*Carduelis psaltria*
long-eared owl	*Asio otus*
loggerhead shrike	*Lanius ludovicianus*
mallard	*Anas platyrhynchos*
mountain quail	*Oreortyx pictus*
mourning dove	*Zenaida macroura*
northern bald eagle	*Haliaeetus leucocephalus*
northern goshawk	*Accipiter gentilis*
northern harrier	*Circus cyaneus*
olive-sided flycatcher	*Contopus cooperi*
peregrine falcon	*Falco peregrinus ssp.*
pine siskin	*Carduelis pinus*
pinyon jay	*Gymnorhinus cyancephalus*
prairie falcon	*Falco mexicanus*
red-tailed hawk	*Buteo jamaicensis*
rough-legged hawk	*Buteo lagopus*
rufous hummingbird	*Selasphorus rufus*

Common Name	Scientific Name
sage sparrow	*Amphispiza belli*
sharp-shinned hawk	*Accipiter striatus*
snowy egret	*Egretta thula*
song sparrow	*Melospiza melodia*
spotted sandpiper	*Actitus macularia*
Swainson's hawk	*Buteo swainsoni*
violet-green swallow	*Tachycineta thalassina*
western burrowing owl	*Athene cunicularia*
western snowy plover (inland)	*Charadrius alexandrinus*
western tanager	*Piranga ludoviciana*
white-faced ibis	*Plegadis chihi*
willow flycatcher	*Empidonax traillii adastus*
Wilson's phalarope	*Phalaropus tricolor*
yellow-billed cuckoo	*Coccyzus americanus*
yellow warbler	*Dendroica petechia*
yellow-rumped warbler	*Dendroica coronata*
Fish	
Alvord chub	*Gila alvordensis*
Borax Lake chub	*Gila boraxobius*
bridgelip sucker	*Catostomus columbianus*
brook trout	*Salvelinus fontinalis*
Catlow Valley tui chub	*Gila bicolor ssp.*
crappie	*Pomoxis sp.*
Great Basin redband trout	*Oncorhynchus mykiss ssp.*
guppy	*Poecilia reticulata*
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*
long-nosed dace	*Rhinichthys cataractae*
largescale sucker	*Catostomus macrocheilus*
Malheur mottled sculpin	*Cottus bairdi ssp.*
mountain whitefish	*Prosopium williamsoni*
rainbow trout (generic)	*Onchorhynchus mykiss*
redside shiner	*Richardsonium columbianus*
speckled dace	*Rhinichthys osculus*
Mammals	
California bighorn sheep	*Ovis canadensis ssp.*
California wolverine	*Gulo gulo*
Canada lynx	*Lynx canadensis*
fringed myotis	*Myotis thysanodes*

Common Name	Scientific Name
gray wolf	*Canis lupus*
kit fox	*Vulpes velox*
long-eared myotis	*Myotis evotis*
long-legged myotis	*Myotis volans*
mountain lion (cougar)	*Puma concolor*
mule deer	*Odocoileus hemionus hemionus*
pallid bat	*Antrozous pallidus*
Preble's shrew	*Sorex preblei*
pronghorn antelope	*Antilocapra americana*
pygmy rabbit	*Brachylagus idahoensis*
Rocky Mountain elk	*Cervus elaphus*
silver-haired bat	*Lasionycteris noctivagans*
spotted bat	*Euderma maculatum*
Townsend's big-eared bat	*Corynorhinus townsendii*
western small-footed myotis	*Myotis ciliolabrum*
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*
white-tailed jackrabbit	*Lepus townsendii*
Yuma myotis	*Myotis yumanensis*
Reptiles	
desert horned lizard	*Phrynosoma platyrhinos*
long-nosed leopard lizard	*Gambelia wislizenii*
Mojave black-collared lizard	*Crotophytus bicinctores*
northern sagebrush lizard	*Sceloporus graciosus*
Animal Fossil Remains	
beaver	*Dipoides, Castor*
camel, small and large	*Pliauchenia, Procamelus*
cat, saber-tooth	*Machairodus*
horse	*Hipparion, Pliohippus*
mammoth	*Mammuthus*
mastodon	*Mammut*
peccary	*Prosthennops*
rhinoceros	*Teleoceras*
rodent, horned	*Mylagaulus*
sloth, giant turtle	*Megalonychidae (Family)*

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Appendix L - Common and Scientific Names for Plants and Animals Cited in the Document

Common Name	Scientific Name
PLANT SPECIES	
Forbs	
Alvord milkvetch	*Astragalus alvordensis*
American bistort	*Polygonum bistortoides*
alpine lily	*Lloydia serotina*
aster	*Aster spp.*
balloon-pod milkvetch	*Astragalus whitneyi*
balsamroot	*Balsamorhiza spp.*
bedstraw	*Galium spp.*
Biddle's lupine	*Lupinus biddlei*
Bigelow's four-o'clock	*Mirabilis bigelovii v. retrorsa*
bindweed	*Convolvulus arvensis*
biscuitroot	*Lomatium spp.*
bitterroot	*Lewisia rediviva*
black henbane	*Hyoscyamus niger*
buckwheat	*Eriogonum spp.*
bull thistle	*Cirsium vulgare*
burr buttercup	*Ranunculus testiculatus*
buttercup	*Ranunculus spp.*
butterweed	*Senecio spp.*
camas	*Camassia quamash*
Canada thistle	*Cirsium arvense*
cattail	*Typha latifolia*
cinquefoil	*Potentilla spp.*
clasping peppergrass	*Lepidium perfoliatum*
Cusick's draba	*Draba cusickii*
Cusick's hyssop	*Agastache cusickii*
cut-leaf daisy	*Erigeron compositus*
dalmation toadflax	*Linaria dalmatica*
Davidson's penstemon	*Penstemon davidsonii v. praeteritus*
Davis' peppergrass	*Lepidium davisii*
desert chaenactis	*Chaenactis xantiana*
diffuse knapweed	*Centaurea diffusa*
discoid goldenweed	*Ericameria discoidea v. discoidea*
dwarf evening primrose	*Camissonia pygmaea*

Common Name	**Scientific Name**
elephant's head	*Pedicularis spp.*
ephemeral monkey flower	*Mimulus evanescens*
filaree	*Erodium cicutarium*
flowering quillwort	*Lilaea scilloides*
fourwing milkvetch	*Astragalus tetrapterus*
geranium	*Geranium viscosissimum*
gray moonwort	*Botrychium minganense*
hairy wild cabbage	*Caulanthus pilosus*
halogeton	*Halogeton glomeratus*
Hayden's cymopterus	*Cymopterus nivalis*
hedgehog cactus	*Pediocactus simpsonii v. robustior*
Indian carrot	*Perideridia spp.*
iodine bush	*Allenrolfea occidentalis*
Janish's penstemon	*Penstemon janishiae*
Kruckeberg's holly fern	*Polystichum kruckebergii*
lance-leaved grapefern	*Botrychium lanceolatum*
large-flowered chaenactis	*Chaenactis macrantha*
leafy spurge	*Euphorbia esula*
lomatium	*Lomatium spp.*
lupine	*Lupinus spp.*
lyrate malacothrix	*Malacothrix sonchoides*
Malheur cryptantha	*Cryptantha propria*
meadow rue	*Thalictrum spp.*
Mediterranean sage	*Salvia aethiopis*
milkvetch	*Astragalus spp.*
monkeyflower	*Mimulus spp.*
montane pepperwort	*Lepidium montanum v. nevadense*
moonwort	*Botrychium lunaria*
moss gentain	*Gentiana prostrata*
musk thistle	*Carduus nutans*
naked-stemmed phacelia	*Phacelia gymnoclada*
ochre-headed buckwheat	*Eriogonum ochrocephalum s. calcareum*
onion	*Allium spp.*
pale paintbrush	*Castilleja pallescens v. inverta*
peavine	*Lathyrus spp.*
perennial pepperweed	*Lepidium latifolium*
phacelia	*Phacelia spp.*
phlox	*Phlox spp.*

Common Name	Scientific Name
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prickly poppy	*Argemone munita s. rotundata*
puncturevine	*Tribulus terrestris*
purple loosestrife	*Lythrum salicaria*
purple cymopterus	*Cymopterus purpurascens*
pussytoes	*Antennaria spp.*
Rafinesque's pondweed	*Potamogeton diversifolius*
Raven's lomatium	*Lomatium ravenii*
Rocky Mtn. helianthella	*Helianthella uniflora v. uniflora*
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Russian knapweed	*Acroptilon repens*
salt heliotrope	*Heliotropium curassavicum*
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sky pilot	*Polemonium viscosum*
slender gentian	*Gentianella tenella*
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speedwell	*Veronica spp.*
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squarrose knapweed	*Centaurea virgata*
St. John's wort	*Hypericum perforatum*
Steens Mountain paintbrush	*Castilleja pilosa v. steenensis*
sulfur-flowered buckwheat	*Eriogonum umbellatum*
sumac	*Rhus spp.*
sweet cicely	*Osmorhiza occidentalis*
tansy ragwort	*Senecio jacobaea*
thick-stemmed wild cabbage	*Caulanthus crassicaulis*
Torrey's malacothrix	*Malacothrix torreyi*
tumble mustard	*Sisymbrium altissimum*
tumble weed	*Salsola tragus*
two-stemmed onion	*Allium bisceptrum*
verrucose seapurslane	*Sesuvium verrucosum*
weak-stemmed stonecrop	*Sedum debile*
wedge-leaf saxifrage	*Saxifraga adscendens v. oregonensis*

Common Name	Scientific Name
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yarrow	*Achillea millefolium*
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Back's sedge	*Carex cordillerana*
basin wildrye	*Leymus cinereus*
Bellard's kobresia	*Kobresia bellardii*
bluebunch wheatgrass	*Pseudoroegneria spicata*
bottlebrush squirreltail	*Elymus elymoides*
capitate sedge	*Carex capitata*
cheatgrass	*Bromus tectorum*
crested wheatgrass	*Agropyron cristatum*
dark alpine sedge	*Carex subnigricans*
desert needlegrass	*Achnatherum speciosum*
foetid sedge	*Carex vernacular*
hairstemmed rush	*Juncus capillaris*
Hayden's sedge	*Carex haydeniana*
Idaho fescue	*Festuca idahoensis*
Indian ricegrass	*Achnatherum hymenoides*
June grass	*Koeleria macrantha*
least rush	*Juncus hemiendytus v. abjectus*
Lemmon's needlegrass	*Achnatherum lemmonii*
medusahead rye	*Taeniatherum caput-medusae*
mosslike dwarf rush	*Juncus bryoides*
mountain brome	*Bromus carinatus*
needle and thread needlegrass	*Hesperostipa comata*
Nevada bluegrass	*Poa nevadensis*
new sedge	*Carex nova*
nodding melic	*Melica stricta*
redtop	*Agrostis spp.*
rush	*Juncus spp.*
saltgrass	*Distichlis spicata*
Sandberg's bluegrass	*Poa secunda*
sedge	*Carex spp.*

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Thurber's needlegrass	*Achnatherum thurberiana*
Tiehm's rush	*Juncus tiehmii*
tufted hairgrass	*Deschampsia cespitosa*
western needlegrass	*Achnatherum occidentalis*
Shrubs and Trees	
barberry	*Mahonia reticulata*
basin big sagebrush	*Artemisia tridentata s. tridentata*
big sagebrush	*Artemisia tridentata*
bitter cherry	*Prunus emarginata*
bitterbrush	*Purshia tridentata*
black greasewood	*Sarcobatus vermiculatus*
black sagebrush	*Artemisia nova*
black cottonwood	*Populus trichocarpa*
buckbrush	*Ceanothus spp.*
bud sage	*Artemisia spinescens*
chokecherry	*Prunus virginiana*
currant	*Ribes spp.*
dogwood	*Cornus stolonifera*
Douglas fir	*Pseudotsuga menziesii*
Drummond Willow	*Salix drummondiana*
elderberry	*Sambucus mexicana*
fourwing saltbush	*Atriplex canescens*
grand fir	*Abies grandis*
gray rabbitbrush	*Ericameria nauseosus*
green rabbitbrush	*Ericameria viscidiflorus*
hornbeam	*Carpinus grandis*
horsebrush	*Tetradymia spp.*
indigo bush	*Amorpha condoni*
long-flowered snowberry	*Symphoricarpos longiflorus*
low sagebrush	*Artemisia arbuscula*
madrone	*Arbutus spp.*
maple	*Acer spp.*
mountain ash	*Sorbus harneyensis*
mountain alder	*Alnus incana*
mountain mahogany	*Cercocarpus ledifolius*
mountain big sagebrush	*Artemisia tridentata s. vaseyana*

Common Name	**Scientific Name**
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ocean spray	*Holodiscus dumosus*
Oregon grape	*Berberis repens*
pine	*Pinus spp.*
quaking aspen	*Populus tremuloides*
rose	*Rosa woodsii*
salt cedar	*Tamarix ramosissima*
serviceberry	*Amelanchier utahensis*
shadscale	*Atriplex confertifolia*
short-fruited willow	*Salix brachycarpa var brachycarpa*
Sierra willow	*Salix orestera*
silver sagebrush	*Artemisia cana*
snowberry	*Symphoricarpos rotundifolius*
spiny hopsage	*Grayia spinosa*
spruce	*Picea spp.*
true fir	*Abies spp.*
wax currant	*Ribes cereum*
western juniper	*Juniperus occidentalis*
willow	*Salix spp.*
winterfat	*Ceratoides lanata*
Wyoming big sagebrush	*Artemisia tridentata s. wyomingensis*
ANIMAL SPECIES	
Amphibians	
Columbia spotted frog	*Rana luteiventris*
western toad	*Bufo boreas*
Birds	
American avocet	*Recurvirostra americana*
American kestrel	*Falco sparverius*
American robin	*Turdus migratorius*
American white pelican	*Pelecanus erythrorhynchos*
bank swallow	*Riparia riparia*
black rosy finch	*Leucosticte atrata*
black tern	*Chlidonias niger*
black-throated sparrow	*Amphispiza bilineata*
bobolink	*Dolichonyx oryzivorus*
Brewer's sparrow	*Spizella breweri*
broad-tailed hummingbird	*Selasphorus platycercus*
Bullock's oriole	*Icterus galbula bullockii*

Common Name	Scientific Name
Canada goose	*Branta canadensis*
Cassin's finch	*Carpodacus cassinii*
Chipping sparrow	*Spizella passerina*
cinnamon teal	*Anas cyanoptera*
Columbia sharp-tailed grouse	*Tympanuchus phasianellus columbianus*
Cooper's hawk	*Accipiter cooperii*
downy woodpecker	*Picoides pubescens*
dusky flycatcher	*Empidonax oberholseri*
ferruginous hawk	*Buteo regalis*
flammulated owl	*Otus flammeolus*
Forster's tern	*Sterna forsteri*
Franklin's gull	*Larus pipixcan*
gadwall	*Anas strepera*
golden eagle	*Aquila chrysaetos*
great blue heron	*Ardea herodias*
great egret	*Casmerodius albus*
Greater sage-grouse	*Centrocercus urophasianus*
greater sandhill crane	*Grus canadensis ssp.*
hairy woodpecker	*Picoides villosus*
horned grebe	*Podiceps auritus*
least bittern	*Ixobrychus exilis*
lesser goldfinch	*Carduelis psaltria*
long-eared owl	*Asio otus*
loggerhead shrike	*Lanius ludovicianus*
mallard	*Anas platyrhynchos*
mountain quail	*Oreortyx pictus*
mourning dove	*Zenaida macroura*
northern bald eagle	*Haliaeetus leucocephalus*
northern goshawk	*Accipiter gentilis*
northern harrier	*Circus cyaneus*
olive-sided flycatcher	*Contopus cooperi*
peregrine falcon	*Falco peregrinus ssp.*
pine siskin	*Carduelis pinus*
pinyon jay	*Gymnorhinus cyancephalus*
prairie falcon	*Falco mexicanus*
red-tailed hawk	*Buteo jamaicensis*
rough-legged hawk	*Buteo lagopus*
rufous hummingbird	*Selasphorus rufus*

Common Name	Scientific Name
sage sparrow	*Amphispiza belli*
sharp-shinned hawk	*Accipiter striatus*
snowy egret	*Egretta thula*
song sparrow	*Melospiza melodia*
spotted sandpiper	*Actitus macularia*
Swainson's hawk	*Buteo swainsoni*
violet-green swallow	*Tachycineta thalassina*
western burrowing owl	*Athene cunicularia*
western snowy plover (inland)	*Charadrius alexandrinus*
western tanager	*Piranga ludoviciana*
white-faced ibis	*Plegadis chihi*
willow flycatcher	*Empidonax traillii adastus*
Wilson's phalarope	*Phalaropus tricolor*
yellow-billed cuckoo	*Coccyzus americanus*
yellow warbler	*Dendroica petechia*
yellow-rumped warbler	*Dendroica coronata*
Fish	
Alvord chub	*Gila alvordensis*
Borax Lake chub	*Gila boraxobius*
bridgelip sucker	*Catostomus columbianus*
brook trout	*Salvelinus fontinalis*
Catlow Valley tui chub	*Gila bicolor ssp.*
crappie	*Pomoxis sp.*
Great Basin redband trout	*Oncorhynchus mykiss ssp.*
guppy	*Poecilia reticulata*
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*
long-nosed dace	*Rhinichthys cataractae*
largescale sucker	*Catostomus macrocheilus*
Malheur mottled sculpin	*Cottus bairdi ssp.*
mountain whitefish	*Prosopium williamsoni*
rainbow trout (generic)	*Onchorhynchus mykiss*
redside shiner	*Richardsonium columbianus*
speckled dace	*Rhinichthys osculus*
Mammals	
California bighorn sheep	*Ovis canadensis ssp.*
California wolverine	*Gulo gulo*
Canada lynx	*Lynx canadensis*
fringed myotis	*Myotis thysanodes*

Common Name	Scientific Name
gray wolf	*Canis lupus*
kit fox	*Vulpes velox*
long-eared myotis	*Myotis evotis*
long-legged myotis	*Myotis volans*
mountain lion (cougar)	*Puma concolor*
mule deer	*Odocoileus hemionus hemionus*
pallid bat	*Antrozous pallidus*
Preble's shrew	*Sorex preblei*
pronghorn antelope	*Antilocapra americana*
pygmy rabbit	*Brachylagus idahoensis*
Rocky Mountain elk	*Cervus elaphus*
silver-haired bat	*Lasionycteris noctivagans*
spotted bat	*Euderma maculatum*
Townsend's big-eared bat	*Corynorhinus townsendii*
western small-footed myotis	*Myotis ciliolabrum*
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*
white-tailed jackrabbit	*Lepus townsendii*
Yuma myotis	*Myotis yumanensis*
Reptiles	
desert horned lizard	*Phrynosoma platyrhinos*
long-nosed leopard lizard	*Gambelia wislizenii*
Mojave black-collared lizard	*Crotophytus bicinctores*
northern sagebrush lizard	*Sceloporus graciosus*
Animal Fossil Remains	
beaver	*Dipoides, Castor*
camel, small and large	*Pliauchenia, Procamelus*
cat, saber-tooth	*Machairodus*
horse	*Hipparion, Pliohippus*
mammoth	*Mammuthus*
mastodon	*Mammut*
peccary	*Prosthennops*
rhinoceros	*Teleoceras*
rodent, horned	*Mylagaulus*
sloth, giant turtle	*Megalonychidae (Family)*

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Appendix M - Transportation Plan

Appendix M describes how routes within the Steens Mountain Cooperative Management and Protection Area (CMPA) will be managed. The transportation plan (TP) provides details on the various components of the transportation management system. The TP identifies the current route system (See Map 2.18.2) and outlines the various route categories and road maintenance levels. Best Management Practices (BMPs) for route management and a glossary of transportation terms are also attached.

Transportation and Roads

Goal 1- Provide travel routes to and through BLM managed lands 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. Numerous federal laws and internal regulations give the Bureau of Land Management (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 Proposed RMP/FEIS meets this legislative requirement. Routes specifically addressed by name will need no further analysis. An Environmental Assessment (EA), 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 2.18.1 in the Proposed RMP/FEIS represent the routes historically available for motorized use and shall remain available for such use unless changed through the development of the updated TP 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 Wilderness Study Area Interim Management Plan (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 2.18.1 in the Proposed RMP/FEIS 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 would be conducted 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 or upgraded, if needed, to meet resource objectives. Public input to the EA(s) would be sought.

The The Steens Mountain Cooperative Management and Protection Act of 2000 (Steens Act) closed approximately 104 miles of motorized routes upon designation of the Steens Mountain Wilderness. These routes would 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.

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 would 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 be signed.

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 lands and private lands where public access easements have been acquired.

Cooperatively Managed Routes: Routes across private, state, BLM administered, or other agency lands that are 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 lands 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 lands 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 lands. 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 three 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 that may normally be negotiated by passenger cars driving 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 would 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.

BMPs for the construction, maintenance, and general management of the transportation system are attached.

Easements across nonfederal 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 would be upgraded to Maintenance Level 3.
- Keep the Fish Creek, Cold Springs, Grove Creek, Big Alvord Creek, Indian Creek and Three Springs 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 Steens Mountain Advisory Council (SMAC).
- Keep open all cherry stem roads and ways associated with WSAs except as shown on Maps 2.18.3 and 2.19.1 in the Proposed RMP/FEIS.
- Retain Maintenance Level 3 as currently prescribed for the Moon Hill Road system.
- Close specific routes as shown on Map 2.19.1 in the Proposed RMP/FEIS. Approximately seven miles of routes would 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.
- 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 Moonhill Road near the base of Moon Hill to protect higher elevation road surfaces. Closure of the Moon Hill gate would 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 land owners 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 ridge tops, natural benches, and flatter transitional slopes near ridges, and valley bottoms, and moderate sideslopes 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.

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 head walls, midslope locations on steep, unstable slopes, fragile soils, seeps, old landslides, sideslopes 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 sideslopes 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 sideslopes 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 three 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 would not present a safety issue. Locate drainage dips in such a way so that water would 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 down spouts. Provide energy dissipators 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 head walls 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 water flow and reduce erosion.

25) Establish adapted vegetation on all cuts and fill immediately following road construction and maintenance.

26) Remove berms from the down slope 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 side casting.

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, restrooms, 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 lands. The underlying land owner 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 Environmental Impact Statement (EIS) is required. Also used to aid an agency's compliance with the NEPA when no Environmental Impact Statement 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, ten years and beyond.

Maintenance - In general, taking care of what already exists.

Manual on Uniform Traffic Control Devices (MUTCD) - 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 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 lands 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.

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 (see H-8550-1).

Steens Act Sec. 112 Exception Criteria

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 Mgt. Plan.[2]
      c) Other CMPA public lands – 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 authorized by the Field Manager.

3. Construction and maintenance of facilities or restoration projects outside Wilderness and WSAs: Case by case as authorized by the Field Manager.

[1] Preauthorizes helicopter landings and bucket work for initial attack but chainsaws, engines, etc.., must be specifically approved.
[2] Preauthorizes all initial attack fire suppression tactics except cat work.

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Appendix N - Wild and Scenic Rivers Suitability Evaluations

WILD AND SCENIC RIVER SUITABILITY EVALUATION
THREEMILE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Fisheries and cultural resource (prehistoric) are the two outstandingly remarkable values identified on public land within the river corridor, which could contribute to the designation of a Wild and Scenic River.

Threemile Creek is one of only three streams that provide habitat for the Catlow Valley redband trout, one of two 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 sties. One site is considered to be in very good condition, which is the reason for the outstandingly remarkable value, 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 Wild and Scenic River designation, it is possible that any management activity that can effect the outstandingly remarkable values, 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 Resource Area 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 one of only three that provide habitat for the endemic Catlow Valley redband trout, a Bureau 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 Oregon Department of Fish and Wildlife survey in 1995, the Oregon Department of Fish and Wildlife closed the stream to angling. Catlow tui chub, another endemic Bureau 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 <u>potential</u> to be regionally important in the interpretation of prehistory because of its potential to contain perishable, datable items. There are two other prehistoric sites within the assessment area. Both are surface lithic scatters probably containing data of local importance only. These sites do not possess outstandingly remarkable values, 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 Allotment Management Plan. 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 Wilderness Study Area, 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 outstandingly remarkable values.

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 Allotment Management Plan, 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. Threemile Creek is within the Home Creek Wilderness Study Area and is being managed to protect wilderness values until Congress makes a determination on wilderness designation.

The Catlow redband trout will continued to be managed and protected under existing Bureau of Land Management policy. At the present time, Threemile Creek is closed to fishing. The entire watershed is part of the nominated Catlow Redband Trout Area of Critical Environmental Concern and a portion is part of the nominated North Catlow Rim Area of Critical Environmental Concern. 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 such a manner as to conserve the species to prevent listing.

The prehistoric rock shelter site would be protected by the Bureau of Land Management 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 Bureau of Land Management 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 Wild and Scenic River system. The amount of private land located in the headwaters of the system would make management difficult.

It is felt that the two listed outstandingly remarkable values are currently being protected under existing management, as previous described, and will offer the same protection as found under the Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
WILLOW CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable values identified within this river corridor are the botanical values associated with the existing South Fork Willow Creek Research Natural Area/Area of Critical Environmental Concern.

Approximately 200 acres out of a total of 230 acres of the Research Natural Area are within the river corridor. The area represents a wide variety of microhabitats including rock outcrops, ledges, a

series of three bog terraces with pools, streams, and open shrubs. Plant communities includes those associated with stream systems originating in a glacial cirque.

With a Wild and Scenic River designation, it is possible that any management activities that could effect the outstandingly remarkable values, 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 Resource Area 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 two 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 Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape. It is also part of the High Steens Wilderness Study Area. This Wilderness Study Area 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 one of nine 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 a 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 outstandingly remarkable value because of the designated Research Natural Area 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 Wild or Scenic River, management would be similar to the present situation, for most activities, but could be curtailed if there are impacts to the outstandingly remarkable values.

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 outstandingly remarkable value. The corridor would still be managed under Visual Resource Management Class ll. The Wilderness Study Area 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 Research Natural Area/Area of Critical Environmental Concern

management plan. Fish and wildlife habitat would be maintained, but not necessarily enhanced through long-term protection under the Wild and Scenic Rivers 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 Wild and Scenic River. 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 rivers existing condition, and to protect and enhance the outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species, within the river corridor, will be managed or action mitigated in such a manner as to conserve the species so as not to contribute to the need to list the species.

The South Fork of Willow Creek Research Natural Area/Area of Critical Environmental Concern will continue to be managed under the existing Research Natural Area plan to preserve the character of streams originating in glacial cirques. Scenic values will be managed under the guidelines for Visual Resource Management Class II and Wilderness Study Areas 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 Bureau of Land Management has determined that the eligible 6.2 miles of public land within the Willow Creek drainage is "not suitable" for inclusion in the National Wild and Scenic River 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 outstandingly remarkable value 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 Research Natural Area. The Research Natural Area is inaccessible due to topography, adding further to its protection from physical disturbance.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
VAN HORN CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified on public land, within the river corridor, is recreation. This outstandingly remarkable value could contribute to the designation of a Wild and Scenic River.

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 Wild and Scenic River designation, it is possible that any management activities that could affect the outstandingly remarkable value, 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 Resource Area 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 seven 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 Bureau of Land Management Visual Resource Management Class II. The objective of this class is to maintain the existing character of the landscape. Van Horn Creek is within the Pueblo Mountain Wilderness Study Area, with portions of this Wilderness Study Area being recommended to Congress as wilderness.

Recreation has been identified as an outstandingly remarkable value. 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 one of nine 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 Bureau of Land Management 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 a 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 outstandingly remarkable value.

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 outstandingly remarkable value, or free-flowing character of the stream. The corridor would still be managed under Visual Resource Management Class II. Wilderness Study Areas 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species, within the river corridor, will be managed or action mitigated in such manner as 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 Visual Resource Management Class II, and Wilderness Study Areas 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 Bureau of Land Management has determined that the eligible 9.9-mile segment of the Van Horn Creek is "not suitable" for inclusion in the National Wild and Scenic River system. It is felt that the

recreation outstandingly remarkable value 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 Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
COTTONWOOD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value 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 Wild and Scenic River.

Several State and Bureau sensitive species are also found within the corridor.

With a Wild and Scenic River designation, it is possible that any management activities that could effect the outstandingly remarkable value, 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 Resource Area 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 a Research Natural Area/Area of Critical Environmental Concern 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 Wilderness Study Area, 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 Wild and Scenic River, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable value.

Recreation use would continue at current levels until such a time that it was determined that impacts were occurring from overuse of the river corridor. The corridor will still be managed under Visual Resource Management Class II. The Wilderness Study Area 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

All sensitive species within the river corridor will be managed or action mitigated in such a manner, as to conserve the species so as not to contribute to the need to list the species.

The Pueblo Foothills Research Natural Area/Area of Critical Environmental Concern contains most of the narrowleaf cottonwood and Mormon tea, as well as several State and Bureau sensitive plant species. This particular value is currently being managed and protected under the Pueblo Foothill Research Natural Area/Area of Critical Environmental Concern management plan.

Scenic values will continue to managed under existing Visual Resource Management guidelines for Class II, and Wilderness Study Areas 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 Bureau of Land Management has determined that the eligible 12.1 miles of Cottonwood Creek is "not suitable" for inclusion in the National Wild and Scenic River system.

It is felt that the outstandingly remarkable value for botanical resources is currently being managed under the existing Pueblo Mountain Research Natural Area/Area of Critical Environmental Concern management plan. The Research Natural Area has been established since 1982, with the first management plan being developed in 1984, and updated in 1994.

The continued Bureau of Land Management riparian management and sensitive species policies, will also add protection to the Cottonwood Creek area.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
BIG TROUT CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified within this river corridor is scenic quality, and could contribute to the designation of a Wild and Scenic River.

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 Visual Resource Management Class II. The objective of this class is to retain the existing character of the landscape.

With a Wild and Scenic River designation, it is possible that any management activities that could affect the outstandingly remarkable value, 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 Resource Area 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 three 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 Bureau of Land Management's Visual Resource Management Class II. A good portion of Big Trout Creek is within the Mahogany Ridge Wilderness Study Area. None of this Wilderness Study Area 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 Bureau sensitive species.

Livestock grazing does occur and is within the Trout Creek Allotment Management Plan. 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 Wild and Scenic River, management for most activities would be similar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable value.

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 outstandingly remarkable value, or free-flowing character of the stream.

Designation as a scenic river area would allow continued management under the current Visual Resource Management Class II. Wilderness Study Areas 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel.

Scenic values will continue to be managed under the existing Visual Resource Management guidelines for Class II, and Wilderness Study Areas 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 Bureau of Land Management 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 such a manner as 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 Bureau of Land Management 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 Wild and Scenic River 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.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
BIG ALVORD CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

The outstandingly remarkable value identified for this stream is the diversity and excellent condition of riparian and wildlife habitat found in Big Alvord Creek, especially the upper elevation.

The outstandingly remarkable values discussed make Big Alvord Creek a potential addition to the National Wild and Scenic River system. The excellent condition riparian and upland vegetation is similar to other drainage on the East Steens, but the diversity here is greater.

This drainage is one of nine 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 Wild and Scenic River designation, it is possible that the management of activities that can affect the outstandingly remarkable values, 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 Bureau of Land Management 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 Resource Area 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 a 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 three 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 Wilderness Study Area, the Steens Mountain Area of Critical Environmental Concern for scenic values, and the potential Big Alvord Creek Research Natural Area 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 similiar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable values. Livestock grazing could be eliminated due to the designation of the stream into the Wild and Scenic River 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 Area of Critical Environmental Concern for the excellent condition vegetation resources. It is also part of an existing Area of

Critical Environmental Concern 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. The Big Alvord Creek drainage is currently within the High Steens Wilderness Study Area 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 Endangered Species Act Section 7 Biological Opinion for the Lahontan cutthroat trout, the Bureaus 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 such a manner as to conserve the species so as not to contribute to the need to list the species.

The outstandingly remarkable values within this drainage can be protected without the Wild and Scenic 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 Bureau of Land Management has determined that the eligible 6.3 miles of Big Alvord Creek is "not suitable" for inclusion in the National Wild and Scenic River system. The presence of the Federally listed trout, the Wilderness Study Area status, the location and topography of the drainage along the east face of the Steens, the continued Bureau of Land Management riparian management policies will provide the same level of protection for the two outstandingly remarkable values, as would protection under the Wild and Scenic Rivers Act.

Public access from the county road is not available to the public, and offers no legal access for visitor use.

WILD AND SCENIC RIVER 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 outstandingly remarkable values identified for Home Creek. Home Creek is one of only three streams that provide habitat for the Catlow Valley redband trout, one of two 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 Bureau of Land Management 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 Allotment Management Plan.

With a Wild and Scenic River designation, it is possible that management of activities that can affect the outstandingly remarkable values 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 Wild and Scenic River 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 Resource Area 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 three tributaries of Home Creek in the headwaters are located on private property. The upper two-thirds of the creek is 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 a 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 Allotment Management Plan. 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. Bureau 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 Bureau sensitive species and endemic to the Catlow Valley. Home Creek is one of only four streams in the valley that historically provided habitat for these species, only three 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 Wild and Scenic River, 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 Allotment Management Plan. It is also part of the active Herd Management Area of the South Steens Wild Horse Herd Area. The corridor lies within the Home Creek Wilderness Study Area, but only the Federal portion falls within the area the Bureau of Land Management 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 Wild and Scenic River, the management for most activities would be similiar to the present situation, but could be curtailed if there are impacts to the outstandingly remarkable values. The Catlow redband trout would be managed and protected under the Bureau of Land Management's policy to manage sensitive species in such a manner as 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. The Home Creek drainage is currently within the Home Creek Wilderness Study Area 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 such a manner as to conserve the species so as not to contribute to the need to list the species.

The South Steens Allotment Management Plan currently outlines the management of livestock, including cattle and wild horses. The Allotment Management Plan 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 Bureau of Land Management has determined that the eligible 5.7 miles of Home Creek that is on public land is "not suitable" for inclusion in the National Wild and Scenic River 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 Bureau of Land Management policies, as described previously, will provide the same level of protection for the three listed outstandingly remarkable values for this stream, as would protection under the Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER 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 outstandingly remarkable value identified on public land, within the river corridor, and could contribute to the designation of a Wild and Scenic River. 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 Wild and Scenic designation, it is possible that the management of activities that can affect the outstandingly remarkable value 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 Resource Area 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 Bureau of Land Management land being in the headwaters of the system. This segment runs through approximately one 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 downslope 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 Bureau of Land Management Visual Resource Management 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 three 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, are migrants that use 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 outstandingly remarkable value. 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management 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 Bureau of Land Management currently manages the Donner und Blitizen National Wild and Scenic River, with experienced personnel. If McCoy Creek was added to the National Wild and Scenic River system, the Bureau of Land Management would continue to manage the land and resources in the river corridor.

Portions of McCoy Creek are within the High Steens Wilderness Study Area 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 such a manner as 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 Bureau of Land Management policy. Recreation use will continue at the current level until such a time that the use will impact the outstandingly remarkable value, 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 Bureau of Land Management 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 Wild and Scenic River system. The broken landownership (12.6 miles being private) would make it very difficult to manage. It is felt that the outstandingly remarkable values listed for McCoy Creek, are 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 Wild and Scenic Rivers Act.

WILD AND SCENIC RIVER 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 outstandingly remarkable value 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 National Wildlife Refuge 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 Wild and Scenic River designation, it is possible that the management activities that can affect the outstandingly remarkable values 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 Resource Area 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 Bureau of Land Management Visual Resource Management 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 Wilderness Study Area.

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 Bureau of Land Management 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 Threatened and Endangered 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, is 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 Allotment Management Plan, but could be eliminated due to designation. Wilderness Study Areas, fish and wildlife habitat would be maintained or possibly enhanced through long-term protection under the Wild and Scenic Rivers 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 Wild and Scenic River. 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 outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, with experienced personnel. Mud Creek is within the Bridge Creek Wilderness Study Area, 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 such a manner as 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 Bureau of Land Management policies.

Historic and Existing Rights

There are no known historic or existing rights within the studied portions of the creek.

Suitability Determination

The Bureau of Land Management has determined that the 7.2-mile segment of Mud Creek is "not suitable" for inclusion in the National Wild and Scenic River system. An error was made in the inventory. The botanical outstandingly remarkable value, 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 outstandingly remarkable values for Mud Creek.

WILD AND SCENIC RIVER SUITABILITY EVALUATION
PIKE CREEK

Characteristics Which Do or Do Not Make the Area a Worthy Addition to the System

Wildlife habitat diversity is the outstandingly remarkable value identified within the river corridor, and could contribute to the designation of a Wild and Scenic River. The excellent condition of riparian and upland vegetation is similar to other drainages located on the east side of Steens Mountain.

This drainage is one of nine 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 Wild and Scenic River designation, it is possible that the management activities that could impact the outstandingly remarkable values, 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 Bureau of Land Management 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 Bureau of Land Management land next to Pike Creek, however, this privilege could be denied at any time.

Landownership Status and Current Management and Uses

The Bureau of Land Management 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 Wilderness Study Area and is being managed to protect wilderness values until Congress makes a determination. It is also within a Visual Resource Management 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 Area of Critical Environmental Concern 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 three 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 two 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 five 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 Wild and Scenic River, the management would be similiar to the present situation, unless there are impacts to the outstandingly remarkable values. 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 Wild and Scenic River**.** 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 outstandingly remarkable values. 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 Bureau of Land Management currently manages the Donner und Blitzen National Wild and Scenic River, 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 Endangered Species Act.

Other sensitive species will also be managed or actions mitigated in such a manner as 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 Bureau of Land Management has determined that the eligible 4.2-mile segment of Pike Creek is "not suitable" for inclusion in the National Wild and Scenic River 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 Wilderness Study Area status, the similarity of the adjacent streams along the east face of the Steens, the continued Bureau of Land Management riparian management policies will provide the same level of protection for the outstandingly remarkable value, as would designation under the Wild and Scenic Rivers Act.

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Appendix O - Effects of Intensity and Season of Grazing

Introduction

Livestock impacts to vegetation resources, both negative and positive, occur due to defoliation and browsing, as well as the physical impacts associated with the presence of livestock. Although livestock grazing in desert steppe communities is seldom necessary to meet vegetation management objectives, negative impacts can be maintained within acceptable limits with implementation of appropriate management actions. Many successful livestock grazing strategies have been developed to achieve specific ecological or management objectives. The effectiveness of meeting objectives when implementing a given strategy depends on a number of factors including the associated resource values present, ecological characteristics present, physical characteristics present, and livestock management practices (Cook 1971; Heady 1975; Lacock and Conrad 1981; Holochek et al. 1989). General trends may hold true in the relative effectiveness of different grazing strategies to meet specific management objectives, but site-specific strategies are required to integrate the interactions of unique features present within a pasture. Though the ecological consequences of implementing a given grazing strategy occur at the pasture level or smaller, livestock operations dependent on public land forage resources require grazing schedules which support animals on public and private land throughout the year.

The consequences of short-term impacts of livestock use, both in upland and riparian communities, are related to the season in which livestock graze a vegetation community as well as the intensity and duration of use in a given year. Long-term consequences result from the sequence of annual use a vegetation resource receives, the severity of use, the competitive response of individual vegetation species to selective grazing or browsing by herbivores, and the resultant changes to community composition. Season and intensity of livestock grazing use in riparian communities, as well as in upland communities, has been found by a number of authors to affect riparian function and the attainment of other riparian-related objectives (Elmore 1991; Elmore and Kauffman 1993; Chapman 1987; Belsky et al. 1997; Kinch 1989; Myers 1987; and Platts 1989). Periodic opportunities for recovery of health and vigor and for recruitment of new individuals into upland and riparian communities are also required to maintain or improve vegetation conditions for the amenity values of current and potential vegetation resources as well as commodity production.

Intensity of Use

Short-term impacts to vegetation resources are the result of the combined utilization levels, the season of use, and the duration of use. For the purposes of analysis, light utilization is defined as up to 40 percent, moderate utilization is defined as from 41 to 60 percent, and heavy utilization is defined as 61 percent and greater. Generally, the vigor of key herbaceous species can be sustained with light and moderate utilization, while heavy utilization reduces photosynthetic tissue below levels needed to maintain root reserves, diminishing the vigor of key species. However, the timing of grazing use relative to plant phenology and the occurrence of repeat grazing are usually considered more important factors affecting the health and vigor of key species as well as changes to vegetation community composition. Light and moderate utilization during periods when plants are withdrawing reserves from roots for growth, during regrowth, or during seed formation will impact herbaceous species greater than the same level of utilization during periods when the plant is not actively growing. Additionally, the composition of a vegetation community, as it relates to the relative palatability of species present, will affect measured utilization. Long-term impacts of moderate to heavy utilization will also be dependent on the individual species' ability to maintain health and vigor and remain competitive with livestock use. Though stocking rates are established to limit utilization to light or moderate levels, factors affecting livestock distribution will cause some areas where animals tend to concentrate to be utilized heavy while other areas remain unused or only slightly used.

The intensity of livestock use will also affect other resource values, as well as the ability to meet management objectives as a result of standing vegetation material and ground cover remaining after use. As utilization levels are increased, canopy cover of grazed and browsed plants declines. Additionally, deposition of protective plant litter to the soil surface and incorporation of litter into the soil is decreased. As a result, increased utilization can reduce cover of bare ground by vegetation material and litter, increase puddling of

clay soils by raindrop impact, reduce rates of infiltration of precipitation, and reduce permeability and moisture storage of soils. Excessive utilization levels can contribute to increased overland flow of precipitation and snowmelt, soil erosion, siltation of streams, and a decline in surface water quality affecting beneficial uses.

Season of Use

Livestock impacts to public land resources are dependent on the season of use as it relates to timing of grazing during the growth cycle of plants, spacial and seasonal conflicts with annual life cycles of wildlife species, physical condition of resources, and other factors. All dates referenced are approximations dependent on elevation and climatic conditions and need to be interpolated on a site-specific basis. Analyzed seasons overlap due to variation in the growing conditions between years and a lack of clear seasonal divisions in anticipated impacts to existing or potential resource values. Thus, impacts resulting from livestock use early or late during any season may also be accurately defined by described impacts during the proximate season based on those variables.

Winter (November 1 to March 15)

Upland herbaceous plants are mostly dormant during the winter season of use with the exception of some photosynthesis by new growth after fall and winter precipitation and during warming weather trends, primarily on south exposed slopes. Forage quality of cured standing herbaceous vegetation is moderate to low, improving when mixed with new growth or browse from palatable shrubs. Light to moderate utilization of standing cured herbaceous vegetation is not detrimental to health and vigor of plants. Light to moderate defoliation of new growth usually is not detrimental to maintenance of health and vigor of herbaceous species since soil moisture will be available for spring and early summer growth, regrowth, and completion of the annual cycle prior to soil moisture depletion. Grazing of fall sprouting annual species may reduce competition with desirable perennial herbaceous species during the following growing season. Light to moderate utilization levels will retain adequate standing material and litter for soil protection from wind erosion, rainfall impact, and late winter and spring runoff. Heavy utilization levels will expose the soil surface to these negative impacts, especially on sites with marginal potential to produce a reasonable vegetation cover and in years with limited growth of protective vegetation cover. The potential for repeated grazing of localized areas, resulting in heavy utilization, is present with severe weather conditions and snow accumulation reducing livestock distribution. Negative impacts intensify on palatable shrub species when snow accumulation makes herbaceous species unavailable. Livestock management actions to maintain animal distribution are oftentimes limited by weather and accessibility.

Winter use is usually the least detrimental to soils and to dormant riparian herbaceous and woody vegetation. Herbaceous riparian species are mostly dormant in this season with some active photosynthesis occurring during warming trends when plants are free of snow and ice cover. During these fair weather periods, dormant woody riparian species may be used to some degree; therefore, may be subject to live twig growth being removed. Riparian communities tend not to be used by livestock during moderate weather conditions where cold air drainage settles into low-lying areas throughout the majority of the winter. Dramatic recovery rates have occurred in riparian areas when cold drainage patterns and/or the availability of alternate livestock water keep livestock away from streams. Where winter temperatures are moderate and cold air does not settle into low-lying areas, dormant woody riparian species can be negatively affected by browsing or trampling when livestock movement is restricted. The potential for livestock to concentrate in riparian communities to avoid severe weather conditions and attempt to drift to base property feeding grounds requires a high level of livestock management activity to avoid negative impacts to riparian vegetation resources at a time when access to public land is limited. Winter use provides rest during the growing period every year, promotes plant vigor, seed and root production, and seedling establishment. It may be the period of greatest use of browse species by both livestock and wildlife depending on temperatures, snow depth and duration, availability of other feed, animal concentration, forage/browse preference, and the extent of the woody plant community. A full understanding of expected livestock use patterns is necessary using this strategy or land use objectives

may not be achieved. Utilization levels of herbaceous riparian species should be limited to maintain adequate material on streambanks and floodplains for protection during late winter and spring runoff. Heavy grazing during the winter can eliminate the streambank vegetation mat needed to prevent soil erosion from winter and spring floods or ice events. Throughout the winter, frozen soil and streambanks are more resilient to mechanical damage thereby minimizing streambank shear, thus resulting in little bank damage.

Areas suitable for winter grazing by livestock are, at times, also prime winter range for native large herbivores. Spacial conflicts for habitat and conflicts for limited forage are more common than at other times of the year. With snow cover of herbaceous species, livestock browse of shrub species may remove a valuable winter source of feed for wild herbivores. Viability of mountain shrub species as well as aspen recruitment may be jeopardized with winter use of these vegetation communities by livestock.

Spring (March 1 to April 30)

Early growth of herbaceous species, primarily cool season species, occurs with rising soil temperatures. Minimal impacts to plant vigor and health occur with light to moderate utilization of early growth when adequate soil moisture is available for regrowth and completion of the annual growth cycle. Moderate utilization, in years with minimal soil moisture available for regrowth after use, could deplete plant vigor and health, especially during periods of critical growth. Heavy to severe defoliation can expose the soil surface to future erosive forces of wind and water. Additionally, heavy utilization can remove structural diversity valued for wildlife habitat. Use of palatable annual species early in this period may reduce competition with desirable native perennial species when grazing is removed and adequate soil moisture remains to complete growth cycles.

Early growth of herbaceous vegetation contains high water content and thus, when combined with leached old growth, has only moderate forage quality, improving after mid-March in most years. The hazard of compaction of wet soils with hoof action of livestock may be present, resulting in a reduction of infiltration and soil moisture holding capacity in fine-textured soils. Opportunities for good livestock distribution are present with more locations of available water and cool air temperature.

Riparian vegetation communities are less vulnerable to negative impacts from livestock use during this season for a number of reasons. Improving forage quality in upland communities will draw livestock from riparian communities as will available alternate water sources located outside streamside riparian communities. Spring use normally results in better livestock distribution between riparian and upland areas due to flooding of riparian areas and presence of highly palatable forage on the uplands. Also, cooler seasonal temperatures allow livestock to forage longer between visits to water sources. Opportunities for regrowth of herbaceous species are present through the remainder of the growing season. Most woody riparian species do not initiate growth until late spring, resulting in lower palatability than at other seasons of the year. If periods of use allow for adequate regrowth and do not correspond to the seasons of woody riparian species reproduction, grazing during this period can be very beneficial to riparian areas, especially in establishing woody plants. Conversely, this can be detrimental to upland grasses if grazing strategy results in utilization during the critical part (shoot elongation) of their growing season. Heavy defoliation and physical impacts by livestock can expose banks and floodplains to the hydraulic energy of high spring streamflow and peak runoff. Heavy use on finer textured soils in riparian areas with steep gradients may cause soil compaction, accelerated streambank losses or increased erosion rates. Hoof action can result in trampling of seed and litter into wet soil, although on some saturated soils, plants are more easily uprooted by grazing animals than would be possible later in the year. Care must be taken to prevent streambank hoof shearing and to leave adequate carryover vegetation for bank protection and silt filtering during spring runoff.

Wild native herbivores typically reach their lowest physical condition during this period, especially in years with heavy snowfall and limited forage availability. As a result, the potential for competition between livestock and wildlife species early during spring use is great on winter ranges. Activities associated with

livestock management during this period can also increase stress to wildlife species, especially within areas of raptor nesting habitat.

Upland Growing Season (April 1 to July 15)

Upland plants are actively growing, removing carbohydrates from roots and crowns for early growth, regrowth, and seed formation. Herbaceous plants are susceptible to defoliation impacts as a result of the depletion of carbohydrates in roots and crowns, especially with moderate to heavy utilization, repeated grazing, and/or frequent growing season use. Grass species are especially susceptible to impacts from defoliation during seed formation and seed stalk elongation, due to the increased withdrawal of carbohydrate reserves from roots and crowns. Opportunities for regrowth and completion of the annual growth cycle after defoliation are limited, especially in years of below average precipitation. Introduced perennial bunchgrass species are better adapted to maintaining vigor with defoliation than native herbaceous species, having evolved with the grazing pressure of more large herbivores. Soil compaction from the physical presence of livestock remains a concern with moist soils, especially in areas with shallow and fine-textured soils. Upland shrub species reach maximum growth withdrawing shallow soil moisture early and deeper water reserves as the season progresses. Opportunities for good livestock distribution during the early portion of this season are present with more locations of available water, high palatability of high quality forage, and cool air temperature. Repeated use during the growing season can be expected to reduce vigor and health of desirable perennial herbaceous species and lead to trends away from desired conditions.

Riparian vegetation communities initiate active growth during this season, especially during the later portion. Impacts to riparian resources are minimal with light to moderate utilization levels on herbaceous and woody species and minimal physical impacts. Livestock begin to concentrate in riparian vegetation communities as the season progresses for higher quality forage, browse, water, and shade with higher ambient temperatures. Opportunities for regrowth of herbaceous vegetation following use remain throughout the summer with available moisture in riparian soils. Desirable woody riparian species become vulnerable to impacts from moderate to heavy use mid-way through this season when active growth is initiated. Heavy levels of utilization or high levels of physical impacts can expose banks and floodplains to impacts from high streamflows during late spring and summer flooding.

Summer (July 1 to October 31)

A deferred season of use provides for livestock grazing after most of the upland species have reached seedripe stage and replenished carbohydrate reserves. Most upland plants, including native and introduced bunchgrass species, have completed their annual growth cycles and have entered senescence. As a result, upland communities have declining forage quality and lower palatability to wildlife and domestic herbivores. Livestock will tend to turn to palatable browse species, especially when herbaceous utilization levels become heavy late during this period, to maintain a given level of nutrition when mixed with lower quality herbaceous feeds. With the onset of senescence, native upland vegetation communities are less susceptible to negative impacts of light to moderate defoliation. Introduced perennial bunchgrass species are better adapted to maintaining vigor with defoliation than native herbaceous species, having evolved with more large herbivores. Heavy to severe defoliation can expose the soil surface to future erosive forces of wind and water. Livestock distribution away from water sources is limited by high ambient temperatures increasing the need for frequent watering and causing cattle to graze primarily during the evenings and throughout the night, while becoming less active during daylight hours. Localized impacts from defoliation and the physical presence of livestock intensify, especially near water sources and other areas of concentrated activity. Additionally, nutrient concentration will occur in areas of concentrated livestock activity.

Riparian vegetation species, both woody and herbaceous are actively growing with a sustained source of water available for continued photosynthesis. The potential for regrowth of herbaceous species remains through most of the summer, while soil moisture and temperatures are maintained. Regrowth of woody riparian species is limited after moderate to heavy use, especially late in the period. Forage value and

palatability are high from standing riparian herbaceous and woody growth. The potential for poor livestock distribution, away from riparian communities, exists as the availability of stock water in upland communities declines, forage value in upland communities declines, and with higher ambient temperatures. Livestock tend to concentrate in riparian vegetation communities for water, high quality green forage, and shade when intensive livestock management is lacking. Use during this period typically provides no rest during the growing period for plant vigor, reproduction, or litter accumulation and generally results in heavy utilization of woody riparian vegetation, trampling damage, soil compaction, and accelerated streambank erosion. Since rest is never provided, riparian plants do not replace food reserves in roots; seed may or may not be produced. Concentration of livestock in riparian areas results in heavy use of woody and herbaceous riparian species. Impacts to riparian values are typically greater during summer and early fall use than at other seasons of the year.

Competition between wildlife species and livestock is usually minimal when summer utilization levels are maintained at light to moderate levels. Those wildlife species that are mobile tend to inhabit portions of the range less used by livestock, while those less mobile species tend not to be significantly impacted so long as utilization levels and related management activities do not disrupt habitat and security.

Fall (September 15 to December 15)

Herbaceous upland plants remain senescent with minimal new growth and some regrowth during warming conditions when soil moisture has been replenished by fall precipitation. Upland herbaceous health and vigor is not impaired with light to moderate utilization of cured standing materials. Heavy to severe use may expose soils to erosion from wind and water for an extended period through the initiation of spring growth. Cooler ambient temperatures, with some fall regrowth of upland herbaceous species, may provide for better livestock distribution than during summer. Forage quality of upland herbaceous species remains low, though improving with the initiation of new fall growth. Livestock will retain a percentage of palatable browse species in their diets, when available, to maintain a given level of nutrition by combining it with lower quality herbaceous feeds.

Riparian herbaceous and woody species enter dormancy with cool temperatures and freezing conditions. Opportunities for limited livestock grazing of pastures containing riparian values are present so long as utilization levels on herbaceous and woody species do not impair riparian function with peak streamflows. Moderate to heavy use of riparian herbaceous species, with little opportunity for regrowth to facilitate sediment retention, may expose banks and floodplains to hydraulic forces of high streamflow during winter and spring runoff. The potential for improved livestock distribution, away from riparian communities, is greater than during summer use, though less than during spring use. During years with extended summer heat and drought, livestock water may be limited to riparian communities. Use during this season can be detrimental to riparian vegetation if heavy utilization of woody species occurs because temperatures are warm, fall green-up has not occurred, or utilization is not closely monitored. Fall grazing usually allows for less soil compaction in riparian areas; although streambank damage may be considerable from hoof action shearing if excessive fall precipitation occurs. Livestock impacts to riparian vegetation are directly related to the intensity of livestock management practices implemented by operators.

Livestock's use of big game winter range can limit the availability of both herbaceous and browse species for wildlife during subsequent winter periods as identified in the section on winter use. Competition between livestock and wildlife species increases with greater levels of utilization and the resultant increase of browse species in livestock diets.

Seasonlong

Seasonlong grazing of a pasture generally begins during the growing season and extends to the end of the period of authorized use, typically into the fall period. Many of the impacts associated with use during the growing season occur with seasonlong use. Additional impacts occur from localized livestock concentration

late in the season as sources of water diminish, as forage quality in upland communities declines, and as ambient temperatures rise. The effects of seasonlong grazing on species composition are largely dependent on the degree of utilization on the key species. Although the proposed stocking rates are designed to achieve moderate levels of utilization on most areas, factors such as terrain, location of fences and water, and vegetation types available, prevent uniform patterns of grazing. Heavy grazing will inevitably occur in some areas while light utilization will occur in others. A trend away from desired conditions is expected in areas receiving moderate to heavy utilization on an annual basis, especially when that use occurs during critical growing periods.

Livestock tend to concentrate in riparian communities from summer on, when these areas are available. Decreases in woody and herbaceous riparian species are expected to occur in streamside riparian vegetation communities accessible to livestock under seasonlong use. Livestock prefer green herbaceous and new growth of woody species within riparian communities as upland communities dry and lose forage quality in late summer. This strategy typically provides no rest during the growing period for plant vigor, reproduction, or litter accumulation. It generally results in heavy utilization of woody riparian vegetation, trampling damage, soil compaction, and accelerated streambank erosion.

No pastures in the planning area are scheduled for seasonlong (March 1 through February 28) grazing by domestic livestock, but wild horse use does occur seasonlong in HMAs.

Exclusion (No Scheduled Livestock or Wild Horse Use)

Defoliation of herbaceous and shrub species is limited to that which occurs from insect and native herbivore use. Except in instances when native herbivore numbers are high, upland utilization levels during the growing season and dormant seasons are light. In any year, small areas of concentrated native herbivore use may have moderate to high utilization levels. Residual standing herbaceous material and litter accumulation is greater than with scheduled use by livestock or wild horses in any season. Soil protection from rain impact is high, limiting erosion and improving soil structure and infiltration. The initiation of herbaceous growth with warming spring soil temperatures may be slightly delayed due to greater interception of solar radiation by standing and down litter.

The complete elimination of livestock and wild horses from riparian vegetation communities in many cases provides for a more rapid rate of recovery of both herbaceous and woody components than will scheduled use in any season. Residual herbaceous material and a diverse age structure of woody species will protect streambanks during peak flows of all seasons. In the absence of consideration of the ecological linkages between upland, riparian, and aquatic communities, potential rates of recovery of riparian communities may be limited when upland management plans are not designed to restore and protect the entire landscape.

Grazing Schedules

Livestock grazing schedules are implemented to provide opportunity for unacceptable resource conditions to improve, to maintain resource values which are consistent with the DRC and other management objectives, or to avoid unacceptable impacts to resource values or conflicts between uses of public land resources. Though some established grazing schedules provide for annual use of a pasture during one specified season, more often the mix of management objectives associated with a given pasture can better be met by varying the season of use over a repeating cycle of two or more years. Multi-year grazing schedules are primarily developed with varied seasons of use through an established rotation to allow desirable vegetation species the opportunity to regain vigor and health for future growth, productivity, and sustainability of resource values. Similarly, opportunities for recovery from grazing impacts to other resources, specific to a season of use, may be provided by varying the season in which livestock graze a pasture. Long-term and cumulative impacts of implementing a grazing scheme will define trend toward future vegetation communities and resource conditions.

Conversely, constraints necessary to meet multiple management objectives may limit opportunities for grazing use to one short period annually, or no scheduled use in some years, to ensure that all management objectives are met. Examples include the compounding effects of objectives to improve riparian function or meet other riparian management objectives while maintaining upland stability and function. Though scheduled use during the upland growing season annually may be compatible with objectives to improve riparian function, health and vigor of desert steppe vegetation communities can seldom be improved or maintained with annual growing season defoliation. Similarly, scheduled deferment of grazing use until after seed-set may be compatible with meeting upland vegetation management objectives while not maintaining healthy riparian vegetation communities which support proper functioning condition. As a result, the combined objectives may further constrain opportunities for varied seasons of use.

Speciality Pastures

Construction of fences and use of other barriers to livestock movement may be utilized to create speciality pastures and implement grazing schedules consistent with meeting specific management objectives when resource values, such as riparian vegetation communities, are present in only a portion of an existing pasture. Development of speciality pastures is applicable in areas where resource values encompass a small enough area to justify fencing and to manage them separately from areas that are solely comprised of upland vegetation communities and few other resource values. Speciality pastures may continue to be grazed while meeting objectives or excluded from livestock use. Construction of fences to create corridor or riparian pastures allows riparian recovery or maintenance while allowing grazing of other uplands sites to occur with grazing strategies providing for more livestock use. Riparian pastures are normally areas of rangeland containing both upland and riparian vegetation communities large enough to support some livestock use while managed to attain riparian, water quality, and/or aquatic objectives, as opposed to stream side pastures created through corridor fencing. Total rest of riparian pastures is required at times during the first few years of corrective management of a deteriorated riparian area where the objective includes and the site potential supports the establishment of shrub or tree growth above the reach of livestock. As riparian vegetation within riparian pastures regains vigor and productivity, available forage for livestock use may often be increased while continuing to meet management objectives. Corridor pastures are generally excluded from livestock use, or used only for trailing purposes, since the areas enclosed are usually too small and narrow for proper grazing.

Grazing Rotations

Most multi-year grazing schedules can be defined as either a deferred-rotation or rest-rotation schedule. Both types of grazing schedules were designed primarily to promote plant vigor, seed production, seedling establishment, root production, and litter accumulation for herbaceous plants in upland ecosystems. Deferred rotation grazing schedules provide for one or more years of grazing use after seed-set, following one or more years of growing season use. In its simplest form, a deferred rotation grazing schedule within a pasture provides for a two-year rotation cycle with one year of use during the critical period of plant growth followed by one year of deferment of use until after the growing season. More conservative schedules provide for a higher proportion of deferment than years of use during the period of active growth. Rest-rotation schedules allow for similar opportunities for recovery with one or more years of the grazing rotation in which no use is scheduled. Caution should be implemented to ensure that higher levels of utilization during use periods of a pasture do not preclude meeting management objectives while providing for rest in other pastures. At moderate utilization levels, either rest-rotation or deferred-rotation grazing systems can allow for adequate recovery of upland herbaceous root growth and associated carbohydrate storage following the impacts of critical season defoliation. The number of years of rest or deferment necessary to meet vegetation management objectives is dependent on a number of factors including resource conditions, soil and climatic factors, and the intensity of grazing use. With an increase in the proportion of years of rest or deferred use to the number of years of use during the critical season, the opportunity for recovery and maintenance of plant health and vigor is improved. Recovery following heavy use during the critical growing season may require a substantial number of rest or deferment years to provide adequate opportunities for recovery of health and

vigor, especially when growth conditions are poor or if the vegetation resource is in poor ecological condition.

Most rest-rotation and deferred-rotation grazing schedules, designed for the physiological needs of herbaceous upland plants, can be successful within wide, low gradient sedge, rush, and grass-dominated riparian sites, provided utilization levels in riparian communities are maintained within acceptable limits. These strategies have been found to maintain species diversity and productivity of meadow systems when use is deferred in these areas until after seedripe. This promotes seed and root production, seedling establishment, and total growing period rest for each pasture every year. The need for additional livestock management may be necessary to maintain livestock distribution. Riparian herbaceous species having a natural potential to regrow following use provide for recovery and maintenance of resource values in years of the rotation when grazing occurs during the growing season. Caution in years of mid to late season use should ensure that cover necessary to buffer erosion from floods and ice is maintained and to trap sediment during high flow events. Similarly, in years of the rotation when grazing occurs during a season with high soil moisture, caution should be implemented to prevent trampling and shear damage to banks.

Rest rotation and deferred-rotation schedules are usually inappropriate for shrub-dominated riparian areas, especially in the primary stages of willow establishment and development. Establishment and growth of woody riparian species, which is attained in years when the pasture is rested or during a season of use compatible with progress toward attaining riparian objectives, may be nullified in years of use when grazing occurs during a period not consistent with maintenance or improvement of riparian values. Maintenance of established riparian communities containing a woody component may ultimately result in a population of only mature decadent stands of woody species, providing no ongoing replacement of younger stands. When these schedules are implemented, levels of use of woody riparian species must be monitored because utilization occurring during the summer months has been found to limit woody plant succession on gravel bars and other scoured areas along stream channels. Heavy utilization during late grazing periods can lead to removal of vegetation needed to protect streambanks from ice and water scouring.

Improvement of vegetation composition toward desired conditions may require recruitment of new individuals of desired species through seeding, planting or natural regeneration from vegetation materials on site. Establishment of desirable seedlings into a vegetation community may require a sequence of rest and/or deferment years to avoid defoliation and physical impacts of livestock presence. Similarly, recruitment of new shoots of desirable woody species in upland and riparian may require more than one year of rest to establish old wood, which is less palatable, and to allow growth above the reach of domestic herbivores. Removal of livestock from riparian vegetation communities may be required to allow these communities to recover herbaceous and woody species composition adequate to attain functioning condition. Upon improvement to functioning condition, a grazing schedule consistent with maintaining riparian function may be implemented.

Generally within desert steppe vegetation communities, no more than one period of use of a given pasture is planned in any one year's grazing schedule. An exception is spring/fall use in which livestock are removed in the spring while sufficient soil moisture is available for regrowth. Fall use occurs after most vegetation species have completed their growth cycle and are dormant. This schedule is used primarily within seedings of nonnative perennial bunchgrass to maintain productivity and availability of species adapted to grazing use.

Appendix P - Wildlife Habitat Descriptions and Considerations

Introduction

Chapter 2 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 P 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 (Chapter 2 of the Proposed RMP/FEIS) 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.

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.

P-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.

P-2: Structural Projects

Powerlines 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 routing needs to 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 Areas sections 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 P-3).

P-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 year long 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 Proposed 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: 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.

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 P-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.

P-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, DPC 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.

P-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 is 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 P-1 describes general relationships of wildlife use at various shrub overstory canopy measures, and Table P-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 Chapter 2 objectives for wildlife habitat in sagebrush rangelands.

Exceeding the fine scale (pasture level) percents (acreages) of Table P-2 may be necessary in order to compensate for currently fragmented habitats ~~and/~~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.

Table P-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 inhibit 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 <u>or both,</u> 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 eliminate biological soil crusts. The combination of these conditions inhibit 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 <u>or both,</u> 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.

Each Table P-1 class has value and contributes toward meeting the year long 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.

Table P-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 P-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 P-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 PNC seral stages.

Herbaceous understory on seeded range at fine scales (pastures): Herbaceous cover composition in seedings should support one or more adapted forb species.

P-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.

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.

P-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.

P-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.

P-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 P-3 of this section would allow the BLM to meet upland wildlife forage needs within the Planning Area. 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 I. Specific locations of bighorn sheep use at the pasture level throughout the Planning Area 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 I, Allotment Management Summaries, 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 Q - Monitoring Plan for the Andrews Management Unit and the Steens Mountain Cooperative Management and Protection Area

A. Purpose

This monitoring plan is intended to present information to the public on current resources monitoring. Resource monitoring is critical to successful resource management, and this plan presents the why, what and how of resource monitoring for the AMU and CMPA. This plan extracts the monitoring information presented in the DRMP/DEIS and consolidates it in a format more accessible for the reader. The general priorities, correlations and evaluation mechanisms presented in this plan shall be used to effectively conduct resource monitoring with available staff and funding. In order to provide for flexibility in the event of changing resource focus or concern and the introduction of new science and methodology, the resource summaries cannot be viewed or interpreted as restrictive or all inclusive.

Following completion of the PRMP, implementation, effectiveness, and performance monitoring for the broader scale AMU/CMPA PRMP goals and objectives shall be developed in an Implementation Plan. This Plan will describe the annual monitoring methodology and priorities. It will also provide a mechanism for evaluating and reporting Plan implementation and effectiveness. This component of implementation monitoring is critical for the successful use of the proposed adaptive management strategy adopted in the PRMP, as applied at a landscape level.

This monitoring plan establishes general guidance and priorities for conducting resource monitoring in the AMU and CMPA and shall identify resource monitoring priorities by geographic areas or other considerations, dependent upon available funding. The specific benefits of the plan include the following:

- Increased efficiency in the resources monitoring program by avoiding duplication between resource programs and administrative units.
- Prioritized resource monitoring needs within individual resource programs to aid in staff assignments and budget allocation.
- Identification of priority geographic areas by resource program, established through resource needs and individual program direction.
- Improved resource management based upon applying findings from monitoring and making appropriate management adjustments.
- Identification of the correlation and interrelationships between monitoring for different resources, uses and social values.

B. Monitoring Definition

Monitoring is the process of collecting information to evaluate the effects of management actions on identified resources. Monitoring needs are determined by the goals and objectives established in the PRMP. Monitoring could also be directed by applicable laws, regulations, policy, and other planning documents, as well as available funding (e.g., the Wilderness Act, the Steens Act, the ESA, and associated Biological Assessments and Biological Opinions, the S & Gs, the Steens Mountain Wilderness and WSR Management Plan, and WQRPs associated with the CWA). Monitoring could be implemented as a result of site specific EAs and activity level resource management plans such as AMPs or SRMA Plans. Monitoring shall be conducted at the project/activity level and watershed level to evaluate project-specific action(s) and plan level goals and objectives.

Implementation monitoring determines whether specifically stated goals or activities are being met. This type of monitoring involves periodic review at the activity/project level (e.g., annual allotment summaries that determine whether the activity level management actions of an AMP are being implemented). Another example would include monitoring the completion of the Steens Mountain Wilderness baseline visitor inventory in order to identify and manage effects to resources within the Wilderness. Implementation monitoring could be as simple as checking to see if a fenceline was constructed to the specifications provided in an EA prepared prior to construction. Implementation monitoring at the level of this monitoring plan is directed toward site specific management goals and objectives.

Effectiveness monitoring is used to determine whether specific actions help to meet or make progress toward short, intermediate, and long-term objectives (i.e., are our management actions achieving or making progress toward the desired results?). An example would include determining whether riparian habitat was being maintained or improved, with regard to hydric species composition and density. Effectiveness monitoring provides for short-term resource response indicators that provide the opportunity to adjust management actions in order to meet or make progress toward long-term goals and objectives. Effectiveness monitoring is the key to successful adaptive management strategies.

Performance monitoring measures achievement or progress toward goals and long-term objectives, typically through the collection and analysis of effectiveness monitoring over time. As used above, the example of effectiveness monitoring of riparian habitat would be utilized as performance monitoring through the comparison of multiple years of effectiveness monitoring. This performance monitoring demonstrates that attainment or progress toward desired goals and objectives continues, while also capturing the potential cumulative effects of multiple site specific management actions. In the riparian monitoring example, performance monitoring shall be used to evaluate management within an entire drainage, combining the results of multiple effectiveness monitoring sites. Performance monitoring is also crucial to adaptive management strategies, as it can then be applied to adjusting site specific management actions or land use plan decisions to demonstrate continued attainment or progress toward long-term goals and objectives. Public and customer feedback could also be considered, where appropriate.

C. Roles and Responsibilities for Monitoring

1. Resource Specialists, in consultation with specialists of other affected resources shall recommend appropriate monitoring priorities and staff assignments to the Field Manager. Resource Specialists shall track overall AMU and CMPA progress in meeting monitoring commitments for the assigned resources and geographic areas.

2. Resource Specialists responsible for specific monitoring tasks shall seek appropriate public input and participation in the monitoring implementation and/or provide feedback to public participants in those instances where interest groups or other public groups have participated in developing management strategies. Examples would include SRP holders submitting post-use reports, or livestock permittees submitting actual use reports or participating in vegetation monitoring.

3. Resource Specialists shall be responsible for analyzing and reporting monitoring data and making specific management adjustment recommendations to the Field Manager, based upon data analysis and professional judgment.

4. District Program Leads and/or Data Stewards (when applicable) shall assist and direct Resource Specialists in determining specific monitoring techniques, based on guidance from the State Office and current scientific and BLM standards.

5. AMU and CMPA Budget Representatives shall be responsible for programming appropriate funding to provide completion of programmed monitoring, within the constraints of available budget.

6. The Field Manager, in consultation with Resource Specialists, shall determine specific monitoring policy, protocols, strategies, techniques, and priorities for the AMU and CMPA, based on current funding opportunities and issue identification.

7. The Field Manager shall be responsible for determining data acceptance from outside sources.

8. The Field Manager shall make specific decisions for management adjustments necessary to achieve improved resource management.

D. Resources Monitoring

Monitoring information in this plan is presented in the same resource sequence and numbering system utilized in Chapter 2 of the AMU/CMPA PRMP. These resource monitoring summaries present basic information about monitoring of individual resources at the site specific or project specific level. General priorities shall be described within the context

of a single resource or use. Interrelationships between single resource specific monitoring and other resources shall be identified, when applicable. Available evaluation and reporting mechanisms shall be identified.

For some resources and uses, detailed monitoring methodology may be identified. Some resource monitoring could require statistical validity. These monitoring techniques are often labor intensive, and are only applied for specific monitoring needs. The information gained from this monitoring will typically be used in conjunction with information from other less intensive monitoring methods in order to gain an understanding of management effectiveness over a broader area. Some resources and uses only require qualitative or observational monitoring to measure management effectiveness.

2.2 Air Quality

Air quality is monitored by the State of Oregon to identify and quantify the effects of all uses and activities within the state. Except for wildland fire activities and events, BLM management activities do not affect air quality to an extent that requires monitoring or mitigation.

An air quality monitoring network has been developed for Oregon that will be utilized to help quantify air quality standards. Fire prescriptions and mitigation measures shall be reviewed and records of acreages/tonnages burned shall be maintained and reported. Additional smoke management mitigation measures, including the use of smoke modeling programs (e.g., simple approach smoke estimation models), would be completed for large or long duration burns that have the potential to affect major population centers.

2.3 Water Resources

Water resources monitoring is primarily designed to measure water quality attributes as an indicator of reach or watershed scale condition relative to identified beneficial uses (e.g. salmonid habitat) and standards prescribed under the CWA. Water quality monitoring is primarily in the context of performance monitoring, relying on monitoring of other resources, such as vegetation, that generally indicate an earlier response to land management activities and function as surrogate measures of water quality. The prioritization, intensity, and scale (watershed, subwatershed or reach/site) of implementation, effectiveness, and performance monitoring shall be determined through watershed or reach/site assessments, activity plans, or WQRPs.

Identification of specific riparian attributes of vegetation, hydrology/geomorphology and erosion/deposition to be monitored shall be identified through PFC assessments (USDI 1988 and 1999) and activity level planning. The relevance of vegetation management to the maintenance, restoration, or improvement of water quality and quantity will be reflected in monitoring the implementation and effectiveness of BMPs, and may include a variety of techniques to assess condition and trend.

2.4 Soils and Biological Crusts

Direct monitoring of soils is not typically implemented except in the case of major erosion features, such as head-cuts or gully erosion. These features are usually monitored for movement and expansion utilizing photo points and fixed-point measurement. Other direct soil monitoring shall be conducted by research and educational entities to study the effects of western juniper encroachment and control treatments. These monitoring efforts, which measure soil attributes such as infiltration rate, are outside the scope of BLM resource monitoring.

Information on soil processes, as required by the S & Gs, is typically inferred from other monitoring information, such as vegetative cover and density, litter cover, and stream sediment loading and turbidity. It can be assumed, in the absence of measurable and observable soil erosion, and in the presence of healthy vegetative communities, that soil processes are functioning correctly.

The S & Gs identified biological soil crusts as one of at least twelve potential indicators to be used in evaluating watershed function for uplands. Biological soil crust monitoring is intended to establish the presence or absence of biological soil crusts, and where they are present, to measure the effects of long-term climatic variations, precipitation, elevation, soils and topography, and disturbance to biological soil crusts.

2.3 Water Resources Monitoring Table*

Monitoring Method	Monitoring Type***	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
PFC Assessment	E, P	Qualitative assessment of riparian/stream physical function that considers hydrology, vegetation and soil/landform attributes	Habitat for T&E or Special Status aquatic species; WSR designated streams; perennial and intermittent streams within Wilderness; other perennial or intermittent streams.	Riparian-wetland vegetation, fisheries habitat, wildlife habitat, grazing management, wild horse management, recreation management, transportation management	Single base-line assessment; reassess streams at less than PFC following indication of change in identified limiting factors
Water Temperature	E, P	Quantitative measurement of daily fluctuation and 7-day average maximum of stream temperature	WQRP implementation and development; T&E salmonid habitat; Redband Trout Reserve/WSR; Special Status salmonid habitat.	Riparian vegetation, fisheries habitat, grazing management	1-3 consecutive years within a 10-year time frame, or as specified in WQRP
Stream Shade	E, P	Quantify site specific or reach average percent stream shade	WQRP implementation and development.	Riparian vegetation, fisheries habitat, grazing management	Determined through WQRP
Macroinvertebrate Sampling	E, P	Presence, composition and diversity of aquatic macroinvertebrates	303(d) listed streams.	Riparian vegetation, fisheries habitat, grazing management	Infrequent-issue specific
Stream Channel Cross-Sections	E, P	Quantify channel configuration and width-to-depth ratio	WQRP implementation and development; project specific actions that may modify stream channel configuration.	Riparian vegetation, fisheries habitat, grazing management, recreation management, transportation management	Infrequent-issue specific

* This list of potential monitoring methods is neither all inclusive nor exclusive of new monitoring techniques or methodologies. Monitoring efforts will be implemented based upon accepted BLM technical references and accepted science research.
** I = Implementation, E = Effectiveness, P = Performance
*** Those additional resources which are directly monitored as a result of water resources monitoring, or for which inferences regarding condition can be derived from water resources monitoring.

Disturbance can result from natural and BLM management-related influences. Human-caused influences are the one effect to biological soil crusts which can be correlated, either positively or negatively, to BLM's management actions. Monitoring data of biological soil crusts can be directly correlated to known activities occurring within a particular area. The effects monitored can then be translated into correlating resource condition, primarily soil stability and/or soil erosion.

Biological soil crusts monitoring is focused primarily on those distinct morphological groups of biological soil crusts that are easily identified in the field. These morphological groups are also useful because they are representative of the ecological function of the organisms (p. 6, Technical Reference (TR)-1730-2). The data gathered on these morphological groups can then be analyzed against the factors influencing the distribution of biological soil crusts, including elevation, soils and topography, disturbance, and timing of precipitation. Monitoring typically focuses on presence or absence and cover.

Initial prioritization of biological soil crusts monitoring will focus on the Pueblo-Lone Mountain Allotment. This prioritization will satisfy a series of actions required by the BLM to comply with a settlement (USDI Office of Hearing and Appeals Settlement of OR-020-97-01 and OR-020-97-02) between the BLM and the appellants Elaine Rees and Oregon Natural Desert Association (ONDA). The appellants maintained that the BLM did not consider biological soil crusts when preparing the 1995 Pueblo-Lone Mountain AMP EA. The resulting settlement provided the opportunity for the BLM to cooperate with the appellants in the development of biological soil crusts monitoring strategy for the Pueblo-Lone Mountain Allotment.

The agreement to cooperate with Elaine Rees and ONDA on development of a monitoring strategy for the Pueblo-Lone Mountain allotment precludes the inclusion of a specific monitoring methodology in this monitoring plan. Key BLM personnel attended a training session in February, 2002, titled Roles of Microbiotic Soil Crusts in Rangeland Health. This course presented information contained in TR-1730-2, which was incorporated into a proposed monitoring strategy and provided to the appellants in early 2004. Following agreement on the proposed strategy, monitoring in the Pueblo-Lone Mountain Allotment was implemented in the spring of 2004.

Following initiation of biological soil crusts monitoring in the Pueblo-Lone Mountain Allotment in cooperation with the appellants, biological soil crusts monitoring strategies will be expanded to other areas, based upon prioritization of identified resource conflicts and concerns. Specific monitoring methodology and monitoring intervals shall be defined in the Implementation Plan for the AMU/CMPA PRMP/FEIS.

2.5 Vegetation

Vegetation monitoring is designed to measure the response of vegetative communities or species to particular influences such as grazing use, fire, climate, vegetative treatments, recreation activities, and vehicle use. Monitoring provides information necessary to change management strategies defined in site specific EAs, allotment evaluations, AMPs, recreation plans, wilderness plans, and TPs. Monitoring provides feedback in order to evaluate management decisions and implementation, and provides the evaluation necessary to change management strategies to best manage natural resources.

Vegetation monitoring must be designed to correctly monitor the desired community/species, relative to the known or predicted influence to the vegetation. Areas with little or no resource use or concerns could require only minimal monitoring, such as occasional visual observation. Areas of higher use or resource concern could require more intensive monitoring, such as line-intercept transects, nested frequency plots, greenline transects or other more intensive monitoring methodology.

Vegetation monitoring usually occurs during the allotment evaluation process followed by a report. All herbicide treatments are evaluated and reported to the ODA.

Riparian and Wetlands
Riparian and wetland areas are typically the first areas to be affected by uses such as grazing and recreation activities. Conversely, riparian and wetland areas often tend to be more resilient to other influences, such as fire and climatic variability. Riparian and wetland areas generally tend to respond more rapidly when management is adjusted to provide for improvement, but can degrade rapidly if management is not adjusted in a timely manner when monitoring data indicate a need for changes to management activities. Monitoring methods for riparian and wetlands may include but are not limited to: PFC assessments, greenline transects, browse transects, photo points, channel cross sections and vegetation density/composition/frequency assessments.

Woodlands
Western juniper encroachment in the CMPA is the focus of most monitoring for woodlands. Monitoring is focused on density (i.e., number of trees per acre) and age class, which can be measured through visual observation or more intensive core sampling and ring counting. Other woodland types such as quaking aspen and mountain mahogany stands, are monitored for their response to western juniper control activities such as cutting and burning and other management activities and uses. These woodland types are monitored for density, age class, and recruitment.

Wildland Juniper Management Area
The WJMA was established in 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. As such, monitoring within the WJMA shall be designed on a site specific basis, as applicable to studies and demonstrations occurring within the designated area.

Rangelands
Rangelands typically encompass shrub-grass communities, most commonly used for grazing activities. Rangelands can be slow to show response to influence from grazing management and other activities, and can also be slow to show recovery response after appropriate management changes are implemented. Monitoring methods for rangelands may include, but are not limited to, utilization studies, line-intercept transects, pace-frequency transects, Cole browse transects, nested frequency plots, photo-trend plots, climatic data, and actual use reports.

Noxious Weeds
Noxious weed infestations are a serious threat to all types of vegetative communities. Monitoring is focused on identification of new infestations, spread of existing infestations, and effectiveness of treatment activities. Monitoring for new infestations is accomplished through inventories, most commonly in areas previously disturbed by fire or other disturbance causing activity, and also in areas with high resource values where early detection is critical to maintain those values. Spread of existing infestations and treatment effectiveness are often monitored simultaneously using stem counts, various estimation techniques, and/or calculations using calibrated herbicide application equipment.

2.6 Fish and Wildlife

Fish habitat monitoring is primarily in the context of water quality and riparian vegetation condition, management, and monitoring. Additionally, the BLM, independently or in coordination with the ODFW and/or the USFWS, periodically assesses fish and aquatic habitat using established inventory and monitoring protocols. Management and monitoring of fish population and distribution is under the jurisdiction of the ODFW and/or the USFWS; the BLM coordinates and cooperates with these agencies relative to monitoring public lands.

Wildlife species habitats are related to other resources such as riparian/wetland areas or upland areas. Monitoring of these areas using techniques described in the grazing management, vegetation management, and water resources sections, will also give a description of the condition of habitat for wildlife species. Management and monitoring of wildlife population and distribution is under the jurisdiction of the ODFW and/or the USFWS; the BLM coordinates and cooperates with these agencies relative to monitoring public lands.

2.7 Special Status Species

Special status plant and animal species monitoring is designed to assess the distribution, resource condition, and trend of species populations known or suspected to be limited in distribution, uncommon within a specific area, or potentially vulnerable to certain activities occurring on public land. Monitoring is conducted in key areas and is designed to best reflect the attribute that identified the species for a special status species category.

2.5 Vegetation Management - Monitoring Table*

Monitoring Method	Monitoring Type***	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Grazing Use Supervision	I, E, P	Monitors livestock management such as: pasture moves; gathering; salt placement; herding practices; and livestock locations and seasonal movements.	I, M and C category allotments; more intensive with more resource concern.	Riparian vegetation, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly
Grazing Actual Use Data	I, E, P	Monitors actual number and timing grazing animals in an allotment and individual pastures versus permitted numbers and time, reported by permittees.	I and M category allotments.	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly
Climatic Data	E, P	Measure annual precipitation	All	All	Yearly
Vegetation Density/Composition/ Frequency Monitoring	E, P	A variety of monitoring methods which inventory species abundance and distribution to assess changes in composition over time, relative to site potential.	Special status species plant populations; riparian vegetation; noxious weed infestations and treatments; other vegetation types requiring more intensive monitoring.	All vegetation, grazing management, fisheries habitat, wildlife habitat, wilderness	Infrequent-issue specific
PFC Assessment	E, P	Qualitative assessment of riparian/stream physical function that considers hydrology, vegetation and soil/landform attributes.	Habitat for T&E or special status aquatic species; WSR designated streams; perennial and intermittent streams within wilderness; other perennial or intermittent streams.	Riparian-wetland vegetation, fisheries habitat, wildlife habitat, grazing management, wild horse management, recreation management, transportation management	Single base-line assessment; reassess streams at less than PFC following indication of change in identified limiting factors
Photo Points	E, P	Visual reference for long-term comparison.	Special status species plant populations; riparian vegetation; noxious weed infestations; other vegetation types requiring more intensive monitoring.	All vegetation, grazing management, fisheries habitat, wildlife habitat, wilderness	Yearly, or less frequently dependent upon management activity

Monitoring Method	Monitoring Type**	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Cole Browse Transect	E, P	Measures livestock utilization on key wildlife browse species, such as bitterbrush.	Critical wildlife habitat	Riparian vegetation, wildlife habitat	1 - 3 years
Other Methods as Developed/Identified	I, E, P	Measure effectiveness of vegetation management strategies in relation to other resource responses.	Dependent on desired resource response to be monitored	Dependent on desired resource response to be monitored	Dependent on desired resource response to be monitored

* This list of potential monitoring methods is neither all inclusive nor exclusive of new monitoring techniques or methodologies. Monitoring efforts will be implemented based upon accepted BLM technical references and accepted science research.
** I = Implementation, E = Effectiveness, P = Performance
*** Those additional resources which are directly monitored as a result of vegetation management monitoring, or for which inferences regarding condition can be derived from vegetation management monitoring.

Monitoring for special status plant and animal species will show the effect of management and activities on populations of special status species plants, animals and their habitats. Monitoring will provide data necessary for making determinations as to whether these plants should be listed as T&E, require further observation, or should be removed from consideration as a special status species. Monitoring of those species populations that have not been listed as T&E shall be utilized to gain management information, which will lead to conservation or recovery of those populations occurring in the Planning Area.

The established specific status categories from the highest priority to the lowest are as follows: Endangered Species, Threatened Species, Federal Candidate Species, BLM Sensitive Species, and BLM Assessment, Review and Tracking. These categories are divided between ESA listings and identified BLM concerns. T&E and Federal Candidate species are ESA categories, and the remaining categories are BLM established.

Priority monitoring shall be focused on Endangered, Threatened, Federal Candidate and BLM Sensitive Species. Monitoring efforts for special status plant species shall include establishment of permanent plots in the critical habitats to determine the trend of individual plants or populations. Examples of monitoring methods include circle plots and line transects. Both methods include photo points, as well as measurements of individual plants within the population. Monitoring is expected to continue until the species is stable and off the T&E, Federal Candidate or BLM Sensitive lists. The appropriate monitoring is conducted on a yearly basis. Monitoring efforts for special status animal species shall include PFC assessments for riparian areas, species counts, and radio telemetry tracking.

Further monitoring is conducted for BLM Assessment, Review and Tracking Species. Since these species are not known to be in imminent jeopardy, monitoring is a lower priority and occurs less frequently. Monitoring typically involves ocular reconnaissance to determine population presence, density, and visible threats to the plants, animals, or their habitats.

Monitoring data for special status plant and animal species is incorporated in management decisions for other resources and uses. These data are evaluated and reported to the ODFW and the USFWS. Management may be corrected or adjusted to facilitate improvement of special status plant and animal species, or their habitats. Most commonly, management actions which affect special status plant and animal species are related to the following: Energy and Minerals, Wild Horses and Burros, Grazing Management, Wildland Fire Management, Transportation and Roads, Lands and Realty, OHVs, and Recreation.

2.8 Paleontological Resources

Paleontological resources monitoring is designed to measure the effects of natural and human-caused disturbance on paleontological resources, so that management can be implemented to prevent or minimize deterioration or degradation. Monitoring shall entail measurement, description and photo documentation of disturbed areas within localities and recording evidence of illegal collection and evacuation. These data will serve as baseline information to compare with subsequent monitoring visits. All localities within the Planning Unit would be monitored once every five years. Paleontological monitoring information is evaluated and reported in site specific project analyses.

2.9 Cultural Resources

Cultural resources monitoring is designed to measure the effects of natural and human-caused disturbance on cultural resources so that management can be implemented to prevent or minimize deterioration or degradation. National Register of Historic Places listed and selected eligible sites shall be monitored once every ten years to determine baseline site condition. Monitoring all sites within the Planning Area is not practicable, due to the large number of known sites and limited budget.

Wilderness and Wild and Scenic Rivers
National Register Eligible sites most susceptible to effects from recreation and livestock grazing shall be monitored once every five years. Sites susceptible to illegal looting and/or excavation shall be monitored every year. Other National Register Eligible sites shall be monitored every ten years.

Monitoring shall entail measurement, description, and photo documentation of disturbed areas within sites and recording evidence of looting and illegal excavation. These data will serve as baseline information to compare to subsequent monitoring visits.

Riddle Brothers Ranch National Historic District
The Benjamin Riddle House and associated structures shall be visited annually to assess maintenance needs. The caretaker would report any historic structure or feature maintenance needs to the Burns DO cultural resources staff. The caretaker shall monitor visitor use and act as a deterrent to illegal theft of historic and prehistoric artifacts.

Cultural resources monitoring data are reported to the Oregon State Historic Preservation Officer. These data are also evaluated and reported in site specific project analyses.

2.10 Native American Traditional Practices

On-the-ground monitoring of other resource uses in identified traditional practice sites shall be developed in order to determine condition, amount of deterioration, and use of such sites. Procedures shall be developed to track consultation and to document all written, telephone, electronic, and in-person communications, with a yearly review for adequacy.

2.11 Visual Resources

Visual resource monitoring is used to complete and implement mitigation measures incorporated into a proposed management action or developed through the NEPA process. Mitigation measures are developed so that VRM Class objectives for the project area are met.

VRM monitoring is typically implemented on a project specific basis. The Visual Resource Contrast Rating is the basic monitoring tool used to determine whether VRM Class objectives are being met or if additional mitigation measures need to be developed and implemented. Monitoring can include on-site inspections during and after project work. Documentation should include photographs, video, and/or written reports. To that end, it is critical that all personnel (proponents, contractors, and BLM staff) associated with the construction phase of projects understand the intent of the visual mitigation measures.

Management actions with the greatest potential to effect VRM are as follows: woodlands management; development of mineral material sources; energy and minerals exploration and development; transportation corridor development; and lands and realty ROWs and utility corridors. VRM monitoring evaluation and reporting will be presented in project/action-specific files and analyses.

2.12 Social and Economic Values

Monitoring for social and economic values allows the BLM to provide information to local governments regarding inputs to the local community resulting from BLM management of public lands so that community interests and needs are properly considered.

BLM records will be used to determine the amounts of commodity uses (i.e., AUMs, tons of minerals, range products, etc.). Employment in related industries shall be monitored using public information sources. BLM budget information shall be utilized to project and ascertain expenditures for environmental quality projects and facilities development. This information will then be correlated to employment and revenue in related industries.

Recreation Management Information Systems and other site specific measures shall be used to determine visitor use levels. BLM procurement records shall be utilized to track local versus non local contracts; payroll records will be utilized to track BLM employment levels.

Information from social and economic monitoring will be used to inform future management decisions. Employment and commodities data shall be reported in annual planning updates. No other specific reporting is anticipated, unless specific available information is requested by local government entities.

2.13 Energy and Minerals

For renewable energy permitting, see the Lands and Realty section.

Monitoring for locatable, leasable, and saleable energy and minerals exploration and development is designed to provide compliance with applicable laws, regulations, policy, and site specific plans. In addition, monitoring helps to provide

compatibility with other resource management objectives, and other resource uses, and helps to provide for protection of public lands.

Locatable Minerals
For locatable minerals, monitoring of activities on mining claims shall be conducted primarily to provide compliance with the 43 CFR 3802/3809/3715 regulations and site-specific plans. These regulations allow locatable minerals activities on public lands while preventing unnecessary or undue degradation; require reclamation of disturbed areas; and provide for coordination with other agencies. The 43 CFR 3809 regulations state that the BLM may inspect minerals exploration and mining operations at any time. Those regulations further establish minimum inspection frequencies for mining operations as follows: at least four times each year, the BLM shall inspect all operations that are using cyanide or other leachate, or where there is significant potential for acid rock drainage. There is no stated frequency for inspections for all other activities. According to BLM policy, activities in sensitive areas or activities with a high potential for greater than usual effects shall be inspected more often than annually.

Leasable Minerals
For leasable minerals, inspections shall be conducted primarily to provide compliance with 43 CFR 3100/3200/3500 regulations and site specific plans. Where mineral production occurs, inspections will show (1) an accurate accounting of material removed; (2) proper compensation to the federal government; and (3) protection of the environment, public health, and safety. Activities in sensitive areas or activities with a high potential for greater than usual effects shall be inspected more frequently, according to BLM policy.

Saleable Minerals
Inspections of saleable minerals operations shall be conducted primarily to determine compliance with 43 CFR 3600 regulations and site-specific plans. Where mineral production occurs, inspection will show (1) an accurate accounting of materials removed; (2) proper compensation to the federal government; (3) protection of the environment, public health, and safety; and (4) identification and resolution of saleable mineral trespass. Activities in sensitive areas or with a high potential for greater than usual effects shall be inspected more frequently, according to BLM policy.

2.14 Wild Horses and Burros

Wild horse and burro monitoring is designed to measure the health and viability of wild horse and burro populations, and to measure the effects of their grazing on a variety of resources and uses, including the following: wild horse and burro habitat: vegetation; riparian habitat; water quality; Special Status Species and their habitat; wildlife habitat; wilderness; recreation; and livestock grazing operations.

Wild horse and burro monitoring falls into two distinct categories: animal/herd monitoring and resources monitoring. Animal monitoring includes animal counts, determination of animal locations and seasonal movements/use areas, annual reproduction rates, herd age structure, sex ratios, physical traits (size, color, weight, unique markings), and establishment and reassessment of herd baseline genomes. Resource monitoring includes collection of climatic data, use supervision, and actual use data. Additional vegetation condition and trend data shall be gathered in the course of monitoring for grazing management, riparian vegetation, and rangelands. Monitoring provides information necessary to determine the need for and timing of gatherings, which animals to remove, and whether to maintain or adjust AMLs.

Priorities for monitoring wild horses and burros are established by AMLs and the herd's relative status within HMAs for a given year. Those HMAs approaching or exceeding the upper limit of AMLs will receive priority for monitoring. Those HMAs which have recently been gathered and are at the low end of AMLs will receive minimal monitoring within a given year. Additional monitoring priority could be assigned if major changes occurred within a particular HMA, such as a change to available area, a change in livestock grazing use, water distribution, or some other change which could affect the resident animals. Wild horse and burro population and habitat monitoring is evaluated and reported in the allotment evaluation process and in analysis of specific gathering activities.

2.15 Grazing Management

Grazing management monitoring is designed to measure the effects of grazing animals (e.g., domestic livestock, wild horses, and wildlife) on a variety of resources and uses including: vegetation; riparian habitat; water quality; threatened and endangered species; wildlife habitat; wilderness; recreation; and wild horse and burro habitat. Monitoring provides information necessary to change management strategies defined in environmental assessments, allotment evaluations, and allotment management plans. It provides the feedback loop to evaluate management decisions and implementation, and provides the evaluation necessary to change management strategies to best manage the resources.

2.14 Wild Horses and Burros Monitoring Table*

Monitoring Method	Monitoring Type**	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Focus: Animal					
Animal Census	E, P	Animal numbers, animal locations and seasonal movement/use areas, sex ratios, annual reproduction rates, physical traits.	HMAs approaching or exceeding AML	Riparian habitat, upland vegetation	1- 5 years
Visual Observations	E, P	Animal numbers, animal location and seasonal movement/use areas, sex ratios, annual reproduction rates, physical traits.	HMAs approaching or exceeding AML; BLM staff presence in area	Riparian habitat, water quality, upland vegetation, wildlife habitat, wilderness, visitor use	When present and as needed
Gate Cuts	E, P	Sex ratios, annual reproduction rates. physical traits, herd genome.	At gather	None	At gather
Genetic Testing	E, P	Herd baseline genome.	At gather	None	At gather
Focus: Resource					
Utilization	E, P	Forage availability and utilization, conflicts with livestock use, habitat condition, animal location and seasonal movement/ use areas.	HMAs approaching AML; I category livestock allotments with HMAs	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly, or less frequently
Visual Observations	E, P	Animal numbers, animal location and seasonal movement/use areas, sex ratios, annual reproduction rates; physical traits, habitat condition, water availability.	HMAs approaching AML; BLM staff presence in the area	Riparian habitat, water quality, upland vegetation, wildlife habitat, wilderness, visitor use	When present and as needed
Use Supervision	I, E, P	Monitors livestock management such as: pasture moves; gathering; salt placement; herding practices; and livestock locations and seasonal movements.	I, M and C category allotments with HMAs; more intensive with more resource concern	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness, livestock management	Yearly
Actual Use Data	I, E, P	Monitors actual number and timing grazing animals in an allotment and individual pastures versus permitted numbers and time; reported by permittees.	I and M category allotments with HMAs	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness, livestock grazing management	Yearly

* This list of potential monitoring methods is neither all inclusive nor exclusive of new monitoring techniques or methodologies. Monitoring efforts will be implemented based upon accepted BLM technical references and accepted science research.

** I = Implementation, E = Effectiveness, P = Performance

*** Those additional resources which are directly monitored as a result of wild horse and burro monitoring, or for which inferences regarding condition can be derived from wild horse and burro monitoring.

2.15 Grazing Management - Monitoring Table*

Monitoring Method	Monitoring Type***	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Use Supervision	I, E, P	Monitors livestock management such as: pasture moves; gathering; salt placement; herding practices; and livestock locations and seasonal movements.	I, M and C category allotments; more intensive with more resource concern	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly
Actual Use Data	I, E, P	Monitors actual number and timing grazing animals in an allotment and individual pastures versus permitted numbers and time; reported by permittees.	I and M category allotments	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly
Utilization	I, E, P	Measures forage utilization by grazing animals, either as an ocular estimate or as a quantitative measurement.	I and M category allotments	Riparian habitat, water quality, fisheries habitat, wildlife habitat, upland vegetation, wilderness	Yearly, or less frequently
Photo-Trend Plots	E, P	Measures vegetation cover and frequency through photo documentation and trend plot analysis.	I and M category allotments	Wildlife habitat, upland vegetation, wilderness	5 to 7 year intervals
Nested Frequency	P	Measures vegetation presence and frequency through nested plot analysis.	I category allotments	Wildlife habitat, upland vegetation, wilderness	5 to 10 year intervals
Climatic Data	E, P	Measures annual precipitation.	All	All	Yearly
Line-Intercept Transects	E, P	Measures vegetative composition and cover; often used to measure vegetation response after fire .	I and M category allotments	Wildlife habitat, upland vegetation, wilderness	3 to 5 year intervals, if indicated for management
Pace Frequency Transects	E, P	Measures vegetative composition and frequency.	I category allotments	Wildlife habitat, upland vegetation, wilderness	5 to 7 year intervals, if indicated for management
PFC Assessment	E, P	Qualitative assessment of riparian/stream physical function that considers hydrology, vegetation and soil/landform attributes.	Habitat for T&E or Special Status aquatic species; WSR designated streams; perennial and intermittent streams within wilderness; other perennial or intermittent streams	Riparian-wetland vegetation, fisheries habitat, wildlife habitat, grazing management, wild horse management, recreation management, transportation management	Single base-line assessment; reassess streams at less than PFC following indication of change in identified limiting factors
Greenline Transects	E, P	Measures riparian vegetative composition and cover.	I category allotments; stream segments of concern	Riparian vegetation, water quality, fisheries habitat, wildlife habitat	As indicated for management

Monitoring Method	Monitoring Type***	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Cole Browse Transect	E, P	Measures livestock utilization on key wildlife browse species, such as bitterbrush.	Critical wildlife habitat	Riparian vegetation, wildlife habitat	1 - 3 years
Other Methods as Developed/Identified	I, E, P	Measures effectiveness of grazing management strategies in relation to other resource responses.	Dependent on desired resource response to be monitored	Dependent on desired resource response to be monitored	Dependent on desired resource response to be monitored

* This list of potential monitoring methods is neither all inclusive nor exclusive of new monitoring techniques or methodologies. Monitoring efforts will be implemented based upon accepted BLM technical references and accepted science research.
** I = Implementation, E = Effectiveness, P = Performance
*** Those additional resources that are directly monitored as a result of grazing management monitoring, or for which inferences regarding condition can be derived from grazing management monitoring.

Improper grazing management can adversely affect natural resources and other public land uses, primarily through effects to vegetation, soils and water. These effects may be a result of improper timing, stocking rate, or livestock distribution. Proper grazing management can be utilized to enhance natural resources and other public land uses.

Grazing management monitoring typically focuses on livestock management and vegetation response. Livestock management can be monitored through use supervision, actual use reporting, and photo documentation. Vegetation is monitored through a variety of assessment and quantitative methods.

Grazing management monitoring is prioritized according to allotment category, as follows:

I Category: The "improve" category identifies allotments with management and/or resource concerns. These allotments receive priority for implementation, effectiveness, and performance monitoring.

M Category: The "manage" category identifies allotments with low or no management and/or resource concerns. These allotments receive lower priority for monitoring, and are targeted for effectiveness and performance monitoring, unless monitoring data indicate the need for a change to management strategy.

C Category: The "custodial" category identifies allotments with a very low ratio of public land to private land, and low resource values. These allotments are lowest priority for monitoring efforts, and receive minimal effectiveness and performance monitoring.

"I" category allotments are further prioritized for monitoring based on resources present. The most common resources considered for monitoring prioritization are riparian habitat, water quality, unique plant communities, wildlife habitat, and threatened or endangered species. Within the CMPA, monitoring is also prioritized for the effects of grazing management on wilderness.

Grazing management monitoring is evaluated and reported through the allotment evaluation process, analyses specific to gathering wild horses and burros, Section 7 consultation on T&E species, and in annual planning updates.

2.16 Wildland Fire Management

Wildland fire monitoring is designed to provide safety for personnel involved in fire operations and achievement of resource management objectives, both for burning activities and rehabilitation activities. Monitoring completed after fires are suppressed will determine whether management strategies and suppression activities met safety standards and resource management objectives.

Monitoring studies are encouraged on all emergency fire rehabilitation projects to determine whether rehabilitation objectives are being met. Monitoring shall be carried out on all projects that employ new techniques, seed mixes, or other rehabilitation methods. Emergency fire rehabilitation funds may be used to fund monitoring studies for up to three growing seasons following fire control. This monitoring typically measures vegetative attributes, utilizing monitoring methods identified in the grazing management section. Soil monitoring may also be implemented, if there is a high potential for soil erosion or concerns regarding biological boil crusts. Noxious weed inventories are typically implemented in burned areas, as fire disturbance often provides opportunities for establishment of new noxious weed infestations.

Monitoring of fuel loads, vegetation conditions, and other ecological parameters shall be used to determine the appropriate course of action for prescribed fires, fuels reduction treatments, and fire management in case of natural ignitions. Monitoring results shall be used to determine whether the strategy or specific treatment that was implemented meets resource objectives.

2.17 Lands and Realty

Monitoring of land tenure is designed to track land adjustments over time so that the objectives of the land use plan are being met; to determine the cumulative effects on land and tax bases; and to provide land tenure information to Congress, proponents, and the public. Land tenure is typically monitored by maintaining spreadsheets, databases, and maps showing past and planned ownership changes and proposals. This information is typically updated as land tenure projects are completed. Newly acquired lands would be incorporated into ongoing resource monitoring procedures on adjacent or comparable lands.

Monitoring of realty related land uses, including those for renewable energy development and military activities, shall be undertaken to provide compliance with requirements for mitigation, restoration of the lands, and other terms and conditions of the authorizing document. Monitoring of these types of activities typically involves inspection and photo documentation of the site. If deficiencies are noted during the inspection, the proponent is notified and corrective measures taken until compliance is achieved. Long-term land uses are frequently inspected during the initial construction phase. Once in operation, these land uses are inspected less frequently, concentrating monitoring efforts during periods of reconstruction, major maintenance, or land restoration activity. Development in sensitive areas, or activities with a high potential for greater than usual effects, would be inspected more frequently than those in less sensitive areas or those having less effect potential.

2.18 Transportation and Roads

Monitoring of transportation and roads is designed to measure the frequency of motorized vehicles on roads and routes, and the effects that motorized travel has on other uses within the area. Transportation and road monitoring measures the effects to natural resources as a result of vehicular use, either on existing roads and routes or as a result of unauthorized cross country travel. Monitoring also measures the level and need for road and route maintenance and the effectiveness of road and route closure efforts.

Monitoring of transportation and roads is critical to protecting the integrity of the landscape within the Planning Area from undue effects as a result of road degradation, unauthorized off-road travel, or unauthorized vehicular travel in wilderness and WSAs. Road/route degradation can result in unacceptable vegetation effects and soil erosion, which affects soil stability, soil movement, and biological soil crusts. This in turn can affect wildlife and fisheries habitat, special status species, water quality, wilderness characteristics, visual resources, and the quality of visitor experiences.

Transportation and road monitoring will primarily be focused on the Steens Mountain Wilderness to aid management and protection of wilderness characteristics, and on the safety of routes open to the public. Further focus for monitoring efforts will occur within the CMPA to provide for the purposes and objectives of the Steens Act. Less intensive transportation and road monitoring will occur in the AMU, and will primarily be focused within WSAs to protect their Wilderness characteristics for potential future inclusion in the wilderness system.

Road/route conditions and natural resource effects will determine whether monitoring methods are appropriate as to type and frequency. Method and/or frequency will be adjusted if effects indicate that desired goals and objectives are not being achieved.

Evaluation and reporting of transportation monitoring shall be consistent with the Wilderness and WSRs Plan. Other evaluation and reporting shall be completed as necessary to inform future decisions for the AMU and public health and safety.

2.19 Off-Highway Vehicles

OHV monitoring is designed to evaluate compliance with OHV designations, especially the closed and limited designations. OHV monitoring measures the area, extent, and severity of intrusions. Monitoring of OHV designations is directly related to the Wilderness motor vehicle intrusion monitoring.

There is no formal OHV monitoring plan or protocol at this time. The National Management Strategy for Motorized Off-Highway Vehicles on Public Lands provides for the OHV Strategy Action Team to provide national guidelines to be used in developing local OHV monitoring plans. When these guidelines are developed, a plan or plans will need to be written for OHV management in the CMPA and AMU. The monitoring plan shall include the type of data and amount of funding needed to effectively monitor OHV use and its effect on public land resources.

In the interim, OHV monitoring typically consists of field observations en route to or from other work assignments, as part of WSA surveillance, or as part of Wilderness boundary monitoring. Law enforcement is notified, if needed, when a major intrusion is observed.

2.18 Transportation and Roads Monitoring*

Monitoring Method	Monitoring Type**	Monitoring Measurement	Prioritization Criteria	Related Resources Measured***	Monitoring Interval
Visual Observation	I, E, P	Road/route condition; erosion; detection of off road travel; maintenance levels and needs; effectiveness of closures.	Safety; wilderness; WSA	Soils, BSEs, wilderness, WSA, upland and riparian vegetation, visitor use	Varied as to prioritization and use levels
Photo Points	I, E, P	Maintenance level is remaining consistent within Wilderness; road crossings effects in riparian areas; road closure effectiveness; erosion.	Wilderness; WSA; riparian habitat	Soils, BSEs, wilderness, WSA, upland and riparian vegetation	1 - 3 year intervals, or more frequently in wilderness
Road Counters	I, E, P	Travel frequency on a particular road or route.	Wilderness; WSA; CMPA; AMU	Visitor use	As needed
Visitor Satisfaction Surveys	I, E, P	Measures visitor satisfaction regarding permitted vehicle use within Wilderness.	Wilderness	Wilderness	Varied as to prioritization and use levels
Use Reports	E, P	Motorized vehicular use in Wilderness by authorized private land inholders and livestock permittees.	Wilderness	Wilderness	Yearly

* This list of potential monitoring methods is neither all inclusive nor exclusive of new monitoring techniques or methodologies. Monitoring efforts will be implemented based upon accepted BLM technical references and accepted science research.

** I = Implementation, E = Effectiveness, P = Performance

*** Those additional resources that are directly monitored as a result of transportation/road monitoring, or for which inferences regarding condition can be derived from transportation/road monitoring.

2.20 Recreation

Special Recreation Permit Monitoring
SRP monitoring is designed to provide compliance by permittees with the SRP terms and conditions, stipulations, and operating plans. Monitoring is also designed to provide certainty that commercial operations and organized groups have the required permit. Law enforcement personnel take a proactive role in contacting potential permittees in the field and providing information on the need for SRPs, and the process of obtaining a permit. SRPs are monitored so that appropriate resource protection objectives are being met during the course of permitted recreational activities, and to aid in developing a rapport between the BLM and SRP holders. This rapport helps to bring noncompliant users into the permit system.

The type and methods for monitoring SRPs varies greatly by type of permit and the related activities. Resource effects, actual use, and compliance is monitored, utilizing techniques such as site visits, campsite inventories, patrol logs, videos and photos, and post -use reports. The amount and type of monitoring needs to be commensurate with the resource values as risk, the permittee's past performance record, and other factors such as whether permitted use occurs inside or outside wilderness. Monitoring is documented on the SRP Monitoring Form and is placed in the appropriate SRP file. Monitoring results are discussed with permittees on a yearly basis.

Monitoring data provide the opportunity to assess whether the authorized use is the correct fit for the area and to check effects on the resource and other users. If monitoring indicates that unacceptable resource effects are occurring, management can be adjusted through adjustments to a SRP, permit stipulations, or operating plan.

Recreation Site Monitoring
Recreation site monitoring is designed to obtain visitor use information and levels. This information is used in recreation planning for recreation sites and to evaluate visitor satisfaction. The goal of monitoring is to provide data on the types and numbers of recreation activities.

Data on party size, length-of-stay, and geographic origin of visitors are gathered from campground fee envelopes. Additional information on activities, types of vehicles, party size, season of use, and existing potential resource concerns are observed and recorded during site visits. Road counters are also used in various locations within the CMPA and the AMU. They are checked and read monthly when they are accessible. These counters provide information on seasonal use trends and estimated use numbers. Observations on use areas, activities, types of vehicles, and resource concerns are also recorded when the counters are read. Additional recreational information is gathered at trail registers.

The information gathered is used to calculate estimated recreation use for entry into the Recreation Management Information System. Data from this system will be used in preparing the CMPA comprehensive recreation plan, Recreation Area Management Plans, and Recreation Project Plans.

2.21 Areas of Critical Environmental Concern

Monitoring of ACECs is designed to measure uses and activites on the relevant and important characteristics associated with any particular ACEC. Some ACECs are also designated as RNAs, and monitoring is designed to measure the effects of management and uses on the natural features and ecosystem conditions which warrant a RNA designation.

ACECs are identified under Section 103(a) of the FLPMA as areas where special management attention is required to protect and prevent irreparable damage to important values, resources, systems or processes, or to protect life and safety from natural hazards. The BLM shall protect special places and provide for visitor health and safety.

Monitoring for ACECs and RNAs is divided into two categories: visual observation and trend indicators. Baseline sampling has been established in some ACECs to document trends and conditions of relevant and important characteristics. Highest priority for monitoring efforts will be assigned to monitoring that measures potential changes from uses such as livestock grazing and recreation activity. If the visual monitoring indicates that a potential problem were occurring, permanent plots could be established to help identify potential causes, and to provide information for necessary changes in management.

Visual monitoring of key elements has been established for each of the relevant and important characteristics of the Alvord Desert ACEC and the following ten RNAs/ACECs: East Kiger Plateau, Little Blitzen, Little Wildhorse Lake,

Long Draw, Mickey Basin, Pueblo Foothills, Rooster Comb, South Fork Willow Creek, Tum Tum Lake, and Big Alvord Creek. Visual monitoring shall determine if outside forces are affecting the key elements of the natural area (e.g., recreation use, grazing use, etc). Photo points shall be established in key areas if visual monitoring indicates the need.

Trend monitoring shall be conducted to assess the effect of grazing animals on populations of specific plant species within the Long Draw RNA/ACEC, Pueblo Foothills RNA/ACEC and the Mickey Basin RNA/ACEC. Permanent plots have been established to monitor the condition and assess the trend of the key species. Photo points and measurements are taken in the Long Draw and Pueblo Foothills RNA/ACECs each year. The belt transect established in the Mickey Basin RNA/ACEC is read every five years.

2.22 Wilderness

Wilderness monitoring is discussed at length in the Steens Mountain Wilderness and WSRs Plan (Appendix U).

2.23 Wilderness Study Areas

WSA monitoring is designed to measure the effects of various activities within WSAs in order to preserve wilderness values in the WSAs.. The goal is to prevent impairment of an area's suitability for preservation as wilderness.

Monitoring is includes on-the-ground surveillance, conducted at a minimum of once per month during the months the area is accessible to the public. Surveillance can be initiated more frequently if potential use activities or resource conflicts indicate the need for such. Monitoring data are collected through the use of patrol logs, surveillance reports, BLM personnel diaries, and photographs.

Unauthorized uses and facilities may be assertively prevented by using such measures as law enforcement patrols, cooperative agreements with local law enforcement agencies, surveillance by volunteers, posting signs at key access points, notifying various user and commodity groups of WSA locations, and regular project compliance visits to monitor actions authorized within WSAs.

Monthly monitoring reports are maintained at the Burns DO. Information from these reports are used to make future management decisions, during allotment evaluation efforts, and in other site-specific planning documents.

2.24 Wild and Scenic Rivers

Wild and Scenic River monitoring is discussed at length in the Wilderness and WSRs Plan (Appendix U).

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Appendix R - Cultural Resources- Site Specific Impacts, Site Condition and Management Actions

Below is a compilation of data for all sites within the Planning Unit including National Register Eligibility, Management Priority, Impact Agents, Site Type, Site Condition and Proposed Actions. Nearly two thirds of the sites have not been visited since they were originally recorded, as many as 20 years ago. Since site recording standards have dramatically changed since the mid-1980s, many of these sites have not been adequately documented.

Most of the sites in the Planning Unit have not been evaluated for eligibility to the National Register of Historic Places. The sites will have to be evaluated for eligibility before management priorities and management actions can be determined. Site re-recording and condition assessment and evaluation will be completed at sites with the highest potential for eligibility, as budget allows.

Data included in this table was derived from the Oregon Heritage Information Management System database and Burns Field Office GIS.

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Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060006SI	unevaluated	unevaluated	vandalism	rockshelter	unknown	evaluate, assess condition
0502060013SI	unevaluated	unevaluated	erosion	other	unknown	evaluate, assess condition
0502060016SI	unevaluated	unevaluated	unknown	obsidian quarry, lithic scatter	unknown	evaluate, assess condition
0502060017SI	unevaluated	unevaluated	erosion	obsidian quarry, lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060026SI	unevaluated	unevaluated	vandalism, road construction	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060030SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060069SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060070SI	unevaluated	unevaluated	none	lithic scatter, ground stone tools	excellent	evaluate, assess condition
0502060071SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060072SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	excellent	evaluate, assess condition
0502060073SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060074SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	fair	evaluate, assess condition
0502060075SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060076SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060077SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060078SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060079SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060080SI	unevaluated	unevaluated	road construction	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060081SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060082SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060082SI	unevaluated	unevaluated	none	flaked tools	unknown	evaluate, assess condition
0502060083SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060084SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060085SI	unevaluated	unevaluated	unknown	hearth, fire cracked rock, lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502060086SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060087SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060088SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060089SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060090SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060091SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060092SI	unevaluated	unevaluated	none	rockshelter	excellent	evaluate, assess condition
0502060093SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060094SI	unevaluated	unevaluated	campground	lithic scatter	unknown	evaluate, assess condition
0502060095SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060096SI	unevaluated	unevaluated	unknown	rock cairn	unknown	evaluate, assess condition
0502060097SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060098SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060099SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060100SI	unevaluated	unevaluated	livestock grazing, other	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060101SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060102SI	unevaluated	unevaluated	livestock grazing	lithic scatter	unknown	evaluate, assess condition
0502060102SI	unevaluated	unevaluated	livestock grazing	lithic scatter	unknown	evaluate, assess condition
0502060103SI	unevaluated	unevaluated	livestock grazing, other	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060104SI	unevaluated	unevaluated	agriculture, other	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060105SI	unevaluated	unevaluated	none	rock cairn	excellent	evaluate, assess condition
0502060106SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060107SI	unevaluated	unevaluated	multiple agents vandalism	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060108SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060109SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060110SI	unevaluated	unevaluated	OHV	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060111SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060112SI	unevaluated	unevaluated	OHV	lithic scatter	unknown	evaluate, assess condition
0502060113SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060114SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060115SI	unevaluated	unevaluated	OHV, vandalism, erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060116SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060117SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060118SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060119SI	unevaluated	unevaluated	OHV	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060120SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060121SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060122SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060123SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060124SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060125SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060126SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060127SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060128SI	unevaluated	unevaluated	OHV	lithic scatter	unknown	evaluate, assess condition
0502060129SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060130SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060130SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060131SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060132SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060133SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060134SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060135SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060136SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060137SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060138SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060139SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060140SI	unevaluated	unevaluated	trail	lithic scatter	unknown	evaluate, assess condition
0502060141SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060142SI	unevaluated	unevaluated	trail, OHV, erosion	lithic scatter	unknown	evaluate, assess condition
0502060143SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060144SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060145SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060146SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060147SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060148SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060149SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060150SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060151SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060152SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060153SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060154SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060155SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060156SI	unevaluated	unevaluated	multiple agents	lithic scatter	unknown	evaluate, assess condition
0502060157SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060158SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060159SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060160SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060161SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060162SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060163SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060164SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060165SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060166SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060167SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060168SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060169SI	unevaluated	unevaluated	multiple agents	lithic scatter	unknown	evaluate, assess condition
0502060170SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060171SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060172SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060173SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060174SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060175SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060176SI	not eligible	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060177SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060178SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060179SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060180SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060181SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060182SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060183SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060184SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060185SI	unevaluated	unevaluated	wildfire	lithic scatter	unknown	evaluate, assess condition
0502060186SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060187SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060188SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060189SI	unevaluated	unevaluated	erosion, vandalism	lithic scatter	unknown	evaluate, assess condition
0502060190SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060191SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060192SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060193SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060194SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060195SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060196SI	unevaluated	unevaluated	livestock grazing	lithic scatter	unknown	evaluate, assess condition
0502060197SI	unevaluated	unevaluated	erosion, other	lithic scatter	unknown	evaluate, assess condition
0502060198SI	unevaluated	unevaluated	erosion, road construction	lithic scatter	unknown	evaluate, assess condition
0502060199SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060200SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060201SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060202SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060203SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060204SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060205SI	unevaluated	unevaluated	vandalism	rockshelter	unknown	evaluate, assess condition
0502060206SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060207SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060208SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060209SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060210SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060211SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060212SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060213SI	unevaluated	unevaluated	unknown	hearth, fire-cracked rock, lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502060214SI	unevaluated	unevaluated	erosion	hearth, fire-cracked rock, lithic scatter, flaked stone, ground stone tools	unknown	evaluate, assess condition
0502060215SI	unevaluated	unevaluated	erosion	flaked tools	unknown	evaluate, assess condition
0502060216SI	unevaluated	unevaluated	erosion	lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502060217SI	unevaluated	unevaluated	unknown	lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502060218SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060219SI	unevaluated	unevaluated	erosion, weathering	lithic scatter	unknown	evaluate, assess condition
0502060220SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060221SI	unevaluated	unevaluated	erosion, livestock grazing, trail	lithic scatter	unknown	evaluate, assess condition
0502060222SI	unevaluated	unevaluated	OHV	lithic scatter	unknown	evaluate, assess condition
0502060223SI	unevaluated	unevaluated	livestock, OHV, weathering	lithic scatter	unknown	evaluate, assess condition
0502060224SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter	unknown	evaluate, assess condition
0502060225SI	unevaluated	unevaluated	road construction, erosion	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060226SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060227SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060228SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060229SI	unevaluated	unevaluated	erosion	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060230SI	unevaluated	unevaluated	none	lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502060231SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060232SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060233SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060234SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060235SI	unevaluated	unevaluated	road construction, erosion	lithic scatter	unknown	evaluate, assess condition
0502060236SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060237SI	unevaluated	unevaluated	unknown	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060238SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060239SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060240SI	unevaluated	unevaluated	unknown	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060241SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060242SI	unevaluated	unevaluated	erosion	lithic scatter, flaked stone	unknown	evaluate, assess condition
0502060243SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060244SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060245SI	unevaluated	unevaluated	flooding	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060246SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060247SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060249SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060250SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060251SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060252SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060253SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060254SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060255SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060256SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060258SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060259SI	unevaluated	unevaluated	erosion, vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060260SI	unevaluated	unevaluated	livestock grazing	lithic scatter	unknown	evaluate, assess condition
0502060261SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter	unknown	evaluate, assess condition
0502060262SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060263SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060264SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060265SI	unevaluated	unevaluated	vandalism, OHV	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060266SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060267SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060268SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060269SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060270SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060271SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060272SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060273SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060274SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060275SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060276SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060277SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060278SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060280SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060281SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060282SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060283SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060284SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060285SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060285SI	unevaluated	unevaluated	unknown	flaked tools	unknown	evaluate, assess condition
0502060286SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060287SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060288SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060289SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060290SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060291SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060292SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060293SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060306SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060307SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060308SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060309SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	good	evaluate, assess condition
0502060310SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060313SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060314SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060333SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060336SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	good	evaluate, assess condition
0502060337SI	unevaluated	unevaluated	road construction, vandalism,erosion, livestock grazing	hearth, fire-cracked rock, lithic scatter, flaked stone, ground stone tools	good	evaluate, assess condition
0502060338SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060342SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060343SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060344SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060345SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060346SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060347SI	unevaluated	unevaluated	erosion, road construction	lithic scatter, flaked tools, ground stone tools	unknown	
0502060348SI	unevaluated	unevaluated	road construction, erosion	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502060349SI	unevaluated	unevaluated	road construction, vandalism	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060350SI	unevaluated	unevaluated	vandalism, road construction	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060351SI	unevaluated	unevaluated	vandalism,	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060352SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060363SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060372SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060373SI	unevaluated	unevaluated	unknown	rock alignment	unknown	evaluate, assess condition
0502060389SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502060390SI	unevaluated	unevaluated	road construction	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060391SI	unevaluated	unevaluated	road construction	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060392SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060393SI	unevaluated	unevaluated	unknown	lithic scatter	poor	evaluate, assess condition
0502060394SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060395SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060396SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502060397SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502060398SI	unevaluated	unevaluated	vandalism, livestock grazing, OHV	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060399SI	unevaluated	unevaluated	livestock grazing, OHV	lithic scatter	unknown	evaluate, assess condition
0502060400SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060401SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060402SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060403SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060404SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060405SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060406SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060407SI	unevaluated	unevaluated	erosion, vandalism	lithic scatter	unknown	evaluate, assess condition
0502060408SI	unevaluated	unevaluated	none	road alignment	unknown	evaluate, assess condition
0502060409SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060410SI	unevaluated	unevaluated	road construction	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060411SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060412SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060413SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060414SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060415SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060416SI	unevaluated	unevaluated	weathering	rock cairn	unknown	evaluate, assess condition
0502060417SI	unevaluated	unevaluated	none	rock alignment	unknown	evaluate, assess condition
0502060418SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060419SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060420SI	unevaluated	unevaluated	unknown	rock alignment, lithic scatter	unknown	evaluate, assess condition
0502060431SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060432SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060433SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060434SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060435SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060436SI	unevaluated	unevaluated	unknown	rock cairn	unknown	evaluate, assess condition
0502060437SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060438SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060439SI	unevaluated	unevaluated	vandalism	rock alignment, lithic scatter	unknown	evaluate, assess condition
0502060440SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060441SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060442SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060443SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060445SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060446SI	unevaluated	unevaluated	none	rock alignment	unknown	evaluate, assess condition
0502060447SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060448SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060449SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060450SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060451SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060452SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060453SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060454SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, rock cairn	unknown	evaluate, assess condition
0502060455SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502060456SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502060459SI	unevaluated	unevaluated	road construction	historic trash dump, lithic scatter	unknown	evaluate, assess condition
0502060460SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060461SI	unevaluated	unevaluated	none	rock alignment, lithic scatter	unknown	evaluate, assess condition
0502060462SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060463SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060464SI	unevaluated	unevaluated	vandalism	rock alignment	unknown	evaluate, assess condition
0502060465SI	unevaluated	unevaluated	vandalism	rock alignment	unknown	evaluate, assess condition
0502060466SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060467SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060468SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502060469SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools, historic dump	unknown	evaluate, assess condition
0502060470SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060471SI	unevaluated	unevaluated	vandalism	rockshelter	good	evaluate, assess condition
0502060472SI	unevaluated	unevaluated	road construction, weathering	rock alignment, rock cairn	unknown	evaluate, assess condition
0502060473SI	eligible	high	erosion	midden, hearth, prehistoric structure, fire-cracked rock, prehistoric ceramics, lithic scatter, flaked tools, ground stone tools, prehistoric organic tools,	good	monitor, salvage eroding material, fence from livestock grazing
0502060474SI	unevaluated	unevaluated	unknown	rockshelter, rock alignment, lithic scatter, flaked tools, groundstone tools	unknown	evaluate, assess condition
0502060475SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, rockshelter	unknown	evaluate, assess condition
0502060476SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060477SI	unevaluated	unevaluated	none	rock cairn	excellent	evaluate, assess condition
0502060478SI	unevaluated	unevaluated	none	rock cairn	excellent	evaluate, assess condition
0502060479SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060480SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060481SI	unevaluated	unevaluated	none	rock cairn, lithic scatter	unknown	evaluate, assess condition
0502060482SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060483SI	unevaluated	unevaluated	unknown	rockshelter, lithic scatter	unknown	evaluate, assess condition
0502060484SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060485SI	unevaluated	unevaluated	unknown	rock cairn, lithic scatter	unknown	evaluate, assess condition
0502060493SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060513SI	eligible	high	none	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060558SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060586SI	unevaluated	unevaluated	unknown	rock cairn, lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060591SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060592SI	unevaluated	unevaluated	unknown	rock cairn, lithic scatter	unknown	evaluate, assess condition
0502060593SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060594SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060595SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060596SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060597SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060598SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060599SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060603SI	unevaluated	unevaluated	vandalism	rockshelter, religious site	unknown	evaluate, assess condition
0502060604SI	unevaluated	unevaluated	unknown	rockshelter, religious site	unknown	private property
0502060607SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060608SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060609SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060610SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060611SI	unevaluated	unevaluated	none	rock alignment	unknown	evaluate, assess condition
0502060612SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060613SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060614SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060615SI	eligible	high	vandalism, livestock grazing, agriculture	hearth, refuse scatter, fire-cracked rock, lithic scatter, flaked tools, ground stone tools,	good	private property, lost is Steens Exchange
0502060616SI	not eligible	none	OHV, vandalism, erosion	lithic scatter, refuse dump	fair	discharged from management
0502060617SI	unevaluated	unevaluated	none	lithic scatter	unknown	evaluate, assess condition
0502060618SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060619SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502060620SI	unevaluated	unevaluated	none	rock cairn	unknown	evaluate, assess condition
0502060626SI	unevaluated	unevaluated	road construction, erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502060627SI	unevaluated	unevaluated	erosion	lithic scatter	unknown	evaluate, assess condition
0502060658SI	unevaluated	unevaluated	erosion	unknown	good	evaluate, assess condition
0502060722SI	unevaluated	unevaluated	fire, erosion	rock alignment, rockshelter	good	evaluate, assess condition
0502060723SI	unevaluated	unevaluated	fire, erosion	lithic scatter	poor	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060724SI	unevaluated	unevaluated	road construction, erosion, fire	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502060725SI	unevaluated	unevaluated	livestock grazing, erosion, vandalism	pictographs, rockshelter	poor	evaluate, assess condition
0502060726SI	unevaluated	unevaluated	unknown	rock alignment, lithic scatter	good	evaluate, assess condition
0502060727SI	unevaluated	unevaluated	livestock grazing	rock alignment	excellent	evaluate, assess condition
0502060728SI	unevaluated	unevaluated	road construction, erosion	rockshelter, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060729SI	unevaluated	unevaluated	erosion	lithic scatter	good	evaluate, assess condition
0502060730SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060731SI	unevaluated	unevaluated	erosion, other unknown	refuse scatter, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060732SI	unevaluated	unevaluated	road construction	refuse scatter	good	evaluate, assess condition
0502060733SI	unevaluated	unevaluated	livestock grazing, vandalism, road construction, erosion	rockshelter, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060734SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060735SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060736SI	unevaluated	unevaluated	road construction, livestock grazing, erosion	rock alignment, lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502060737SI	unevaluated	unevaluated	erosion, animal burrowing	rockshelter, lithic scatter	good	evaluate, assess condition
0502060738SI	unevaluated	unevaluated	livestock grazing, road construction, erosion	lithic scatter, flaked tools, ground stone tools	excellent	evaluate, assess condition
0502060739SI	unevaluated	unevaluated	erosion, road construction, vandalism	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502060740SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060741SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060743SI	unevaluated	unevaluated	road construction, vandalism,erosion, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060744SI	unevaluated	unevaluated	erosion	rockshelter, lithic scatter	good	evaluate, assess condition
0502060745SI	unevaluated	unevaluated	vandalism, road construction, erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502060746SI	unevaluated	unevaluated	road construction, erosion, vandalism	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060747SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060771SI	unevaluated	unevaluated	erosion, road construction, vandalism	basalt quarry, lithic scatter, flaked tools	good	evaluate, assess condition
0502060772SI	unevaluated	unevaluated	vandalism, erosion, road construction, livestock grazing, animal burrowing, OHV	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502060773SI	unevaluated	unevaluated	livestock grazing	lithic scatter	good	evaluate, assess condition
0502060774SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502060782SI	unevaluated	unevaluated	vandalism, erosion	rockshelter, hearth, fire-cracked rocks	destroyed	assess for intact material
0502060801SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502060804SI	unevaluated	unevaluated	erosion, vandalism, livestock grazing	hearth, fire-cracked rock, lithic scatter, flaked tools	good	evaluate, assess condition
0502060805SI	unevaluated	unevaluated	unknown	lithic scatter	good	evaluate, assess condition
0502060807SI	unevaluated	unevaluated	vandalism, recreation, livestock grazing, road construction	rock alignment, lithic scatter, flaked tools	good	evaluate, assess condition
0502060808SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter	good	evaluate, assess condition
0502060847SI	unevaluated	unevaluated	livestock grazing, erosion, vandalism	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060848SI	unevaluated	unevaluated	vandalism, erosion, livestock grazing	lithic scatter, flaked tools	poor	evaluate, assess condition
0502060849SI	unevaluated	unevaluated	erosion	lithic scatter	good	evaluate, assess condition
0502060850SI	unevaluated	unevaluated	erosion, road construction, livestock grazing	lithic scatter	poor	evaluate, assess condition
0502060851SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502060857SI	unevaluated	unevaluated	animal burrowing	rockshelter	good	evaluate, assess condition
0502060980SI	unevaluated	unevaluated	vandalism, erosion, livestock grazing	lithic scatter	poor	evaluate, assess condition
0502060981SI	unevaluated	unevaluated	erosion, vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502060982SI	unevaluated	unevaluated	livestock grazing, vandalism, erosion	lithic scatter, ground stone tools	poor	evaluate, assess condition
0502060983SI	unevaluated	unevaluated	erosion, livestock grazing, vandalism	lithic scatter	poor	evaluate, assess condition
0502060984SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502060984SI	unevaluated	unevaluated	vandalism, livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060987SI	eligible	high	erosion, vandalism, livestock grazing, scientific excavation, road construction	lithic scatter, flaked tools, ground stone tools, hearth, midden, obsidian quarry,	good	monitor, salvage eroding material
0502060988SI	not eligible	none	erosion, livestock grazing, road construction,	lithic scatter	good	discharged from management
0502060995SI	unevaluated	unevaluated	livestock grazing, road construction	lithic scatter	good	evaluate, assess condition
0502060996SI	unevaluated	unevaluated	vandalism, livestock, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502060997SI	unevaluated	unevaluated	vandalism, livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061001SI	unevaluated	unevaluated	vandalism, livestock grazing, agriculture, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061002SI	unevaluated	unevaluated	vandalism, agriculture, erosion, livestock grazing	lithic scatter	good	evaluate, assess condition
0502061003SI	unevaluated	unevaluated	agriculture, vandalism, erosion	lithic scatter	good	evaluate, assess condition
0502061004SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, groundstone tools, obsidian quarry	good	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502061008SI	unevaluated	unevaluated	erosion, vandalism, livestock grazing, animal burrowing, fire	groundstone tools, lithic scatter, flaked tools,	good	evaluate, assess condition
0502061009SI	unevaluated	unevaluated	weathering	refuse dump	poor	evaluate, assess condition
0502061010SI	unevaluated	unevaluated	unknown	refuse dump	unknown	evaluate, assess condition
0502061012SI	unevaluated	unevaluated	vandalism, erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502061013SI	unevaluated	unevaluated	erosion, vandalism	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502061025SI	unevaluated	unevaluated	vandalism, livestock grazing, erosion, animal burrowing	historic structural remains, refuse scatter	poor	evaluate, assess condition
0502061027SI	unevaluated	unevaluated	animal burrowing, livestock grazing	lithic scatter	good	evaluate, assess condition
0502061028SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502061029SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools, groundstone tools	good	evaluate, assess condition
0502061030SI	unevaluated	unevaluated	livestock grazing	lithic scatter, ground stone tools	excellent	evaluate, assess condition
0502061031SI	unevaluated	unevaluated	livestock grazing, animal burrowing,	lithic scatter, flaked tools	good	evaluate, assess condition
0502061032SI	unevaluated	unevaluated	livestock grazing, animal burrowing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061033SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061035SI	unevaluated	unevaluated	erosion	lithic scatter	excellent	evaluate, assess condition
0502061036SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502061037SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter	unknown	evaluate, assess condition
0502061038SI	unevaluated	unevaluated	none	rock alignment	fair	evaluate, assess condition
0502061039SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061040SI	unevaluated	unevaluated	livestock grazing	lithic scatter	unknown	evaluate, assess condition
0502061041SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061042SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061043SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061044SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502061045SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502061046SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	excellent	evaluate, assess condition
0502061047SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061048SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502061049SI	unevaluated	unevaluated	none	lithic scatter, ground stone tools	excellent	evaluate, assess condition
0502061050SI	unevaluated	unevaluated	livestock grazing, animal burrowing	lithic scatter, ground stone tools	good	evaluate, assess condition
0502061051SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061052SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061053SI	unevaluated	unevaluated	livestock grazing, animal burrowing	lithic scatter	good	evaluate, assess condition
0502061056SI	unevaluated	unevaluated	none	lithic scatter	good	evaluate, assess condition
0502061057SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	excellent	evaluate, assess condition
0502061145SI	unevaluated	unevaluated	unknown	petroglyph, lithic scatter	unknown	evaluate, assess condition
0502061146SI	unevaluated	unevaluated	unknown	refuse scatter	unknown	evaluate, assess condition
0502061147SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502061148SI	unevaluated	unevaluated	erosion, livestock grazing	refuse scatter, rock alignment	poor	evaluate, assess condition
0502061149SI	unevaluated	unevaluated	unknown	refuse scatter, rock alignment	poor	evaluate, assess condition
0502061150SI	unevaluated	unevaluated	agriculture	lithic scatter	unknown	evaluate, assess condition
0502061151SI	unevaluated	unevaluated	agriculture	lithic scatter	unknown	evaluate, assess condition
0502061152SI	unevaluated	unevaluated	vandalism	lithic scatter	unknown	evaluate, assess condition
0502061153SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter	good	evaluate, assess condition
0502061154SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061155SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061156SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools, historic structure	good	evaluate, assess condition
0502061157SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter	good	evaluate, assess condition
0502061158SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	good	evaluate, assess condition
0502061159SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502061160SI	unevaluated	unevaluated	vandalism, livestock grazing,	lithic scatter, flaked tools	good	evaluate, assess condition
0502061161SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061162SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061163SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	good	evaluate, assess condition
0502061164SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter	good	evaluate, assess condition
0502061165SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	good	evaluate, assess condition
0502061166SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061167SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061168SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter	good	evaluate, assess condition
0502061169SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter	good	evaluate, assess condition
0502061170SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502061171SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, ground stone tools	good	evaluate, assess condition
0502061172SI	unevaluated	unevaluated	livestock grazing, animal burrowing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061173SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061174SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061175SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061176SI	unevaluated	unevaluated	scientific excavation, livestock grazing, vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061177SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061178SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061179SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061180SI	eligible	high	livestock grazing, vandalism, road construction,	flaked tools, lithic scatter, ground stone tools, hearth, fire cracked rock, midden,	good	excavation 2005, monitoring

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
			animal burrowing, scientific excavation	organic artifacts		
0502061181SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061182SI	unevaluated	unevaluated	livestock grazing, vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061183SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061184SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061185SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061186SI	unevaluated	unevaluated	vandalism	lithic scatter	good	evaluate, assess condition
0502061187SI	unevaluated	unevaluated	vandalism	lithic scatter	good	evaluate, assess condition
0502061188SI	unevaluated	unevaluated	road construction, vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061189SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061190SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061191SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061192SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061193SI	unevaluated	unevaluated	vandalism	lithic scatter	good	evaluate, assess condition
0502061194SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061195SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition
0502061196SI	unevaluated	unevaluated	vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061197SI	unevaluated	unevaluated	road construction, vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061198SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked stone	good	evaluate, assess condition
0502061199SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked stone	good	evaluate, assess condition
0502061200SI	unevaluated	unevaluated	vandalism	flaked tools, refuse scatter, lithic scatter	good	evaluate, assess condition
0502061201SI	unevaluated	unevaluated	vandalism	refuse scatter	good	evaluate, assess condition
0502061215SI	unevaluated	unevaluated	vandalism	rockshelter	unknown	evaluate, assess condition
0502061216SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502061217SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502061218SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061219SI	not eligible	none	livestock grazing	lithic scatter, flaked tools	excellent	discharged from

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
						management
0502061220SI	unevaluated	unevaluated	weathering, vandalism	refuse scatter	poor	evaluate, assess condition
0502061221SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061222SI	unevaluated	unevaluated	vandalism, road construction, erosion	lithic scatter	poor	evaluate, assess condition
0502061223SI	unevaluated	unevaluated	erosion, road construction, livestock grazing	lithic scatter, flaked tools	poor	evaluate, assess condition
0502061224SI	unevaluated	unevaluated	vandalism, road construction, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061245SI	unevaluated	unevaluated	erosion	lithic scatter	good	evaluate, assess condition
0502061246SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061247SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061248SI	unevaluated	unevaluated	erosion	lithic scatter	good	evaluate, assess condition
0502061249SI	unevaluated	unevaluated	erosion	lithic scatter	good	evaluate, assess condition
0502061250SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502061251SI	unevaluated	unevaluated	livestock grazing	refuse scatter, lithic scatter, ground stone tools	good	evaluate, assess condition
0502061252SI	unevaluated	unevaluated	trail	lithic scatter	good	evaluate, assess condition
0502061253SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061254SI	unevaluated	unevaluated	recreation, trail	lithic scatter	good	evaluate, assess condition
0502061255SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502061256SI	unevaluated	unevaluated	trail	lithic scatter, flaked tools	good	evaluate, assess condition
0502061257SI	unevaluated	unevaluated	trail	lithic scatter	good	evaluate, assess condition
0502061258SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502061259SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502062000SI	unevaluated	unevaluated	vandalism, recreation	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062001SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502062002SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062011SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter	fair	evaluate, assess condition
0502062012SI	not eligible	none	unknown	lithic scatter, flaked tools	destroyed	assess for intact material

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062013SI	unevaluated	unevaluated	unknown	hearth, fire cracked rock, lithic scatter, ground stone tools, rock alignment	good	evaluate, assess condition
0502062014SI	unevaluated	unevaluated	animal burrowing	hearth, fire cracked rock, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062015SI	unevaluated	unevaluated	livestock grazing	lithic scatter, hearth, fire cracked rock, flaked tools	good	evaluate, assess condition
0502062016SI	unevaluated	unevaluated	animal burrowing	housepit, hearth, fire cracked rock, rock alignment, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062017SI	unevaluated	unevaluated	livestock grazing, vandalism	rockshelter, lithic scatter, hearth, fire cracked rock, ground stone tools	poor	evaluate, assess condition
0502062018SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062019SI	not eligible	none	erosion	lithic scatter, flaked tools, ground stone tools	good	discharged from management
0502062020SI	not eligible	none	erosion	lithic scatter, flaked tools	good	discharged from management
0502062021SI	not eligible	none	erosion	lithic scatter, flaked tools	good	discharged from management
0502062022SI	eligible	high	erosion	lithic scatter, flaked tools, ground stone tools	unknown	monitor
0502062023SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062024SI	eligible	high	erosion	hearth, fire cracked rock, lithic scatter, flaked tools	unknown	monitor
0502062025SI	eligible	high	erosion, livestock grazing	hearth, fire cracked rock, lithic scatter, flaked tools, ground stone tools	good	monitor
0502062026SI	not eligible	none	erosion	lithic scatter, flaked tools	unknown	discharged from management
0502062027SI	unevaluated	unevaluated	erosion	lithic scatter, ground stone tools	unknown	evaluate, assess condition
0502062028SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502062029SI	not eligible	none	erosion	lithic scatter, ground stone tools	unknown	discharged from management
0502062030SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062031SI	not eligible	none	vandalism	lithic scatter, historic structural remains	unknown	discharged from management
0502062033SI	eligible	high	erosion,	lithic scatter, flaked tools, ground stone tools	unknown	monitor, assess condition
0502062034SI	eligible	high	erosion	lithic scatter, flaked tools	unknown	monitor, assess condition
0502062035SI	not eligible	none	erosion	lithic scatter, flaked tools	unknown	discharged from management
0502062036SI	unevaluated	unevaluated	erosion	hearth, fire cracked rock, lithic scatter	unknown	evaluate, assess condition
0502062037SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502062038SI	unevaluated	unevaluated	erosion	hearth, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502062040SI	not eligible	none	erosion	lithic scatter, flaked tools	fair	discharged from management
0502062041SI	not eligible	none	fire, livestock grazing	refuse dump	good	discharged from management
0502062042SI	not eligible	none	erosion	lithic scatter, flaked tools	fair	discharged from management
0502062043SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062044SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062045SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502062046SI	eligible	high	vandalism, weathering, fire	historic structure complex	good	monitor
0502062047SI	not eligible	none	livestock grazing, erosion	rock alignment, lithic scatter, flaked tools, ground stone tools	good	discharged from management
0502062048SI	unevaluated	unevaluated	weathering	refuse scatter	fair	evaluate, assess condition
0502062058SI	unevaluated	unevaluated	none	rock alignment, lithic scatter, flaked tools	excellent	evaluate, assess condition
0502062068SI	not eligible	none	erosion	lithic scatter	poor	discharged from management
0502062072SI	unevaluated	unevaluated	livestock grazing, vandalism	hearth, fire cracked rock, lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502062073SI	unevaluated	unevaluated	multiple agents	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062074SI	unevaluated	unevaluated	unknown	refuse scatter	good	evaluate, assess condition
0502062075SI	unevaluated	unevaluated	vandalism	lithic scatter, flaked tools	good	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062076SI	unevaluated	unevaluated	vandalism	hearth, fire cracked rock, lithic scatter, flaked tools	good	evaluate, assess condition
0502062077SI	unevaluated	unevaluated	vandalism, livestock grazing	hearth, fire cracked rock, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062078SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062102SI	unevaluated	unevaluated	livestock grazing	lithic scatter	good	evaluate, assess condition
0502062110SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062111SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502062112SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062178SI	unevaluated	unevaluated	road construction, erosion	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062179SI	unevaluated	unevaluated	erosion, animal burrowing, vandalism, livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062199SI	not eligible	none	fire, erosion, weathering	rock alignment, grazing camp, refuse scatter	poor	discharged from management
0502062211SI	unevaluated	unevaluated	erosion, fire	historic road	good	evaluate, assess condition
0502062213SI	unevaluated	unevaluated	fire, vandalism, erosion	refuse scatter, lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502062214SI	unevaluated	unevaluated	fire	hearth, fire cracked rock, lithic scatter, flaked tools	poor	evaluate, assess condition
0502062216SI	not eligible	none	fire, erosion, livestock grazing	lithic scatter	poor	discharged from management
0502062217SI	not eligible	none	fire, flooding	lithic scatter, flaked tools	destroyed	discharged from management
0502062218SI	not eligible	none	vandalism, livestock grazing, erosion	lithic scatter, flaked tools	poor	discharged from management
0502062219SI	unevaluated	unevaluated	erosion, fire	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062225SI	unevaluated	unevaluated	erosion	refuse scatter, lithic scatter, flaked tools, ground stone tools	poor	evaluate, assess condition
0502062226SI	unevaluated	unevaluated	fire, erosion	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062231SI	unevaluated	unevaluated	fire, vandalism, erosion	rock alignment, historic structure	fair	evaluate, assess condition
0502062233SI	listed	high	unknown	historic community	good	monitor, maintain

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062276SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062285SI	unevaluated	unevaluated	recreation, livestock grazing, vandalism	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062286SI	unevaluated	unevaluated	livestock grazing, recreation, vandalism	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062299SI	not eligible	none	livestock grazing	historic road, refuse scatter	good	discharged from management
0502062300SI	not eligible	none	agriculture, fire, livestock grazing	lithic scatter, flaked tools	good	discharged from management
0502062301SI	not eligible	none	livestock grazing, fire, agriculture	lithic scatter, flaked tools	good	discharged from management
0502062302SI	not eligible	none	vandalism, livestock grazing,	lithic scatter, flaked tools	good	discharged from management
0502062303SI	not eligible	none	livestock grazing	lithic scatter, flaked tools, refuse dump	good	discharged from management
0502062304SI	not eligible	none	livestock grazing	lithic scatter, flaked tools	good	discharged from management
0502062305SI	not eligible	none	livestock grazing	refuse dump	good	discharged from management
0502062306SI	unevaluated	unevaluated	erosion, vandalism, livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502062307SI	not eligible	none	agriculture, vandalism, livestock grazing, road construction, fire	refuse dump	good	discharged from management
0502062308SI	not eligible	none	unknown	historic road	good	discharged from management
0502062309SI	not eligible	unevaluated	livestock grazing, utilities	lithic scatter, flaked tools	fair	discharged from management
0502062310SI	unevaluated	unevaluated	livestock grazing, vandalism, erosion, road construction	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062312SI	eligible	high	vandalism, weathering, livestock grazing	petroglyph, pictograph, lithic scatter	good	monitor
0502062313SI	unevaluated	unevaluated	erosion, livestock grazing	lithic scatter, flaked tools	fair	evaluate, assess condition

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0502062314SI	unevaluated	unevaluated	unknown	petroglyph, flaked tools	fair	evaluate, assess condition
0502062315SI	eligible	high	weathering	petroglyph, flaked tools	good	monitor
0502062316SI	eligible	high	livestock grazing, weathering	petroglyph, lithic scatter, flaked tools, refuse scatter	good	monitor
0502062319SI	not eligible	none	weathering, erosion	mine/adit	fair	discharged from management
0502062320SI	not eligible	none	weathering, erosion	mine/adit	poor	discharged from management
0502062321SI	not eligible	none	erosion, livestock grazing, vandalism	mine/adit	poor	discharged from management
0502062322SI	not eligible	none	erosion, vandalism	mine/adit	poor	discharged from management
0502062323SI	not eligible	none	unknown	mine/adit	poor	discharged from management
0502062324SI	not eligible	none	unknown	mine/adit	poor	discharged from management
0502062325SI	not eligible	none	erosion, weathering	mine/adit	good	discharged from management
0502062326SI	not eligible	none	none	mine/adit	good	discharged from management
0502062327SI	not eligible	none	erosion	mine/adit	fair	discharged from management
0502062328SI	not eligible	none	OHV, vandalism, erosion	mine/adit	poor	discharged from management
0502062329SI	not eligible	none	erosion	mine/adit	fair	discharged from management
0502062330SI	not eligible	none	erosion, fire	mine/adit	fair	discharged from management
0502062358SI	unevaluated	unevaluated	weathering, erosion, vandalism	refuse dump, rock alignment	poor	evaluate, assess condition
0502062362SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter, flaked tools	good	evaluate, assess condition
0502062363SI	unevaluated	unevaluated	none	refuse dump, lithic scatter, flaked tools	good	evaluate, assess condition
0502062364SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	excellent	evaluate, assess condition
0502062366SI	unevaluated	unevaluated	none	lithic scatter	excellent	evaluate, assess condition
0502062367SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	unable to re-located site 1999
0502062368SI	unevaluated	unevaluated	fire, livestock grazing, OHV	lithic scatter	good	evaluate, assess condition
0502062369SI	unevaluated	unevaluated	none	refuse scatter	good	evaluate, assess condition
0502062370SI	unevaluated	unevaluated	none	rock cairn	excellent	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062371SI	not eligible	none	fire	refuse dump	poor	discharged from management
0502062372SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062373SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062374SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062375SI	unevaluated	unevaluated	erosion	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062376SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062377SI	unevaluated	unevaluated	none	lithic scatter	good	evaluate, assess condition
0502062378SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062379SI	unevaluated	unevaluated	weathering	lithic scatter, flaked tools	good	evaluate, assess condition
0502062380SI	unevaluated	unevaluated	OHV, livestock grazing	obsidian quarry	fair	evaluate, assess condition
0502062395SI	eligible	high	livestock grazing, animal burrowing, road construction, agriculture, vandalism,	fire cracked rock, lithic scatter, ground stone tools, petroglyph,	fair	monitor, track condition
0502062428SI	unevaluated	unevaluated	none	rockshelter	good	evaluate, assess condition
0502062429SI	not eligible	none	none	rock alignment	excellent	discharged from management
0502062430SI	not eligible	none	weathering, vandalism	historic structure complex remains	fair	discharged from management
0502062431SI	not eligible	none	weathering	refuse scatter	fair	discharged from management
0502062432SI	unevaluated	unevaluated	livestock trampling	lithic scatter	good	evaluate, assess condition
0502062433SI	unevaluated	unevaluated	livestock trampling	lithic scater	good	evaluate, assess condition
0502062434SI	not eligible	none	erosion, animal burrowing, livestock grazing	lithic scatter, flaked tools, ground stone tools	poor	discharged from management
0502062435SI	not eligible	none	erosion, livestock grazing	lithic scatter, flaked tools	good	discharged from management
0502062435SI	not eligible	none	livestock grazing	lithic scatter, ground stone tools	good	discharged from management
0502062436SI	not eligible	none	livestock grazing	lithic scatter	good	discharged from management

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062437SI	not eligible	none	erosion, livestock grazing	livestock grazing	poor	discharged from management
0502062438SI	unevaluated	unevaluated	livestock grazing	lithic scatter	excellent	evaluate, assess condition
0502062439SI	not eligible	none	livestock grazing	lithic scatter	good	evaluate, assess condition
0502062440SI	not eligible	none	unknown	historic structural remains	poor	discharged from management
0502062441SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502062442SI	unevaluated	unevaluated	livestock grazing	lithic scatter	good	evaluate, assess condition
0502062443SI	unevaluated	unevaluated	livestock graozing	lithc scatter	good	evaluate, assess condition
0502062444SI	unevaluated	unevaluated	livestock grazing, erosion	lithic scatter	good	evaluate, assess condition
0502062445SI	not eligible	none	erosion	rock alignment	poor	discharged from management
0502062446SI	not eligible	none	weathering, fire, vandalism	historic structure complex remains, refuse scatter	poor	discharged from management
0502062447SI	unevaluated	unevaluated	erosion, livestock grazing, fire	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062448SI	not eligible	none	erosion, livestock grazing	wagon road, refuse scatter	fair	discharged from management
0502062449SI	unevaluated	unevaluated	erosion, livestock grazing, vandalism	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062450SI	unevaluated	unevaluated	livestock grazing, vandalism, erosion	lithic scatter	fair	evaluate, assess condition
0502062451SI	unevaluated	unevaluated	vandalism, erosion, livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062452SI	unevaluated	unevaluated	livestock grazing, erosion, vandalism	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062453SI	not eligible	none	livestock, erosion, vandalism	lithic scatter, flaked tools	poor	discharged from management
0502062454SI	not eligible	none	vandalism	historic structure remains, refuse scatter	fair	discharged from management
0502062455SI	unevaluated	unevaluated	vandalism, livestock grazing, erosion	refuse scatter, lithic scatter, flaked tools	fair	discharged from management
0502062485SI	not eligible	none	livestock grazing, vandalism, weathering	refuse dump	fair	discharged from management
0502062492SI	not eligible	none	none	rock cairn	good	discharged from management

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062501SI	unevaluated	unevaluated	livestock grazing, OHV, animal burrowing, erosion	lithic scatter, flaked tools, historic structure	poor	evaluate, assess condition
0502062503SI	not eligible	none	road construction, livestock grazing, scientific excavation	lithic scatter, refuse dump	poor	discharged from management
0502062504SI	unevaluated	unevaluated	erosion, livestock grazing, fire	obsidian quarry, lithic scatter, flaked tools	good	evaluate, assess condition
0502062505SI	unevaluated	unevaluated	erosion, livestock grazing, fire	obsidian quarry, lithic scatter, flaked tools	fair	evaluate, assess condition
0502062506SI	not eligible	none	scientific excavation, animal burrowing, fire, livestock grazing	hearth, midden, fire cracked rock, lithic scatter, flaked tools, ground stone tools	destroyed	discharged from management
0502062507SI	unevaluated	unevaluated	livestock grazing, weathering, erosion	obsidian quarry, hearth, midden, fire cracked rock, lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062508SI	unevaluated	unevaluated	fire, animal burrowing, fire fighting, livestock grazing, erosion, road construction,	hearth, lithic scatter, flaked tools, fire cracked rock, ground stone tools	fair	evaluate, assess condition
0502062509SI	unevaluated	unevaluated	livestock grazing, vandalism, erosion, road construction	obsidian quarry, hearth, fire cracked rock, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062510SI	unevaluated	unevaluated	erosion, livestock grazing, fire fighting, fire	midden, lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062511SI	unevaluated	unevaluated	fire fighting, erosion, fire, livestock grazing	lithic scatter	good	evaluate, assess condition
0502062512SI	unevaluated	unevaluated	livestock grazing, erosion, fire fighting, fire	fire cracked rock, lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062513SI	not eligible	none	weathering, vandalism	utility corridor	good	discharged from management

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062514SI	not eligible	none	road construction, weathering, fire, fire fighting, livestock grazing	refuse scatter	destroyed	discharged from management
0502062515SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062516SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062517SI	unevaluated	unevaluated	fire, fire fighting	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062518SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062520SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062521SI	unevaluated	unevaluated	fire	lithic scatter, flaked tools	good	evaluate, assess condition
0502062552SI	unevaluated	unevaluated	weathering	dendroglyphs	good	evaluate, assess condition
0502062553SI	unevaluated	unevaluated	weathering	refuse scatter	fair	evaluate, assess condition
0502062559SI	unevaluated	unevaluated	weathering	historic structure complex	good	evaluate, assess condition
0502062563SI	eligible	high	inundation, livestock grazing, vandalism, erosion, animal burrowing,	hearth, midden, fire cracked rock, lithic scatter, flaked tools, ground, stone tools, prehistoric organic artifact	fair	monitor, salvage eroding material
0502062578SI	unevaluated	high	vandalism, scientific excavation,	midden, lithic scatter, flaked tools, ground stone tools, prehistoric organic artifact, rockshelters, fire cracked rock	poor	monitor for vandalism, salvage artifacts
0502062631SI	not eligible	none	multiple	historic structure remains, refuse scatter	poor	discharged from management
0502062632SI	not eligible	none	multiple	rock alignment, fence, refuse dump	fair	discharged from management
0502062636SI	unevaluated	unevaluated	erosion, livestock grazing, vandalism	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062637SI	unevaluated	unevaluated	erosion, livestock grazing, vandalism	lithic scatter, flaked tools, refuse dump	fair	evaluate, assess condition
0502062639SI	not eligible	none	weathering, vandalism	refuse dump	poor	discharged from management
0502062674SI	not eligible	none	weathering, vandalism	refuse dump	fair	discharged from management
0502062675SI	eligible	high	weathering	petroglyph	good	monitor, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062680SI	eligible	high	weathering, vandalism	petroglyph	good	monitor, assess condition
0502062683SI	unevaluated	unevaluated	weathering	historic structure remains	poor	evaluate, assess condition
0502062684SI	unevaluated	unevaluated	weathering	historic structure remains	poor	evaluate, assess condition
0502062685SI	unevaluated	unevaluated	weathering	historic structure complex remains	poor	evaluate, assess condition
0502062694SI	unevaluated	unevaluated	none	lithic scatter	good	evaluate, assess condition
0502062695SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	good	evaluate, assess condition
0502062696SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	good	evaluate, assess condition
0502062697SI	unevaluated	unevaluated	none	lithic scatter	good	evaluate, assess condition
0502062712SI	unevaluated	unevaluated	weathering	rock cairn	good	evaluate, assess condition
0502062713SI	unevaluated	unevaluated	weathering	rock alignment	fair	evaluate, assess condition
0502062714SI	unevaluated	unevaluated	livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062715SI	unevaluated	unevaluated	weathering	historic structure complex	fair	evaluate, assess condition
0502062716SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062717SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062718SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062719SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062720SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062721SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition
0502062722SI	eligible	high	weathering, livestock grazing, vandalism	historic structure, refuse scatter	good	evaluate, assess condition
0502062782SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062783SI	unevaluated	unevaluated	livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062784SI	unevaluated	unevaluated	livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062787SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502062788SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062789SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062790SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062791SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062792SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062793SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062794SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062795SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition
0502062796SI	unevaluated	unevaluated	unknown	lithic scatter, flaked tools	unknown	evaluate, assess condition

Site Number	NRHP Status	Management Priority	Impacting Agent	Site Type	Site Condition	Management Actions
0502062797SI	unevaluated	unevaluated	unknown	lithic scatter	unknown	evaluate, assess condition
0502062798SI	unevaluated	unevaluated	unknown	fire cracked rock	unknown	evaluate, assess condition
0502062799SI	unevaluated	unevaluated	erosion	midden	good	evaluate, assess condition
0502062801SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	unknown	evaluate, assess condition
0502062802SI	unevaluated	unevaluated	livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062804SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062805SI	unevaluated	unevaluated	none	flaked tools, ground stone tools	fair	evaluate, assess condition
0502062806SI	unevaluated	unevaluated	unknown	lithic scatter	fair	evaluate, assess condition
0502062807SI	unevaluated	unevaluated	erosion	lithic scatter, ground stone tools, refuse dump	fair	evaluate, assess condition
0502062809SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	good	evaluate, assess condition
0502062810SI	unevaluated	unevaluated	none	lithic scatter	good	evaluate, assess condition
0502062811SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062827SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062828SI	unevaluated	unevaluated	livestock grazing	lithic scatter	good	evaluate, assess condition
0502062829SI	unevaluated	unevaluated	none	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062830SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools, ground stone tools	good	evaluate, assess condition
0502062831SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	good	evaluate, assess condition
0502062832SI	unevaluated	unevaluated	livestock grazing	lithic scatter	good	evaluate, assess condition
0502062833SI	unevaluated	unevaluated	livestock grazing	lithic scatter	fair	evaluate, assess condition
0502062834SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062835SI	unevaluated	unevaluated	livestock grazing	lithic scatter, flaked tools	poor	evaluate, assess condition
0502062836SI	unevaluated	unevaluated	erosion	lithic scatter	poor	evaluate, assess condition
0502062891SI	unevaluated	unevaluated	none	lithic scatter, flaked tools	fair	evaluate, assess condition
0502062897SI	unevaluated	unevaluated	road construction	refuse scatter	fair	evaluate, assess condition
0502062898SI	not eligible	none	road construction	lithic scatter, flaked tools, ground stone tools	fair	evaluate, assess condition

Appendix S - Final Plan Table of Data Needs/Status

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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 Layer – 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	N/A
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 RECREATION AREAS Layer - Burns District GIS RECREATION LINES Layer - Burns District GIS VISUAL RESOURCE MANAGEMENT Layer - Burns District GIS RECREATION MANAGEMENT INFORMATION SYSTEM BLM database Wilderness Visitor Use Monitoring WILDERNESS Layer - Burns District GIS	Yes Yes Yes Yes No No Yes	BLM BLM BLM BLM BLM Local Files BLM	N/A N/A N/A N/A Yes N/A Yes
10) BLM administration of land status and values to improve management efficiency and cooperation with private landowners;	OWNERSHIP Layer - Burns District GIS SUBSURFACE MINERAL ESTATE Layer - Burns District GIS STEENS MINERAL WITHDRAWAL Layer - Burns District GIS EASEMENT Layer - Burns District GIS TAXLOT Layer - Harney County GIS	Yes Yes Yes Yes Yes	BLM BLM BLM BLM Harney County	Yes Yes Yes Yes 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 and other multiple uses of the area;	HORSE OBSERVATIONS Layer - Burns District GIS WILDHORSE HERD/HERD MANAGEMENT AREA Layer - Burns District GIS	Yes Yes	BLM BLM	N/A Yes
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
16) BLM management of transportation issues in the Planning Area;	ROAD Layer - Burns District GIS Draft WA. & Eastern OR. Transportation Mgt. Plan Public comments on the DRMP	Yes No No	BLM BLM Public	Yes Yes N/A
17) Changes in current resource uses and management practices affecting the economic and social status of rural communities in the Planning Area;	Regional Economic Benefits of Ecotourism and Operations Associated with the Malheur NWR Harney County Travel Impacts 1991-2001 WILDLIFE CUMULATIVE EFFECTS Layer - Burns District GIS WATER CUMULATIVE EFFECTS Layer - Burns District GIS	No No Yes Yes	Local Records Local Records BLM BLM	Yes Yes N/A N/A

Appendix T - Public Comments on the DRMP/DEIS and BLM Responses

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General DRMP/DEIS Comments and Responses

1 Comment: The BLM should adopt the Steens-Alvord Coalition "Citizens Alternative".

Response:. The Steens-Alvord Coalition alternative is not a fully developed alternative that comprehensively addresses the range of resource issues in the Planning Area. The individual proposals in the "Citizens Alternative" are incorporated throughout the five alternatives in the DRMP/DEIS. Analysis of the overall alternative would not differ significantly from analyses for Alternatives B and C.

2 Comment: The EIS does not contain an adequate range of alternatives. BLM Instruction Memorandum No. 2001-075 states "The impacts of all alternatives addressed must be fully analyzed in the NEPA document. They must also reflect the actual situation on the ground." In short, this RMP must present and analyze a range of alternatives that comply with the planning criteria and existing law and should therefore include the elements of the Citizen's Alternative.

Response: The document contains five alternatives which were subject to public review and comment. "What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case." (Forty Most Asked Questions Concerning CEQ's NEPA Regulations 1b.) Since the "proposal" in this case is a wide-ranging management plan, the alternatives themselves must be wide-ranging. In this document, alternatives range from few management activities and uses to considerable activities and uses. The instruction memorandum cited has expired and is no longer to be used as guidance in accordance with BLM Instruction Memorandum No. 2003-195 which deleted the statement quoted above. Also see response to comment 1 concerning the "Citizen's Alternative".

3 Comment: Analysis should not be undertaken through alternatives which are contrary to various laws and regulations.

Response: "An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered... Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies." (Forty Most Asked Questions Concerning CEQ's NEPA Regulations 2b.)

4 Comment: The Draft fails to include sufficient details and data for analysis purposes.

Response: An RMP is a planning document not an implementation document. The purpose of an RMP is to provide a general management framework and guidance for future management activities. The EIS, which analyzes proposals put forth in a Draft RMP, analyzes those proposals on a level commensurate with the purpose of an RMP. Extensive details and data are more appropriate for, and pertinent to, implementation level environmental documents.

5 Comment: The Draft fails to analyze cumulative effects.

Response: The geographic extent of a land use plan results in most of the impact analysis being equivalent to a cumulative effect assessment. There is a cumulative effects discussion at the end of each resource section. In addition, new discussion has been added to some cumulative sections for some of the resources. Cumulative effects analysis, as with all other analysis in the document, is commensurate with the purpose of an RMP. Specific cumulative effects analysis is conducted in implementation environmental documents wherein specific actions are being proposed. See also response to comment 2.

6 Comment: The Proposed Final Southeast Oregon RMP promised that the scoping comments for the SEORMP would be considered during the current RMP process.

Response: The Proposed Final SEORMP stated that the comment letters on the Draft SEORMP pertaining to the Andrews RA "...will be retained at the Burns District and appropriately utilized in the district's upcoming planning efforts." The Draft comments were retained at the Burns District. The letters were reviewed and those which provided substantive comments different from those received on the current DRMP/DEIS document were considered. Initial scoping comments on the SEORMP were considered during the scoping period for this RMP process.

7 Comment: Hiring Enviroscientists, Inc. to write the Plan constitutes a conflict of interest due to connection with the mining industry, and the document shows bias in favor of the extractive industries as a result.

Response: In the contracting process, affiliations with professional organizations are not considered a conflict of interest under Federal Acquisition Regulation at FAR Part 9.5 *Improper Business Practices and Personal Conflicts of Interests*, no matter what the nature of the organization may be. This regulation is used Government-wide to evaluate contracting proposals for potential conflicts of interest. No conflicts of interest were identified during the procurement review process for the companies that submitted proposals for the project. Selection of the contractor was done in a manner consistent with government contracting procedures established by the General Services Administration. The content of the document was not subject to influence by of the contractor. Most resource sections of the document were written wholly, or for the most part, by BLM specialists, including the minerals sections which were written entirely by the

Burns BLM minerals specialist. Resource sections were reviewed by appropriate staff of the Oregon State Office of the BLM and the Washington Office of the BLM, as well as specialists in the Burns DO. The Proposed RMP was reviewed extensively and supported by the SMAC. All language appearing in the RMP must ultimately be approved by BLM management no matter the author.

8 Comment: The EIS fails to describe the nature of effects that would result under the alternatives considered; the EIS fails to provide any reasonable assessment of the direct, indirect and cumulative effects of the alternatives. The EIS lacks an adequate analysis of proposed mitigation measures under various alternatives or a comprehensive assessment of their effects.

Response: The EIS for an RMP generally does not go into a more detailed level of analysis since the decisions made in an RMP are primarily planning framework decisions and guidance for future management actions, not site specific implementation decisions resulting from a particular proposed action. Mitigation measures are developed for implementation activities. Each resource section contains a discussion of direct, indirect, and cumulative effects in Chapter 4. The various action alternatives include design features and standards that represent mitigation at the plan level.

9 Comment: All public comment letters should be printed in the plan as the Lakeview BLM did in the Proposed Final RMP/Final EIS.

Response: The Andrews/Steens DRMP/DEIS generated over three times the number of comment letters received by Lakeview. In addition, the Burns DO received over 4,500 form letters. Printing all comment letters would render the Proposed RMP/FEIS document very costly and unnecessarily voluminous. The CEQ regulations (the NEPA regulations) at 40 CFR 1503.4(b) state that all substantive comments can be summarized if there has been a considerable number of comments.

10 Comment: The Purpose of the Cooperative Management and Protection Area...as stated in 102 (a) of the Steens Act, is the guiding principle of how the CMPA is to be managed: *"to conserve, protect, and manage the long-term integrity of Steens Mountain for future and present generations."* The fact that this quote cannot be found anywhere in this RMP is disturbing. It appears BLM has chosen to not implement the Steens Act according to its mandates.

Response: This purpose is stated on page 2-2 of the DRMP/DEIS and appears in the Proposed RMP/FEIS along with the thirteen purposes of the Steens Act at Section 1 (b), and the five objectives [Section 102 (b)] which further the purpose of the CMPA. The BLM is required to implement all mandates of the Steens Act, and the RMP is an integral part of that implementation.

11 Comment: The AMU and CMPA plans should be separate.

Response: The Final RMP will consist of two separate plans with two RODs - one for each of the two areas.

Water Resources

1 Comment: Table 2.2 is a good start but what about all the other listed streams?

Response: The revised table in the Proposed RMP/FEIS, formerly Table 2.2, actually contains a more comprehensive list of streams in the Planning Area and includes all 303(d) streams associated with public land, with the exception of Skull Creek and Rock Creek which contain limited or no public land along the listed stream reach.

2 Comment: Using Best Management Practices (BMP) from Appendix D is fine, but BLM does not tell the reader which ones are needed because it avoids identifying grazing, and acts as though the source needs to be determined. Reference to the use of adaptive management and generalizations about what BLM can and might do in the future is not reassuring.

Response: Grazing is recognized as a potential contribution of nonpoint source pollution in the Proposed RMP/FEIS. For example, the assumptions identified under the Water Resources section state that BMPs range from specific practices designed to protect water quality at individual sites to management actions designed to reduce potential adverse water quality effects from recreation, grazing, or other activities. Appendix F, rather than Appendix D, provides a list of some recognized BMPs, including some that specifically address controlling livestock access and use of riparian areas which would contribute to maintenance or improvement of water quality. However, Appendix F acknowledges that this is not an "exhaustive list" and that BMPs may need to be refined and additional practices recognized. Adaptive management provides for interim adjustments and refinement of management actions, including BMPs, provided through implementation and effectiveness monitoring, as well as new management concepts, policy, regulation and opportunities. Management of water quality is a dynamic process in which requirements and emphases vary over time, as recognized by the EPA in 40 CFR 130(e).

3 Comment: Total Maximum Daily Loads (TMDLs) should be developed to ensure that water quality is improved and impaired waters are de-listed within ten years.

Response: The development of TMDLs is the responsibility of the DEQ. The current schedule for developing TMDLs for subbasins within the Planning Area identifies completion of all subbasins by the end of 2010 (http://www.deq.state.or.us/wq/303dlist/TMDLTargetsMap.htm). The BLM is working with the DEQ to develop Water Quality Restoration Plans for waters included on the 303(d) list and within BLM's administrative jurisdiction.

4 Comment: At a minimum the RMP/EIS should state that grazing permits for allotments adjacent to or containing water quality limited streams will be put into Temporary Non-renewal status until the streams are no longer listed under the Clean Water Act 303(d) list.

Response: 43 CFR 4130.6-2 defines nonrenewable grazing permits and leases as: "Nonrenewable grazing permits or leases may be issued on an annual basis to qualified applicants when forage is temporarily available...". This is an additional temporary allocation of forage. Based on the overall context of the comment, the BLM assumes the comment was intended to reference temporary suspension of grazing, 43 CFR 4110.3-3, Implementing reductions in permitted use which states: "when continued grazing use poses an imminent likelihood of significant resource damage, after consultation with, or a reasonable attempt to consult with, affected permittees or lessees, the interested public, and the State having lands or responsible for managing resources within the area, the authorized officer shall close allotments or portions of allotments to grazing..." The option of temporarily suspending grazing adjacent to water quality limited streams is within the existing regulations. However, this is relative to resolving site specific issues through consultation with affected interests, and the state having management responsibilities. The DEQ has specific responsibility relative to water quality limited streams in the Planning Area. Assessment of resource condition and actions to "de-list" are addressed through the TMDL and Water Quality Management Plan, and recognized BMPs. The Proposed RMP/FEIS Appendix F identifies BMPs for livestock grazing management including "Fencing to delineate pastures associated to area-specific management objective(s), or to establish permanent, temporary or seasonal exclusion from specific areas."

5 Comment: How many TMDLs currently exist within the Planning Area? How many will likely exist within five and ten years from now?

Response: The Alvord Lake subbasin TMDL and Water Quality Management Plan has been developed by the DEQ and approved by the EPA. The DEQ prioritized subbasins for development of TMDLs (http://www.deq.state.or.us/wq/303dlist/PRIORITIZATION.pdf). All subbasins within the Planning Area are scheduled to be completed by 2010.

6 Comment: The plan's non-specific, non-immediate promise to develop and implement "best management practices" to restore water quality and meet Oregon water quality standards for listed waters fails to satisfy the requirements of CWA Section 313. Note that the requirements of CWA 313 and FLPMA 202 are mandatory in nature.

Response: Although Section 313 (Federal Facilities Pollution Control) of the CWA appears to be more associated with point source pollution from facilities/properties, this section is stated in terms of "subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution ...." Potential water pollution associated with public land management in the

Planning Area is recognized as nonpoint source in the Proposed RMP/FEIS. As stated in Copeland (1997), "because there are no federal controls over these sources under the Clean Water Act, the primary implementation measures will be state-run nonpoint source management programs coupled with state, local, and federal land management programs and authorities". The DEQadministers the state water quality program as discussed in the Proposed RMP/FEIS. The TMDL, and associated implementation plan (WQMP), process implements water quality standards and thus provides a regulatory framework and defines the components for measuring compliance with the CWA (see Overview of the TMDL Process [http://yosemite.epa.gov/R10/water.NSF]). The FLPMA 202(c)(8) states "In development and revision of land use plans, the Secretary shall provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans". As presented in the Proposed RMP/FEIS, the Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters developed in conjunction with the EPA and the DEQ, and subsequent WQRPs (provided in all alternatives) provides for compliance with applicable water pollution control laws. The BLM reissued a MOA with the DEQ in 2003. The MOA stipulates the BLM and DEQ responsibilities under the CWA and each agency's commitment to a collaborative approach for developing TMDLs and WQMPs/WQRPs. The BLM and DEQ have agreed to develop more specific details for the 303(d) listed waters in the BLM's jurisdiction. Per EPA requirements for developing TMDLs and WQMPs, designated management agencies have one year after completion of the TMDL to develop a WQMP for water quality restoration.

7 Comment: Section 303 of the CWA, 33 U.S.C. 1271-1387, addresses water quality via water quality standards, which specify the appropriate uses of water bodies and set standards to protect those uses. Implementation of water quality standards requires states to place those waters not meeting water quality standards on the 303(d) list. 33 U.S.C. 1313(d)(1)(A)-(B) (requiring states to "identify those waters for which the effluent limitations required by section [303(b)(1)(A)] and section [303(b)(1)(B)] ... are not stringent enough to implement any water quality standards applicable to such waters"). States must then calculate total maximum daily loads (TMDLs) for those waters not meeting water quality standards. The Draft RMP/EIS fails to make clear that its adaptive management approach to listed water bodies without approved TMDLs is likely to lead to continuous violations of the CWA.

Response: The CWA does not directly regulate nonpoint source pollution; the primary implementation measures are through state-run nonpoint source management programs and federal land management programs and authorities (Copeland 1997). The TMDL process implements water quality standards (Overview of the TMDL Process [http://yosemite.epa.gov/R10/water.NSF]); thus, technically there would be no violation pending approved TMDL. Adaptive management as discussed in the D RMP/DEIS, as well as the Proposed RMP/FEIS, is a process of defining management practices, evaluating their effectiveness and refining as needed. WQRPs are recognized in the Proposed RMP/FEIS as the primary mechanism to address and restore waters identified on the 303(d) list. These plans will further describe management actions and monitoring to attain or progress towards attainment of state water quality standards and implement requirement(s) outlined in the TMDL and associated Water Quality Management Plan. Through MOA with the DEQ and according to the EPA requirements, the BLM has one year following the development of a TMDL to develop plans for water quality restoration.

8 Comment: The DRMP/DEIS fails to adequately analyze the impacts on water quality of land use practices such as grazing, and fails to provide compliance with water quality standards by referring only to potential future implementations of adaptive management measures, rather than providing objective standards with definite triggers and responses to water quality problems. In order to satisfy the requirements of NEPA, and particularly if the RMP is going to allow grazing in riparian areas, the agency must analyze the potential impacts of livestock grazing to water quality. Additionally, the D RMP/DEIS does not identify what changes "would be made", nor does it provide any scientific evidence that these changes would prevent impairment of water quality. It also appears that the BLM is linking PFC to water quality, when achieving PFC (let alone "progressing toward" PFC) may still leave a water body in violation of water quality standards.

Response: The BLM planning regulations at 43 CFR 1601.0-5(k) describes an RMP as a plan that "generally establishes in a written document" allowable resource uses, resource condition goals and objectives, and the need for an area to be covered by more detailed and specific plans, among other items. The definition further recognizes that "it is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations". Potential effects to water resources from grazing have been discussed. The effects analysis of grazing management on water resources are in the context of the stated grazing management actions, such as those described under Management Common to All Alternatives. This action is to develop and implement changes in grazing management necessary to meet habitat and other resource objectives, including water quality, based upon project level assessments and planning. This is further supported through the objectives and alternatives under Water Resources to maintain or improve water quality and comply with state and federal requirements to protect public waters. Identification and implementation of management practices, such as the BMPs identified in Appendix F, would be conducted through project level assessment and planning. Management to maintain or restore water quality would further be reviewed through development of WQRPs in support of TMDL and WQMPs developed by the DEQ.

Adaptive management is a process of evaluating the effectiveness of management practices, including BMPs, and modifying as necessary based on monitoring and assessment. Therefore, grazing management would be assessed and implemented at the project level to meet resource objectives, including water quality. PFC is both an assessment method

and a condition rating. PFC is an assessment of the physical function of riparian areas through consideration of hydrology, vegetation, and soil/landform attributes. This assessment utilizes existing site specific inventory and monitoring data, as well as helping to identify site specific management objectives and additional monitoring needs. Riparian areas are considered properly functioning when adequate vegetation, landform or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality. Achieving or maintaining PFC establishes a level of resiliency and foundation for managing riparian/wetland areas for desired values, including water quality.

9 Comment: Review all grazing allotment management plans, and revise as necessary, to expedite meeting state water quality standards in all 303(d) listed streams.

Response: Review and necessary revision of grazing allotment management plans in regards to 303(d) listed streams is provided for in the Proposed RMP/FEIS, particularly through evaluations for the S&Gs and the development and implementation of WQRPs developed in coordination with the DEQ.

10 Comment: Under the federal reserved water rights doctrine an implied reserved water right exists if water is necessary for the purposes of the reserve and, the agency in question, may claim water for the minimum amount necessary to fulfill the purposes of the reservation. The BLM, therefore, should pursue implied federal reserved instream flow water right for fish, recreation, or wildlife purposes as authorized by this doctrine.

Response: Other than those lands specifically reserved for purposes that provide for application of a federal reserved water right such as designated WSRs, the public lands in the Planning Area are considered part of the public domain, not a reservation. Therefore, federal reserved water rights would not be applicable. In regard to designated WSRs in the Planning Area, the application of federal reserved water rights is discussed under the Water Resources section of the Proposed RMP/FEIS. While the option for applying a federal reserve water right exists, it is not warranted at this time for the following reasons: 1) the Donner und Blitzen River system is fully appropriated; and 2) these river/stream segments are within the Steens Mountain Wilderness with the majority from headwater to the downstream Wild and Scenic Rivers boundary.

11 Comment: I was involved in most of the inventory of riparian areas and fisheries habitat on public lands from 1971 to 2000. I continue to visit many of these areas and find that along many stream sections junipers and topographic relief provide the only significant stream shade. Junipers provide valuable overhanging structure and ameliorate high summer water temperatures. Some places there are riparian shrubs, such as willows, that also occur but in other places after many years of protection from grazing juniper is the only significant tall shade providing species. I witnessed, while working for BLM, that the burning out of riparian areas usually had strong negative impacts on stream structure, shade, and tons of sediment was deposited in the stream bottoms the first year following burning. You reference that "Application of BMPs based on site-specific analysis would minimize or mitigate potential short-term sediment input". What BMP would that be? Short term impacts of high sediment yield often have long term impacts as when pools are silted in and spawning gravel is impacted by sediment that is usually a long term impact.

Response: The context of this comment appears to be related to actions proposed under the Vegetation-Woodlands Management Alternatives and the Indirect Effects to Water Resources. The Vegetation-Woodlands Proposed RMP and Alternatives A, C, and E propose the use of mechanical removal or prescribed burning or both to reduce the influence of western juniper on riparian plant communities. As described, the objective is to reduce the influence of post-settlement western juniper to restore riparian habitats. The effects of these alternatives are in the context of restoration of watershed and riparian function and values, while recognizing other potential ancillary effects such as increased sediment delivery. However, the effects of increased sediment are presumed to be negligible due to the likelihood of similar sediment input relative to site conditions such as reduced ground cover often associated with the presence of western juniper and the assumption that project design and application of BMPs would prevent or reduce project related sediment inputs. The potential effect on stream shade was not addressed in the Indirect Effects under the Water Resources section of the DRMP/DEIS; this has been included in the Proposed RMP/FEIS.

As indicated in the comment, riparian sites in the Planning Area vary in existing presence of riparian species presence and density. Additionally, site characteristics such as valley slope and confinement, stream channel gradient, and bank and floodplain stability associated with substrate (e.g. boulders) also vary among riparian areas. Therefore, specific treatment and BMP development and implementation rely on site specific assessment and planning to achieve project objectives while preventing or reducing adverse effects to water resources such as nonpoint source pollution. Again, the BMPs identified in Appendix F is not an exhaustive list. An example of recently prescribed BMPs for a watershed restoration project to reduce western juniper presence and competition employed in the Planning Area involved retaining a buffer of western juniper along the riparian area while treating (cutting and burning) junipers in the adjacent upland, subsequently cutting the junipers within the riparian area and burning during a period of low air and soil temperature and riparian vegetation dormancy to reduce potential impacts to existing riparian vegetation. Additionally, project actions that may result in initial reduction of shade or increased sediment input would be assessed and coordinated with the DEQ. Project design and BMPs would be implemented to prevent, reduce or mitigate potential adverse effects. The Oregon Administrative Rules, Division 41 Water Quality Standards allow short-term degradation of existing water quality as a result of activities that are intended to restore the geomorphology or riparian vegetation of a water body, or control invasive species, so long as the DEQ determines that there is a net ecological benefit of the restoration activity.

Reasonable measures that are consistent with the restoration objectives for the water body must be used to minimize the degradation. Because streams are affected by energy input via direct solar radiation, the factors that control energy inputs to streams (such as channel width and stream shading) are among the most important factors affecting stream temperature that can be affected by BLM management. The condition of the riparian canopy and its ability to regulate solar radiation is important for moderating the solar energy input to streams, especially during the summer months (Beschta 1987). The amount, type and distribution of shade-providing vegetation at a given site is controlled by channel processes and land use. The character of riparian vegetation communities in many locations of the Planning Area has been altered as a consequence of grazing, altered wildland fire regimes, and juniper encroachment. Channel incision has been causally linked with conversion of riparian ecological types to vegetation communities more typical of upland areas (e.g. juniper) (Toledo and Kauffman 2001). Although juniper provides stream shading (a larger contribution than would occur naturally), channel incision and juniper encroachment adversely affect species that provide canopy cover, bank stability, and streambank/floodplain roughness that contribute to stream shading and sediment deposition. The purpose of juniper removal from riparian areas identified in the Proposed RMP/FEIS is to aid restoration of riparian vegetation communities, and subsequent maintenance or restoration of water quality.

12 Comment: We recommend that the EIS incorporate the framework provided in the Forest Service and Bureau of Land Management Protocol for Addressing 303(d) Waters in it s discussion of water quality.

Response: The Forest Service and Bureau of Land Management Protocol for Addressing 303(d) Listed Waters is presented and incorporated by reference into the water quality discussion on page 3-6 of the DRMP/DEIS.

Soils

1 Comment: What level of resources does BLM have on an annual basis to work with landowners on soil conservation? How many full time employees does BLM currently allocate towards soil conservation work and how many full time employees does the EIS assume will be allocated to working with private landowners in the future? What evidence from BLM's current efforts supports the idea that BLM will be able to effectively protect soils on private land in the Planning Area.

Response: A BLM ESI team maps soils and vegetation information on public lands. The Natural Resource Conservation Service does the same type of mapping of soils and vegetation on private lands. It is the Natural Resource Conservation Service that most private landowners work with to improve or maintain soils conditions on their land. BLM has no full time employees assigned to working with private landowners for management of private land. The BLM works with private landowners on cooperative management projects, where private land is intermixed with public land. In this situation, the BLM pulls together an ID team made up of various resource specialists, with input from the private landowner, to complete a plan and EA for the project area. The public and private lands are then treated together to obtain the expected effects across the landscape. The BLM can effectively treat private land and protect soils and other resources in a cooperative management plan only if the landowner is a willing participant.

2 Comment: Microbiotic crusts (also known as biological soil crusts) are a major indicator of healthy rangelands.

Response: Biological soil crusts are one of at least twelve potential indicators used in evaluating watershed function for uplands. 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 (Standards for Rangeland Health OR/WA; USDI 1997). "BLM agrees that the Andrews/Steens RMP will provide for monitoring of the indicators of rangeland health, including biological soil crusts..." (see 2-7 of the DRMP/DEIS, Management Actions 3A-3E), "... and that the BLM will use the data resulting from this monitoring to inform decisions..." (see 2-7 of the DRMP/DEIS, Management Actions 1B-1E) "... regarding management of grazing and other resource uses." (USDI Office of Hearings and Appeals settlement of OR-020-97-01 and OR-020-96-01).

3 Comment: The DRMP/DEIS fails to discuss the condition or degradation of the microbiotic crusts in the planning area.

Response: The discussion of biological soil crusts in Chapters 2, 3, and 4 of the Proposed RMP/FEIS has been greatly expanded directly in response to this and other comments on the DRMP/DEIS and includes discussions concerning management framework; factors that influence biological soil crust distribution (including disturbance); biological soil crusts role in a functioning ecosystem; recent literature that provides insight into disturbance of biological soil crust communities in the Planning Area; and future crust monitoring that would be one of the tools for the study and adaptive management of biological soil crusts.

The BLM acknowledges that the information base on biological soil crusts is incomplete for the Planning Area; however, CEQ's regulations regarding the implementation of the NEPA (43 CFR Part 1502.22) allow an analysis to move forward with incomplete or unavailable information.

4 Comment: The critical importance of crusts on arid landscapes like those in the planning area
has also been widely recognized in recent years. See, e.g., Thomas J. Stohlgren et al., Patterns of Plant Invasions: A Case Example in Native Species Hotspots and Rare Habitats, 3 Biol. Invasions 37–50 (2001) (finding exotic species richness strongly negatively correlated with crust cover, and that crusts often present a "physical barrier to invasive species establishment and growth").

Response: Stohlgren et al. (2001), examined microbiotic crusts in southeastern Utah, an area that receives summer rain and is quite different ecologically from the Northern Great Basin region of the Planning Area (which does not receive summer rain). The habitat types and species composition of the microbiotic crusts are different than those found in the Planning Area. Therefore, this research is not directly applicable to the Planning Area.

5 Comment: The BLM must, in order to engage in a meaningful RMP process, and one that complies with statutes, regulations, and the BLM's internal guidance, inventory for soils and crusts.

Response: The benefit of continuing inventories for planning is recognized.

The information used in this analysis is the best available, specifically from the Planning Area, that can be reasonably supported. Monitoring efforts will continue after the RMP is approved. As new information becomes available during or as a result of RMP implementation, it will be evaluated. If new information is significant and clearly indicates a need to make a change to the management direction outlined in the Proposed RMP/FEIS, a plan amendment can be pursued, consistent with the BLM's planning regulations.

Much information specific to the Planning Area can be gathered via new monitoring proposed for the Pueblo-Lone Mountain Allotment and other allotments in the Planning Area; this information can be utilized to inform decisions on future management actions.

6 Comment: The BLM must establish soil and biological crust condition goals and objectives to be attained.

Response: The BLM acknowledges that the information base on biological soil crusts is incomplete for the Planning Area. BMPs in Appendix F of the DRMP/DEIS are not an exhaustive list of BMPs (see the DRMP/DEIS at F-1). Additional BMPs for biological soil crusts may be identified in an interdisciplinary process when evaluating site specific actions. CEQ regulations regarding the implementation of NEPA (43 CFR Part 1502.22) allow an analysis to move forward with incomplete or unavailable information.

The Burns DO, as part of a continuing effort concerning biological soil crusts, has included the development and implementation of the Pueblo-Lone Mountain monitoring studies. This biological soil crust monitoring is an important and major part of this effort. Additionally, the DRMP/DEIS states that the proposed monitoring methodology will be appropriate for other allotments within the Planning Area (see page 2-7 DRMP/DEIS) and future crust monitoring would be one of the tools for the study and adaptive management of biological soil crusts.

New monitoring studies are proposed in this document for the Pueblo-Lone Mountain Allotment and other allotments in the Planning Area in order to inform future management actions.

The Proposed RMP/FEIS provides for monitoring of the indicators of rangeland health, including biological soil crusts (see page 2-7 of the DRMP/DEIS, Management Actions 3A-3E). The BLM will use the data resulting from this monitoring to inform decisions (see page 2-7 of the DRMP/DEIS, Management Actions 1B-1E) regarding management of grazing and other resource uses. (USDI Office of Hearings and Appeals settlement of OR-020-97-01 and OR-020-96-01). (See also Proposed RMP/FEIS Appendix Q.)

7 Comment: The BLM must provide for continued monitoring of biological crusts.

Response: The Burns DO, as part of a continuing effort concerning biological soil crusts has included the development and implementation of the Pueblo-Lone Mountain monitoring studies. This biological soil crust monitoring is an important and major part of this effort. Additionally the DRMP/DEIS states that the proposed monitoring methodology will be appropriate for other allotments within the Planning Area (see page 2-7 DRMP/DEIS) and future crust monitoring would be one of the tools for the study and adaptive management of biological soil crusts. See response to comment 6.

8 Comment: The Draft RMP/EIS fails to provide the same level of protection and attention to crusts as it provides for soils.

Response: The BLM acknowledges that the information base on biological soil crusts is incomplete for the Planning Area. BMPs in Appendix F of the DRMP/DEIS are not an exhaustive list of BMPs (see the DtRMP/DEIS at F-1). Additional BMPs for biological soil crusts may be identified in an interdisciplinary process when evaluating site specific actions. The CEQ's regulations regarding the implementation of NEPA (43 CFR Part 1502.22) allow an analysis to move forward with incomplete or unavailable information.

There is limited research currently available specific to biological soil crusts in the Planning Area or surrounding lands and not all of the available research is directly pertinent to the Planning Area. The BLM has considered the available research that was applicable to the area. To reflect the insight provided by this collection of work and in response to comment 8 and other comments on the DRMP/DEIS, modifications have been made to chapters 2, 3, and 4 of the Proposed RMP/FEIS.

The Burns DO, as part of a continuing effort concerning biological soils crusts, has included the development and implementation of the Pueblo-Lone Mountain monitoring studies. This biological soil crust monitoring is an important and major part of this effort. Additionally, the DRMP/DEIS states that the proposed monitoring methodology will be appropriate for other allotments within the Planning Area (see page 2-7 DRMP/DEIS) and future crust monitoring would be one of the tools for the study and adaptive management of biological soil crusts. See response to comment 6. (See also Proposed RMP/FEIS Appendix Q.)

Vegetation - Riparian/Wetland

1 Comment: With respect to livestock grazing, the BLM should acknowledge that grazing has damaged approximately 80 percent of stream and riparian ecosystems in the United States. These riparian areas provide critical habitat for desert plants and animals (see Belsky et al. 1999). An estimated 70-80 percent of all desert shrubs, grasslands and animals depend on riparian areas. Grazing has converted many of the riparian habitats in the West, including within the Planning Area, into communities dominated by habitat generalists and weedy species. As a result, both habitat quality and native species diversity have been drastically reduced. Moreover, available evidence suggests that the impacts in semi-arid areas such as those within the Planning Area are similar to those within drier areas. Thus, the grazing proposed in this plan will almost surely have very significant detrimental impacts on riparian vegetation.

Response: The statement from Belsky (1999), "Grazing by livestock has damaged 80 percent of the streams and riparian ecosystems in arid regions of the western United States" is referenced from the USDI (1994). USDI (1994) references Cooperrider, et al. (1986) which is further in reference to publications from the late 1970s, and use the terms "up to" and "possibly as much as", respectively. While a complete search of the origin of this statement was not conducted, the context is one of past condition and at a nation wide scale. Additionally, both USDI (1994) and Cooperrider, et al. (1986) are stated relative to "human disturbance" as a whole, not exclusively livestock grazing. The USDI (1994) expresses current nation wide condition of surveyed riparian areas (acres) for BLM lands in terms of PFC at the following levels: PFC 34 percent, Functioning At Risk 47 percent, and Nonfunctioning 19 percent. PFC data (stream miles) presented for the Planning Area in the DRMP/DEIS (page 3-10) are as follows: PFC 72 percent, Functioning At Risk 25 percent, Nonfunctioning 3 percent. Fifty-five percent of the systems rated as Functioning At Risk were observed in an improving trend. These data suggest that existing grazing management has maintained and improved riparian condition within the Planning Area, and grazing management proposed under the Proposed RMP/FEIS would continue to maintain and improve riparian vegetation through subsequent assessment and application of additional BMPs as needed. Recognition of maintenance and improvement of riparian vegetation is further expressed in biological opinions pursuant to the ESA which identify current grazing management along several streams in the Planning Area as providing improvement to riparian habitat (USFWS 2001, 1999, and 1995). Additionally, a portion of the Planning Area which includes much of the riparian habitat has been excluded from livestock grazing pursuant to the Steens Act. Therefore, the data do not support your assertion that "this plan will almost surely have very significant detrimental impacts on riparian vegetation".

2 Comment: In analyzing the impacts of the preferred alternative, the Draft RMP/EIS (page 4-35) states that "grazing management would continue toward improved riparian/wetland conditions while providing sustainable livestock grazing." The document never explains how it can simultaneously allow grazing in riparian areas, while still protecting riparian health. Nor does the plan fully explain what the impacts of grazing on riparian areas would be under the individual alternatives. This, of course, violates NEPA's requirement to analyze and discuss the individual and cumulative impacts of the proposed action and disclose a full environmental analysis to the public.

Response: The BLM's planning regulations(43 CFR 1601.0-5(k)) describe an RMP as a plan that "generally establishes in a written document" allowable resource uses, resource condition goals and objectives, and need for an area to be covered by more detailed and specific plans, among other items. The definition further recognizes that "it is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations". The indirect effects analysis of grazing management on riparian/wetland vegetation are in the context of the stated grazing management actions, such as those described under Management Common to All Alternatives. This action is to develop and implement changes in grazing management necessary to meet habitat and other resource objectives based upon project level assessments and planning. Therefore, grazing management would be assessed and implemented at the project level to maintain, restore, or improve riparian/wetland resources such as composition and abundance of riparian vegetation necessary to achieve or progress towards attainment of project level riparian objectives.

3 Comment: As Riparian and Wetlands biological importance continues to increase it will be important to get all springs in the Andrews Management unit into proper functioning condition. Photo trend plots need to be established to document progress at all sites. Pictures of degraded and improved sites should be published in the draft documents. BLM's Technical Reference 1317-37 A Guide to Managing, Restoring and Conserving Springs in the Western United States should be consulted for management practices. All springs that have been developed for livestock use need to be modified to allow 50 percent of the water to enter the original wetland riparian areas. This would involve fencing and moving water troughs considerable distances from the water source. Funding and work can come from allotment users because grazing rates are artificially low to help offset costs like this. Also pipe line maintenance needs better monitoring where users oversee the operation of such. Wells should be drilled to allow springs to return to a free flowing state. No new spring developments should be implemented until all current developed springs are properly maintained. All developed springs should be inventoried for needed repairs and put on a maintenance schedule. This information needs to be included in the final draft of the RMP/EIS. These suggestions need to be included in the Preferred Alternative.

Response: The Proposed RMP specifies direction to assess and manage riparian/wetland areas, including springs, to a minimal level of PFC. Assessment and monitoring may include photo trend and management would incorporate technical references such as A Guide to Managing, Restoring and Conserving Springs in the Western United States. However, accomplishing continuous monitoring on 100 percent of riparian/wetland sites would be overwhelming. Development

and maintenance of water developments, including monitoring and restoration activities, is project specific and outside of the scope of this Proposed RMP/FEIS; however, the direction is incorporated in the Proposed RMP/FEIS.

4 Comment: I own 120 acres of land that is completely surrounded by BLM-WSA. Under cooperative agreement with USDI-FWS (Partners in Wildlife), I have dedicated this land to wildlife habitat improvement and riparian restoration.

BLM has an easement, entered into with the previous owner, that allows BLM to "pipe" water from Dip spring through my property into a storage tank hence into more pipeline for watering cattle. I am suggesting that in order to be consistent with their priorities, BLM abandon the pipeline through my property so as to allow for a more meaningful riparian restoration of Dip Creek.
BLM has drilled many wells throughout the Great Basin desert of Oregon, a well to replace Dip Creek water seems appropriate.

Response: The BLM acknowledges your issues and suggestions for managing water and riparian resources. However, to appropriately address this potential opportunity would require project level assessment and planning which is outside of the scope of this RMP. The BLM encourages you to follow up with the Burns DO to further discuss the opportunities you have presented.

5 Comment: As a ga**u**ge to measure the health of riparian areas, the RMP consistently relies on the "properly functioning condition" standard. Rather than providing for the outright maintenance of desirable riparian attributes, however, "proper functioning condition" (PFC) refers to the availability of the proper components which are necessary to produce such attributes, and therefore may occur anywhere from early to late-seral stages. (Bureau of Land Management, USDI, Riparian area Management, Process for Assessing Proper Functioning Condition, Technical Reference 1737-9, 5, 11-12 (1993)). As a result, the Plan would authorize the BLM to resume impacts to riparian areas in which vegetative cover, wildlife habitat, biodiversity, improved water quality and other desirable attributes have not been fully achieved.

Response: As defined in the technical references for PFC assessment and reiterated in the D RMP/DEIS page 3-10, PFC occurs when adequate vegetation, land form, or large woody debris is present to dissipate stream energy associated with high water flows. Achieving or maintaining PFC establishes a level of resiliency and foundation for managing riparian/wetland areas for desired values and associated desired ecological status. The range of alternatives described under the Riparian/Wetland Vegetation section further couples PFC to managing toward a desired ecological status through subsequent site/reach specific assessment and relevant to management obligations such as the CWA, ESA, WSRs Act and Wilderness Act.

6 Comment: The use of chain saws to remove junipers from the riparian corridor is highly preferred over burning if it is needed. The riparian areas make up a small percentage of the Andrews MU and adjacent ground cover is not disturbed significantly by chain saw operations.

Response: Chain saws would be a mechanical method included as a tool for removing western juniper from riparian areas as proposed under the Proposed RMP and Alternatives A, C, and E.

7 Comment: We support the Riparian/Wetland Vegetation Objective 2, Preferred Alternative. However, we remain concerned regarding the use of "desirable nonnative species". Please provide additional information on the potential proposed use of restoration with nonnative species and how this would help achieve the stated goal and objective. We recommend that rehabilitation in areas dominated by nonnative species should attempt to restore native vegetation. Additionally, we recommend that Preferred Alternative be altered to include the following: Restoration sites would be managed to progress toward native vegetation communities within the RMP goal timeframe of 20-50 years.

Response: The Proposed RMP states: "Restoration of adjacent upland vegetation communities that influence riparian/wetland areas would include establishment and management for a range of vegetation, native to desirable nonnative, relative to site specific emphasis of multiple resource management objectives." The potential use of nonnative species in upland communities that influence riparian/wetland areas would be analyzed through project specific planning. The use of nonnative upland vegetation would provide opportunities to utilize vegetation that may provide restoration/protection qualities such as limiting the spread of wildland fire into riparian areas through higher moisture retention and reduced flame length, and higher establishment success rates for soil stability over native vegetation alone, thus providing for maintenance, restoration, or improvement of native riparian/wetland vegetation. Under the Proposed RMP, the application of nonnative upland vegetation, and restoration or management towards native upland vegetation would be developed and assessed on a project specific basis to achieve riparian/wetland management objectives, as well as other management objectives or legal requirements identified in the DRMP/DEIS.

8 Comment: Please clarify how the BLM would meet Objective 2 for Preferred Alternative if "ecological status objectives would be dependent on meeting multiple use resource management objectives".

Response: Objective 2 under Riparian/Wetland Vegetation is to "Maintain, restore, or improve riparian/wetland vegetation communities relative to ecological status, site potential and capability, or site-specific management objectives". Under the Proposed RMP, "management would include passive and active measures relative to site-specific

emphasis of multiple resource management objective(s)". Objective 2 and the Proposed RMP account for both site and reach/area scale to meet identified objectives based on interests and obligations such as recreational use, commodity use, the CWA and the ESA. The following hypothetical example illustrates application of passive or active measures for multiple resource management: An active grazing allotment contains a reach of stream that is on the CWA 303(d) list and provides habitat for an ESA threatened fish. Interdisciplinary evaluation concludes livestock concentration and use of riparian areas has reduced the abundance and diversity of riparian vegetation. Reduced riparian vegetation has contributed to reduced thermal buffering of stream temperatures and reduced overhanging cover of aquatic habitat. Active measures (BMPs) may include fencing to develop a pasture that incorporates livestock season of use or off channel water development that promotes distribution and use in upland habitat rather than along the stream. Planting of riparian trees or shrubs to increase diversity and abundance (active measure) coupled with natural recruitment through reduced use (passive measure) would be monitored to assess progress toward site specific objectives such as percent shade (surrogate measure of thermal buffering and aquatic habitat cover).

9 Comment: Objective 3. Action 1: why are beaver discussed here instead of under wildlife? These industrious little fellows should not only be viewed from the perspective of how they affect riparian areas.

Response: This was discussed at length during some of the initial meetings of the RMP team. To reduce some redundancy of having management actions for beaver under both Riparian and Wildlife headings, it was decided to discuss them under Riparian because of the objective which is to "maintain, restore, or improve soil moisture content and retention of alluvial groundwater to augment base flows during warm summer months."

10 Comment: Why, then, does the Draft RMP/EIS allow for natural expansion of beaver in all alternatives but the preferred alternative, given the cost/benefit analysis that seemingly heavily favors natural expansion over ODFW transplants? As it stands, this particular proposed decision is not well reasoned or supported, and ONDA asks the BLM to select an alternative that allows for natural expansion of beaver in order to provide one of the key ingredients to the recovery, maintenance and improvement of key riparian areas throughout the planning area.

Response: The Proposed RMP does allow for the natural expansion or reintroduction of beaver. The management action states "Allow for the natural expansion or reintroduction of beaver into suitable habitat." Refer to the text for Objective 3, 1D, in the Riparian Section of the Management Actions Table (page 2-11) or in the text portion (page 2-92) of the DRMP/DEIS under Alternative D.

11 Comment: Preferred Alternative is acceptable only if BLM institutes safeguards to ensure that the resource is actually being harmed rather than simply removing a nuisance.

Response: This is the intent of the Proposed RMP. Any request for removal of beaver will have to be coordinated with the ODFW and the person requesting removal of the beaver.

12 Comment: Objective 3, Proposed RMP, Page 2-92: Proposed RMP allows for the natural expansion or reintroduction of beaver into suitable habitat, except that the BLM would recommend their removal to ODFW if economic harm or ecological damage occurs. The Service concurs with the BLM that beaver are important to the health and functions of riparian habitat, and we support the natural expansion or reintroduction of beaver into suitable habitat. We request clarification on the criteria that would be used to remove beaver from BLM administered lands.

Response: A couple of examples may help to clarify the intention of this management action. Economic harm could take on one of several types. One example: If a beaver were to block a culvert on a stream and the water that was backed up from the blocked culvert degraded the roadbed, causing the road to wash out.. Another example: if a beaver blocked a irrigation diversion located on public land and caused loss of water to a private individual. Ecological damage could occur if beaver moved into an area where the BLM had transplanted willow or cottonwood shoots to revegetate a degraded riparian system after juniper removal. Even though the area may be fenced, beavers have been known to find ways to get under or through fences and destroy new plantings.

13 Comment: Statements in the draft plan conflict regarding the roles of the ODFW and the BLM in fish and wildlife management. On page 4-70 (4.6.1.2) it states that "ODFW or the USFWS or both, retain jurisdiction over the management of fish and wildlife populations". However, on page 4-77 (4.6.1.4) it states that " alternatives D and E allow for beaver to be removed if economic harm or conflicts with other objectives can be demonstrated." This statement infers that the BLM is establishing criteria and deciding whether beaver removal will be allowed. We recommend all alternatives regarding beaver management in the draft plan be revised so that they are consistent and reflect the fact that it is the role of the BLM to manage beaver habitat and the responsibility of the ODFW to manage beaver populations. We encourage the BLM to provide input to us regarding beaver population management and share your desire to maintain healthy beaver populations in balance with other resources and land uses.

Response: The BLM Manual 6500, Wildlife Management, contains a section on Cooperative Relations with State Agencies (6521.1) which states:

"The BLM strives for a partnership approach with State fish and wildlife agencies on the full range of fish and wildlife related efforts on the public lands and waters. Bureau policy is based upon the premise that management of fish and

wildlife on the public lands and waters should be a joint effort between BLM and State fish and wildlife agencies, with BLM managing the habitat and *the States managing the resident fish and wildlife species. Further, State wildlife agencies have regulatory authority over resident fish and wildlife and, at times certain migratory species."* (emphasis added)

The next section in the manual discusses development of an MOU with State agencies. The current MOU between the BLM and the ODFW was signed in 2001 and reiterates on page 4 (2), that the BLM "recognizes the Department [ODFW] as the agency responsible for management of fish and wildlife species on public lands in conformance with applicable Federal and State laws and regulations."

The DRMP/DEIS points out this fact as noted on p 4-70 and also on p. 2-90, p. 2-103 (twice), p. 2-106, p. 3-15, p. 4-29, p. 4-78, and p. 4-99. The section pointed out in the comment is in the Summary of Effects section. It is meant to be a comparison of the effects of the different alternatives and not a reiteration of the management framework or assumptions that were already set out in the various sections prior to the alternative descriptions and discussions of effects. There is no inference intended as to the BLM establishing criteria for managing populations. There are many other statements in the DRMP/DEIS that refer to the BLM making recommendations to the ODFW for management of different species populations, especially beaver. The Burns DO has worked well with the local ODFW office and looks forward to a continued close working relationship.

14 Comment: Please provide information on the location of areas to be reseeded, the areas/acres that are proposed for brush-beating and information on the technique that will be used to beat brush and its impact.

Response: The method that has been used in the past has been a wheeled tractor pulling a mower behind it. The height of the blades can be set to allow for young sagebrush plants to not be cut and provide a new crop of sagebrush without having to wait for seeds to sprout. The width of areas cut depends on the size of the area and the objectives of the project. This method allows for grasses and forbs to remain untouched. The cut strips, if planned according to wind and snowfall direction may allow for more snow to accumulate in these areas, which could result in more ground moisture to aid in grass and forb growth in subsequent years.

The locations of and acres to be seeded or brushbeat will be identified through site specific plans as the analysis is completed. The analysis will be available to the public for comment when completed. These areas are scattered throughout the Planning Area.

Vegetation - Woodlands

1 Comment: Some other methods that should be evaluated include harvesting cut juniper for use, expanding pole cutting opportunities for public.

Response: The Proposed RMP and Alternative E would allow for commercial utilization of the cut western juniper. Utilization could include, but may not be limited to removal for specialized wood products, post and poles, firewood cutting, or biofuels. The BLM would notify the public of such opportunities. Careful planning will be required to meet the requirements set by transportation and other management sections.

2 Comment: The service would like to work with you on the juniper woodland removal projects. We are particularly interested in the removal of junipers that have invaded sage grouse habitat. We recommend each project have site specific analysis. We suggest that BLM convene a committee to assess the restoration potential of each site. The removal of juniper may not result in the expected repopulation by native species that we want.

Response: Each project is evaluated through an ID team process. Within this process, site specific factors are evaluated and post-treatment responses projected. Participation of the USFWS is welcome at any stage in the process.

Each site is evaluated for potential post-treatment response. Sites selected for treatment, for the most part, have understory plant communities capable of responding to overstory reduction or removal. In situations where the understory vegetation is not capable of responding to overstory removal, the plant species will be seeded or planted to facilitate reestablishment of a perennial dominated plant community.

3 Comment: …recommend cutting and burning activities be closely evaluated on a site-by-site basis.

Response: Each project is evaluated through an interdisciplinary process in the planning, implementation, and evaluation steps. Monitoring is an integral part of management actions. The targets for success are established in the planning phase. These targets are measured/observed during implementation and evaluation. Adjustments are made to future projects if monitoring indicates a change will better achieve the goal.

4 Comment: The Eastern Oregon Agricultural Research Center, based out of Burns, Oregon, has done a considerable amount of research on this issue and would be valuable asset in assisting in prioritizing juniper control efforts and prescribing follow-up treatments to maintain or enhance the ecological integrity of impacted plant communities.

Response: The Burns DO has been working with the Eastern Oregon Agricultural Research Center on juniper management issues since the early 1980s. Some of the seminal research relating to western juniper ecology and management was conducted on the Burns District and Steens Mountain. Many current management actions are based on recommendation from research conducted by the research center. The Burns DO also works with a number of other universities, conservation groups, and institutes. Research funded by the BLM and other granting agencies is vital to the management. These relationships will be sought and encouraged in the future.

5 Comment: We request additional information on the proposed mechanical removal of 90% of the younger (<120 yo) western juniper trees… We are particularly interested in the removal of juniper in areas that provide habitat for sage grouse. Please provide the following information: 1) number and location acres of old growth western juniper woodlands within the Planning Area; 2) number and location of acres proposed to be treated under Preferred Alternative; 3) remaining tree densities after proposed treatment; 4)potential short-term and long-term impacts to special status species and other wildlife species; 5) area and location of juniper encroachment in relation to occupied and historic sage grouse habitat; and 6) proposed measures and mitigations that would be used to avoid and minimize impacts to special status species.

Response: Research conducted by Miller and Rose (1995) estimated that western juniper has increased approximately 90 percent on the Steens Mountain since the late 1800s. Western juniper has invaded mountain big sagebrush, low sagebrush, quaking aspen, and riparian habitats. However, western juniper densities have also increased in historic locations. Historically, western juniper was limited to the rocky ridge tops and shallow soil areas where fires burned at low intensities and frequencies allowing western juniper to establish and survive. This increase in number and cover has increased the threats of high intensity wildfires. The increase of western juniper has occurred at the expense of the associated understory vegetation.

Old growth western juniper stands have not yet been mapped; however, they occur within the western juniper belt on the rocky ridge tops and shallow soil areas. Using the figures of Miller and Rose (1995), the Steens Mountain would have approximately 10,660 acres of western juniper that established prior to the 1870s. This is based on the approximately 90 percent increase of western juniper since the 1970s. In most cases the old growth western juniper stands fall within current post-settlement western juniper woodlands. They occur as small islands on rocky, shallow soils or ridge tops.

The number and locations of treatments and their site specific impacts on special status species will be evaluated for each project through the ID team and NEPA process.

6 Comment: Specific acreage of mountain mahogany are not provided. Please provide information regarding the loss of these habitats to juniper encroachment, and the estimated acres and location of proposed treatment.

Response: Mountain mahogany was specifically mapped as a vegetation type in the GIS data base; however, on the ground experience indicates that this species forms small stands across the middle elevations of the Planning Area. Little information is available on the ecology of mountain mahogany and mountain mahogany plant communities. Observations indicate that western juniper is actively invading some of these stands and the western juniper appears to be reducing the health of the mountain mahogany stand. Little to no new mountain mahogany seedlings are establishing and older mountain mahogany are losing vigor and dying. The increase in the western juniper also increases the fuel continuity of the stands, increasing the risk of stand replacing fires.

7 Comment: Why is the juniper to be removed to 90% of pre-settlement status? – this a major effort that is more properly declared a range management operation than a landscape restoration one.

Response: According to site specific research by the Eastern Oregon Agricultural Research Center, western juniper has increased its range by approximately 90 percent since the 1870s. This increase has had a tremendous impact on sagebrush, quaking aspen, and riparian plant communities. These plant communities are experiencing a conversion and overall simplification of plant and animal communities. Reducing the influence of western juniper in these plant communities will help to restore sagebrush, aspen and riparian plant and animal communities.

Removal of 90 percent of the western juniper is in relation to the level of tree removal within stands selected for treatment. In old growth stands at least 10 percent of the trees that established after the 1870s will be left to act as replacements for natural mortality.

8 Comment: The draft plan identifies correctly the ecosystems and vegetation management issues that are most in need of critical attention in order to achieve and maintain healthy watersheds, but we did not see a reasoned method or design to site vegetation management actions on the landscape.

Response: Specific project locations are based on funding and agency direction. Areas for project location are based on these factors in addition to resource management issues.

9 Comment: Management of fir groves should include fire suppression but there should also be demographic work done on the population to determine reproductive success and to delineate factors at the site.

Response: This suggestion will be considered in the Burns Interagency Fire Management Plan. The fir groves are a unique vegetation community and management actions will take into account the protection of this area.

10 Comment: What are the desirable non-native plant species to which the EIS is referring and describe the adverse environmental impacts of these species.

Response: Non-native species will be used in accordance with current BLM and Department of Interior policies. The use of non-native species and species selection will also be based on site specific analysis. Native species will be utilized when and where possible following BLM policy.

11 Comment: First and foremost, broad-scale mechanical (or other method) treatment of western juniper should be tempered with current scientific research on the issue, including paying close attention to the current and historic causes of juniper expansion – and especially using the information gleaned from the studies conducted within the Wildland Juniper Management Area.

Response: The BLM works closely with local university and federal agency scientists and other university and private foundation researchers to base management decisions on the most current site specific research. Many projects currently underway within the Planning Area contain research plots. The Planning Area also has many long-term studies examining a variety of subjects. Some of the earliest work done examining the expansion of western juniper was done on Steens Mountain. This research helped to build the foundation of current management direction and agency policy. This research is also continuing to help shape future decisions. The WJMA will help to further this information and also help to provide a demonstration area to illustrate past, current, and future management actions and the response of the plant community.

12 Comment: It is important to consider-and this issue is not even mentioned in the draft plan- the possible incremental loss of old growth sagebrush habitat if fire is to be used as a tool for juniper removal.

Response: Site specific research indicates that approximately 90 percent of the western juniper present on Steens Mountain is less than 120 years old (Miller and Rose 1995). Western juniper increases have occurred primarily in the mountain big sagebrush plant communities between 4,500 and 7,000 feet. Miller and Rose (1995, 2000) identified three major factors that have contributed to the increase in western juniper: 1) fire suppression; 2) introduction of domestic livestock; and 3) subtle climate changes. The increase in western juniper has been found by research in Oregon and

northern California to occur at the expense of the understory vegetation. Shrubs were negatively affected across all sites. The impact on associated understory vegetation was related to soil depth, as well as the western juniper overstory. On deeper soil, the herbaceous vegetation held on longer in the understory than on shallow soil sites. Sites with deep soils were found to maintain a fairly good cover of grasses and forbs under the western juniper overstory, but shrubs were reduced to very low levels. If western juniper woodland progresses to a closed woodland, the shrub understory will be lost.

13 Comment: …areas where juniper has been removed should be rested from all livestock grazing until they have fully recovered to native species plant communities.

Response: Treatment of western juniper dominated big sagebrush stands are evaluated on a site by site basis. Most sites selected for treatment contain an understory plant community of natives capable of response to treatment. Areas that utilize prescribed fire will be rested from livestock grazing for at least one year prior to burning and at least two growing seasons following burning.

14 Comment: Why, then does the BLM propose-before a single study has even commenced and without the aid of any results from any studies undertaken as part of the five million dollar project- to remove ninety percent of western juniper less than 120 years old throughout the planning area?

Response: The BLM works closely with local university and federal agency scientists and other university and private foundation researchers to base management decisions on the most current site specific research. Many projects currently underway within the Planning Area contain research plots. The Planning Area also has many long-term studies examining a variety of subjects. Some of the earliest work done examining the expansion of western juniper was done on Steens Mountain. This research helped to build the foundation of current management direction and agency policy. This research also is continuing to help shape future decisions. The WJMA will help to further this information and also help to provide a demonstration area to illustrate past, current and future management actions and the response of the plant community. Published articles in refereed journals and gray literature that report results from western juniper, pinyon-juniper, sagebrush-steppe, quaking aspen, and riparian plant communities that have applications to the Planning Area.

The DRMP/DEIS indicates that up to 90 percent of the western juniper less than 120 years old will be removed from old growth stands. Leaving at least 10 percent of the younger trees in the old growth stands will help replace trees lost through natural mortality, lightning strikes, or insects. The RMP does not propose removal of 90 percent of the western juniper less than 120 years old throughout the Planning Area.

15 Comment: The Management Alternatives and the Environmental Consequences Chapters do not provide any quantitative data on how much of the Rangelands are to be burned/mechanically treated except for the seeding/interseeding figures give.

Response: Actual acres and locations are related to site specific plans and will be analyzed by ID teams through the NEPA process.

16 Comment: Burning of the sagebrush community in the southeastern part of Steens Mountain (along the east slope of the Steens) and the Pueblo Mountains is likely to result in a strong stand of cheatgrass.

Response: The BLM agrees. Any projects that occur in these areas will need to include a seeding treatment. Cheatgrass has made significant inroads into the plant communities in these areas. Large portions of the these areas are already dominated by introduced annual plants. Fire regimes have shifted to a very frequent fire condition, a fire every 3 to 5 years. Some of these areas my have crossed an ecological threshold where a single mechanical or burning treatment will not restore the native plant community. Numerous treatments following mechanical treatment or burning will be required to restore the native plant community.

17 Comment: Junipers provide valuable overhanging structure and ameliorate high summer water temperatures. Some places there are riparian shrubs, such as willows, that also occur but after many years of protection from grazing juniper is the only significant tall shade providing species. I witnessed, while working for the BLM, that the burning out of riparian areas usually had strong negative impacts on stream structure, shade and tons of sediment was deposited in the stream bottom the first year following burning.

Response: Western juniper within the riparian area will provide some measure of shade; however, there are other factors that must also be considered. Western juniper is a coniferous species. Litter from western juniper can increase soil pH. This may be a significant shift in the soil chemistry. Most riparian species are deciduous. Litter from these species is slightly basic (ph > 7). Dominance of western juniper in the riparian area may change overall soil chemistry.

Riparian hardwood species are reestablishing following removal of western juniper. Most of these species sprout following top removal. The combination of sprouting and establishment from seed is helping to restore the riparian plant communities.

Areas where western juniper dominates the riparian area are associated with uplands dominated by western juniper. Recent work done on the Steens by the USDA Agricultural Research Service indicates that up to 0.5 tons of soil per acre is lost from closed western juniper woodlands following a rain event of one inch. An adjacent area where western juniper had been cut and understory grass cover was approximately 25 percent lost no measurable soil from a similar event. Initial, short-term pulses of sediment out weigh moderate, long-term inputs from runoff.

18 Comment: The AMS (p.2-5) has a figure of 200,000 acres of woodland while on p3-12, first paragraph, has figure of 100,000 to 200,000 acres. As one of your goals under Juniper Woodlands your Preferred Alternative, has a figure of 10,000 acres a year to be burned (page 4-53) that "would be appropriate for current desired vegetation conditions." On page 4-194 you state "Over the next 15 to 20 years at least 10,000 acres of western juniper woodlands (established after 1870) must be treated to restore and maintain a 35 year fire return interval." Which way is it?

Response: The exact number of acres dominated by western juniper cannot be provided given the current data. Acres presented are from data collected in the early to mid 1980s. Another factor would be how the data is interpreted. 134,259.76 acres are classified in the current GIS GENVEG layer as western juniper plant communities; however, if you include all acres where western juniper is present that number would be over 250,000 acres. A range of acres was given to give the reader an indication of the conditions. This is also explained in the text. Western juniper has continued to encroach upon other plant communities since the early to mid 1980s. This number will continue to grow. Current treatments do not remove all western juniper trees from the plant community, especially following prescribed fires.

19 Comment: At the bottom of p 4-194 you are back to 10,000/year. Are you proposing 10,000 acres a year or 10,000 over 15 to 20 years? If you are using that 100,000 acre figure and you are doing 10,000 acres a year you are out of junipers in 10 years. Appendix I, Table I-2, has 21,300 acres of proposed juniper cutting/brush control and 21,500 acres of prescribed burning. That is a total of 42,800 of vegetation treatment. Is this the goal of Preferred Alternative?

Response: The estimates of number of acres were inaccurate and have been removed from the text. Part of the data used to calculate these acres included the Three Rivers Resource Area. The previous comment addressed the accuracy of the acres identified as western juniper woodlands. Until there is an accurate estimate of the number of acres of western juniper, these types of calculations will be misleading.

The number of acres identified for treatment in Appendix I are potential projects. Adding the two figures, prescribed fire and cutting/brush control, together yields a misleading number. The prescribed fires would occur in some areas that have been cut; therefore, the total number would be somewhat less than the 42,800 acres calculated. The exact number of acres would be established after site specific evaluations for each project.

20 Comment: The use of chainsaws to remove junipers from the riparian corridor is highly preferred over burning if it is needed. The riparian areas make up a small percentage of the Andrews MU and adjacent ground cover is not disturbed significantly by chainsaw operations.

Response: Chainsaws are one tool available for the mechanical treatment of western juniper. In many instances chainsaws are used to pre-treat areas for prescribed burning. Chainsaws are used in areas where accessibility is restricted by slope, rocks, or areas where the ground disturbance must be kept to a minimum. Currently, chainsaws are the primary mechanical tool utilized by the Burns BLM for western juniper cutting.

21 Comment: Maximizing juniper removal for fuel by-products would be a huge impact on those areas that would be opened to this on the Steens Mountain…. P. 4-90 says roads would be encouraged. Why would you encourage new road construction with all of the negative impacts of roads? How many per square mile? A range of permissible road densities per mile?

Response*:* Page 4-90 in the DRMP/DEIS refers to Alternative E, where road construction would be encouraged in the AMU. The CMPA does not generally allow construction of new roads.

Vegetation - Rangelands

1 Comment: Please provide additional information on the potential proposed use of restoration with non-native species and how this would help achieve the stated goal and objective.

Response: Restoration with nonnative species is done, following a wildfire, primarily because it allows the BLM to get a perennial ground cover established immediately, before introduced annual plants like cheatgrass get a chance to take over a site. It is very hard to get most native plants, especially grasses, established and is also very expensive to purchase the seed. By getting a cover of perennial plants on a site following a fire, the objectives that prevent invasive, introduced, annual plants from being established would be achieved.

2 Comment: Please clarify what native and non-native species would be used and the desired benefits it would provide to sage grouse habitat and /or deer winter range.

Response: The action described under the Proposed RMP for Objective 2 is to diversify nonnative seedings, primarily crested wheatgrass seedings, to make them more desirable for deer and sage-grouse. To do that the BLM tries to plant native species such as big sagebrush, four-wing saltbush, bitterbrush, bottlebrush squirreltail, Thurber's needlegrass, needle and thread, thickspike wheatgrass, dropseed, Sandberg's bluegrass, globemallow, lupine, hawksbeard, and agoseris for diversity, cover, and food. If we cannot get native species to grow, desirable nonnatives such as Hobble Creek big sagebrush, forage kochia, crested wheatgrass, and genetically altered grass species such as nezpar Indian ricegrass, goldar bluebunch wheatgrass, magnar basin wildrye, trailhead basin wildrye, and arriba western wheatgrass would be planted to satisfy habitat requirements or provide ground cover to keep undesirable annual species from getting established. Other nonnative species that may be seeded for ground cover or cover and food for wildlife include appar blue flax, tall wheatgrass, secar bluebunch wheatgrass, siberian wheatgrass, paiute orchardgrass, ladak alfalfa, and nomad alfalfa.

3 Comment: Please clarify how you will apply "when consistent with other resource objectives".

Response: We would only propose management actions in the Proposed RMP that would not conflict with objectives for other resources.

4 Comment: Please provide information on the location of areas to be reseeded, the areas/acres that are proposed for brush-beating and information on the technique that will be used to beat brush and its impact.

Response: The RMP is a programmatic plan and does not make decisions concerning individual locations of seedings or areas to be brush-beat. That information will be determined and analyzed during the implementation of the RMP, using appropriate NEPA analysis. The existing seedings are shown on the rangeland improvements map on the supplemental map CD.

5 Comment: Please clarify if you are proposing to convert native vegetation acres into new, non-native seeding areas.

Response: The BLM is not proposing to convert native vegetation into nonnative seedings. The BLM is concerned, that in some areas of native vegetation, the perennial grass layer is absent and cheatgrass is the dominant species beneath the shrub layer. If a fire burns such a site, the shrub layer would be gone (if big sagebrush was the dominant shrub) and cheatgrass would occupy the site completely. If desirable nonnative, perennial species were planted following the fire, cheatgrass would not have such an easy time dominating the site and the fire interval for the site would be longer. With cheatgrass as the dominant species on a site, the fire interval would be much more frequent.

6 Comment: What are the "desirable non-native plant species" to which the EIS is referring and describe the adverse environmental impacts of these species?

Response: The desirable non-native plant species that are used in seeding mixes include crested wheatgrass, forage kochia, nezpar Indian ricegrass, goldar bluebunch wheatgrass, magnar basin wildrye, trailhead basin wildrye, arriba western wheatgrass, appar blue flax, tall wheatgrass, secar bluebunch wheatgrass, siberian wheatgrass, paiute orchardgrass, ladak alfalfa, and nomad alfalfa. These species may not be native to the region but they serve a purpose; to establish a perennial plant cover on the soil to prevent invasive annuals from dominating the site. These desirable nonnative species are chosen because they do not readily spread from where they are planted so there are no long-term adverse environmental effects.

7 Comment: The vague description of impacts from the various alternatives in the rangelands section ignores the significant effects that BLM has described as resulting from activities such as off road vehicle use and grazing.

Response: With the possible exception of the emphasize commodity alternative (Alternative E), the management actions for grazing and OHV are designed for implementation without causing significant effects to rangeland or riparian vegetation. The S&Gs are assessed periodically for each grazing allotment, and the guidelines for livestock grazing management are followed; therefore, effects to natural resources from grazing public lands are acceptable.

8 Comment: The EIS virtually ignores the impacts of non-native species that are not considered noxious weeds but nonetheless are having significant adverse impacts as a result of habitat simplification, competition with native species, and threats posed to native vegetation in key habitats.

Response: The effects of nonnative species are discussed in the environmental consequences section under Rangelands for Alternative B. The direct effect of allowing natural processes to happen after a fire or other disturbance is potential domination by introduced annual species.

9 Comment: We did not see a reasoned method or design to site vegetation management actions on the landscape. The Planning Area is very large and contains numerous opportunities where restoration actions could take place whether they are localized weed eradication projects or larger prescribed burns. If these numerous actions are not sensibly laid out and coordinated amongst one another there could be a diminished overall response on the landscape.

Response: The Proposed RMP/FEIS is a programmatic document and is not the place where the BLM would lay out the implementation actions for vegetation management in the Planning Area. Following the publication of the ROD, individual projects would be scheduled and implemented over several years and in various locations. The BLM may combine some of the projects into single plans, covering larger areas, so implementation will be in an orderly manner to facilitate management and maximize the response of the treatment areas.

10 Comment: On page 3-9 your figures indicate that within the AMU, the big sagebrush type is the largest of any vegetation type, yet in the proposed alternative (and others), there is no figure on what the proposals are.

Response: If the proposals you are referring to are brush control projects, brush beating is proposed to be implemented on 50 percent to 75 percent of seeded areas, depending on the alternative, where the brush cover is high. Prescribed fire would be utilized to create a mosaic of multi-successional stages within both western juniper and big sagebrush types. The extent and size of each proposal will be determined through subsequent project analysis and decisions.

11 Comment: Alternative A concerning brush control is wrong. In the 1982 Andrews MFP, 1983 Andrews Grazing Management Program Final EIS, and the Andrews RPS, there were specific proposals identified for burning and those are on maps in those documents. Those acres were completed long ago. You have already exceeded the acres of seeding and brush control that were given in those documents and those are the decision documents that pertain to Alternative A, present management.

Response: After looking back at the maps for the three documents that were referred to above, it appears that many of the specific sites that were proposed to be treated back then, have still not been treated. The 1984 Andrews Rangeland Program Summary also had proposed approximately 150,000 total acres of brush control only along with brush control and seeding. The BLM has still not exceeded 150,000 acres of land treatments in the Andrews RA since 1984. The BLM has treated many areas containing western juniper and brushbeat sagebrush in some seedings since 1984. There have been significant changes in technology since 1984, and the BLM has since recognized new areas that they would like to treat to improve ecological status. This RMP will replace the Andrews MFP developed over 20 years ago.

12 Comment: The description of the big sagebrush and mountain big sagebrush communities is lacking in identifying one of the most important factors that strongly affected the condition of those communities. In the late 1950s and the 1960s, extensive areas of big sagebrush were sprayed with 2,4-D on Steens Mountain. Many of those areas are still apparent by looking at aerial photographs. Spraying sagebrush that resulted in a 95 percent kill over vast areas had a huge influence and it is not described.

Response: This information has been added to Chapter 3 in the Proposed RMP/FEIS.

13 Comment: The section is inaccurate at 3.5.4.8 where it states that sites may remain in a dominant crested wheatgrass community for about ten years until sagebrush and rabbitbrush recolonize the site. There are many examples in the north part of the Steens where brush was cleared and crested wheatgrass was seeded and little brush has come back on the site.

Response: It is true that in some of the crested wheatgrass seedings in the north part of the Steens, big sagebrush and rabbitbrush have not recolonized those sites. That information has been changed in Chapter 3 of the Proposed RMP/FEIS.

14 Comment: Of all the issues addressed in today's BLM management planning, I believe the seeding of sagebrush (rather than managed thinning to sagebrush) to be the most controversial and damaging to our ecosystem and rangeland management practices.

Response: In the past, the BLM has cleared the public lands of sagebrush in many areas, primarily to promote the growth of native or nonnative grasses for livestock forage. In recent years, sagebrush has been seeded following wildfires and is proposed to be seeded in nonnative seedings to provide for the needs of sagebrush dependent wildlife, especially special status species such as the Greater sage-grouse and pygmy rabbit. Neo-tropical birds also depend on sagebrush for habitat and nesting cover. Sagebrush is a native plant and it is important that the BLM maintain large areas containing

sagebrush because habitat fragmentation is considered as one of the major causes of the decline of sagebrush dependent species. One of our primary goals is to prevent the listing of plant and animal species as threatened or endangered.

15 Comment: The EIS's statement that ODFW has the management responsibility for wildlife populations appears to deflect from the statutory and regulatory duties that BLM has to maintain and protect wildlife and their habitats. This responsibility is not reflected in the EIS and the extent to which various alternatives would affect wildlife species as a result of vegetation impacts is not adequately addressed.

Response: BLM Manual 6500, Wildlife Management, contains a section on Cooperative Relations with State Agencies (6521.1) which states:

"The BLM strives for a partnership approach with State fish and wildlife agencies on the full range of fish and wildlife related efforts on the public lands and waters. Bureau policy is based upon the premise that management of fish and wildlife on the public lands and waters should be a joint effort between BLM and State fish and wildlife agencies, with BLM managing the habitat and the States managing the resident fish and wildlife species. Further, State wildlife agencies have regulatory authority over resident fish and wildlife and, at times certain migratory species."

The next section in the manual discusses development of MOU with state agencies. The current MOU between the BLM and the ODFW was signed in 2001 and reiterates that the BLM "recognizes the ODFW as the agency responsible for management of fish and wildlife species on public lands in conformance with applicable Federal and State laws and regulations."

The effects of vegetation treatments on various wildlife species are discussed in the Wildlife and Special Status Species sections under the Indirect Effects subsection for the various alternatives.

Vegetation - Noxious Weeds

1 Comment: Please provide additional information on BMP that will be employed for OHV use to control introduction of noxious weeds. Many weed seeds are carried on, and spread by motor vehicles including OHVs.

Response: BMP #5 (Appendix F, Noxious Weed Management section, page F-7) recommends that all vehicles, including off-road and all-terrain, traveling in or out of weed-infested areas should clean their equipment before or after use on public land. The BLM is not currently planning to do more than recommend this action as there is no infrastructure in place for enforcement. The BLM will develop and disseminate brochures, handouts, and signs where appropriate to educate the public about the issue of noxious weeds and the potential for spread from vehicles.

2 Comment: All vehicles that have been used off the highway must be cleaned before entering the Area to remove all traces of invasive weed seed.

Response: See previous response.

3 Comment: Weed Free Feed shall be required within the Area for all stock users.

Response: At this time, the Burns BLM District does not have a requirement for using weed-free forage. Nor does Oregon/Washington BLM have such a requirement. The State of Oregon does not have an organized weed-free forage program in place and there is no infrastructure for certification, inspection, or listing of potential growers of certified weed-free forage. BMP #4 (Appendix F, Noxious Weed Management section, page F-7) recommends that 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. At this time, BLM is not currently planning to do more than recommend this action as there is no infrastructure in place for enforcement. The BLM will develop and disseminate brochures, handouts, and signs, where appropriate, to educate the public about the issue of noxious weeds and the benefits of weed-free forage. Recreational stock users are not required to bring in feed, and except for campgrounds and parking areas, little recreational stock feed is brought in and used on public lands.

4 Comment: All stock, including cattle, shall be groomed or otherwise cleaned to assure no weed seed shall be transported or introduced into the Area. Definition of stock includes cattle, horses including draft stock, mules, burros, llamas, and goats.

Response: While this is a very worthwhile goal, the impracticality of the action and lack of ability to enforce it suggests that it is not something the Burns BLM can reasonably do. The BLM will consider livestock quarantine (BMP #3 [Appendix F, Noxious Weed Management section, page F-7]) where necessary, and will develop and disseminate brochures, handouts, and other educational material, where appropriate, to educate recreational stock owners about the issue of noxious weeds and the potential for spread from their animals. It would also be important to educate campers and hikers to assure weed seeds are not transported in boots, pants cuffs, or tents and bedding.

6 Comment: ONDA is very concerned with the BLM's references to the use of livestock grazing as a "tool" for the control of noxious weeds. See e.g. DRAFT/EIS at 3-15, 4-64. The Draft RMP/EIS offers no scientific evidence in support of its claim that livestock can be an effective "tool" for managing weed infestations. Nor is there any meaningful information about specific management actions planned, or how grazing would be managed to achieve this result. This does not satisfy NEPA's requirement to take a "hard look" at the environmental effects of a proposed action. Because of the significant scientific evidence that grazing is <u>not</u> an effective or desirable mechanism to control the spread of weeds, ONDA asks that the preferred alternative eliminate all mention of the use of livestock as a possible "tool" for the control and management of noxious weeds within the planning area.

Response: The Burns BLM will continue to consider the use of all available tools for the management of noxious weeds throughout the Planning Area. Managed livestock grazing has been shown to be very effective in reducing noxious weeds under some circumstances as part of an integrated weed management program. The BLM, under the authority of the Invasive Species Executive Order, issued February 3, 1999, currently participates in the National Invasive Species Council and follows the guidelines set forth in the January 2001 Management Plan: Meeting the Invasive Species Challenge. This plan lists the use of grazing animals as one of the tools for management of noxious weeds.

7 Comment: Objective 1, Preferred Alternative, page 2-102: Non-native species, including noxious weeds are a recognized threat to native communities and listed species. Weed control is important in maintaining and restoring native habitat conditions for wildlife, fish, and native plants. We concur with BLM's goal to control the introduction and proliferation of noxious weeds. Efforts to control non-native invasive and noxious weeds should be a priority undertaking for the BLM. We recommend that BLM include the following into the selected alternative in addition to the protective measures included in Preferred Alternative: Inventories for noxious weeds would increase to provide maximum detection of new infestations.

Response: The Burns BLM agrees with this statement and it is included in the Proposed RMP and Alternative E. "Integrated weed management would be implemented for the control of noxious weeds. Control on disturbed areas such

as roads, ROWs, waterholes, and recreational sites would be emphasized. Priority would be given to lands with high quality natural resource values. Emphasis would be on prevention, restoration, research, and expanded efforts to inventory and detect new infestations."

Fish and Wildlife - Fish and Aquatic Habitat

1 Comment: Degraded habitat due to cattle grazing has been identified in numerous inventories conducted by BLM and ODFW. Table 3.10 refers to degraded habitat but gives no reason for the damage in the text. Page 3-30 (DRMP/DEIS) has grazing mentioned but some causes listed for habitat degradation are not pertinent to the Planning Area. It also has nothing on trend. Much of the habitat inventoried in the 1970s and 1980s has improved. There are only vague references in places in the draft but it should be in this section. Instead in the text you mention that further improvement in riparian condition has occurred. Where is the data? Instead you provide a table with data that is 20 to 30 years old. In the draft 1998 Southeast Oregon RMP/EIS, Volume 2, Table D 3 you have trend data for the streams of the Andrews Resource Area. Why was it omitted when you went to a draft plan for the Andrews Planning Area only 5 years later? Annually BLM is updating monitoring so the 1998 data could have been updated.

Response: The Affected Environment section provides a general description of resources in the Planning Area. The general effects of the alternatives, including the existing situation, are discussed in the Environmental Consequences section of the Proposed RMP/FEIS. The text in Section 3.6.1 of the DRMP/DEIS associated with Table 3.10 addresses trend in the statement: "These surveys further indicate that 54 percent of the riparian habitat rated as 'Fair' and 'Poor' were in an improving trend." The summarized data collected during the 1970s and 1980s provides an overall condition and trend for the Planning Area. This information is a consolidation of that presented in the 1998 DraftSEORMP/EIS, Volume 2, Table D 3. The type and frequency of ongoing monitoring throughout the Planning Area varies and does not necessarily lend itself to the general description, rather it provides for localized evaluation and management adjustments, as needed, at the activity level.

2 Comment: Also, there is no mention of how many miles of fish habitat are in the no grazing area. This is important and is recognized in places but there is no quantification of it. Quantification is basic to the Environmental Consequences section.

Response: The information provided in the Proposed RMP/FEIS and maps provides perspective on the relative amount of fish habitat in the No Livestock Grazing Area.

Fish and Wildlife - Wildlife and Wildlife Habitat

1 Comment: This section does mention that upland birds are present in the area. It gives no indication of the extent of chukar abundance nor that it is a valuable recreation resource. Page 3-40 mentions totals for hunting but does not break out upland bird from any other hunting. ODFW has estimates on chukar hunting expenditures and it is significant for the Steens and Pueblo Mountains.

Response: Much of this information has been incorporated into the Proposed RMP/FEIS.

2 Comment: Section 3.6.2.2 - This section on mule deer is deficient. There are no estimates on deer numbers.... what number in the planning area. Antelope numbers? You give estimates on elk and bighorn numbers. Why not deer and antelope?

Response: This informationhas been incorporated into the Proposed RMP/FEIS.

3 Comment: Objective 1, Alternative D, Page 2-104: The service concurs with this objective. The Service would like to work with the BLM to determine the areas to be reseeded, species composition of the seed mix, the use of locally collected seed and livestock grazing prescriptions. We recommend that the selected alternative allow for restoration up to 20,000 acres.

Response: According to our data, the amount of seedings that are still mainly crested wheatgrass is about 20,000 acres. The purpose for only having 10,000 acres in the Proposed RMP was to provide a mid point of acreage to work on to restore vegetative diversity. During the life of the plan, with all the other vegetative restoration projects that could occur, approximately 10,000 acres was thought to be an amount that could be accomplished during the life of the plan. This amount of treatment acres would allow time for the treated acres to produce seed and possibly spread, increasing the area having improved species diversity and structure. Also, in trying to balance competing uses, livestock grazing would be affected in the attempts to restore native vegetation and increase species diversity and structure.

4 Comment: Objective 2, Alternative D, Page 2-105: We recommend that the selected alternative include the following: "Forage for wildlife would be allocated at greater than management objective level. Wildlife populations would be allowed to expand naturally or through limited transplants in coordination with the ODFW."

Response: Forage allocations for wildlife are reviewed through the ODFW planning process approximately every five years. At that time, management objective levels for different game species can be adjusted to match new information on the different species. Through working with ODFW the BLM could adjust allocations of forage for wildlife.

5 Comment: It is hard to accurately assess the impacts of all of the vegetation treatments on various species of wildlife, special status species, etc.

Response: The intent of this document is to address effects of different actions in a programmatic fashion. Site-specific analysis would be completed at the time that projects are proposed.

6 Comment: Looking at the overall map I see too much that is piecemeal and fragmented, and I think wilderness, wildlife and multiple uses should consider reducing the fragmentation.

Response: The purpose of many of the vegetation treatments in the Proposed RMP/FEIS is to restore some habitat connectivity where it has been lost due to past actions, such as crested wheatgrass seedings and other brush treatments The expansion of juniper in sagebrush habitat has also fragmented that habitat and made parts unusable for sagebrush dependent species.

Special Status Species - Animals

1 Comment: BLM points out in 3.7.1 that there are 73 special status plant species, but makes the reader count the number of special status animal species in Table 3.12. There are 71.

Response: Actually there are 62 special status species animals listed in Table 3.12 fo the DRMP/DEIS and that number has been inserted in the text in Section 3.7.2.

2 Comment: In looking at Appendix L, which lists all plant and animal species in the Planning Area, very few species appear to be doing well.

Response: Appendix L is not a complete list of all the plants and animals species found in the Planning Area and it only a list of the plant and animal species cited in the document. Wording will be added to the title to clarify this.

3 Comment: An action should be added to control the placement and construction of new utility structures and fences throughout the planning area to avoid impacts on sage grouse survival and mitigate for habitat damage incurred by existing fences and structures.

Response: Management actions under Objective 2 for Special Status Animals Species (2.7.3) directs the BLM to manage according to the "Greater Sage-Grouse and Sagebrush Steppe Ecosystem Management Guidelines." In these guidelines, Suggested management actions already exist and the BLM intends to follow these guidelines until they are replaced by a statewide conservation strategy, which should include these management actions. Most proposed actions along these lines such as ROW or fence lines, would be reviewed when the action is proposed. The management guidelines would be implemented at that time to avoid or mitigate the effects of the proposed action on sage-grouse.

4 Comment: Table 3.12 indicates that the inland western snowy plover (*Charadrius alexandrinus*) is a Threatened Species in Oregon and holds a place on List 2 of the Oregon Natural Heritage Program for that reason. It is also a BLM Sensitive Species though not shown as such in Table 3.12.

Response: Table 3.12 of the DRMP/DEIS is correct in that the western snowy plover is not a BLM Sensitive Species. Even though not it is on the BLM list because of the listing as Threatened by the State of Oregon, the BLM is directed in 6840 Manual (Special Status Species Management) to "carry out management for the conservation of State listed plants and animals."

5 Comment: BLM has photos of tire tracks in the snowy plover nesting site though not located in a place most of the travel occurs, and the BLM has not put up fences to protect the area because this would attract attention to the area and potentially harm the birds.

Response: These photos were sent to the BLM by the ODFW in 1990 with a letter stating that if this continued, the BLM and the ODFW should get together to work out a solution. There is no record in our files of further damage so no action was needed to protect the site. The ODFW conducted annual trips through the 1990s to the snowy plover nest sites to monitor populations and nesting habitat. Since that time, their monitoring trips have been about every three years. Nothing has been brought to the BLM's attention indicating a further need to protect the site. Construction of fences does not totally protect a nesting site. While it may provide protection from OHV traffic, fence posts provide roost sites for ravens and other nest predating birds which may decrease nest success. The public has also been known to disturb sites by trying to take close up pictures or trying to more closely view the adults and chicks. This may cause a loss in productivity.

6 Comment: The EIS fails to adequately consider the RMP's effects on sensitive, threatened and endangered species and their critical habitat, such as sage-grouse, snowy plover, and redband trout. The EIS also lacks an adequate analysis of the proposed mitigation measures under various alternatives or a comprehensive assessment of their effects.

Response: An RMP is a plan that generally establishes in a written document allowable resource uses, resource conditions and objectives, and considers effects on federally listed species and their critical habitat and the need for an area to be covered by more detailed and specific plans. Consultation with the USFWS under Section 7 of the ESA on the effects of the Proposed RMP/FEIS on listed species is occurring. Additional consultations have been completed at the site specific level and the RMP actions are not substantially changing any of those actions. The USFWS has been involved in the RMP process as a cooperating agency and has commented on various sections. As for other special status species such as sage-grouse, snowy plover, and redband trout, the BLM can ask for assistance from the USFWS and the ODFW on a site specific basis during project formulation for opinions on the effects of proposed actions. Proposed mitigation measures would be suggested and incorporated into site specific projects to reduce or eliminate the effects of the proposed action.

7 Comment: Question #4 - How does the Proposed RMP/FEIS comply with Section 7(a)(1) of the Endangered Species Act (ESA) which highlights that BLM has an affirmative duty to recover listed species?

Response: In the Special Status Species section, Objective 2 states "Conserve special status animal species and the ecosystems on which they depend." The management action 1A under this objective is,"Manage special status species animal habitat for conservation and recovery," supports this objective and is what Section 7(a)(1) is directing the BLM to do.

8 Comment: The EIS largely ignores any potential adverse effects from the installation of "wildlife guzzlers."

Response: Wildlife guzzlers, while providing water in areas where water may not be presently available, may have problems with water quality that can be eliminated through design. Other "potential effects" from supplying water in areas where water does not presently exist are still being debated with no resolution at present Through this RMP process, the BLM, is working with the ODFW to restore bighorn sheep to historic habitat as is stated through our support of the ODFW's bighorn sheep plan. Installation of guzzlers will be analyzed on a site-specific basis and more information may be available at that time regarding any effects that might be detrimental to wildlife.

9 Comment: Manage big sagebrush communities to meet the life history requirements of sage-grouse and other sagebrush dependent species.

Response: This is one of the management actions that is already included in the Special Status Species section under Objective 3.

10 Comment: Objective 2, Preferred Alternative, Page 108: It is unclear what this alternative proposes; the description states that management of special status species would be developed through site-specific analysis or site-specific activity plans to balance a variety of resource management and uses. Please provide additional information regarding the project proposal under the preferred alternative.

Response: At present, there is no specific project proposal under the Proposed RMP. The intent of this alternative is that when projects are proposed or analysis of watershed conditions is undertaken, special status species habitats and requirements will be considered and effects to habitats would be analyzed with appropriate avoidance/mitigation/restoration measures included to meet the needs of special status species.

11 Comment: The Service concurs with the BLM regarding the importance and value of bats and supports your proposal to install bat gates at the entrances to abandoned mines to protect roost sites from disturbances while still allowing bat movement. We are concerned that Preferred Alternative will only "consider" withdrawal of "critical sites" from mineral entry. The service recommends that the selected alternative include the following: All caves that provide roost sites for bats be withdrawn from mineral entry. Additionally, bat species are not limited to roosting in caves. Rocky outcrops and large trees provide important roosting habitat for bats. We recommend additional surveys, particularly in old growth juniper woodland.

Response: There are no known caves in the Planning Area. Most of what are considered caves are more similar to rock overhangs and were inventoried in the 1990s for consideration as significant caves. None were identified as significant for roosting bats although some use did occur.

All of the rock overhangs with known bat roosts are located within areas where no surface disturbance from mining activities may occur (WSAs and Mineral Withdrawal Area). The BLM has inventoried abandoned mines for bats roosts and are in the process of protecting those with significant use. The BLM has not inventoried many other types of areas but do have requests in our annual work plan process to fund inventory for bats in other habitats to determine distribution and possible roost sites. Should roost sites be located, which are not already protected by a specific land designation or withdrawal, the BLM will evaluate the situation and look at protective measures for the site.

12 Comment: The primary differences in alternatives are the amount of area to be addressed. Please describe what you mean by "most" in Preferred Alternative description..."meet DRCs in <u>most</u> big sagebrush habitats."

Response: The definition of "most" in this case is our realization that trying to meet the DRCs in all sagebrush communities may not be possible in the life of this plan Areas exist that for some reason may not fit into one of the classifications of the DRCs due to constraints from other resource uses or management decisions. The term also indicates that the BLM will do as much as possible in meeting the DRCs across sagebrush habitats.

13 Comment: The draft EIS should analyze the direct, indirect, and cumulative effects of these threats to sage-grouse populations in the Planning Area. The Draft EIS identifies nesting and brood rearing habitat present in the Planning Area. However, the draft EIS does not explain whether surveys for sage grouse have been conducted. Additionally, there are no maps depicting nest or lek locations in relation to other planned activities such as rehabilitation, brush beating, prescribed fire, grazing, roads, energy and minerals, or recreational activities. There is no discussion of potential impacts to the sage-grouse from implementing the Proposed RMP. We recommend that the EIS analyze impacts resulting from multiple uses proposed in the alternatives to assess the adequacy of the plans to conserve the sage-grouse. Additional information regarding status of sage grouse within the Planning Area and monitoring information on the condition or the range would be useful in assessing project impacts to this species. We are concerned without thorough analysis of effects to sage grouse, activities may further degrade important sage grouse habitat.

Response: Surveys for sage-grouse have been conducted throughout much of the Planning Area. There are about 75 known leks in the Planning Area of which most (80 to 90 percent) are still active though not all are monitored every year. Research was conducted on the south end of the Steens during the late 1990s tracking sage-grouse movements, nesting areas, and brood rearing habitat for radio-collared birds. This research was conducted to study the effects of fire on habitat use by sage-grouse. The map depicting the leks is on the DRMP/DEIS supplemental map CD. The BLM has worked with the ODFW over the last few years to identify known sage-grouse habitat (breeding, nesting, brood-rearing, winter, year long) and does have that mapped in the GIS system. Although not all effects were analyzed in the DRMP/DEIS due to incomplete management actions in some areas, many were analyzed and are listed under Indirect Effects for Special Status Species. Further analysis will be included in the Proposed RMP/FEIS where needed to disclose effects. As with many activities proposed in the Proposed RMP/FEIS in a general manner, site-specific analysis will be conducted when specific proposals are brought forward. At that time, depending on the status of sage-grouse or other special status species, mitigating measures and project design will reduce/eliminate effects of the project. The main purpose of including many of the management actions dealing with special status species habitat and the DRCs in Appendix P are to help shape project design to conserve or improve special species habitat.

14 Comment: Page 2-111, Alternatives A, C, D, E - Where are the new domestic sheep and goat areas. As apart of the alternatives these locations should be shown in order for you analyses in the Environmental Consequences section. A nine mile buffer from current bighorn range may seem like a long distance, but in the Andrews area bighorns have readily pioneered new habitat and have established populations where neither BLM nor ODFW suspected they would appear. Often these areas exceeded the 9-mile buffer from where they were released or were residents of.

Response: The Proposed RMP/FEIS states that new applications for domestic sheep or goat permits will be evaluated for consistency with the 1998 Revised Guidelines for Management of Domestic Sheep and Goats in Native Wild Sheep Habitats. There are no new domestic sheep and goat areas being proposed in the Proposed RMP/FEIS. Any new applications for sheep and goat permits will be evaluated with the ODFW's Bighorn Sheep Management Plan and will consider areas that have been proposed for many years as suitable habitat as areas to not allow new domestic sheep or permits. The nine-mile buffer is current BLM policy.

15 Comment: On p.4-99 you state, "BLM manages the habitat of these species in cooperation with the ODFW and USFWS through plans for various species." That is wrong. You do not have plans for the many Special Status Species. There are few plans available. The draft misleads the public into assuming that there is consideration for Preble's shrew, loggerhead shrike, and many other species listed in Table 3.12.

Response: The intent of this statement was to point out that the BLM coordinates with the ODFW or the USFWS or both on the effects of a proposal on special status species when the BLM is analyzing a project. There are several plans in place for species such as bald eagle and Lahontan cutthroat trout, and interim guidelines for sage-grouse and sagebrush steppe habitat, and other documents such as the Migratory Bird Executive Order that are in place and that direct the BLM on management of special status species.

Special Status Species - Fish

1 Comment: Review all grazing allotment management plans, and revise as necessary, to expedite meeting state water quality standards in all 303(d) listed streams.

Response: Review and necessary revision of grazing management in regard to 303(d) listed streams is provided for in the Proposed RMP/FEIS, particularly through evaluations for the S&Gs, and the development and implementation of WQRPs developed in coordination with the DEQ.

2 Comment: Alternative B is the best choice to protect the Borax chub and its ecosystem.

Response: The Proposed RMP closely resembles Alternative B with the intent of establishing permanent protection for Borax Lake chub; however, the Proposed RMP is based only on protection through Conservation Agreement or cooperative agreement rather than purchase. Comments provided by TNC, owner of the private land parcels associated with Borax Lake, indicates that TNC is interested in cooperative management for protection of the area, rather than disposal. Additionally, the Proposed RMP has been modified to reflect protection of the public land portions of Borax Lake chub critical habitat with the following text: "Permanent protection of Borax Lake chub critical habitat would be pursued through establishment of a Conservation Agreement or other cooperative agreement among the 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 travel, and limiting or closing vehicle access."

3 Comment: I would recommend that the BLM develop a cooperative management plan with The Nature Conservancy (TNC) relative to management of the Borax Lake area. Development of such a cooperative management plan would be consistent with the existing recovery plan and would improve management of the Borax Lake chub and the unique hot spring habitats of the ACEC.

I also recommend that the Andrews/Steens plan allow for closure of roads in the Borax Lake ACEC. Visitor use in the area is important, but currently, vehicle access is unrestricted and damage is occurring to wetland and lake shoreline areas. I would further recommend that the Borax Lake ACEC be removed permanently from livestock grazing. Both the road and livestock grazing actions would be consistent with the recovery plan for the Borax Lake chub and could be further addressed in the cooperative management plan for the area.

Response: The Proposed RMP and Alternatives B, and C, in the Special Status Species section of the DRMP/EIS provide for development and implementation of cooperative management for the Borax Lake ACEC and Borax Lake chub critical habitat. The Proposed RMP has been modified to reflect recommendations of the Borax Lake chub Recovery Plan and the Borax Lake Chub Conservation Status Review in the following manner: *Permanent* protection of the public land portions of Borax Lake chub critical habitat would be pursued through Conservation Agreement or other cooperative agreement among the 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 travel, and limiting closing vehicle access*.

4 Comment: An access management plan for Borax Lake and the surrounding unique features of the ACEC should be developed and implemented. The access management plan should encourage visitation of these unique resources, but minimize vehicle use and associated recreational impacts. Interpretive signs should be posted to explain the unique features of the ecosystem and provide a guide to visiting the area, furthering the public awareness task of the Borax Lake chub Recovery Plan. A boardwalk and viewing platform may also be appropriate to limit damage to the fragile Borax Lake and springs ecosystems. In addition, we recommend establishing a camping closure within 500 feet of Borax Lake to help eliminate damage to the lake's fragile shoreline and protect aquatic health.

We recommend, based on the Borax Lake Chub Conservation Status Review, that the BLM's proposed cooperative monitoring program also include an assessment of visitor use. Visitor use monitoring should be designed to adaptively guide management actions that minimize impacts of visitors on Borax Lake chub and its habitat. In addition, the cooperative agreement should cover management actions which provide permanent protection to Borax Lake chub critical habitat.

We recommend that BLM ensure its final action include measures that guarantee permanent protection of Borax Lake chub critical habitat from threats identified in the Borax Lake chub Recovery Plan. Threats identified in the Recovery Plan include grazing, mineral and geothermal exploration, and vehicle use. Specific components of the draft alternatives B and C appear to provide permanent protection of designated critical habitat.

The goal of downlisting or delisting the Borax Lake chub under the ESA should also be included in the BLM's final action.

Response: Development and implementation of a Conservation Agreement or other cooperative management agreement for the Borax Lake chub critical habitat should incorporate management of access (including transportation), visitor use, and education/interpretive opportunities. The Conservation Agreement or cooperative management agreement should incorporate monitoring and an adaptive management component. Implementation of a camping closure within 500 feet

of Borax Lake is outside the scope of this RMP and would need to be established through cooperative management with TNC, the owner of the property. The overall intent of developing and implementing a Conservation Agreement or cooperative agreement would be to provide permanent protection for Borax Lake chub and its habitat to facilitate downlisting or delisting under the ESA. Additionally, the Proposed RMP has been modified to reflect recommendations of the Borax Lake Chub Recovery Plan and the Borax Lake Chub Conservation Status Review in the following manner: *Permanent* protection of the public land portions of Borax Lake chub critical habitat would be pursued through Conservation Agreement or other cooperative agreement among the 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 travel, and limiting closing vehicle access*.

Special Status Species - Redband Trout Reserve

1 Comment: Alternative C is the appropriate choice for all Actions in this section. The only exception is that we prefer BLM to remove (rather than modify) the Page Springs gauging station weir to allow natural migration of redband trout in the Blitzen River system. If the migration of other fish species is a problem, we would like to see BLM find another way to deal with that migration, preferably outside the CMPA, and that such action take place before the weir is removed.

Response: The Proposed RMP for the RTR is essentially the same as Alternative C, and has been modified to include managing for an advanced ecological status of riparian vegetation as stated in Alternative C. The direction to evaluate, develop and implement alternatives for the removal or modification of the Page Springs gauging weir would include reviewing other options for addressing migration of nonnative fish species as recommended.

2 Comment: I am concerned that Preferred Alternative will not provide for expansion of redband trout habitat. In particular, greater protection is needed for water quality and riparian vegetation. Grazing plans should meet water quality standards. BLM should move as soon as possible to remove the Page Springs weir, which likely inhibits fluvial and adfluvial forms of redband trout. Conservation of these forms of redband trout is likely to be critical to the long-term survival of redband trout. Removal of the weir also would be a logical complement to river restoration measures along the lower Donner und Blitzen to promote free movement of fishes in the river.

The Redband Trout Reserve should be defined to include current and future redband trout habitat in the mainstem Donner und Blitzen River and tributaries (Alternatives B, C, and D).

Increase the distribution and abundance of redband trout by managing riparian and aquatic habitats for an advanced ecological status that provides for a diversity of high quality fish habitat (Alternatives B and C).

Response: The RTR as delineated under the Proposed RMP and Alternatives B, and C, contains the majority of redband trout habitat in the Planning Area with the expressed purpose of conserving, protecting and enhancing the Donner und Blitzen population of redband trout. The Proposed RMP under the objective of "Increase the distribution and abundance of redband trout in the RTR through maintenance or restoration of habitat quality and quantity" has been modified to include managing for an advanced ecological status. Specifically regarding water quality in support of redband trout habitat, redband trout are considered by the DEQ as the most sensitive beneficial use within their distribution by which water quality parameters are established. Water quality will be addressed more specifically through development and implementation of WQRPs and are supported by the alternatives described in this Proposed RMP/FEIS. The BLM agrees that passage associated with the Page Springs weir should be addressed as soon as possible; however, this project specific activity is subject to funding and workload priorities of the BLM and cooperators.

3 Comment: We recommend that measures be included in the RMP to modify the Page Springs gauging weir to allow for native fish passage for all life stages, while ensuring maintenance of streamflow gauging capabilities.

Response: Development and evaluation of alternatives to improve fish passage at the Page Springs gaging weir would be conducted subsequent to the completion of the RMP and is intended to assess passage for multiple aquatic species and ages, and life history patterns such as fluvial or adfluvial redband trout in coordination with the USFWS, ODFW, SMAC and other local interested public and organizations. Retention or modification for continued streamflow gaging would also be a component of alternatives developed.

4 Comment: We recommend this document consistently recognize the authority and management responsibility of ODFW to protect and enhance redband trout populations. This authority is recognized on pages 4-70 (4.6.1.2) and 4-122 (4.7.4.2), but is not clearly stated in chapter 2. For consistency, we recommend the RMP either remove references to fish population management actions, or clearly state in each reference that coordination and cooperation with the BLM is encouraged, but the authority for fish management actions lies with ODFW.

Response: The authority of the ODFW in managing fish populations is recognized in the DRMP/DEIS Management Framework for Fish and Wildlife (page 2-103), Management Framework for Special Status Species (page 2-106), Assumptions for Fish and Wildlife (page 4-70), Assumptions for Special Status Species (page 4-99), and RTR Assumptions (page 4-122). To accommodate the request for consistency, the Management Framework for the RTR in Chapter 2 has been modified to reflect the ODFW's authority for managing fish populations in the RTR.

5 Comment: Chapter 4 refers to specific alternatives to protect genetic integrity of redband trout (Page 4-126, 4.7.4.4). These alternatives do not match the objective and actions listed in chapter 2 (Page 2-24, 2.7.4.1.2), objective 2, Page 4-122, 4.7.4.1, objective 2). We recommend this segment be revised to match the alternatives listed in chapter 2.

Response: The Analysis of Effects section has been modified to reflect the action regarding Objective 2.

6 Comment: Genetic integrity of redband trout. page 4-126, 4.7.4.4:
Our recommendation is that the BLM adopt a policy prohibiting stocking of non native fish in public waters on lands under the authority of the BLM, including warm water fish, in order to maximize the protection of native redband trout.

Response: The section discussing redband trout genetic integrity in the DRMP/DEIS Summary of Effects (4-126) has been deleted to reflect the management action "Coordinate and cooperate with the ODFW and Malheur NWR in developing or revising Native Fish Conservation Plan(s) for the Donner und Blitzen subbasin in support of the ODFW's Native Fish Conservation Policy" under the objective "Maintain genetic integrity of redband trout in the RTR" (2-112). This is in recognition of the ODFW's jurisdiction and responsibility for managing fish populations.

The ODFW has jurisdiction over the management of fish populations, including stocking, while BLM manages habitat on public lands as described in the MOU between the ODFW and the BLM. Therefore, adopting a policy to prohibit stocking nonnative fish on public lands is outside of the scope of this RMP, and in conflict with the ODFW's jurisdiction and the MOU. Protection of native redband trout is addressed in the ODFW's Native Fish Conservation Policy.

7 Comment: What is the unique population of waterfowl found in the Blitzen River?

Response: There is no unique population of waterfowl known from the Blitzen River in the RTR. Waterfowl do use various areas along this river system but most are common to the area and Malheur NWR. Some text in the Steens Act was ambiguous regarding migratory waterfowl. In Title III, Section 302 (1)(a) the wording is "Those portions of the Donner und Blitzen River in the Wilderness Area are an exceptional resource that provides habitat for unique populations of native fish, migratory waterfowl, and other wildlife resources, including a unique population of redband trout." In the preceding statement the first instance of the word unique is referring only to the populations of native fish.

Paleontology

1 Comment: Alternative C would be preferred in Goal 2, Objective 1, Action 1 because signing paleontological sites would attract people and result in resource damages.

Response: On-site interpretive signs would be planned so that the minimum of resource damage would occur at signed paleontology localities. Localities chosen for interpretation would be near a main road to facilitate adequate maintenance of facilities and provide ample opportunity for surveillance by law enforcement and other BLM employees.

2 Comment: Off-road vehicle use should be prohibited until all paleontological localities are inventoried.

Response: Most paleontological localities are known. Fine-tuning inventory to assess paleontological significance and condition has not been completed. Under the Proposed RMP, only 25,286 acres of the Planning Area would be open to OHV. The 25,286 acres left "open" is the Alvord Desert playa, an area not likely to contain paleontological localities. The remainder of the 1,649,470 acres would be under OHV designations such as "limited to designated routes" or "closed".

Cultural Resources

1 Comment: The DRMP does not provide any analysis of the potential effects on identified and unidentified historic and cultural resources, nor does it specify activity restrictions to prevent adverse effects.

Response: Chapter 4 in the DRMP/DEIS analyzes by resource the various direct and indirect effects on historic and cultural resources (both archaeological sites and Native American Traditional Practice locations) in detail. A site-specific effects analysis with proposed specific management actions was not completed for the DRMP/DEIS but will be is included in Appendix R in the Proposed RMP/FEIS. Additional information on specific effect agents on cultural resources in the AMU and CMPA is shown on Tables 3.9.1 and 3.9.2.

2 Comment: The DRMP/EIS does not adequately discuss BLM cultural resources stewardship role as part of current management.

Response: Chapter 2, Alternative A (existing management) was re-written for the Proposed RMP/FEIS to demonstrate the level of cultural resources stewardship activities under current management.

3 Comment: Ninety three percent of the Planning Area is uninventoried for cultural resources. BLM should adopt Alternative B until cultural resource inventories are complete.

Response: Overarching management authority for the Planning Area is found in the FLPMA. The management philosophy and mandate in the FLMPA is multiple use. Alternative B affects cultural resources the least of all the alternatives but cultural resources is only one of many resources or resource uses. Management objectives outlined in Chapter 2 show the current practice of annual, incremental cultural resources inventory, site monitoring, salvage, law enforcement surveillance and mitigating effects to cultural sites on a case-by-case basis. In addition to the current management, a predictive model for discovering the most likely locations for conflicts between cultural resources and other resources and resource uses is proposed for future implementation. This model, tied to sample inventory on an annual basis, would be designed to discover significant sites most likely to be affected.

4 Comment: The Area should be closed to off-road vehicle travel until cultural resource inventories are complete.

Response: Under the Proposed RMP/FEIS, only 25,286 acres of the Planning Area would be open to OHV and mechanized vehicle use. The 25,286 acres left "open" is the Alvord Desert playa, an area not likely to contain intact, significant archaeological sites. The remainder of the 1,649,470 acres would remain under OHV designations such as "limited to designated routes" or "closed".

5 Comment: Gating the Cold Springs Road was a stipulation in the purchase agreement with the previous owner of Riddle Brothers Ranch National Historic District. The gating was intended to protect historic and cultural resources within the ranch. This restriction should be continued and mentioned in Alternative A.

Response: Alternative A was altered to reflect this omission and the restriction was included in all other alternatives. Use of the road within Riddle Brothers Ranch is available only by permit from the Authorized Officer and for administrative use.

6 Comment: Do not maintain or restore historic structures in wilderness.

Response: Nothing in the Wilderness Act precludes maintenance or restoration of historic structures in wilderness and historic or cultural features are listed as special wilderness features. BLM is responsible for maintaining National Register eligible or listed historic buildings/structures, inside wilderness and out. Noneligible or listed buildings/structures can be maintained or restored at BLM discretion. MRDG would be required prior to maintenance and restoration activities and adhered to during implementation of these activities.

7 Comment: Remove mining roads, building, landings and associated abandoned hardware and trash.

Response: The BLM is required to follow a process when reclaiming mining areas. A part of the process is determining the historic nature of the remains and their significance, and determining their eligibility for inclusion on the National Register of Historic Places. If mining sites (including roads, tailings piles, hardware, buildings, etc.) are found eligible, the effect of their removal will be mitigated according to a process established in 36CFR800. Generally, reclamation of a National Register eligible mining site would require completion of a Historic American Engineering Record by a qualified professional and coordination with the Oregon State Historic Preservation Office, the National Park Service, and the Advisory Council on Historic Preservation.

Native American Traditional Practices

1 Comment: The Burns Paiute Tribe encourages closure of Steens Mountain to mineral development.

Response: Steens Mountain was withdrawn from mineral entry by Congress in the Steens Act.

2 Comment: Tribal members should be allowed access to roadless areas by traditional (foot or horse) means only.

Response: The Steens Act states that it will not 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. Recent traditional use of Steens Mountain and the surrounding area includes access by auto, horseback and walking. Access via auto has been limited to existing open roads and developed recreation areas. More remote locations are accessed by horseback or on foot. It has not been established that Indian people used mechanized means of access to areas on Steens Mountain where access has changed since wilderness designation.

3 Comment: Provide adequate documentation that BLM has sought consultation on a "government to government" basis with all Native American Tribes that might have an identified interest in the planning area.

Response: During the SEORMP process, contact and consultation occurred with a number of Indian tribes. Pages 5-2 to 5-4 of the Draft SEORMP are a summary of key public involvement events. First they show that scoping letters were sent to the Burns Paiute Tribe, Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Umatilla Reservation, Fort McDermitt Shoshone-Paiute, Shoshone-Paiute Tribes at Duck Valley Indian Reservation, Shoshone-Bannock Tribes at Fort Hall Indian Reservation, Klamath Tribe and Nez Perce Tribe. These letters were followed up with phone calls. Based on scoping contact, RMP meetings were held with the Burns Paiute Tribal Council, Fort McDermitt Shoshone-Paiute Tribal Council and Confederated Tribes of the Warm Springs Reservation. Additional contact was made with tribes in the form of a plan update and offer to meet to discuss the Draft SEORMP. With the passage of the Steens Act, the CMPA and AMU were separated from the SEORMP process. However, the tribal contact/consultation experience was carried forward to the AMU/CMPA RMP process. Initial scoping letters were sent to the Burns Paiute Tribal Council, Confederated Tribes of the Warm Springs Reservation, Fort McDermitt Tribal Council and Klamath Tribes. Only the Burns Paiute Tribe expressed interest in being involved in the RMP planning process and eventually became a cooperating agency. Their representative has been involved in DRMP/DEIS review and they also have a representative on the SMAC. The SMAC has worked closely with the BLM in preparation of the management objectives and alternative selection of the Draft and Proposed RMP/EISs. In addition, the Burns Paiute Tribe has a representative on the RAC.

4 Comment: Protect resources Tribes identify during consultation, especially those that cannot be adequately protected by adherence to the National Historic Preservation Act.

Response: The Burns BLM is involved in active consultation with the Burns Paiute Tribe on a number of issues identified by both the BLM and the tribe. The BLM also has a signed MOU that forms the basis of our consultation and cooperation. The BLM will not knowingly advocate or allow activities on public land that would threaten resources identified by the tribes during consultation.

Visual Resources

1 Comment: The EIS does not describe how the various alternatives would affect visual resources nor does it include the nature and effectiveness of potential visual BMPs or mitigation measures. The EIS does not describe the visual effects of mineral development or OHV use.

Response: An RMP is a general planning document, as described in Chapter 1. For this reason, the specific visual effects and proposed visual mitigation measures of a specific activity or project cannot be described in this document. The effects of management actions on Visual Resources are described in *Indirect Effects* discussions in Section 4.11.3. In the Proposed RMP and Alternatives B, and C, there would be minimal visual effects to Visual Resources from OHV and mechanized vehicle use because the area open to OHV and mechanized vehicle use is a very small percentage of the Planning Area. In all alternatives, the majority of OHV and mechanized vehicle use is limited to designated or existing roads, ways, and trails, so most effects would be restricted to the current road network.

2 Comment: The effects of cutting juniper and letting it lay have not been adequately evaluated.

Response: Vegetation management methods and their effects will be analyzed in separate activity or project level documents.

3 Comment: WSA additions should be designated as ARM II

Response: In accordance with current BLM policy, there are no WSA additions proposed in the Proposed DRMP/FEIS. In the future, should WSA additions be allowed, the recommended ARM Class would be I, not II, because Class I ARM designations are assigned to those areas where a management decision has been previously made to maintain a natural landscape. This includes areas such as national wilderness areas, the wild section of national wild and scenic rivers, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape (H-8410-1, p. 6).

Energy and Minerals

1 Comment: The RMP should close the entire Steens planning area to oil and gas, geothermal, and mineral exploration and development; we are concerned about mineral development in our Steens Wilderness Area; we are concerned about the recommendation to open mining in the CMPA.

Response: The entire CMPA is closed (withdrawn) from leasable and locatable mineral exploration and development under the Steens Act. The CMPA area includes the Steens Wilderness Area. In addition, the Mineral Withdrawal Area designated by the Steens Act also closed 496,364 acres of the AMU (see Map 3.13.1) to leasable and locatable mineral exploration and development.

2 Comment: The Proposed RMP/FEIS does not take into account Congress' clear mandate, nor does it examine how it advances Congress' goals and objectives in passing the Steens Act

Response: The Steens Act did not withdraw the entire Planning Area from leasable and locatable mineral exploration and development. Consistent with the Steens Act, the Proposed RMP/FEIS considers leasable and locatable mineral exploration and development in the AMU portion of the Planning Area outside of the Mineral Withdrawal Area.

3 Comment: The Planning Area should be withdrawn from locatable and leasable mineral exploration and development where it has low potential for mineral resources

Response: It is USDI policy (DM 603, 1976) that all withdrawals of land shall be kept to a minimum. Areas are recommended for mineral withdrawal based on the resources they contain that conflict with exploration and development of locatable and leasable mineral resources in a culturally- and environmentally-sound manner. Areas are not recommended for withdrawal based on whether or not they have high mineral resource potential. In addition, it is BLM policy that the mineral leasing category of each area (closed, NSO, open with seasonal or other special stipulations, and open with standard leasing stipulations) is determined by the resources contained in that area and identification of the least restrictive mineral leasing category that would protect those resources under each management alternative.

4 Comment: It appears the BLM is not considering any alternatives with respect to locatable minerals other than making the maximum amount of land available for exploration and development

Response: See the Proposed RMP/FEIS Section 2.13.1. The goal of this section is to provide opportunities for the exploration and development of locatable minerals in a culturally- and environmentally-sound manner. See also Table 2.13.1 and its footnotes. The Proposed RMP/FEIS considers a range of management alternatives for the 467,831 available BLM acres. Under Alternative A, BLM recommends closing (withdrawing) zero acres to locatable minerals exploration and development. Under Alternative B, the BLM recommends closing 467,831 acres (the entire Planning Area) to locatable minerals exploration and development. Under Alternative C, the BLM recommends closing 254,859 acres to locatable minerals exploration and development. Under the Proposed RMP, the BLM recommends closing 20,367 acres to locatable minerals exploration and development. Under Alternative E, the BLM recommends closing zero acres to locatable minerals exploration and development.

5 Comment: Every possible reference to laws and regulations that provide support for mining and geothermal activities is listed while any that would support limiting these activities are missing

Response: Mineral resources laws and regulations both support and limit exploration and development activities. In the Energy and Minerals Section of Chapter 2 are minerals laws and regulations. In other resource sections are laws and regulation of those other resources. The other resource sections do not summarize the minerals laws and regulations and the minerals section does not summarize the laws and regulations of other resources.

The consideration of other resources in exploration and development of mineral resources is provided under each objective in the Energy and Minerals section in Chapter 2. . The effects of other resources on mineral exploration and development are discussed in the Energy and Minerals section in Chapter 4 under Analysis of Effects. The effects of mineral exploration and development on other resources are discussed in each resource section in Chapter 4.

6 Comment: BLM should note that FLPMA gives the Department of the Interior the authority to restrict Mining Law activities through the process of land use planning

Response: The FLPMA reference is in Chapter 1 at Section 1.4 of the DRMP/DEIS where it is noted that the RMP is a land use plan as prescribed by the FLPMA and that the RMP establishes areas for limited, restricted, or exclusive resource uses. In addition, at Section 2.17.1.1 it states, "Section 204 of the FLPMA gives the Secretary of the Interior the authority to make, modify, extend, or revoke withdrawals, and mandates review of withdrawals." Note that the Proposed RMP/FEIS recommends lands for withdrawal, but the authority for withdrawal rests with the Secretary of the Interior. A primary function of the RMP process is to identify land to recommend for withdrawal from mineral exploration and development, and this is the entire subject of Section 2.13. Under Objective 1 in Section 2.13.1.2 the

BLM identifies lands to be recommended for withdrawal from locatable mineral exploration and development under each management alternative.

7 Comment: What is required in the mineral withdrawal process?

Response: Lands are recommended for mineral withdrawal in the Energy and Minerals section of the Proposed RMP/FEIS but the mineral withdrawal process is a Lands and Realty action with supporting information from minerals specialists and other specialists. Justification and support for a withdrawal recommendation to the Secretary of the Interior must include a statement regarding consistency with a land use plan; a description of resource values; an environmental assessment or EIS; a justification of why the withdrawal is necessary including a detailed explanation why the 43 CFR 3809 requirements or a right-of-way or a cooperative agreement would not provide an adequate degree of protection; a mineral potential report; a description and an estimated value of investments of Federal funds on the lands; an estimated number of recreation visits per year if the proposal involves recreational use; a report identifying the present users of the land; a statement concerning use of water; a statement concerning wetlands and floodplains; and a statement of consultation with governmental bodies, agencies, and individuals.

8 Comment: The RMP should not open any part of the Planning Area to energy and mineral exploration and development

Response: The Proposed RMP does not open public land to mineral exploration and development, the public land is already open by law, regulation, and policy. As stated at Section 2.13.1.1 in the DRMP/DEIS, the General Mining Law of 1872 gave the public the basic right to explore and locate mining claims on public land. The Mining and Minerals Policy Act of 1970 declares that it is the continuing policy of the federal government to foster and encourage private enterprise in the development of domestic mineral resources. Section 102 of the FLPMA directs that the public land be managed in a manner that recognizes the nation's need for domestic sources of minerals and other resources. It is U.S. Department of the Interior policy (DM 603, 1976) that all withdrawals of land shall be kept to a minimum. It is BLM policy (1984) that public lands are open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest.

9 Comment: BLM should close the entire Planning Area to mineral exploration and development.

Response: Comment noted that you prefer Alternative B; see also the response to comment 3.

10 Comment: All land not now closed should be kept open for mineral resource development.

Response: Comment noted that you prefer Alternative E.

11 Comment: The RMP does not cite the source for the statements claiming the land has mineral potential.

Response: References were generally not cited in the document to aid in readability. References are listed in Chapter 6 of the Proposed RMP/FEIS.

The BLM primarily used mineral potential maps developed by the USGS for our mineral potential information. The USGS should have been listed as the data source on the Locatable and Leasable Mineral Potential map (Map 3.13.2) and that has been corrected.

The USGS mineral potential information is presented in these two documents:

> Peters, S.G., G.T. Spanski, H.C. Brooks, J.G. Evans, R.R. Carlson, G.K. Lee, K.A. Connors, J.J. Rytuba, A. Griscom, G.V. Albino and P.F. Halvorson. 1996. Deposit Models, Tracts, and Estimation of Endowment for Undiscovered Metallic Resources in the BLM's Malheur, Jordan, and Andrews Resources Areas, Southeastern Oregon: U.S. Geological Survey Administrative Report to the Bureau of Land Management. 70 pp.
>
> Smith, Cole L., ed., 1994, Mineral and Energy Resources of BLM's Malheur, Jordan, and Andrews Resource Areas, Southeastern Oregon: U.S. Geological Survey Administrative Report to the Bureau of Land Management, 232 pp.

The two administrative reports have been combined into one report edited by Jim Evans and that report is in the USGS editing and publication process. No publication date for the report has been established.

12 Comment: NEPA requires that all references be available for public review

Response: All references are available for public review at the Burns DO during office hours. Please call ahead to make an appointment so that the references you are interested in can be set aside in the public room. Some references are also publicly available through libraries and the agencies that published them.

13 Comment: Some important geologic references are missing in the References section.

Response: The USGS and BLM used references listed in Appendix B of the report edited by Cole L. Smith, which is an exhaustive list of geologic references for this area. It includes reports and publications by Gray and Rimal. It references an article in Oregon Geology by Gray in 1984 that provides additional geochemical sampling references.

14 Comment: Table 3.18 indicates that about one fifth of the study area, or over 300,000 acres, has high potential for one or more types of gold deposit and would be open for locatable mineral exploration and development; the RMP should analyze mining on three hundred thousand acres; acreages should be identified where a mineral developer can focus their efforts

Response: Note that Table 3.18 of the DRMP/DEIS (Table 3.13.2 in the Proposed RMP/FEIS) shows the mineral potential for the entire Planning Area, including land within the Mineral Withdrawal Area, WSAs, and non-BLM administered lands.

Table 2.13.1 shows that the Proposed RMP/FEIS supports minerals management decisions on 467,831 acres total (public land that is outside of the Mineral Withdrawal Area and WSAs). Land that is open for mineral exploration and development is not necessarily going to be mined. It is likely that only land with high mineral resource potential would be subject to exploration. Further, it is likely that only a portion of that area with high potential could be economically mined and would be proposed for a mine or mines.

Table 2.13.1 shows total available BLM administered acres (outside of the Mineral Withdrawal Area and WSAs) with high potential for hot-springs-type mineral deposits (deposits that formed associated with hot springs plumbing systems millions of years ago; there may be no hot springs located there today) as 32,055 acres (two percent of the Planning Area). There are zero available BLM administered acres with high potential for vein gold and 1,313 acres available BLM administered acres (less than 0.1 percent of the Planning Area) with high potential for porphyry-type gold deposits. There are zero available BLM administered acres with high potential for uranium, one acre with high potential for diatomite, zero acres with high potential for sodium or potassium leasable mineral resources, zero acres with high potential for oil and gas resources, and 332 available BLM acres with high potential for geothermal resources.

The map that shows Locatable and Leasable Mineral Potential (Map 3.13.2) shows that the areas with high potential for porphyry-type mineral deposits are entirely within the areas with high potential for hot-springs-type mineral deposits. The map also shows that the 332 available BLM administered acres with high potential for geothermal resources are located about a mile north of Fields. These high potential areas are the areas most likely for mineral exploration and development activity. This is where a mineral resource developer can be expected to focus their efforts.

There is a new map called "Available Areas with High Potential for Hot-Springs-Type Minerals"(Map 2.13.8) to show areas on BLM administered land, outside of WSAs and outside of the Mineral Withdrawal Area, with high potential for locatable minerals. Table 2.13.1 shows that under the Proposed RMP/FEIS 8,005 acres with high potential for hot-springs-type gold and mercury deposits would be recommended for closure (withdrawal) due to consideration of other resources. This would leave 24,050 acres with high potential for hot-springs-type gold and mercury deposits available for mineral exploration and development. On Map 2.13.8 the available high potential areas are shown in pink where they are recommended for withdrawal under the Proposed RMP/FEIS. The area along Denio Creek contains a Federallylisted threatened fish species but it does not show up on the map because the thick blue line symbol for the creek covers up the pink.

The USGS report by Peters and others provides estimated grade and tonnage for mineral deposits and shows that a typical gold deposit in this area would require mining twice as much rock to obtain half as much gold compared to a typical gold deposit in the Oregon-Idaho Graben south of Vale, Oregon, so it is unlikely that a gold mine will be developed here. In Section 4.13.5 of the DRMP/DEIS it states that a relatively small amount of locatable mineral exploration, mining, and occupancy have occurred in the past, is occurring now, and is expected to occur in the future. The potential for leasable minerals activity is low. It is unlikely that geothermal resources will be developed on 332 acres except for a small operation such as a swimming pool or greenhouse. Salable minerals are always in demand for road maintenance although development generally conflicts with one or more resources; salable mineral development would be subject to areas identified in the Proposed RMP/FEIS as closed and further subject to the judgment of the BLM Authorized Officer (Andrews Field Manager). Effects of exploration and mineral development are described in Chapter 4.

15 Comment: The RMP/EIS should establish the criteria that all mining claims will undergo a validity examination prior to having the BLM permit development; this would prevent speculative exploration and subsequent damage to natural resources.

Response: It is BLM policy that actions prompting a mining claim validity examination are a mineral patent application or a withdrawal. The government may choose to examine, and where appropriate, bring contest action against mining claims or mill sites in other situations only when such action is deemed to be in the public's interest.

A validity exam is an involved process. A validity exam that finds that an operator's activities or occupancy are reasonably related to mining operations prepares the claimant to apply for a patent if the patent moratorium is lifted by Congress. It is likely that a validity exam on a claim within an area with high potential for mineral resources would find that an operator's activities are reasonably related to mining operations.

16 Comment: The EIS fails to consider the reasonably foreseeable direct, indirect and cumulative effects of the DRMP alternatives as they relate to mineral development and energy

Response: Chapter 4 in the Proposed RMP/FEIS considers reasonably foreseeable direct, indirect, and cumulative effects of the Proposed DRMP and alternatives as they relate to mineral development and energy.

17 Comment: The Andrews Management Unit includes the mineral-rich Pueblo and Trout Creek Mountains; interest in those areas caused new state regulations over cyanide heap-leach mining in the early 1990s.

Response: No gold mines were proposed in the Pueblo Mountains or Trout Creek Mountains in the early 1990s. You have the Pueblo Mountains and Trout Creek Mountains confused with Grassy Mountain, which is approximately 100 miles to the northeast in the Vale District. Grassy Mountain is in a different geologic setting (in the Oregon-Idaho Graben) where economic gold deposits are more likely as estimated by USGS specialists.

Most of the high mineral potential areas in the Pueblo and Trout Creek Mountains are within WSAs. Under the WSA IMP no surface-disturbing minerals activities are allowed in WSAs. As a result, the acreage within WSAs is not under minerals management consideration in this DRMP process.

18 Comment: Why doesn't the Proposed RMP/FEIS protect ACECs, RCAs, wild and scenic river corridors, areas containing special status species and their habitat, and roost sites for bats; why did BLM chose to recommend very little acreage for withdrawal under the Proposed RMP/FEIS?

Response: The Proposed RMP/FEIS considers a range of alternatives. More areas are considered for mineral withdrawal under Alternative C, which emphasizes protection of natural values, than under the Proposed DRMP, which balances cultural, economic, ecological, and social health in a manner that encourages cooperative management practices. The Proposed DRMP recommends for withdrawal existing BLM recreation and administrative sites, potential BLM recreation sites when development is approved, National Register listed cultural sites, significant paleontological localities, areas containing federally listed species and their designated critical habitat, and within 0.6 mile of sage-grouse leks.

Under Alternative C, all ACECs are recommended for withdrawal. Under the Proposed DRMP, not all ACECs are recommended for withdrawal so that there is a range of ACEC withdrawals within the alternatives. Most of the ACECs are within the Mineral Withdrawal Area and are already withdrawn from locatable and leasable mineral exploration and development (see Table 2.21.2). Under the Proposed DRMP those ACECs outside of the Mineral Withdrawal Area would be open to locatable mineral exploration and development, open to leasing under standard lease stipulations, and closed to salable mineral development (see Section 2.13).

Three of the ACECs outside of the Mineral Withdrawal Area are in WSAs (Long Draw, Pueblo Foothills, and East Fork Trout Creek ACECs) and are subject to the WSA IMP, including the nonimpairment criteria. There are no grandfathered mining claims in any WSAs in the Planning Area. WSAs are open to mining claims but surface-disturbing mineral exploration and development activities are not allowed (see Section 2.13). No new leases may be issued within WSAs and there are no grandfathered leases (see Section 2.13). Under the WSA IMP mineral materials sales and free use permits are not allowed except at one grandfathered site. Table 2.21.2 shows the three ACECs in WSAs as Open for locatable minerals (although they are open to the staking of claims, any activity must comply with the WSA IMP, including the nonimpairment criteria), NL for leasable minerals and Closed for mineral materials.

There are two ACECs outside of the Mineral Withdrawal Area and outside of WSAs under Alternative C (Picket Rim ACEC and Tum Tum Lake ACEC) and there is one ACEC outside of the Mineral Withdrawal Area and outside of WSAs under the Proposed DRMP (Tum Tum Lake ACEC). Under the Proposed DRMP Tum Tum Lake ACEC would be open to locatable mineral exploration and development, open to leasing under seasonal or other special stipulations because it is within deer winter range, and closed to salable mineral development (see Section 2.13). There have been locatable mineral exploration activities in Tum Tum Lake ACEC within the past 15 years. The activities did not impair the plant community and the site of the surface disturbance is fully reclaimed and unnoticeable.

Riparian areas are discussed in the Riparian/Wetlands Sections 2.5.1, 3.5.1, and 4.5.1. No mineral withdrawals are proposed for riparian/wetland areas under Alternative C because conflicts can be resolved under mining regulations at 43 CFR 3809 or under standard lease stipulations that allow wells to be moved up to 660 feet or leasing activities to be delayed for up to 60 days.

Wild and Scenic River corridors are withdrawn from locatable and leasable mineral exploration and development by Congressional action; that is not an DRMP decision. There are no grandfathered mining claims or mineral leases in WSRs in the Planning Area. WSR eligible rivers are protected from mining where they are within the Mineral

Withdrawal Area. WSR eligible rivers that are outside of the Mineral Withdrawal Area are Van Horn and Little Cottonwood Creeks in the Pueblo Mountains and Big Trout Creek in the Trout Creek Mountains, all of which are in WSAs and are subject to the WSA IMP, including the nonimpairment criteria.

In the DRMP/DEIS, areas containing special status species and their habitat, which includes Federally-listed species and their designated critical habitat, are recommended for withdrawal from mineral exploration and development under Alternative C (see Section 2.13). Under the Proposed DRMP areas containing Federally-listed species and their designated critical habitat are recommended for withdrawal.

All known bat roosts are within WSAs or the Mineral Withdrawal Area and are protected from locatable, leasable, and salable mineral activities. There are no known bat roosts of Federally-listed threatened and endangered species but if any are discovered those roost sites would be recommended for withdrawal under the Proposed DRMP where they are outside of WSAs and the Mineral Withdrawal Area.

19 Comment: Alt C is preferable because it would preclude mining in the Planning Area.

Response: Alternative B would preclude mining in the Planning Area; Alternative C would still leave 212,972 acres open to mineral entry (see Table 2.13.1), although very few of those acres have high mineral potential.

20 Comment: Precluding mining from the Planning Area would eliminate emissions from mining operations, thus improving air quality.

Response: Mining in the Planning Area currently consists of occasional mineral materials (aggregate) mining primarily by the Oregon Department of Transportation and the Harney County Road Department for use on roads in the area. Crushers used on those operations are under a state permit certifying acceptable dust exposure for the workers at the site. Maintenance of roads is a safety and national transportation issue and so aggregate mining will not be eliminated. There is no other mining occurring in the Planning Area.

21 Comment: The DRMP should protect from mineral entry that land in WSAs that might be dropped in the future

Response: This Proposed RMP/FEIS does not consider minerals management actions in WSAs except to state that the WSA IMP allows mining claims to be located but surface disturbance is not allowed, no mineral leases may be issued, and no mineral materials disposals are permitted except where grandfathered. WSA lands that are Congressionally released from consideration for Wilderness designation would only be protected from mineral entry if they are included in some other special area that is withdrawn from mineral entry or in an area withdrawn to protect a specific resource value. WSA lands that are Congressionally released from wilderness consideration could be considered for mineral withdrawal under an DRMP plan amendment that could be prepared at that time. When releasing WSA lands from wilderness consideration, Congress may specify management actions for those lands.

22 Comment: ACECs should be withdrawn from mineral entry because mineral entry would degrade values for which they were originally designated an ACEC; mineral leases should not conflict with resource values.

Response: ACECs and other areas are recommended for withdrawal only if the values they contain cannot be protected with less restrictive measures. Refer to Proposed RMP/FEIS Table 2.21.2 for recommended withdrawals and leasing categories in ACECs. Also see the responses to comment 3 and comment 18.

23 Comment: BLM must include in its planning process alternatives that consider a balanced range of mineral withdrawals.

Response: See Section 2.13 for the variation in areas for which mineral withdrawals would be recommended under the range of alternatives.

24 Comment. The range of alternatives needs more flexibility concerning small and low-impact minerals such as sand and gravel for road maintenance; the Proposed RMP/FEIS excessively restricts development of rock sources for road maintenance.

Response: Restrictions imposed on mineral materials development under the Proposed DRMP are not considered to be excessive. Development would still be allowed at existing sites, identified potential sites, and at many sites located in proximity to existing roads.

25 Comment: A section needs to be added regarding potential geologic hazards in the area; is there a hazardous materials response plan?

Response: There have been no historic landslides, mudslides, or large earthquakes in the area. 3.13.5 shows Potentially Hazardous Sites within the Planning Area that include abandoned mine land areas and areas with naturally-occurring mercury, arsenic, and uranium. Because emergency response or remediation of these hazards is not an DRMP decision, because there have been no historic incidents, and because these hazards are not expected to significantly affect the

human environment given the small and dispersed population of the area, there is no emergency response plan in this Proposed RMP/FEIS and no further discussion of these hazards.

26 Comment: I favor the reclamation of abandoned mining areas such as the obliteration of roads and landings, removal of buildings, and collection of scrap iron

Response: The Proposed RMP/FEIS considers obliteration of roads and landings in the TP. Roads to old prospects and mines provide access for recreationists to the east side of Steens Mountain from the East Steens Road and at other locations. Some recreationists enjoy seeing old mine areas so mine headworks were left at the Mogul Mine near Fields when the BLM backfilled shafts and adits in that area. Specific remediation actions at abandoned mine lands are subject to site-specific environmental analysis.

Wild Horses and Burros

1 Comment: The EIS assumes that under any of the alternatives a 20percent increase in the number of horses is expected. The EIS, however, fails to adequately address or evaluate the likely adverse effects that this increase would have on forage available for native species, the impacts on vegetation resources, water quality and a host of related effects that would result from a population increase of this magnitude.

Response: Presently, a 20percent annual increase would be expected under normal circumstances. Other alternatives call for changes in sex ratios and the possibility of birth control which could cause some reduction in this expected rate of increase. The normal schedule for gathers of wild horses every three years with numbers being reduced to the low end of the AML helps keep forage resources from being overutilized by wild horses and therefore unavailable for wildlife species. This should also help maintain water quality and keep conflicts for water resources between wild horses and wildlife to a minimum.

2 Comment: The following is in reference to a desired change in the Draft Resource Management Plan and Environmental Impact Statement under the heading of Wild Horses and Burros specifically in the paragraph 2.14.2 Monitoring. I would like to see the last sentence of this paragraph with the part in parenthesis to read as follows: (conformation, size, color, weight, unique markings).

Response: This has been incorporated in the text.

3 Comment: Wild horses and burros should be managed to protect native wildlife.

Response: This is the intent of the objectives listed in the Wild Horses and Burros section. While the BLM recognizes that there are conflicts for resources between native wildlife and wild horses and burros, the numbers of horses managed for in each HMA was established to recognize other resources and uses on public lands and not degrade the vegetation and water resources.

Livestock Grazing

1 Comment: Under Preferred Alternative in the Summary Table at S-18, it says "more flexibility in grazing resources" and "predicts an increase in utilization of grazing resources".

Response: The statement in the Summary Table at S-18 in the DRMP/DEIS is in error. In the Proposed DRMP, livestock grazing would be maintained at a sustained level without any specific increases or decreases. Livestock use would be adjusted, as necessary, following periodic evaluations.

2 Comment: No assessment is provided of the impacts from continued grazing on the Planning Area outside the no-graze area.

Response: In Chapter 4 , there are statements under the Indirect Effects sections for various resources that explain how those particular resources are affected by the management actions of livestock grazing outside the No Livestock Grazing Area. If grazing does not affect that resource, there is no statement of effects.

3 Comment: The DRMP fails to provide whether BLM has made any assessment as to the suitability of the Planning Area to grazing as required by FLPMA, NEPA, and the Taylor Grazing Act.

Response: The entire Planning Area was surveyed in the 1960's to determine the forage carrying capacity for livestock and wildlife. A usability and suitability assessment was completed on the Frenchglen Unit (Steens Mountain area) at that time. The usability and suitability assessment on the Wildhorse Unit (Alvord, Pueblo Mountains, and Trout Creek Mountains) was completed in 1979 in a separate survey. The usability and suitability criteria considered during the two surveys included the horizontal distance from water, arrangement of water, slope, and rockiness. Nowadays, the general health of ecological processes is periodically evaluated for individual allotments within the Planning Area to determine if current management is working. Allotments must meet the five elements of the Standards for Rangeland Health or management must change until the elements are met. The Guidelines for Livestock Grazing Management offer guidance in achieving goals, meeting standards, and fulfilling the fundamentals of rangeland health.

4 Comment: It is apparent that almost all the allotments have problems with water quality, riparian, and upland conditions, and are judged to need improvements. How does this compare to the allotment summaries when the Andrews MFP was written more than 20 years ago?

Response: Appendix I is intended to portray some of the basic objectives of each allotment, specifically, upland and riparian vegetation communities. Some areas are in a condition that the BLM is trying to maintain and others are in a condition the BLM would like to improve. Most of the areas where the BLM wants improvement are already on an upward trend because of grazing systems in place that satisfy natural resource objectives. When the MFP was written, more than 20 years ago, there were no detailed allotment summaries, so there is nothing on paper to compare to. Field experience over the years since the MFP was written indicates that there are fewer areas with riparian and upland problems than there were then. In the early 1980's there were very few allotments with working AMPs.

5 Comment: Information relating to the cause of unsatisfactory range condition is not identified. Does the BLM believe that problems pertaining to livestock grazing are not related to existing forage allocations?

Response: It is an accepted fact that most of the unsatisfactory range condition the BLM is still observing in the Planning Area was created by the uncontrolled grazing by cattle and sheep that took place in the late 1800s and early 1900s. Existing forage allocations are based on detailed evaluations designed to assess the health of the resources. If rangeland health is being compromised, and livestock grazing is determined to be the cause, action is taken to correct the situation. The type of action taken may be a reduction in allocated forage, change in the season of use, or complete removal, depending on the situation.

6 Comment: Will the BLM assess the effect of current grazing practices on biological soil crusts, distribution of invasive weed species, water quality, and sage grouse, and then take action to mitigate for them?

Response: Biological soil crusts, invasive weeds, water quality, and sage-grouse are all resources that are indicators of rangeland health. The effects of grazing on those and other resources would be assessed periodically in allotment evaluations or rangeland Standards and Guidelines determinations.

7 Comment: Do you have plans in place to provide for "accurate accounting of costs-to-benefit" of cattle grazing?

Response: No, the BLM is not addressing that topic in this Proposed RMP/FEIS. Any analysis of costs-to-benefit accounting of livestock grazing is outside the scope of this plan .

8 Comment: In the goal statement under grazing management, what does sustainable mean and what does healthy mean in this goal?

Response: Sustainable is meeting the needs of the present without compromising the abilities of future generations to meet their needs. When referring to grazing, it means the continuation of grazing at various levels as long as the Standards for Rangeland Health are met or improving. Healthy resources are those resources that are functioning at or near their potential.

9 Comment: I object to the grazing goals and objectives. Where did they come from?

Response: Livestock grazing is a resource that has historical privileges, which allow for the utilization of forage resources on public lands. The Taylor Grazing Act of 1934 authorizes grazing on public lands as well as providing the limitations to grazing necessary to protect other resources. The FLPMA continued to allow for livestock grazing on public lands, as does the Steens Act for certain areas within the CMPA. The goals and objectives were chosen because they provide for continued grazing as well as for attainment of resource objectives.

10 Comment: Many allotment evaluations, riparian evaluations, and other studies have been completed that have identified livestock grazing problems. The plan fails to identify when they will be addressed but calls for more monitoring and evaluations. The Andrews MU grazing program EIS was completed in 1984. Many changes have occurred in the grazing program since then. Why was this not addressed in the new RMP/EIS?

Response: The allotment evaluation and subsequent NEPA document identifies problems, if there are any, proposes actions to alleviate the problems, and analyzes the effects of those actions. The actions are then incorporated into the management plan for the allotment. Allotments are evaluated every ten years unless a situation arises that needs immediate attention. The DRMP is, by design, a programmatic plan, so information, such as changes in the grazing program for the last 20 years, is not incorporated. Both documents are available at our office for comparison purposes.

11 Comment: It is stated that there are seven allotments in the Planning Area that have temporary non-renewable grazing use authorized. Which ones are they? How many AUMs are involved?

Response: The allotments known to have had TNR authorized include: Alvord, Pollock, Sandhills, Hammond, Krumbo, Ruby Springs, and Reicken's Corner. TNR may have been authorized only once or several times, depending on the year and the allotment. Most of the use has been on crested wheatgrass seedings. The number of AUMs involved in TNR authorizations has not been determined. TNR allocations are by nature, temporary, and considered site specific, and therefore are not an DRMP decision. See changes in text**.**

12 Comment: Preferred Alternative includes an increase in livestock use over current levels. No identification of where the increases would occur and how much was given in chapter 2. Chapter 4 does not address the impacts; it merely states that the increases would occur. The TNR increase identified in chapter 2 is not addressed in Preferred Alternative.

Response: The management actions for grazing management in Chapter 2 do not increase livestock use over current levels for the Proposed DRMP. The Proposed DRMP calls for sustainable livestock grazing consistent with the Steens Act, the S & G's, and resource objectives. Increases over the current level are proposed for Alternative E in Chapter 2. The Comparison Summary Table at the beginning of the DRMP/DEIS on page S-18 indicatedan increase in the utilization of available grazing resources. That portion of the table was wrong and has been corrected . The TNR statement was inadvertently left out of the management actions in Chapter 2. In the Proposed RMP/FEIS, TNR will be authorized in years of favorable forage production.

13 Comment: The exact same season of use, April-June, should be implemented throughout the Andrews Resource Management Unit. Implementing this change would greatly improve the high desert ecosystem. Winter grazing allotments need to be eliminated.

Response: Grazing livestock from April until June is not the ideal system for the entire Planning Area. This system works on the east side of the Pueblo Mountains because the soils are deeper and more moist. Vegetation, especially in the meadows and riparian areas, has time to grow back before the soils dry out. Winter use does not stress the vegetation because grazing happens during the period when the grasses and shrubs are dormant. In the valley bottoms, where many of the soils are shallow, and most of the winter use is authorized, it is recommended to not graze too long into April or regrowth might not happen. If plants are consistently grazed during the growing season, the root reserves could be used up and the plant would die.

14 Comment: There is a cow free, 97,995 acre no grazing area within the planning area. There is almost no discussion of the impacts to various resource uses within the no grazing area, as compared to the grazed areas outside of it. Yet, the BLM has mentioned that they recognize this on various pages

Response: The BLM will include more discussion of the effects of the No Livestock Grazing Area on various resources such as riparian, wildlife, special status species, wildland fire management, etc.

Wildland Fire Management

1 Comment: BLM must assume a let burn policy for natural fires with the exception of areas which are inhabited like the rural communities of Frenchglen, Diamond, Denio, and Fields.

Response: The Proposed RMP/FEIS sets provisions to manage natural ignitions. In situations where human life, private lands (unless under an agreement), or areas that possess a significant value or attribute are threatened, suppression action will be taken. In all situations, the BLM will evaluate the wildfire situations, notify appropriate parties, and take the appropriate actions as specified in BLM Wildland Fire Management Policy.

2 Comment: Woodlands/Fire/Weeds/Invasive Species-
Use prescribed burns and other actions if necessary to eradicate invasive species and hinder juniper encroachment resulting from skewed fire regimes of the past, if such actions will enhance special status species survival by restoring or protecting their habitat.

Response Prescribed burning is one tool identified in the Proposed RMP/FEIS to help manage the encroachment of invasive species into plant communities within the Planning Area. Projects will be evaluated for their effect on special status species present in the area or affected by the action. Encroachment of western juniper into other plant communities is partially attributed to altered fire regimes.

3 Comment: Include "Pursue cooperative management agreements with private landowners to manage wildfire cooperatively."

Response: The section was modified to reflect changes.

4 Comment: Support the natural wildland fire to burn, as proposed in Alternative B, where cultural and natural resources are protected.

Response: Firefighter and public safety is the first priority in every fire management activity (Federal Wildland Fire Management Policy 2001). Wildland fires outside of the WUI will be evaluated for Wildland Fire Use (page 2-144 Draft RMP-EIS). The Federal Wildland Fire Management Policy (2001) goes on to outline eight additional guiding principles:

1. The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
2. FMPs, programs, and activities support land and resource management plans and their implementation.
3. Sound risk management is a foundation for all fire management activities.
4. Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
5. FMPs and activities are based upon the best available science.
6. FMPs and activities incorporate public health and environmental quality considerations.
7. Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
8. Standardization of policies and procedures among federal agencies is an ongoing objective.

5 Comment: I support natural wildland fire, as proposed in Alternative B, where cultural and natural resources are protected. Special consideration to spread of cheatgrass must be executed.

Response: Wildland fire management actions consider a variety of situations, often occurring in very compressed timeframes.

The establishment and spread of cheatgrass throughout the western United States has presented land managers with many challenges. Many areas are maintained in simplified plant communities dominated by cheatgrass. Frequent fires help cheatgrass, and other introduced annuals and perennials, to dominate these burned areas. Current plant community is one of the factors that is considered when evaluating fire management actions. However, the primary goal of fire management actions is the protection of human life (firefighter and public).

Presence of cheatgrass (and other introduced annuals) in the pre-burn and post-burn plant community will be evaluated during all fire stabilization and rehabilitation processes. One of the goals of stabilization and rehabilitation projects is the reestablishment of perennial plant communities.

6 Comment: Recommend BLM include in the DRMP the potential for implementation of future conservation agreements with BLM and willing landowners.

Response: The BLM has had many projects in the past that have included working closely with the adjacent private landowners, conservation groups, and other interested publics. Projects of this type have proved to be successful in achieving multiple public and private land management goals. The BLM will continue to pursue these type of agreements where possible.

7 Comment: Please provide additional information on the potential proposed use of restoration with non-native species and how this would help achieve the stated goal and objective.

Response: The section heading "Alternative E" was inadvertently omitted from the page. The use of non-native forage species was identified as a component of Alternative E. The heading "Alternative E" will be added above the preceding paragraph.

8 Comment: Please provide information on the proposed native and introduced species that would be used, and clarify how the use of introduced species would meet Goal 2 to restore and maintain the integrity of ecosystem consistent with appropriate fire regimes and land uses.

Response: The best restoration practice would be to allow residual native plant species to revegetate a site following disturbance. However, this option is not available for some areas throughout the Planning Area. Areas where introduced annuals or weedy annuals and perennials have completely dominated a site may not have adequate native vegetation present to recover the pre-disturbance plant community. In these situations, plant species will need to be seeded. Selection of the species will be based on site specific conditions. In some instances introduced species may need to be used to reestablish desirable plant communities. Areas where the site has crossed an ecological threshold may no longer be able to support pre-disturbance plant species. In these situations, desirable introduced species may be utilized to facilitate recovery. This type of treatment would occur when the site had been altered enough that soils stabilization is the primary objective of the restoration actions. Once the site has been stabilized, native species may be reintroduced to the site. Restoration under these situations is a long-term project and reestablishment of native plant communities may take many years.

9 Comment: Wildland fire rehabilitation should be done to promote rehabilitation of native vegetation, rather than seeding with new forage species.

Response: Wildland fire stabilization and rehabilitation projects will move toward establishing native plant communities. However, in situations where the biophysical environment has been altered to the degree that an ecological threshold may have been crossed, use of desirable nonnative species may be used to stabilize the soil. The selection of species will be based on site specific criteria.

10 Comment: Wildland fire management and prescribed fire tools should be used in a manner to promote wildlife habitat improvement or restoration.

Response: Management of public lands administered by the BLM must take into account many objectives and land uses. Improvement and maintenance of wildlife habitat is one of the goals of land management.

11 Comment: Would prefer to stay away from prescribed fire in wilderness and WSAs. Prescribed fire actions (pretreatment, equipment needs) seem to cause more damage or disturbance than benefits derived plus the timing of prescribed burns usually don't coincide with a period when wildfires typically use to burn, which will impact natural conditions.

Response: BLM policy allows for prescribed burning in wilderness areas where natural fires do not meet wilderness fire objectives. Prescribed burning is allowed on a case-by-case basis for the following purposes:

1. to reintroduce or maintain the natural condition of a fire-dependent ecosystem;
2. to restore fire where past strict fire control measures had interfered with natural ecological processes;
3. where a primary value of a given wilderness will be perpetuated as a result of the burning; or
4. where it will perpetuate a threatened or endangered species.

BLM policy also allows prescribed burning in WSAs. However, the BLM will conduct all prescribed fire and suppression activities in accordance with fire management activity plans and subsequent operational plans for all WSAs, using caution to avoid unnecessary impairment of an area's suitability for preservation as wilderness.

12 Comment: …why not have hundreds of airplanes loaded with water bombs and get the fire in the early stages??

Response: The DRMP is not the appropriate planning document for specific operational tactics that would assist fire suppression. Early and effective initial attack has proven to be the best method of suppression since the early 1900s. Fires are suppressed utilizing a variety of tools. Aerial resources are one tool that can be effective in certain circumstances; however, there are many areas where aerial application of retardant is either ineffective or impractical. Steep slopes, narrow canyons, adverse weather and smoke conditions can restrict flying. In these situations, ground resources are best suited to suppress fires. Ground resources also provide more flexibility. During periods with multiple fire starts and rapidly changing priorities, their movements can be more effectively directed than hundreds of airplanes trying to occupy the same airspace.

Boeing is currently working on developing a fire suppression technique that utilizes approximately 5 gallon water bombs. They would be delivered by airplane. The application of this technology is still many years out. See the Boeing web site for details http://www.boeing.com/news/frontiers/archive/2003/august/i_ids4.html

13 Comment: The use of prescribed burning and wildland fires to achieve ecosystem management objectives is described, but what appears to be lacking is any detail about the protection of air quality related values. How will the plans protect visibility and minimize contribution to regional haze?

Response: The plan states that the BLM will cooperate with federal, state and local governments on smoke management related to wildland fires, which includes prescribed fires or fires managed for resource benefits. The BLM will follow goals of the Oregon Smoke Management Plan.

Details related to smoke management will be site specific and related to individual projects. Analysis and actions will be developed under the ID team and NEPA process. Smoke management is a critical component of the environmental assessment and Burn Plan. Project specific information is available upon request.

14 Comment: -… I urge you to use burning of sage sites only for the purpose of increasing the overall health of the sage/forb community and not simply provide cattle forage.

Response: The BLM utilizes prescribed and wildland fires for resource benefits to meet a number of land management goals.

15 Comment: Please, no more crested wheatgrass monocultures.

Response: The BLM will utilize a variety of species in seeding mixtures used for site stabilization, and restoration. Species selection will be based on site specific factors and project and management goals and objectives.

16 Comment: We are concerned with language on page 2-199 which states "fire management activities will be designed to retain the natural characteristics of the ecosystem." The natural characteristics of the existing ecosystem can only be maintained if the natural processes of wildland fire is allowed to play itself out, instead of being shaped and directed by fire management activities.

Response: The Proposed RMP/FEIS provides provisions for management of naturally ignited fires throughout much of the Planning Area; however, there are circumstances where suppression may occur. Under these conditions the BLM will follow current policy regarding fire suppression in wilderness areas.

Current policy also includes provisions for prescribed fire within wilderness areas. Prescribed burning within wilderness may be used to reintroduce or maintain the natural condition of a fire dependent ecosystem, restore fire where past strict fire control measures had interfered with natural ecological processes, or where it will perpetuate a threatened or endangered species.

17 Comment: Best Science-…I can't fined anywhere in the plan a reference to the latest and best science available concerning management of sagebrush communities.

Response: The Proposed RMP/FEIS utilizes a variety of information on which to base decisions. Some of this information is "science based." In this case the most recent, published information is used in combination with older existing information. Resource specialists can make the best decisions by including a wide variety of current and historical information.

18 Comment: The Proposed RMP/FEIS does not address:

I. Wilderness – Off-road travel according to Burns District policy, which preauthorizes helicopter landings and bucket work but chainsaws, engines, and other motorized equipment and mechanized transport, must be specifically approved.
ii. WSAs – Off-road travel according to Burns District Fire Management Plan, which preauthorizes all fire suppression tactics except cat work
iii. Other CMPA public lands – same as WSAs because the intent is the same.

Response: The BLM will follow current agency and district policies and plans as they relate to fire suppression tactics.

19 Comment: The EIS does not adequately consider the adverse effects of firefighting and "fire rehabilitation." It fails to disclose the adverse effects of firefighting on aquatic or terrestrial resources as a result of fire retardant.

Response: The use of aerially applied fire retardant will occur using federally approved products and according to policies outlined in the current year's Interagency Standards for Fire and Aviation Operations, also known as the Red Book. There have been recent studies that document some adverse, short-term impacts from the use of some types of

firefighting retardant. However, these studies did not address the long-term effects of either retardant use or type conversions caused by high intensity burning in riparian areas. Currently the BLM will avoid the use of certain types of retardant near riparian areas.

20 Comment: The EIS's conclusion that off road vehicle use would actually provide a benefit to fire control efforts since this use would maintain existing two track roads that could limit the spread of low intensity fires ignores that dramatically more likely situation that off road vehicle use would cause a wildland fire. Similarly, the EIS ignores the fact that open road networks significantly increase the likelihood of human-caused fire starts as has been recognized by both the Forest Service and BLM in the past.

Response: The BLM agrees that fire starts in other areas are often associated with road networks. However, over the past 20 years less than 1 percent of the fires suppressed on the Andrews RA have been directly the result of a vehicle or motorized equipment. Observations and situational awareness of firefighting crews indicates that roads are often used as control lines during evening or night time operations. They provide a solid or easily improved anchor point to begin suppression operations. This is also a detriment when managing a fire for resource benefits. The open road provides an artificial barrier to fire spread through an otherwise continuous fuel. The open road may actually limit the size of the naturally-ignited fires being managed for resource benefits.

Information will be added to the Indirect Effects section on the impacts of increased visitors to the Planning Area. In the past less than 20 percent of the fires on the Andrews RA have been human-caused. This number is far below the number in RAs closer to metropolitan areas, such as central Oregon. Reducing the miles of road may indirectly reduce the potential of human-caused fires.

21 Comment: The EIS also ignores the potential effects of re-seeding burned areas with non-native species that displace native plant species, decrease native forage, alter ecosystem functions and adversely affect butterflies and other *Lepidoptera* that depend on specific native species for key portions of their life cycles.

Response: The use of nonnative species will most often occur in areas where the historic plant community is no longer present, or present in such a stage that response to disturbance would result in dominance by introduced annuals or perennial noxious weeds. The plant community in these conditions may have crossed an ecological threshold that makes establishment of historic plant communities impossible without major site inputs and multiple successional stages. Plant communities in this condition may not support the historic *Lepidoptera*, or other animal community. The most common situation on the Planning Area occurs in areas dominated by cheatgrass. Introduced plants may be used as intermediate plant communities.

Lands and Realty

1 Comment: EIS fails to adequately describe the effects of land disposal.

Response: The purpose of an DRMP is to provide general management framework and guidance for future management activities. The EIS, which analyzes proposals put forth in the DRMP/DEIS analyzes those proposals commensurate with the purpose of the DRMP, not site specific actions. Chapter 4 in the EIS considers the reasonably foreseeable direct, indirect, and cumulative effects of land disposal. The EIS includes alternatives ranging from no land disposal in Alternative B to maximizing disposal opportunity in Alternative E. There are few specific land tenure proposals currently on the table. Those that do exist are currently in their early stages and are subject to negotiation and change. For these reasons, it is necessary to defer site specific interdisciplinary scoping and NEPA review of land disposal actions until concrete land adjustment proposals are developed.

2 Comment: Dispose of lands, including those found to be difficult and uneconomic to manage, only through land exchange.

Response: Sections 203 (sales) and 209 (mineral conveyances) of the FLPMA, the R&PP Act, and other acts authorize the BLM to dispose of lands when they are difficult and uneconomical to manage, for community expansion, public uses, and other purposes. Appendix J of the DRMP/DEIS specifies that exchanges are the preferred method of disposal but also provides criteria when sales can be utilized over exchanges as a method of disposal. These provisions of Appendix J have been carried forward to the Proposed RMP/FEIS. As major portions of Appendix J are a restatement of current policy, these provisions may be modified if shifts in national priorities and interests result in policy changes.

Sales of public lands under the Federal Land Transaction Facilitation Act of 2000 have a similar effect as land exchanges because the proceeds from such sales can be used to acquire inholdings in designated special areas.

3 Comment: Ensure that recent land exchange proposals are considered in the preferred alternative so that the proposals conform with the adopted DRMP.

Response: All of the referenced proposals were reviewed to determine whether they conformed with the land tenure provisions of the Proposed DRMP. Minor modifications to the Proposed DRMP were made to address this concern. Although available for exchange under the land tenure provisions of the Proposed DRMP, several of the selected parcels are in WSAs and may require legislative action to be exchanged.

4 Comment: All lands adjacent to Malheur NWR should be identified for retention due to deer winter range, recreation uses, and other public purposes.

Response: A review of the resource and other values existing on the referenced lands adjacent to the Malheur NWR indicates that retention and designation of those lands as Land Tenure Zone 1 is appropriate due to the existence of deer winter range, recreational values, public investment, interagency cooperation, and other factors. The Proposed DRMP has been adjusted to reflect this change.

5 Comment: Supports Zone 2A designation as a community expansion zone.

Response: Zone 2A, Community Expansion Zone has been carried forward into the Proposed DRMP with minor changes. Like the DRMP/DEIS, the Proposed RMP/FEIS provides that Zone 2A lands are available for exchange only for lands within the 1A Zone. To improve exchange opportunity the Proposed DRMP eliminates the requirement that was in the draft for a County planning change prior to disposal. Zone 2A in the Proposed DRMP would also allow conveyances of small tracts under the R&PP Act to provide lands for community and public purposes.

6 Comment: Retain all Zone 3 lands that may contain significant wildlife values such as deer winter range, that may facilitate public access, or are contiguous to large blocks of public land. Identify specific parcels for retention in Zone 1 or 2 because of these values.

Response: Section 203 of the FLPMA provides the authority to dispose of public lands when they have been found difficult and uneconomic to manage or meet other specific criteria of the Act. All Zone 3 lands have been reviewed to determine whether they meet these criteria. Generally, those Zone 3 parcels remaining in the Proposed DRMP with deer winter range are also adjacent to large tracts of high quality deer winter range which are secure in public ownership. Prior to any disposal action, each parcel would receive additional site specific review and inventory for the existence of resource values including wildlife and access considerations. Significant wildlife habitat, including deer winter range would be assessed to determine the quality and availability of habitat and how that might be affected by a change in ownership. If after this site specific review a parcel is found to be critical for a wildlife species or public access, it will be retained in public ownership. The specific parcels recommended for retention were reviewed for these qualities and have been rezoned to Land Tenure Zone 1 or 2 in the Proposed DRMP.

Note that the FLPMA criteria do not prescribe that the lands be isolated or landlocked by other private lands, only that they be difficult and uneconomic to manage. Public lands, even though they may be contiguous to large blocks of public land, may be difficult and uneconomic to manage because they are separated from other public land by fences, natural barriers, or other factors.

7 Comment: Discuss the effects of communications development at Buckskin Mountain on bighorn sheep. Phase out communications uses at the site. Continue road closure to Buckskin Mountain communications site except for administrative purposes to minimize effects to Bighorn Sheep.

Response: ROWs and other land uses including communications development are recognized as major uses of the public lands and are authorized pursuant to Sections 302 and 501 of the FLPMA. The provision to allow for additional communications site development at Buckskin Mountain is being carried forward into the Proposed DRMP. An existing road closure, to the top of Buckskin Mountain that was inadvertently left out of the DRMP/FEIS is included in the Proposed DRMP; this would limit human activity to that necessary for administration of the communications site and adjacent lands. The effects to bighorn sheep from communications development on Buckskin Mountain are contained in the Wildlife and Lands and Realty sections in Chapter 4 of the Proposed RMP/FEIS.

8 Comment: Land acquisition should be by exchange only.

Response: Section 205 of the FLPMA and Section 114 of the Steens Act provides the authority to acquire lands and interests in land by purchase, exchange, or donation. Regardless of authority, the BLM will follow the prevailing policy for addressing priority lands actions.

Exchanges are an important tool for the BLM to use to acquire land. However, some landowners have no desire to own other lands in the area, need cash assets, are willing donate land, or want to convey their lands in an expeditious manner. Sometimes public lands desired by an exchange proponent may not be available, are encumbered, or the proposal is otherwise infeasible. In these cases, a purchase or donation may be a viable option. These options are being carried forward in the Proposed DRMP as important acquisition tools.

In response to concerns regarding federal land acquisition activity in Harney and Lake Counties, the Fiscal Year 1992 Congressional Appropriations Act directed the BLM to maintain the private/public land ownership ratio as it existed on September 30, 1991. The directive is still in effect and applies to all forms of acquisition. Currently, in Harney County the BLM administers approximately 99,152 acres less than it did on September 30, 1991. It is not anticipated that adoption of the Proposed DRMP would change the public/private land ownership ratio in the county over time. Regardless of the acquisition tool used, the BLM considers the effect of every land tenure project on the County's tax base and its effect on other social and economic factors in its site specific analysis of each land tenure action.

9 Comment: Maintain current levels of public access and ensure that public access is considered in all land exchanges.

Response: Management Actions relating to access in the Proposed DRMP require that land tenure transactions, including exchanges, be designed to maintain and improve public access. Public access is a key factor in determining whether a land tenure transaction is in the public interest. See Appendix J.

10 Comment: Supports purchase of Steens inholdings.

Response: Acquisition opportunities within or adjacent to special management areas, including the Steens Mountain Wilderness and the CMPA, would be considered higher priority than acquisition of non public lands elsewhere in the Planning Area. Purchasing land is only one tool available to the BLM to acquire lands. Exchanges and donations are also authorized by Section 205 of the FLPMA and Section 114 of the Steens Act. Subtitle C of the Steens Act also authorizes cooperative management agreements, conservation easements and other incentives as an option to fee acquisition to improve and protect lands and further the purposes of the act.

11 Comment: Why are there no exchanges allowed in Alt. B.

Response: It was assumed for purposes of analysis that land disposals, including exchanges, would generally result in commodity production on lands that pass from public ownership. Typically, most proponents of land exchanges and other disposals desire lands that would be suitable for commodity producing activities such as conversion to seedings for livestock grazing, and development of rural residences and small ranches. Thus, to provide for a full range of alternatives no disposal of any kind was allowed in Alternative B. Land exchanges with emphasis on acquiring lands with natural values are allowable in the Proposed DRMP and Alternative C, and in A and E with emphasis for other purposes.

13 Comment: Alt. D has too much flexibility in the disposal of lands.

Response: The flexibility that was included in preferred alternative of the DRMP/DEIS that is being carried forward in the Proposed DRMP is critical to provide land consolidation and acquisition opportunities through land exchanges. The primary flexibility in the Proposed DRMP is that Zone 1 lands have limited availability for exchange in certain circumstances where a specific set of special resource values could be acquired through the exchange. Regardless of the

zone, all land disposal actions must be in the public interest and would be contingent upon site specific evaluation and inventory for resource values in accordance with the NEPA, along with the required public review and comment on the proposal.

14 Comment: Alt. D allows the potential for military maneuvers and land uses without the protection of natural resources.

Response: Military activities, ROW, and other land uses are considered valid uses of the public lands and are authorized under existing laws and regulations. All future proposed military activities and other land uses will be reviewed for land use plan consistency and considered on a case-by-case basis, with appropriate mitigation to protect natural resource values.

14 Comment: Land tenure adjustments in important areas such as Steens Mountain seems to be restricted and should be allowable on a case-by-case basis throughout the planning area.

Response: Although the management actions related to land tenure appear to introduce additional restrictions to land adjustment opportunities, they are necessary to comply with, and are reiterations of existing law. Section 102 of the FLPMA requires that public land be retained in federal ownership unless as a result of land use planning, disposal of a particular parcel would serve the national interest. For this reason, public lands must be identified and categorized for retention, exchange, sale, or other disposal in land use plans and cannot generally be made available on a case-by-case basis. Sec. 113(g) of the Steens Act limits disposals of lands in the CMPA to exchanges that further the purposes and objectives of the act. Except for lands within the Steens Mountain Wilderness and the Riddle Brothers National Historic District, all public lands within the CMPA could be considered for exchange subject to this required determination of the Steens Act and the findings required by the FLPMA.

15 Comment: Lands with high public values should be retained, but should not be consolidated and acquired at the expense of the private sector.

Response: The Proposed DRMP attempts to strike a balance between various types of land tenure adjustments to best meet the objective of retaining, consolidating, acquiring and disposing of lands. Under the Proposed DRMP the private sector should benefit from this balanced set of options. The private sector should be further protected by the willing seller provisions of the Steens Act and a similar implied provision of the FLPMA.

16 Comment: Retain the current policy to identify lands with high public resource values and retain them in public ownership. Re-evaluate existing zones to ensure they have high public resource values.

Response: One of the primary objectives of the lands and realty program, as expressed in the Proposed RMP/FEIS is to retain, consolidate, and acquire land or interest in land with high public resource values. This objective has changed little from previous plans. All lands in the Planning Area have been reevaluated through this planning effort in light of the Steens Act, new information and data, and current policy direction in order to identify lands with high public resource values for retention in public ownership.

Transportation and Roads

1 Comment: It is our understanding that the transportation plan will encompass and include the entire planning area.

Response: The TP in the DRMP only covers the routes currently mapped within the CMPA. The remainder of the CMPA will be inventoried and analyzed and comments from the public will be considered prior to completing the CMPA TP by December 2005. The AMU portion of the Planning Area is scheduled to have a completed TP by December, 2008. This schedule has been clarified in Chapter 2, Transportation and Roads.

2 Comment: The TP needs to be put out as either an independent document or as a segregated section of the DRMP.

Response: The completed portion of the TP will be included as an appendix in the Proposed RMP/FEIS.

3 Comment: The management alternatives discussed in Chapter 2 do not specify whether various actions will apply to the wilderness.

Response: The Chapter 2 management actions apply to all BLM administered lands within the CMPA. For example, Alternative B describes closing all routes bounded on one or both sides by the designated Wilderness. The Proposed DRMP closes a total of six miles of routes all of which are within WSAs.

4 Comment: Why are there no TP maps showing other alternatives besides Alternative A.

Response: The Proposed RMP/FEIS has an added transportation map showing the maintenance levels and closed routes. Map 2.8 in the DRMP/DEIS is designed to show the existing route situation for the CMPA including currently closed routes, road and way locations, public access easements, and potential Service/Permit Use Routes. Map 3.2 in the DRMP/DEIS represents the entire Planning Area and shows some of these same features plus potential easements, existing maintenance levels, and the recognized motorized routes. The OHV maps show which routes would be closed by alternative.

5 Comment: Closing all roads unless provided with justification for leaving them open is an approach that is more consistent with the Steens Act.

Response: Section 112 of the Steens Act calls for the TP to address the maintenance, improvement, and closure of roads and trails within the CMPA. It also states that the closures shall be made in consultation with the SMAC and the public. The closure of all roads and ways in and between WSAs and the Steens Mountain Wilderness is considered in Alternative B of the TP. The routes currently designated as open within the CMPA are shown on Map 2.8 of the DRMP/DEIS.

6 Comment: Motor vehicle use of backcountry routes transport invasive species, displace wildlife, cause ecological damage to streams and upland soils, and conflict with the use and enjoyment of these areas by non-motorized recreational users.

Response: The BLM is currently unaware of substantial consequential effects to fish or wildlife species from routes. Motor vehicle use along established routes can cause short-term disturbance to wildlife. Stream crossings can also cause short-term effects; however, these are normally localized and pose little threat to fish habitat. Routes found to be causing substantial effects to fish, wildlife, water quality, or other resources will be modified, re-routed or closed. Weeds can be transported by vehicles; however, the BLM and our partners monitor routes and treat weeds as they are found. The BLM recognizes vehicle travel along remote routes as a valid and popular recreation activity. There are over 100 miles of closed routes within the wilderness available for non-motorized and nonmechanized recreation users, as well as many other hiking opportunities absent of motor vehicles.

7 Comment: Permanently close and rehabilitate all routes in and adjacent to Wilderness and WSAs.

Response: All routes bounded by the Steens Mountain Wilderness or WSAs are being considered for closure in Alternative B of the TP. The Bone Creek Route and other routes not specifically addressed in the Proposed RMP/FEIS will be included in the inventory EA scheduled for completion in December, 2005.

8 Comment: Leave the Steens Loop Road unimproved.

Response: The Steens Loop Road has historically been maintained at a Level 5 which provides for passenger car travel at prudent speeds. Only the Rooster Comb portion of the road is maintained to a lesser standard. Alternative B would allow the Steens Loop Road to degrade to a level 3 which could require passenger cars to travel cautiously and where user comfort and convenience are not a priority. This level of maintenance could severely restrict visitation to the Steens and is currently not part of the Proposed DRMP.

9 Comment: I urge the BLM to study each mile of road in the planning area and close those routes which serve no traditional recreation purpose or legitimate ranching purpose.

Response: A study of the routes in the CMPA was started during Fall 2003 and is scheduled for completion in 2005. A study of the routes in the rest of the Planning Area will follow and is scheduled for completion by Fall 2008. Each study and accompanying EA will identify the routes to be closed or to remain open that best meet the resource objectives of this plan. The public will have opportunities to comment on the EAs.

10 Comment: Two tracks that go nowhere or are redundant for access outside of wilderness and WSAs should be closed.

Response: See responses to comments 6 and 9.

11 Comment: It's important to maintain the current level of road usage for recreational purposes.

Response: The Proposed RMP/FEIS identifies six miles of routes to be closed as shown on Map 2.18.3. The rest of the routes on public land as shown on the map will remain open pending the results of the comprehensive route inventories described under response to comment 9.

12 Comment: Transportation Maps 2.8, 2.9 and 3.2 incorrectly highlight routes within the designated wilderness as closed roads; the maps suggest the BLM is proposing to close these routes in the planning process.

Response: With the exception of the potential easements shown on DRMP/DEIS Map 3.2, the three maps are depicting the current situation. The closed routes inside the wilderness are shown to give readers an awareness of the route closures that occurred when the wilderness area was designated. Alternative A represents the current situation and has been added to the title on Map 2.18.1 to help prevent further confusion. Map 2.19.1shows the proposed route closures as does Map 2.18.3, which is a new map.

13 Comment: Oppose winter access along the Steens Mountain Loop Road except for inholders.

Response : This suggestion is considered under Alternative B.

14 Comment: No motorized routes should exist in WSAs without a more thorough EA to meet the higher protective standards of WSAs, as opposed to general multiple use lands.

Response: WSAs were inventoried and designated in 1980 and the ways and cherrystem roads were also identified at that time. These routes will be studied again as part of the TP inventories and could be closed if they are causing environmental damage or are no longer needed for transportation purposes.

15 Comment: A recent inventory of vehicle routes on Steens Mountain shows that many routes actually go nowhere, are rarely used by the public, and are causing resource damage.

Response: Routes that go nowhere actually provide recreation opportunities for many public land visitors. The BLM is unaware of an inventory that identifies routes causing resource damage, however, BLM staff are currently conducting inventories and assessing whether resource damage is occurring and if so, how to resolve the problem.

16 Comment: Unmapped routes have been created illegally and need to be closed rather than added to the transportation system.

Response: Unmapped routes will be studied the same as mapped routes. Unmapped routes within WSAs or wilderness will be closed and possibly rehabilitated. Unmapped routes on other BLM administered land may be added to the transportation system if they help meet resource objectives. For example, some unmapped routes may actually take the place of existing routes if they are more easily maintained, have fewer effects to fish and wildlife, or help meet other management objectives.

17 Comment: Allowing motorized access to all campsites along all routes shown on Map 2.8 would effectively authorize illegal off road travel in the CMPA.

Response: The BLM will consider adding the routes to existing dispersed campsites as part of the route inventory explained under response to comment 9 above. Allowing access to campsites along existing routes should reduce the need for new campsites and new routes. Language has been added to the management action to clarify that new found routes in WSAs and Wilderness will be closed and will not be added to the transportation system.

18 Comment: 100 yards is beyond BLM's set back specifications for roads that are adjacent to Wilderness. Since ways in WSAs are not roads, no set backs exist for them, and any travel outside the area disturbed at the passage of FLPMA is not allowed.

Response: The management action provides for the parking of motorized vehicles 100 feet (not yards) from centerline of many of the open routes unless precluded by special designation or other resource concern. WSAs are special

designations and therefore, are excluded from the 100-foot parking allowance. Wilderness management guidance allows a 100 foot from centerline setback for the Steens Loop Road and 30 feet from centerline for smaller, open roads.

19 Comment: Safety on roads for horses, burros, and pack animals should be addressed in the TP.

Response: Public and equestrian safety are valid concerns and will be addressed in the comprehensive recreation plan to be written after the DRMP is completed. Immediate safety concerns are dealt with promptly with measures such as warning signs, or other appropriate action.

20 Comment: Existing management and state laws do not allow all terrain vehicles on the Steens Loop Road.

Response: The BLM has not administratively excluded all terrain vehicles from the Steens Loop Road and state law is not clear on the matter. There are no known conflicts that warrant BLM restricting all terrain vehicles use along the Steens Loop Road at this time.

21 Comment: The transportation monitoring plan needs to also deal with the violations of off road prohibitions and route closures.

Response: Monitoring of route closures will be added to the transportation monitoring plan.

22 Comment: An action should establish criteria by which any routes left open to travel will be closed if necessary "to protect persons, property, and public lands and resources."

Response: The Management Common to All Alternatives section of the TP has been modified to include the protection of persons and property as criteria under which future route closures would be considered.

23 Comment: Within the CMPA; the EIS and ROD should reflect allowing inholders to keep the ability to access their personal property as their own management needs and desires dictate.

Response: The DRMP ROD will be consistent with the legal authorities governing public land management including the Steens Act, Wilderness Act, and federal regulations. These authorities provide for reasonable and adequate access to private land inholdings. The BLM is preparing site specific EAs to determine reasonable access to each inholding. These EAs provide for public involvement throughout the process.

24 Comment: There are many roads which are used by countless hunters, solitude seekers, wildlife watchers, Search and Rescue needs, Senior Citizens and disabled folks. All roads should remain open for any individuals.

Response: See response to comment 11 above.

25 Comment: If routes used by grazing permittees within the wilderness are no longer needed for the grazing permit, the route should be immediately closed.

Response: If the Service/Permit Use Route within the Steens Mountain Wilderness is no longer needed for grazing administration or inholder access, the authorization would cease and the road would be closed to motorized use.

26 Comment: BLM should seek Cooperative Management Agreements with private inholders that compensate inholders for removing their roads.

Response: The BLM has discussed possible terms of Cooperative Management Agreements with some of the inholders and will continue to seek agreements that meet the needs of the private property owners while protecting wilderness characteristics.

27 Comment: Without at least some road access corridors in WSAs and Wilderness, much of these vast relatively low elevation areas will be accessible to only the very hardiest of walkers and to those with horses.

Response: The BLM is sensitive to the needs of people who rely on motor vehicles to visit public lands. This consideration is reflected in the Proposed DRMP that closes only six miles of routes within the CMPA, and will remain an important factor when determining the future use or closure of routes.

28 Comment: Having cars driving the Steens Loop Road and not allowing protection of the Wilderness detracts from the solitude and Wilderness type of experience.

Response: Closing the portion of the Steens Loop Road that is bounded on both sides by wilderness is being considered in Alternatives B and C. It is left open in the Proposed DRMP to allow motorized access to the overlooks. A vast majority of visitors to the overlooks rely on motor vehicles to access that portion of Steens Mountain.

29 Comment: No more road construction.

Response: Section 112 of the Steens Act prohibits new road construction within the CMPA unless the Secretary determines that the road or trail is necessary for public safety or protection of the environment.

30 Comment: Winter travel on the Steens, if we must have it, should remain by special permit.

Response: Permits are required for use of the North Steens Loop Road during the winter season. The permit requirement language has been added to the alternatives that provide winter use of the Steens Loop Road.

31.**Comment**: I hope you will not follow through with all the road closures in the plan. Packing in to these locations is no longer possible for me and I am sure other disabled visitors will want to be able to enjoy exploring as well. Please don't reserve these matchless areas only for the young and physically capable.

Response: While alternatives B and C are proposing many route closures, the Proposed DRMP would only close six miles of routes, at this time. Of the routes currently chosen for closure, two are parallel routes in close proximity to the South Steens Loop Road, one has an alternate route close by, and one is about 200 feet long and dead ends at the Steens Mountain Wilderness boundary Maps 2.19.1 and 2.18.3 show the proposed route closures.

32 Comment: Recreational access to remote roads should not be the reason for keeping them open.

Response: The BLM recognizes vehicle travel along remote routes as a valid and popular recreation activity. Routes that cause ecological damage or that are unsafe will be considered for closure during the route inventory process explained under response to comment 9 above.

33 Comment: Do you have a plan in place for road maintenance upkeep and decommissioning?

Response: Chapter 2 of the Transportation section of the Proposed RMP/FEIS identifies maintenance levels for all roads within the CMPA. Decommissioning routes identified for closure can take many forms including signing, using gates, closing with rocks, and or plowing and seeding with native or introduced plant species. Each decommissioned route would be studied to determine the best method of physical closure.

34 Comment: BLM does not clearly delineate "off-road motorized travel" or off-road vehicles (ORVs) within the proposed transportation plan nor does BLM attempt to examine un-inventoried roads. BLM should make every effort to inventory unrecorded roads and provide for adequate closures and management directives in the DTRMP.

Response: Off-road motorized travel is addressed in the OHV section of the Proposed RMP/FEIS. Due to the accelerated schedule mandated by Congress, the district was unable to complete the route inventory in time to apply specific prescriptions for every route within the CMPA. Route inventories and travel prescriptions are scheduled for completion by December 2005 for the CMPA; and by December 2008 for the AMU.

35 Comment: It is important to me that the RMP acknowledge private inholders rights of motorized access.

Response: The Proposed RMP/FEIS lists the Steens Act and Wilderness Act as legal authorities that guide the management of the public lands and the development of land use plans. The Steens Act and Wilderness Act provide for reasonable and adequate access to private inholdings and the RMP needs to be consistent with theses acts.

36 Comment: The preferred alternative does not reflect the text of the SMAC recommendations nor do the current maps. We don't see how the public will have a fair opportunity to comment on the proposed alternative without viewing the appropriate information for transportation in its entirety.

Response: The Proposed RMP/FEIS has been amended and a map added showing the SMAC's recommendation, with one exception (possible Bone Creek Road closure would be considered during the CMPA TP.). The public will have a 30 day comment/protest period following release of the Proposed RMP/FEIS in which to comment on changes to the document.

37 Comment: Since the passage of the CMPA, it would be proper for the portion of the Cold Springs Road through the Riddle Brothers Ranch be open to motor vehicles by permit.

Response: If the upper portion of the Cold Springs Road stays open to motor vehicles a limited permit program for the Riddle Brothers Ranch segment would be made available to the public. Permit language has been added to the Proposed RMP.

38 Comment: There is little to no evaluation regarding management actions and their impacts to private inholdings including access issues.

Response: Site specific access issues related to wilderness inholdings are being evaluated in a separate EA and are therefore not specifically addressed in the Proposed RMP/FEIS. The Steens Act provides specific direction for the BLM to provide reasonable access to wilderness inholders. The BLM is not aware of issues with inholdings outside the Steens Mountain Wilderness.

Off-Highway Vehicles

1 Comment: A play area for OHVs should be developed/designated.

Response: There are no plans to develop an OHV/ATV play area in the Planning Area. OHV/ATV use is generally dispersed throughout the area, and as such, does not warrant the designation, development, and level of control suggested.

2 Comment: The use of OHVs, especially ATVs, should be restricted.

Response: The OHV management goal is to manage motorized OHV and mechanized (nonmotorized) vehicle use to protect resource values, promote public safety, provide OHV and mechanized vehicle use opportunities, where appropriate and allowable, and minimize conflicts among various users. The BLM recognizes managed OHV and mechanized vehicle use as a recreational activity and as a use which supports other authorized activities on public land. Different levels of use are provided for through the five alternatives.

3 Comment: Provide additional information on the BMPs to manage soils and to control introduction of noxious weeds in relation to OHV use.

Response: See Soils comment response 6 and Noxious Weeds comment response 1.

4 Comment: Maintain or increase the current level of public access.

Response: The Proposed RMP and Alternatives A, C, and E provide for this. Only Alternative B would severely restrict access.

5 Comment: Close and reclaim routes where they serve no function.

Response: Routes recognized by the BLM as existing would be closed with following the required NEPA documentation if it is determined that road closure is the best solution for resolving issues such as effects to resources, public safety, conflicts of use, or to meet RMP management objectives in the next phase TPs. Unauthorized roads and ways would be closed and reclaimed.

6 Comment: 43 CFR 8340 and BLM Manual 8340 should be referenced.

Response: Section 2.19 cites "43 CFR Part 8340," which includes 43 CFR 8341 and 43 CFR 8342. A citation has been added to Section 3.19.

7 Comment: All areas should be closed to off-road vehicles unless posted open.

Response: Although the Executive Order 11644 (as amended by Executive Order 11989) gives the BLM authority to establish policies and direct the use of off-road vehicles on the public lands, subsequent planning regulations require the BLM to establish designations through the land-use planning process. The BLM must designate public lands as “open,” “limited,” or “closed” to OHV use. The Proposed RMP/FEIS would close 1,649,470 acres to cross-country motorized and mechanized vehicle travel through “closed” and “limited to designated roads and ways” designations.

8 Comment: The environmental effects of OHV are not described.

Response: The effects of OHV and mechanized vehicle use are described in the *Indirect Effects* sections of the various affected resources in Chapter 4 of the DRMP/DEIS and the Proposed RMP/FEIS.

9 Comment: The analysis of the effects of OHV use is not detailed enough.

Response: An RMP, by its very nature, is a general document. In most cases, it does not propose site specific actions nor address site specific effects. Project level actions are proposed and analyzed in separate environmental assessments. The detailed level of information requested is not available. A road inventory of the CMPA is scheduled to be completed by December 2005. An inventory of the limited designation areas in the AMU is scheduled to begin in 2005 and be completed by December 2008, subject to funding.

10 Comment: Minimize OHV effects to cultural and ecological resources.

Response: A road inventory of the limited designation areas in the AMU is scheduled to begin in 2005 and be completed in 2008, subject to funding. The presence of cultural resources, special status species habitat, and the historic and current use of two-track vehicular ways by the public and by landowners are all factors that will be considered when proposing road closures in the AMU TP. Management of OHVs would comply with the NEPA.

11 Comment: Prohibit off-road vehicle use until all paleontological and cultural inventories are complete.

Response: See Cultural Resources comment response 4.

12 Comment: Only existing roads should be available for vehicle use. There should be no cross- country or open areas.

Response: The only open area in the Proposed RMP/FEIS is the Alvord Desert playa. This area has been used for over 40 years for a variety of motorized and nonmotorized activities. All existing roads in the AMU will be inventoried and determinations made as to whether they should be closed because of resource or health and safety concerns or left open and available for OHV and mechanized vehicle use. A TP will present recommendations for the roads and their management.

13 Comment: An OHV enforcement plan should be developed.

Response: This would be part of an activity level plan. A TP will be developed for the AMU after this planning effort is completed by 2008. The CMPA TP is scheduled to be completed by December 2005.

14 Comment: Road, way, and trail should be defined.

Response: Definitions of "road" and "way" have been added to the Glossary. The term "trail" is not used in the Proposed RMP/FEIS in reference to motorized or mechanized use.

15 Comment: All vehicles that have been used off-road should be cleaned to remove invasive weed seeds.

Response: See Noxious Weeds comment response 2.

16 Comment: Executive Orders 11644 and 11989 should be included in the EIS.

Response: A citation to Executive Order 11644 (as amended by Executive Order 11989) has been added to Legal Authorities section of Appendix D.

17 Comment: The above Executive Orders require that specific routes be named if they are to be open for use.

Response: The BLM Land Use Planning Handbook (H-1610-1) and recent clarification guidance (Instruction Memorandum No. IM 2003-005, Clarification of OHV Designations and Travel Management in the BLM Land Use Planning Process) allow the BLM to delay identification of specific routes in "limited" areas, when this cannot be completed in the RMP process. Further information has been added to Section 2.19.

18 Comment: A road inventory should be done for the AMU.

Response: As required by BLM Planning Handbook (H-1610-1) and as clarified in Instruction Memorandum No. IM 2003-005, Clarification of OHV Designations and Travel Management in the BLM Land Use Planning Process, an inventory of the limited designation areas in the AMU is scheduled to begin in 2005 and be completed in 2008, subject to funding. Once the inventory is completed, a TP would be developed with recommendations for closures, reclamation, signing, and management. This information has been added to Section 2.19.1.1.

19 Comment: The label "Limited Seasonally/Closed"on DRMP/DEIS Map 2.12 is incorrect.

Response: At the scale of the maps, the corridors of the roads that are bounded on one or both sides by the Steens Mountain Wilderness are not visible. These include, but are not limited to, the Steens Loop, Fish Creek, Cold Springs, Newton Cabin, Bone Creek, and Indian Creek Roads. The Limited Seasonally designation refers to these road corridors. Rather than trying to show each of these road corridors individually as Limited Seasonally, the entire Steens Mountain Wilderness and the road corridors are labeled as "Limited Seasonally/Closed" on DRMP/DEIS Map 2.12. However, motorized winter recreation would be allowed by winter recreation permit or SRP on those roads that are identified for such use in the comprehensive recreation plan. Until the comprehensive recreation plan is completed, winter use of seasonally closed roads would continue in compliance with the 1993 Andrews Plan Amendment for Recreation Access Surrounding the Steens Mountain Loop Road and current winter recreation policy.

20 Comment: Explain whether SRMAs decrease off-road motorized vehicle uses.

Response: The establishment of a SRMA does not decrease off-road driving opportunities. Where resource values require protection from the effects of OHV and mechanized vehicle use, appropriate OHV designations are proposed in the various alternatives. Examples of resources that may require protection include wilderness values of WSAs, important and relevant values of existing and potential ACEC/RNAs, scenic values, and ORVs of certain suitable rivers.

21 Comment: While Alternative "D" lists the Cold Springs Road, as a cherry stem there seems to be little written acknowledgment of that road extending to the South Steens Loop Road via the Riddle Ranch.

Response: While the Cold Springs Road does continue through Riddle Brothers Ranch to the South Steens Loop Road below South Steens Campground, a locked gate prevents through traffic. This is described in Section 3.20.1.

22 Comment: Permits should be issued to allow vehicles to drive the Cold Springs Road from the South Steens Loop Road, through Riddle Brothers Ranch, to the North Steens Loop Road.

Response: This is included in Section 3.20.1 and is a management action common to all alternatives under Recreation Objective 4.

23 Comment: The effects of OHV use on snowy plovers nesting on the Alvord Desert playa are not described.

Response: See Special Status Species - Animals comment response 4.

24 Comment: Minimize OHV and mechanized vehicle use in sites with cultural values, rare plants, erodible soils and sensitive biological species (both flora and fauna).

Response: The Proposed RMP protects these types of resource values by restricting or excluding OHV and mechanized vehicle use in specific locations. Throughout the life of the plan, emergency closures would be implemented should conflicts or resource concerns arise.

25 Comment: Move hiking access off the ways in WSAs.

Response: There is no requirement for hikers and horseback riders to travel only on ways in WSAs. They may travel cross-country in WSAs. Additionally, the WSA IMP does not allow the development of new recreational ways or trails, unless there are public health and safety issues or wilderness values are at risk.

26 Comment: The Alvord Desert WSA is incorrectly designated as an OHV and mechanized vehicle play area.

Response: The authority for allowing OHV and mechanized vehicle use of the Alvord Desert playa is contained in the Andrews MFP The following statement can be found on page 28 of the Andrews MFP: "The Alvord Playa would be managed for all legitimate public land uses as well as ORV [sic] use. Recreation vehicles and commercial uses which do not impair the wilderness values of the Alvord [Desert] WSA would be allowed until Congress makes its final determination on wilderness." This statement is a recognition of the fact that OHV and mechanized vehicle use occurred on the playa prior to the FLPMA. OHV and mechanized vehicle use of the Alvord Desert playa does not cause permanent impairment of the wilderness values and does not preclude Congress from eventually designating the area as part of the national wilderness system. The BLM has allowed and proposes to allow this use to continue based on the determination that managed OHV and mechanized vehicle use would not preclude future wilderness designation. Should the Alvord Desert playa be designated as wilderness, OHV and mechanized vehicle use would not be allowed on the playa.

27 Comment: The *Federal Register* notice in Vol.52, No. 34 designated the Alvord Desert WSA as "limited."

Response: This notice also states in B.1 that WSAs "will be managed in accordance with the nonimpairment criteria of the Wilderness Interim Management Policy which allows off-highway vehicle use to continue in the manner and degree on ways and trails where such use was occurring on October 21, 1976. The only exception to this would be the designation of future cross-country travel in specific sand dune, play[a] and snow areas providing that such use does not impair wilderness character." This exception is being applied to the Alvord Desert playa.

28 Comment: Language clarifying vehicle travel in WSAs should be added to 4.23.2.

Response: The information contained in the above two comments has beenadded to Sections 2.23, 3.23 and 4.23.2.

29 Comment: The Alvord Desert WSA/ACEC should be closed to vehicles.

Response: Only the Alvord Desert playa (25,286 acres), not the entire Alvord Desert WSA, has been open to OHV and mechanized vehicle use. The open area is approximately ten percent of the 251,060-acre WSA. The remainder of the Alvord Desert is managed under the current OHV designation of "limited". The Alvord Desert ACEC (17,933 acres), northeast of the playa, is "limited to designated, existing roads and trails." The Alvord Desert ACEC is not the area that is currently available for OHV and mechanized vehicle use (see DRMP/DEIS Map 2-17).

30 Comment: The Alvord Desert playa should remain open for OHV and mechanized vehicle use.

Responses: The Alvord Desert playa would remain open in the Proposed RMP and Alternatives A , and E. The playa would be closed in Alternatives B and C.

31 Comment: Close roads or restrict vehicle access in the Borax Lake ACEC. Wetland and lake shore areas are being damaged.

Response: See Special Status Species - Fish comment response 3.

32 Comment: An access management plan for Borax Lake and the surrounding unique features of the ACEC should be developed and implemented. The access management plan should encourage visitation of these unique resources, but minimize vehicle and associated recreational impacts. Interpretive signs should be posted to explain the unique features of the ecosystem and provide a guide to visiting the area, furthering the public awareness of the Borax Lake chub Recovery Plan. A boardwalk and viewing platform may also be appropriate to limit damage to the fragile Borax Lake and springs ecosystems. In addition, we recommend establishment of a camping closure within 500' of Borax Lake to help eliminate damage to the lake's fragile shoreline and protect aquatic health.

Response: See Special Status Species - Fish comment response 4.

33 Comment: Describe how the proposed expanded seasonal closure on Steens Mountain would affect access to private lands.

Response: Landowners would be allowed reasonable ingress and egress to their private property adjacent to the North Steens Loop Road or the Moon Hill Road through the life of the plan. The *Federal Register* notice regarding winter access (Vol. 45, No. 183, September 18, 1980) which states, "Access into the area by ranchers and private landowners would be authorized by the District Manager for legitimate business purposes if weather conditions permit motorized vehicle travel." would need to be amended to reflect any changes in the seasonal closure area.

34 Comment: The dates of the seasonal road closures on Steens Mountain should be the same as Steens Loop Road closure.

Response: The seasonal closure on Steens Mountain, as it currently exists and is proposed through the alternatives, is an area closure. All public lands within an area closure, including the roads and ways, are closed to motorized vehicles on a seasonal basis. It is not necessary to specifically list or identify the roads closed.

35 Comment: The dates of the proposed Moon Hill Road area closure should be the same as existing Steens Mountain area closure.

Response: The Proposed RMP/FEIS has been modified to include two gates on the Moon Hill Road. The upper gate, ten miles south of the Diamond Grain Camp Road, would be closed when the Page Springs gate is closed. The lower gate, at the Diamond Grain Camp Road, would be closed from February 1 through May 15.

36 Comment: Designate all WSAs as limited seasonally to OHV and mechanized vehicle use.

Response: Seasonal OHV and mechanized vehicle closures are proposed in response to specific health and safety concerns and for specific resource protection issues. A WSA designation, by itself, does not warrant a seasonal closure.

Recreation

Planning Area

1 Comment: SRPs should continue to be issued.

Response: SRPs are managed under 43 CFR 2930 and BLM Manual Handbook H-2930-1 - Recreation Permit Administration (October 7, 2003). In addition, the Burns DO will soon have district SRP guidance. Each permit application will be evaluated on a case-by-case basis. Additionally, if warranted, an allocation system can be developed.

2 Comment: Party size should not be limited outside of the Steens Mountain Wilderness

Response: There are a number of reasons why party size could be limited. They include, but are not limited to, the presence of special status plant or animal species, physical limitations of a site, or compliance with the WSA IMP. SRPs are required for organized groups. The Burns DO will be evaluating permit applications and party size on a case-by-case basis.

3 Comment: An increase in visitors partaking in wildlife viewing and hunting opportunities would contribute numerous dollars to the economy in Harney County.

Response: There are many existing opportunities for wildlife viewing and hunting on public lands in Harney County. Additional Watchable Wildlife sites are not currently planned, but wildlife viewing will be one activity considered in the development of area management and site specific recreation plans. Hunting is managed by the ODFW and is beyond the scope of this DRMP.

4 Comment: Educate public land users to mitigate their negative impacts.

Response: The BLM would continue its public outreach efforts to communicate responsible uses and safety while visiting public lands, and to provide appropriate literature and other venues to inform land users how they can lessen effects to public resources. The use of programs such as “Leave No Trace” and “Tread Lightly” is an element in all of the alternatives.

5 Comment: Weed-free feed should be required for all stock users.

Response: See Noxious Weeds comment response 3.

6 Comment: All stock (cattle, horses, mules, burros, llamas, goats) should be groomed to ensure that weed seeds are not introduced.

Response: See Noxious Weeds comment response 4.

7 Comment: Information on the amount of chukar hunting should be included in the recreation section.

Response: The ODFW does not have hunter days of chukar hunting readily available. A statement has been added to Section 3.20.1. to reflect the importance of chukar hunting in the Planning Area.

8 Comment: The effects of other resource management actions on recreation are not discussed.

Response: The effects of other proposed resource management actions on recreation are described in the *Indirect Effects* discussions in Section 4.20.4.

9 Comment: Safety should be a consideration when determining development of new recreation areas. Fire-prone locations and other hazards make visitor rescues by local public agencies difficult and expensive.

Response: Harney County is a cooperating agency with the BLM and has had the opportunity to participate, through review and comment, in all parts of the DRMP development process. Issues such as fire safety and natural hazards would be addressed and mitigated as practical during a recreation site’s design, development and maintenance, with public input requested to help identify and minimize effects to visitor safety as they participate in associated recreation activities. Short of prohibiting most dispersed recreation activities, associated natural hazards and personal risks taken when participating in such activities may result in occasional emergency rescue efforts. Public awareness and informational outreach efforts provided by the BLM, private organizations, and other government agencies are venues for informing visitors of their personal responsibility to conduct their recreational pursuits in a safe manner.

10 Comment: Any new recreation developments need to be consistent with local planning and zoning.

Response: Harney County has had the opportunity to review and comment on the proposed management actions. No specific comments have been received concerning the consistency or inconsistency of any proposed recreation development in the Planning Area.

11 Comment: Aircraft should be allowed to land on public lands.

Response: Aircraft use in the Planning Area would be managed on a case-by-case basis and in conformance with land use restrictions (such as prohibitions within wilderness areas) and state law.

CMPA

12 Comment: Manage commercial recreation and large public outings to protect the wilderness experiences of all wilderness users.

Response: The BLM currently manages these commercial and organized group activities through the SRP program. When an existing permittee notifies us of a scheduled activity or when a permit application is received, the activity and location are entered on a master calendar. This calendar is used to monitor the number of groups and their locations, and to suggest alternate dates and locations for a proposed activity, thereby allowing the group or permittee to decide how many other people they wish to encounter. Also, group size limits are proposed for Steens Mountain Wilderness.

13 Comment: Existing special recreation permittees should have preference over new applicants.

Response: The Steens Act recognizes historic uses of the CMPA. The Steens Act also allows the renewal of existing SRPs in the Steens Mountain Wilderness when the permit is consistent with the Wilderness Act. At present, there are no limitations on the number of outfitted trips or organized groups. Should an allocation system be needed in the future, this issue would be addressed.

14 Comment: Trail users should not be restricted to designated trails.

Response: The management action concerning the restriction of use to designated trails refers to use only at the overlooks.

15 Comment: Recreation use on the Steens Loop Road detracts from wilderness experiences and degrades the wilderness.

Response: The Steens Loop Road is an open road and motor vehicle use is allowed on it, even if wilderness users' experiences are affected, as long as the wilderness itself is not physically affected.

16 Comment: Clarify what is meant by "recreational river use."

Response: The term "recreational river use" has been replaced by "nonmotorized boating".

17 Comment: Do not allow large group encampments.

Response: At present, some groups camp on the private lands between Fish Lake and the Jackman Park gate. The lands are not subject to BLM jurisdiction. Other groups occupy two or more campsites in the developed campgrounds. In an effort to better manage the existing group use of Steens Mountain, a variety of alternatives have been proposed. However, the Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

AMU

18 Comment: Expand the Pueblo Mountains SRMA north to the Catlow Valley Road and west to the Oregon End Table and Funnel Valley Roads.

Response: Recreation use in these additional areas is very limited and very dispersed. These areas do not have the qualities and use that are needed for designation as a SRMA.

19 Comment: The Pueblo and Trout Creek Mountains areas should continue to be managed as part of the Andrews ERMA.

Response: In recent years, the Pueblo and Trout Creek Mountains have received increasing recreation use. The BLM expects this use to continue to grow, thereby requiring more intensive management. Identified concerns are area-wide issues and require more than site specific responses and basic stewardship.

20 Comment: Trailheads should not be developed for the Desert Trail.

Response: Development of Desert Trail facilities would be considered and analyzed in a separate project level plan and environmental document when there is demonstrated public interest.

FACILITIES

Planning Area

21 Comment: Lakes, campsites, and campgrounds should be developed.

Response: Developments on public land within the CMPA are limited by the Steens Act. However, the Proposed DRMP states that any additional CMPA facilities to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed. The AMU would be managed primarily for dispersed recreation with minimal recreation developments at sites where health and safety or resource concerns exist.

CMPA

22 Comment: The horse staging area and connecting trails should not be constructed.

Response: These facilities are proposed to resolve current resource and safety issues, to reduce congestion at existing trailheads, and to manage existing recreation use. However, the Proposed DRMP states that any additional CMPA facilities to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

23 Comment: Pullouts along the Steens Loop should be only to reduce resource damage in existing disturbed areas.

Response: The Proposed DRMP states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

24 Comment: Vehicle access to Riddle Brothers Ranch should be described. The current restrictions on vehicle access should be continued.

Response: This language has been added to Sections 2.20.1.2 and 3.20.1.

25 Comment: Recreation facilities on the Steens should be kept to the minimum necessary.

Response: Proposed recreation facilities would be the minimum necessary to provide for visitor health and safety and to protect resources. The Proposed RMP/FEIS states that any additional CMPA facilities to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

26 Comment: The Fir Grove Trail should be designated and developed.

Response: The Proposed DRMP states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed. This plan would include language to allow trails to be developed where there is a demonstrated public interest. Any specific trail proposal would be subject to interdisciplinary review and environmental analysis.

27 Comment: Lily Lake needs to be managed more intensively or closed to camping.

Response: The Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

28 Comment: There should be a shuttle service to ferry people up the mountain.

Response: Almost all visitors to the area drive their own motor vehicles. The BLM has no plans to offer or contract such a service. However, there are several special recreation permittees who offer tours of Steens Mountain and the surrounding area.

29 Comment: Overlook trails should be accessible.

Response: Accessibility at the overlooks would be addressed in a site-specific plan. However, the Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

30 Comment: Parking along the Steens Loop Road should be allowed only in the disturbed area of the roadway.

Response: Currently, many areas adjacent to the Steens Loop Road are commonly used for parking. To require the public to park on the roadway would be unsafe, create hazards, and cause congestion along the road.

31 Comment: The Black Canyon Gate on the South Steens Loop Road should be moved to the Steens Mountain CMPA sign near Highway 205.

Response: The location of the Black Canyon Gate allows some winter use, particularly chukar hunting, of lower Steens Mountain. The gate is also in a location that physically inhibits vehicular traffic around the gate. To move the gate lower on the South Loop Road would not be practical because the fences could be cut and the gate easily bypassed.

32 Comment: Trailhead facilities are needed to address congestion, safety, and resource protection issues.

Response: The Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

33 Comment: Turnouts along the Steens Loop Road should be big enough to accommodate up to 6 horse trailers.

Response: To create parking areas of the size suggested would cause more disturbance and would be more than needed to accommodate the existing use of the area. The Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

34 Comment: New trails should be allowed outside the Steens Mountain Wilderness in order to meet recreational demands and to protect the wilderness.

Response: The Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed. This plan would include language to allow trails to be developed where there is a demonstrated public interest. Any specific trail proposal would be subject to interdisciplinary review and environmental analysis.

AMU

35 Comment: The Wildhorse Canyon staging area should not be developed.

Response: There is very limited public access to the east side of the Steens and this parcel of land was specifically retained to provide for public access to adjoining public lands during a land exchange. Identification of the parcel of public land as a staging area, which connects the Steens Mountain Wilderness to the Penland Road, would allow public access in this area. The design of any facilities would be addressed in a separate environmental analysis.

36 Comment: Limited facilities should be planned for Little Cottonwood Creek in the Pueblo Mountains.

Response: Little Cottonwood Creek is located in the Pueblo Mountains WSA. Any development or facilities would be subject to analysis under the WSA IMP. The proper location for this type of analysis would be a Recreation Area Management Plan or a site specific Recreation Project Plan.

37 Comment: Maintain the primitive character of the AMU. Do not add large developments.

Response: No large developments are planned or anticipated in the AMU, but there are several areas with health and safety concerns or continuing resource damage. These issues could, and should, be addressed with the minimum facilities necessary to accommodate the existing recreation use. Site specific plans and environmental analyses would be completed in the future.

38 Comment: The BLM, in conjunction with the Oregon State Parks, should plan for and construct a wayside/rest area at the Frenchglen corrals.

Response: The BLM has considered this option. However, the community of Frenchglen does not currently demonstrate wide support. Should community support change in the future, the BLM will participate to the extent possible.

39 Comment: An interpretive site should be located at the top of P Hill, west of Frenchglen.

Response: This type of project would be evaluated and analyzed in a site specific plan and environmental analysis; or within the CMPA comprehensive recreation plan if the project is determined to be viable. It is not an DRMP level decision.

WINTER RECREATION

40 Comment: An indicator should be developed to respond to snowmobile trespasses into the wilderness or WSAs.

Response: This is addressed in the Steens Mountain Wilderness and WSR Management Plan. These uses will be monitored and will be adjusted if monitoring indicates wilderness violations.

41 Comment: Winter access for motorized vehicles should not be expanded or allowed beyond Kiger Overlook.

Response: The Proposed RMP/FEIS states that any additional CMPA actions to accommodate or manage recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed. Winter recreation would be monitored and adjusted if monitoring indicates wilderness or WSA violations.

42 Comment: Winter travel on the Steens should remain by special permit.

Response: The present winter recreation program and permit system would continue until a comprehensive recreation plan for the CMPA is prepared after the DRMP is completed.

43 Comment: A description of how the BLM would manage snowmobile use on Steens Mountain should be added to the EIS.

Response: A description of the winter recreation program and guidelines has been added to Section 3.20.1. These guidelines would continue to be implemented. These guidelines address the possible effects to wintering mule deer along the first six miles of the North Steens Loop Road. As part of the management of the winter recreation program, motorized and nonmotorized users are scheduled for different weekends. To assist in this scheduling, the BLM inquires as to the preferences of nonmotorized users. The Proposed RMP/FEIS states that any additional CMPA actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed.

44 Comment: The Steens Loop Road should be closed to snowmobiling.

Response: The elimination of snowmobile use on Steens Mountain is considered in Alternatives B and C. However, the Steens Act recognizes historic uses of the CMPA. In the Proposed RMP/FEIS, limited snowmobile use would continue under the current permit system, as described in Section 3.20.1, and can be further restricted at any time should an emergency OHV use closure be necessary.

45 Comment: A larger area should be designated as snowmobile free.

Response: Snowmobiles are currently excluded from all WSAs and the Steens Mountain Wilderness, so a large area that is "snowmobile free" already exists. Snowmobile use is currently restricted to the North Steens Loop Road and to two side roads when accompanied by a permit holder or member in good standing of the local snowmobile club.

46 Comment: Snowmobiles should not be allowed to affect the experiences of nonmotorized winter recreationists.

Response: As part of the management of the winter recreation program, motorized and nonmotorized users may be scheduled for different weekends. To assist in this scheduling, the BLM inquires as to the preferences of nonmotorized users.

47 Comment: The effects of motorized winter use on the Steens should be described.

Response: Snowmobiling is a historic use of Steens Mountain and, therefore, is allowed to continue. Motorized winter recreation is currently limited to three existing roads on the mountain, as described in Section 3.20.1. This use is very limited; therefore, the effects are not substantial. The effects of motorized winter recreation on other resources are described in the Indirect Effects sections of those resources.

48 Comment: The effects of helicopter skiing should be analyzed.

Response: Helicopter skiing had been included in one SRP holder's Operating Plan, but this activity is no longer offered. This permittee's current Operating Plan was recently described and analyzed in Environmental Assessment EA-OR-020-02-38.

49 Comment: The effect of the winter recreation program on wintering mule deer should be discussed.

Response: Information on the current winter recreation permit system has been added to Section 3.20.1. The existing management guidelines with regard to the number of wheeled vehicles allowed through deer winter range will continue to be used. Wintering mule deer were observed on seven of the last 17 winter recreation monitoring trips. Only one of those seven monitoring reports mentioned that some of the deer observed had been disturbed by the vehicle.

50 Comment: The BLM should continue monitoring winter motorized use.

Response: This language is in Section 2.20.2. The indicator and actions developed for the Steens Mountain Wilderness and WSR Management Plan will be implemented.

51 Comment: The winter recreation program, as it is described in the 1993 *Andrews Plan Amendment for Recreation Access Surrounding the Steens Mountain Loop Road*, should be Alternative A, not the use that is currently allowed.

Response: Information on the current winter recreation program has been added to Section 3.20.1. The currently allowed snowmobile use is not precluded by the MFP.

52 Comment: The Cold Springs Road should be open for motorized winter recreation, especially when conditions higher on the mountain are unsafe.

Response: Historic permitted use during the winter limited snowmobiles to specific routes, and Cold Springs Road beyond Nye Cabin was not part of this historic permit. The SMAC considered this proposal, but did not recommend it. Use of the Cold Springs Road would be allowed in emergency situations to save lives, but not for touring or play, and such use would be rigorously monitored.

53 Comment: BLM should develop cross country skiing and snowshoeing routes through the WJMA.

Response: The Proposed RMP/FEIS states that any additional CMPA facilities or actions to accommodate or manage the existing recreation use would be addressed in a comprehensive recreation plan that would be prepared after the DRMP is completed. The development of cross-country skiing and snowshoeing trails would be considered in the comprehensive recreation plan. if there is demonstrated public interest.

54 Comment: Cooperative Management Agreements should be used for implementing and monitoring the winter recreation program.

Response: There is currently an agreement in place with the local snowmobile club, but there has been no club activity on Steens Mountain since the passage of the Steens Act. This agreement needs to be updated. Other opportunities for cooperative management will be explored and are encouraged by the Steens Act.

Areas of Critical Environmental Concern

1 Comment: The Alvord Desert ACEC should be expanded to include the desert playa.

Response: The proposal to expand the Alvord Desert ACEC to include the entire playa was reviewed by an ID team. It was decided that the ACEC should be expanded to include two parcels on the edge of the playa that were state land when the area was designated in 1983, and an area in the southeast corner of the ACEC, containing a large Wyoming big sagebrush flat. The ACEC already contains several hundred acres of playa margin community on the west boundary, which satisfies the ONHP requirement. The relevant and important values of the ACEC are wholly contained within this boundary of the ACEC and are not necessarily under greater protection with the inclusion of the Alvord Desert. The Alvord Desert is also within the Mineral Withdrawal Area, which provides protection from energy and minerals activities.

2 Comment: The Buck Buttes area should be added to the Long Draw RNA/ACEC to protect the intermittent stream, make a more natural boundary and add additional diversity to the area.

Response: The proposal to expand the Long Draw ACEC to include the Buck Buttes area was reviewed by an ID team. It was decided that, even though the proposal was a unique area, it did not contain the same key elements associated with the Long Draw ACEC, which is a big sagebrush/Indian ricegrass/needle and thread and needlegrass plant community. Consequently, the expanded area did not contain the relevant and important values needed for the area to become part of the RNA/ACEC.

3 Comment: The East Fork Trout Creek Proposed RNA/ACEC should be expanded to include the upper basin to create more ecologically sensitive boundaries and make it more manageable.

Response: The proposal to expand the East Fork Trout Creek proposed RNA/ACEC was reviewed by an ID team. It was decided that the 361 acres proposed for the RNA/ACEC covered all of the key (relevant and important values) elements and that making the entire basin an ACEC was not necessary. Protection from grazing is not a concern because of the present grazing system that has been established there.

4 Comment: The Guano Slough area did not get considered as an RNA/ACEC in the Draft Plan.

Response: The Guano Slough proposal was reviewed by an ID team and it was decided that the site did not meet the relevance and importance criteria. The site contained a good stand of silver sagebrush, but the basin wildrye component was lacking.

5 Comment: It is important to retain protection of Pickett Rim since it contains habitat of birds of prey including nesting grounds. This particular ACEC is located in zone 2, which means it could be exchanged which could lead to endangerment of the birds of prey habitat.

Response: The Pickett Rim ACEC was reviewed by an ID team and it was determined that the density of nesting raptors in the rims was not significant enough to maintain this area as an ACEC. Raptors routinely are protected in all areas of the Planning Area through stipulations applied to leases or permits, and no additional protections are specifically provided by ACEC designation. The relevant and important values were not present, so the ID team recommended that the designation be removed.

Wilderness

1 Comment: The wilderness management plan should not be included in the Steens/Andrews DRMP.

Response: . The Steens Mountain Wilderness is contained completely within the CMPA which has certain mandates that are required by the Steens Act of 2000. One mandate in Section 111(b) (Management Plan) states, "Within four 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 CMPA, including the Wilderness Area". In other words, the wilderness management plan is required to be written as part of the overall CMPA plan. The Steens Mountain Wilderness and WSR Management Plan's proposed management actions are in the Proposed RMP/FEIS but the proposed wilderness management plan would function as a separate and freestanding document and is an appendix to the Proposed RMP/FEIS. BLM Manual 8561, "Wilderness Management Plans", in Section .07, "Concept", also states that management direction in formulating wilderness management plans comes from, but is not limited to, the DRMP process.

2 Comment: "It should be stated that no Action or text applies to Wilderness except those in the Wilderness section."

Response: Because of the interrelationships between resources, information relating to wilderness appears in other resource sections of the document, . Wilderness related information does not appear solely in the Wilderness sections of the Proposed RMP/FEIS.

3 Comment: All open cherrystemmed roads in Steens Mountain Wilderness should be closed.

Response: The legislative map, which is a legal attachment to the Steens Act, identifies certain roads within the wilderness as designated open. Some alternatives in the Proposed RMP/FEIS analyze the closure of a portion of the open roads within the wilderness.

4 Comment: The two different management/monitoring areas or 'zones' proposed for Steens Mountain Wilderness should not allow degradation of one area over the other. The BLM must not allow for a moderate degree of solitude. And… if wilderness zone management occurs then show in the Wilderness Act or the Steens Act where it is permitted to deviate from stewardship responsibilities for different portions of the wilderness. "I urge you to consider an additional zone for the less-used canyons which would preserve the remote and more pristine experiences found there. Wilderness designation is supposed to prevent future degradation of conditions."

Response: The proposed Management Areas for the Steens Mountain Wilderness are based on use of the area since its designation as wilderness. The Gorges Management Area is the most popular attraction and destination in the Steen Mountain Wilderness and receives the most visitor use, especially Little Blitzen and Big Indian Gorges. The Uplands Management Area (all areas in the wilderness other than the five gorges) has less visitation, shows fewer signs of visitor use, and offers more solitude.

BLM Manual 8560, "Management of Designated Wilderness Areas", states the following: "In developing wilderness management plans, the concept of stratification or zoning between wilderness areas or within individual areas should be considered as a means of achieving management objectives or providing different experiences and opportunities." The Manual also recognizes that variations in the level of naturalness, solitude and types of primitive recreation exist in wilderness and that zoning can help wilderness managers achieve objectives, protect resources, and satisfy user demands and expectations.

5 Comment: "BLM should remove the statement in 2.22.2.1.2 about permits not currently being planned. This unnecessarily limits management options."

Response: The fact that permits are not currently planned does not preclude their issuance in the future.

6 Comment: "BLM appropriately states that it must determine carrying capacity, per Manual 8560 (.08.B.5 and .14C), in order to ensure that Wilderness recreationists will enjoy their Wilderness experience". And… "We suggest you conduct a study using the Leave No Trace organization to find out what is a sustainable carrying capacity".

Response: The DRMP/DEIS inappropriately used the term carrying capacity rather than use capacity. BLM Manual 8560, "Management of Designated Wilderness Areas", states in Sections .08.B.5 and .14C that the BLM must determine use capacity. Use capacity is very different from carrying capacity. Carrying capacity is a dated recreation planning process that deals with the number of visitors to an area which could be accommodated without causing unacceptable levels of resource and social impacts. Use capacity recognizes that visitor behavior, site resiliency and resistance, type of use, and timing of use are more important in determining the level of effects rather than only the amount of use an area receives. This has been confirmed by over 2,000 studies of social and resource impacts in wilderness across the country.

"Wilderness Planning, a Framework for Developing Wilderness Management Direction", the text developed and used by the Arthur Carhart National Wilderness Training Center for teaching wilderness planning to Park Service, Forest Service, BLM and Fish & Wildlife Service employees states:

> "The shortcomings of the carrying capacity approach became apparent. Foremost was recognition that searching for a single number was an elusive and probably impossible task. Second, by focusing on determining how many visitors an area could accommodate, managers lost sight of what they were trying to achieve (goals and objectives). Third, if you assume that there is a linear relationship between use and impact, your only management option is to reduce use when there is a problem."

The monitoring process developed and used for Steens Mountain Wilderness considers all aspects of the use capacity concept listed above and engages multiple indirect and direct management options in three different levels (some of which are listed in BLM Manual 8560, .3 A., "Visitor Management") needed to prevent degradation including limiting the amount of visitor use.

Leave No Trace is an outdoor ethics education organization and does not conduct wilderness carrying capacity studies.

7 Comment: It is difficult for the public to understand how Level I, II and III management options, guidelines, standards, indicators and conditions all fit together in the Steens Mountain Wilderness Management Plan. The management plan seems to be incomplete and lacking information on this issue.

Response: The proposed wilderness management plan is displayed in Appendix U of the Proposed RMP/FEIS . Additional management issues are analyzed in the proposed plan. The wilderness monitoring plan has been incorporated into the Proposed RMP/FEIS to show how social and resource monitoring may affect changes in management options. The changes made in the proposed wilderness management plan make it more responsive to public comments.

8 Comment: Change Objective 1 under Goal 1 to, "Manage the Wilderness to recognize areas of differing past levels of resource use, yet assure all provide outstanding opportunities for solitude or primitive and unconfined recreation."

Response: The language for this objective has been changed to read, "Manage public visitation in the wilderness to provide outstanding opportunities for solitude and primitive and unconfined recreation and naturalness and other features including ecological, geological, scientific, educational, scenic and historic."

9 Comment: "There should be an Objective 2 that breaks out those Actions addressing 'naturalness' using similar language as Objective 1."

Response: This was incorporated into Goal 1, Objective 1.

10 Comment: Additional management issues and action items need to be addressed in the Steens Mountain Wilderness Management Plan. Such issues may include research, Native American uses, religious uses, trapping, prohibited sporting activities, fire management, weed management, wildlife management, as well as other pertinent issues involving wilderness management and nonconforming uses.

Response: The text displayed in the DRMP/DEIS outlined proposed management actions for Steens Mountain Wilderness. Several more management issues have been added and analyzed in the Proposed RMP/FEIS in response to comments.

11 Comment: The BLM needs to use the 'Minimum Requirement Decision Guide' (formerly called a 'minimum tool analysis') for determining any needed maintenance, construction or project work in Steens Mountain Wilderness. Any project work, construction or maintenance work projects needed in the Wilderness must be the minimum amount necessary for the administration of the area and for preserving the wilderness character of the area. Projects such as trail maintenance, weed control, trailhead facility development, signing, fire management, and many others, should be analyzed by this method.

Response: The proposed Steens Mountain Wilderness Management Plan now includes the "Minimum Requirement Decision Guide". The guide is a two part process developed by the Arthur Carhart National Wilderness Training Center for use by managers in making management decisions related to administrative actions in wilderness. The first part of the decision guide is used to determine if the proposed action is needed. If the decision is made to proceed, the second part of the decision guide analyzes which tool/action/method will minimize the negative impacts to wilderness character and values.

Project work should be the minimum necessary to preserve the wilderness resource or for the health and safety of the visitor as noted in BLM Manual 8560, "Management of Designated Wilderness Areas" in Section .1, part .13. This section of the BLM Manual also lists some but not all acceptable tools.

12 Comment: The BLM needs to clarify the continued existence of Nye Cabin and other buildings in Steens Mountain Wilderness and not just assume these structures may remain. And, that existing or future improvements and/or maintenance of such buildings must be justified as historic or required for visitor safety or resource protection as per direction from BLM Manual 8560 Section .31.B.1. Nye Cabin and other buildings in the Wilderness must be analyzed in the Andrews/Steens DRMP or in a forthcoming Environmental Assessment (EA). The BLM should not assume that Nye Cabin will remain and should change the language in Goal 2, Action 1 from 'would' to 'could'.

Response: BLM Manual 8560 in Section .16 A "Condition for Retention" directs the BLM to inventory and evaluate existing structures for purpose and need and historic significance. This section further states that if the structure does have historic significance it may be retained. If the structure does not have historic significance it may be maintained for continued use if it is the minimum necessary for human health and safety or for protection of the wilderness resource.

The Burns District archaeologist plans to conduct a survey of buildings in the Steens Mountain Wilderness in the future. This analysis would lead to a determination and evaluation of the historic significance of those particular structures. BLM Manual 8560 gives no direction that this analysis needs to be addressed in either the DRMP or an EA. However, any federal actions to remove or restore these structures may require environmental analysis.

Section .32 "Cultural and Historic Resources," in BLM Manual 8560 subsection A, states that historic sites are a unique part of the wilderness resources and lists some of the laws by which they are protected. Subsection D ("Retention of Historic Features") of the same section says that some structures may qualify for retention as historic features or under the minimum tool policy. If structures are not of a historic nature they can be removed or allowed to deteriorate naturally. The language in Goal 2, Action 1 has been changed from would to could so as not to assume that Nye Cabin may be retained without proper evaluation.

13 Comment: BLM must specify that prescribed burns would be allowed only to achieve resource objectives that would re-establish natural conditions and retain the natural characteristics of the ecosystem. No motorized equipment or mechanized transport should be used or their use must be restricted and carefully monitored.

Response: Prescribed fire is allowed in designated wilderness per BLM Manual 8560 Section .35, subsection A, "Fire Management", part 3. The manual states that prescribed burning by agency personnel is allowed on a case-by-case basis for certain purposes s , such as to reintroduce or maintain the natural condition of a fire dependent ecosystem. Specific decisions that would potentially authorize motorized equipment or mechanical transport would be considered in the MRDG.

14 Comment: There should be an Objective 2 for interagency coordination for allowing the use of motorized or mechanized equipment and transport under circumstances such as search and rescue, wildlife management, horse gathers, predator control, etc.

Response: Interagency coordination for both emergency and nonemergency uses occurs on a routine basis and is not an DRMP decision. Such management activities and actions are considered in the proposed wilderness Management plan (see Appendix U).

15 Comment: "This RMP/EIS should establish criteria for allowing mechanized transport and motorized equipment by ranching operations in the Steens Mountain Wilderness, upon which all EAs addressing specific ranches should be based, not the other way around. RMPs do not tier to EAs on projects."

Response: The rancher and inholding access issues are not DRMP level decisions. Such issues were in need of resolution and analysis prior to the completion of the DRMP. Completed components are included in the proposed wilderness management plan in Appendix U. If changes occur in the Final RMP, EAs will be written for such operations and activities to analyze implementation of the changes.

16 Comment: A'needs analysis' is required for all commercial services operating in the Wilderness.

Response: Outfitters, guides and packers and similar commercial services may be provided within wilderness to the extent necessary for activities which are proper for realizing recreational and other wilderness purposes according to BLM Manual 8569 Section .15 subsection I "Commercial Services"**.** A needs analysis is not required in the Proposed RMP/FEIS**,** but would be prepared as required or necessary for new SRPs. Historic commercial recreation permits are authorized under the terms of the Steens Act and a needs analysis is not required for these.

17 Comment: Action 1 under Goal 3, Objective 2 needs to be changed to add the language, 'no permanent camps allowed' for SRP permittees and outfitter guide operations.

Response: The installation, erection or building of temporary or permanent structures is prohibited by 43 CFR 6302.20 (f) except for overnight use, or camping within the recognized length of stay limit in the wilderness.

18 Comment: Create an additional Action item under Goal 3, Objective 2 regarding conflict and coordination between large groups and outfitter/guide trip schedules.

Response: A management action regarding scheduling and coordination of large groups and outfitter/guide trips has been added. The statement reads, "The BLM would try to avoid crowding and user conflicts by informing large groups and outfitter/guides of each other's plans."

19 Comment: RMPs do not tier to EAs. The BLM needs to establish criteria for inholder access.

Response: Inholder access to private lands within the wilderness is not an DRMP level decision and has been an ongoing issue which needs to be addressed regardless of the schedule for completion of the DRMP. The EA regarding this issue has been in development and may be completed before the DRMP is final. Should the DRMP change any overall constraints to access, the access EA and decisions would need to be updated to ensure conformance with the DRMP.

20 Comment: Add additional action item under Goal 3, Objective 3 stating BLM should purchase or exchange private inholdings in Steens Mountain Wilderness.

Response: This action is covered by Title I, Section 114 of the Steens Act, and is addressed in the Lands and Realty section of the Proposed RMP/FEIS.

21 Comment: The first four 'provisions' listed on page 3-63 are not from BLM Manual 8560 as stated but from BLM Manual 8561, Appendix 1 and are referred to as 'goals' of wilderness management planning. Statement number 5 from page 3-63 is from the Code of Federal Regulations and is out of place with the other goals/provisions.

Response: The statement on page 3-63 of the DRMP/DEIS has been changed (see section 3.22).

22 Comment: On pages 3-62 and 4-234, additional documents regarding BLM's wilderness administrative direction should be listed. These include BLM Manuals 8560 and 8561. And as noted in BLM Manual 8561 Section .07, the BLM should refer to chapter 8 of Wilderness Management for guidance.

Response: Additional administrative policy, directives, regulations and authorities regarding the BLM's management of wilderness areas have been added to the existing list (see Section 3.22).

23 Comment: On page 3-63 of the Andrews/Steens Draft DRMP, change the reference of CFR 6310 to CFR 6302.2.

Response: Reference to CFR 6310 on page 3-63 of DRMP/DEIS has been changed to CFR 6302.2.

24 Comment: Remove term 'mechanized vehicle' from Andrews/Steens DRMP glossary and add definitions for 'motor vehicle', motorized equipment' and 'mechanical equipment' and state that 'mechanical equipment' is not prohibited in wilderness.

Response: The term 'mechanized vehicle' in the DRMP glossary pertains only to the OHV and mechanized vehicle designations. Definitions for motor vehicle and motorized equipment/mechanized equipment have been added to the glossary.

25 Comment: "Instead of writing a plan with built in triggering points for permitting further degradation, the BLM is required to first assess the existing level and quality of Wilderness characteristics present at the time the land was designated." And… "Unless I am mistaken, I do not believe the BLM has ever done the work necessary to determine baseline conditions." And… "You might wish to consult with your Wilderness Management handbook or ask the folks at the USFS for some guidance."

Response: Beginning in 1998, the BLM began a basic inventory of campsites in the gorges of Steens Mountain and along the Donner und Blitzen River, including photo documentation. Files were developed for each campsite. The inventory process was extended to other areas of the Steens Mountain vicinity, becoming more defined and detailed each year as knowledge of the area is gained and more is learned about the inventory process. During 2002, a monitoring process was developed which used the widely accepted modified Cole monitoring form as well as site photo documentation and GIS coordinates for each campsite.

In 2003, the BLM initiated a complete inventory of all campsites that could be located within Steens Mountain Wilderness during the 2003 and 2004 field seasons and it was decided that these campsites would be inventoried and monitored using the modified Cole process. The data collected during 2003 and 2004 would then be used as the baseline from which all future annual monitoring within Steens Mountain Wilderness would occur. A thorough reconnaissance of the Steens Mountain Wilderness added several campsites to the inventory. During the 2003 field season, all campsites in the wilderness were checked and monitored twice, once early in the season and once at the end of the field season. The monitoring form was modified slightly so it would be compatible with the proposed wilderness management plan.

The SMAC also requested a change in direction in the wilderness management plan to accommodate flexibility to keep it from becoming unnecessarily restrictive in nature. The SMAC also requested that hard and fast indicators, which would immediately trigger a restrictive management action by the BLM, not be used. After reviewing a number of BLM

and Forest Service wilderness management plans a proposed plan was developed using, as a template, the wilderness management plan of the San Juan-Rio Grande National Forests, which is the administrative base for five wilderness areas in Colorado . The San Juan-Rio Grande National Forests plan and the proposed plan use monitoring to track percentages of change for an area which can initiate mitigation at three different levels before restrictions are enforced. Restriction and control would be used only as needed.

BLM Manual 8560, "Management of Designated Wilderness Areas", (Section .2, subsection .21, part B) requires that wilderness management plans have flexibility in order to reflect changes in wilderness condition and use. Manual 8560 (Section .08, subsection A, part 4) further recognizes that some level of change in conditions will occur from most uses but managers must determine what human-caused changes can be allowed without causing degradation, thus the need to establish the monitoring baseline. The monitoring and the wilderness management plans may be further developed and expanded in the final version of both documents. The monitoring plan may include monitoring of factors such as naturalness and the wilderness management plan include more management issues.

26 Comment: "Including the modified Cole report and any other reference material with regard to wilderness monitoring and campsite evaluation appendices would be helpful/important."

Response: The proposed wilderness management plan, including the complete monitoring plan, are included as Appendix U in the Proposed RMP/FEIS.

27 Comment: A detailed map of Steens Mountain Wilderness needs to be included in the RMP/wilderness management plan.

Response: A map of the wilderness is included in the proposed wilderness management plan (Appendix U) showing boundaries, open roads, trails, and trailheads.

28 Comment: Alternatives used in the DRMP are inappropriate for wilderness analysis and have no relationship to the statutory mandate to preserve and manage wilderness character.

Response: The NEPA states in Section 102 ©) (iii) that any proposed action, such as those shown in the DRMP/DEIS, must analyze alternatives. Additionally, the CEQ requires all environmental impact statements to assess an adequate range of alternatives as stated in 40 CFR 1502.14. The BLM recognizes that not all of the alternatives' themes used in the Proposed RMP/FEIS may be completely appropriate to wilderness. Yet, Steens Mountain Wilderness is contained completely within the boundary of the CMPA which has mandates required by the Steens Act. One mandate in Section 111 (b) "Management Plan" states, "Within four 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 CMPA, including the Wilderness Area." In other words, the wilderness management plan is required to be written as part of the overall CMPA plan and is subject to the range of alternatives for purposes of analysis and comparison.

29 Comment: "Mechanized or motorized equipment should be allowed for purposes related to grazing."

Response: Both the Wilderness Act and the Steens Act allow for grazing to continue in both the CMPA and portions of the wilderness. BLM Manual 8560, Section .1, subsection .15, part G., "Livestock Grazing" states that where grazing is not precluded and where it existed prior to wilderness designation, it may continue subject to BLM grazing regulations in CFR 4100 and House Report 96-1126, "Grazing in National Forest Wilderness Areas". The manual also gives extensive direction under subsection .37, "Rangeland Management", which provides direction in several parts and sub-parts for the use of mechanical and motorized equipment and transport for grazing management in wilderness. While such uses are allowed, policy directs that use should be the minimum necessary to achieve the objectives of grazing management and impacts be kept to a minimum. House Report 101-405, Appendix A gives further direction for allowing the use of motorized equipment for the maintenance of range improvements relating to grazing.

30 Comment: Predator control activities are not conducive to protecting the natural conditions mandated by the Wilderness Act and should be banned in Steens Mountain Wilderness.

Response: BLM Manuals 8560 and H-8560-1 give direction for predator control within wilderness. It is preferred that predators be allowed to play a role in the natural selection and survival processes within wilderness. However, there are instances where predator control may be needed to protect federally listed threatened or endangered species, to prevent the spread of diseases and parasites, to prevent the serious loss of livestock or to control nonindigenous species. Under such circumstances, acceptable lethal and nonethal control methods may be implemented by some state or federal agencies pursuant to cooperative management agreements or MOUs.

31 Comment: How will the BLM control snowmobile use on Steens Loop Road and keep snowmobiles restricted to the designated corridor? And how will snowmobile use on the Steens Loop Road be monitored?

Response: Standards, guidelines and management options have been added to the Proposed RMP/FEIS which deal specifically with unauthorized motor vehicle intrusions into the Steens Mountain Wilderness, including snowmobiles.

Unauthorized motor vehicle use within the Steens Mountain Wilderness would trigger management options which may lead to the restriction of certain types of recreational activities in areas near the wilderness.

The BLM has implemented both a winter recreation and unauthorized motor vehicle intrusions monitoring program for the Steens Mountain Wilderness. Part of the wilderness monitoring plan includes the winter recreation use permit system for Steens Loop Road. An individual obtaining a permit to use the Steens Loop Road receives information that snowmobiles and other motorized vehicles are not allowed within the Steens Mountain Wilderness, and receives maps showing the wilderness boundary . The Steens Loop Road is marked by orange snow poles which are maintained throughout the winter recreation season.

Further monitoring includes patrols of Steens Loop Road by BLM personnel to check on snowmobile use and to look for intrusions into the wilderness by snowmobiles or other unauthorized motor vehicles. Parameters have been developed in the proposed wilderness management plan where a set number of violations by snowmobiles into the wilderness will require the elimination or reduction of snowmobile use on the Steens Loop Road, the Cold Springs Road to Nye Cabin, or the Dingle Creek Road.

32 Comment: Group size limits for commercial and non-commercial groups should be the same. There should be no exceptions for 'historic uses'.

Response: Group size limits would be set at the same level for commercial and noncommercial users in the Steens Mountain Wilderness. Exceptions to this are some historic uses which existed prior to the designation of the wilderness and were recognized by Congress, including one SRP holder and Native American Tribes. BLM Manual 8560, Section .07, "Mandate from Congress", subsection J states that, "In some cases, special provisions have been incorporated into the legislation. These provisions override the general management provisions of the Wilderness Act and must be regarded as specific direction for management of the area in question." Monitoring of permitted events would be used to determine the level of effects to the wilderness area and appropriate modifications may be needed if monitoring determines an inappropriate level of effect, to ensure that the permit is consistent with the Wilderness Act and the Steens Act.

33 Comment: Encounters between groups, including both commercial and non-commercial groups, should be kept within limits to preserve the primitive experience of wilderness.

Response: Perception of Solitude is one of the standards included in the proposed Steens Mountain Wilderness Management Plan. Indicators for that standard include number of campsites occupied within sight or sound of each campsite, number of party encounters on or off trail per eight-hour day, and percent of sampled visitors who report being moderately or extremely crowded. These indicators would be monitored and evaluated annually as part of the wilderness monitoring plan. Increases or changes in these indicators from the baseline data collected during the 2003 and 2004 field seasons would require implementation of Level I, II, or III management options to correct the situation and keep numbers and use at baseline levels.

34 Comment: The group size limits in Preferred Alternative of 12 people and 15 head of stock in the Wilderness is too large.

Response: The group size limit would remain at 12 persons for the Proposed DRMP but recreational stock numbers would be increased to 18 based on discussion with recreational stock user groups. In discussions with these groups it was determined that one pack animal is needed for every two horseback riders..

Annual monitoring would determine if these numbers are appropriate for persons and recreational stock. Standards which would be monitored include Campsite Condition, Perception of Solitude and Recreational Stock Use. If any of the indicators under these standards are found to exceed the parameters set in Levels I, II, and III, corrective management actions would be initiated .

Recreational stock will be allowed to graze freely without being required to pack in feed, consistent with standards and guidelines for grazing.
Monitoring includes standards for naturalness. Monitoring of these standards may include forage utilization surveys for recreational stock. There are also Level I, II, and III management options for this function.

35 Comment: The BLM needs to implement a system to monitor effects to wilderness resources. There should be system of limits of change and mitigation actions implemented when thresholds are exceeded for such areas as soil compaction, camping impacts, informal trail density.

Response: A monitoring plan has been included in the proposed wilderness Management plan (Appendix U). Wilderness standards covered by the monitoring plan include: Campsite Condition, Campsite Density, Perception of Solitude, Trail Density, Length of Stay, Recreational Stock Use, and Unauthorized Motor Vehicle and Mechanical Transport Intrusions.

36 Comment: The Steens Mountain Wilderness Management Plan should place strong emphasis on making the wilderness a motor-free wilderness to the fullest extent possible under the law. This includes motorized use for BLM administrative purposes, and by other local, state or Federal agency personnel and motor vehicle use by grazing permittees.

Response: Travel within the wilderness would normally be by nonmotorized and nonmechanized means. Nonconforming but accepted uses specifically permitted in wilderness areas by the Wilderness Act and subsequent laws are allowed in a manner that will prevent undue degradation of wilderness character. Some motor vehicle uses are allowed, either by BLM policy directives, such as Manuals 8560 and H-8560-1, by legislation or though Congressional clarification and interpretation of legislation regarding motorized and mechanized use, such as House Report 101-405. Any proposal for administrative use of motorized or mechanized equipment or transportation would first be evaluated using the MRDG.

37 Comment: Additional facilities and developments within the Wilderness or near the Wilderness boundary should not be initiated for visitor ease or convenience but only to protect wilderness values and characteristics and for visitor safety and to prevent resource damage.

Response: BLM Manual 8560, Section .1, subsection .14, part B, "Acceptable Facilities" states, "Visitor use facilities may be installed if they are the minimum necessary for the health and safety of wilderness visitors or for the protection of the wilderness resource". It further states, "Facilities solely for the convenience of the visitor are not compatible with preservation of wilderness character and therefore will not be provided in wilderness areas". Further direction regarding facilities and developments comes from House Report 95-540 as it interprets the Wilderness Act relating to such uses as trails, trail signs and sanitation facilities.

38 Comment: The Alternative 'B' proposal to require human waste to be packed out of Steens Mountain Wilderness is unwarranted and the Preferred Alternative proposal to dispose of human waste in 'catholes' should be adopted.

Response: The Proposed DRMP recommends that human waste be packed out of the wilderness but does not require it except for some permitted activities. The use of catholes to dispose of human waste would be required.

39 Comment: "Establish criteria to determine whether actions proposed by BLM or any other agencies (for example emergencies, predator control, horse gathers, game control) are "necessary to meet minimum requirements for the administration of the area" as required by the Wilderness Act. Such activities must then be shown to be the minimum tool necessary so as "to preserve its wilderness character."

Response: This level of analysis is outside the scope of the DRMP. Individual projects and actions proposed either by the BLM or other agencies working on BLM administered lands are subject to NEPA analysis at the project level. If necessary, the MRDG would be applied.

40 Comment: "Preferred Alternative (page 2-216) indicates that weeds will be controlled using a full range of equipment after a minimum tool analysis is completed. This clearly indicates that the preferred alternative is selecting the tools and methods for weed management in wilderness prior to doing the minimum tool analysis, thereby rendering any minimum tool analysis as merely an empty exercise."

"There is no special exception in the Wilderness Act for weed management. The Act only grants BLM wide discretion in the management of fire, insects, and disease. Nonnative plants do not fall into any of these three categories. The use of incompatible equipment such as motorized tools and vehicles should not be allowed in wilderness for weed management, because it is not the minimum action required for protecting the area as wilderness."

Response: The Proposed RMP now states "The minimum requirement decision guide(minimum tool analysis) would be completed in order to determine the method of control and range of equipment needed to control noxious weeds in the wilderness."

Also, while weed management is not specifically stated in the Wilderness Act, direction for weed control is clearly stated in BLM Manual 8560, "Management of Designated Wilderness Areas" in Section .37, "Rangeland Management" under (2) "Plant Control" part (b)(2), which states, "Plant control must be approved only for. . . (b) Noxious farm weeds by grubbing or with chemicals when they threaten lands outside wilderness or are spreading within wilderness, provided the control can be effected without serious adverse impacts on wilderness values."

Manual 8560 also states in section .13, "Minimum Tools" subsection A, "Acceptable Tools", that spray equipment is an acceptable tool.

41 Comment: The percentage guidelines of Alternative B is most appropriate for each recreational use impact indicator in the Wilderness Management Plan. If the Steens Mountain Wilderness receives increased recreational use, mitigation must come promptly to assure Wilderness characteristics do not degrade from where they were when the Steens Act passed.

Response: Generally, the percentage of change guidelines used in Alternative B are very low, possibly too low to be effectively detected and checked during the monitoring process. The percentage of change guidelines in the Proposed DRMP have been reduced, but are still detectable for triggering management options and mitigation actions. Overall, Steens Mountain Wilderness at this time has fairly low levels of recreation use and accompanying effects. The levels of recreational related effects appear to be fairly consistent throughout the entire wilderness. Even in the more used and visited areas, such as Little Blitzen and Big Indian Gorges, recreational effects and change are low compared to other wilderness. In order for change due to visitor use and its associated effects to remain at a relatively low level, and thus prevent degradation of wilderness characteristics, it is preferable to use percentages of change overall, which are lower than in the DRMP/DEIS Preferred Alternative yet higher then those in Alternative B, which appear to be too low to be useful.

Overall the change guidelines in Alternative C set a useful level of change which can be monitored effectively yet not allow wilderness characteristics to degrade below acceptable limits. Percentage of change guidelines in Alternative C are now reflected in the Proposed DRMP.

42 Comment: "Allowing highlines on the surface seems like a good idea, but this type of vegetation is not durable for repeated trampling that occurs. If the BLM wants to prescribe highlines, they should designate highline areas, which will become 'sacrifice areas'."

Response: In the Proposed DRMP highlines or picketing are not required except for management of pack goats. Free grazing of other recreational stock is allowed and would be monitored according to the S&Gs.

43 Comment: We request the following statement be included in the final RMP/EIS. 'Traditional recreation saddle and pack stock use is an appropriate, current and historical use of the Steens Mountain Wilderness'."

Response: The statement, "Traditional recreation saddle and pack stock use is a current and historic use of Steens Mountain Wilderness" has been added to Chapter 3. '.

44 Comment: We ask for confirmation that recreation riding and pack stock be allowed to graze freely in the commercial 'no grazing' area in Steens Mountain Wilderness.

Response: The language in section 2.22.3.1, Proposed RMP/FEIS, has been changed to reflect this. Grazing of recreational stock in the No Livestock Grazing Area of the wilderness is allowed consistent with standards and guidelines for grazing management. Grazing would be more limited in Little Blitzen RNA, and the area would be monitored for grazing utilization with management actions initiated as needed.

45 Comment: In order to spread potential use away from the Wilderness develop trails outside of the Wilderness to provide additional hiking and non-motorized recreation opportunities.

Response: The Development of trails outside the wilderness would be considered in a comprehensive recreation plan for the CMPA that would be developed after the DRMP is completed.

46 Comment: How will inappropriate 'user-created' trails be managed?

Response: Trails considered to be inappropriate would be monitored as part of the wilderness monitoring plan. Such trails would be reclaimed if monitoring shows a need.

47 Comment: We disagree with the 5-day length of stay limit in Preferred Alternative and that it is an unnecessarily restrictive regulation until monitoring shows impacts are exceeding present levels. A 14-day length of stay would be appropriate at this time.

Response: The Proposed DRMP now adopts the 14-day length of stay, which is the standard on many federal lands. This number would be used until such time that monitoring shows a need to determine a different length of stay.

Wilderness Study Areas

1 Comment: WSAs should be more oriented towards protecting wilderness characteristics

Response: The WSA IMP specifically states (on page 8) that "the preservation of wilderness values within a WSA is paramount and should be the primary consideration when evaluating any proposed action or use that may conflict with or be adverse to those wilderness values." The WSA IMP will be followed for any proposed action in a WSA.

2 Comment: Range improvements in WSAs should be limited and should be done in a manner that maintains wilderness characteristics.

Response: Management of WSAs is guided by the WSA IMP. Range improvements are specifically discussed on pages 41 and 42. The WSA IMP will be followed for any proposed action in a WSA.

3 Comment: Other alternatives should consider eliminating or reducing grazing in special management areas or areas of special concern, such as . . . WSAs.

Response: For those public lands which were being grazed by livestock or were part of an approved livestock grazing system at the time the FLPMA became law in 1976, and then became part of a WSA, the law recognizes livestock use as a grandfathered activity of those public lands. Thus, eliminating livestock or reducing grazing on the single premise of public land being located within a WSA would not be in compliance with federal law. A reduction of grazing in WSAs is not justified in the absence of supporting rationale. Changes in grazing use are proposed through the allotment evaluation process and evaluated allotment-specifically through the NEPA process.

4 Comment: Comments reference BLM Instruction Memorandum No. 2001-075.

Response: Instruction Memorandum No. 2001-075, Bureau wide Implementation of the Solicitor's Opinion on Jack Morrow Hills Coordinated Activity Plan, has expired and is no longer used for guidance. A portion of this Instruction Memorandum was replaced by a revision (Release 1-1675) to the Land Use Planning Handbook (H-1601-1) on August 22, 2002.

5 Comment: How will the BLM identify and manage lands founds to have wilderness characteristics.

Response: Additional text has been added to Section 3.23.

6 Comment: Since ways in WSAs are not roads, no set backs exist for them, and any travel outside the area disturbed at passage of FLPMA is not allowed.

Response: See Transportation and Roads comment response 18.

7 Comment: Language clarifying vehicle travel in WSAs should be added to 4.23.2.

Response: See Off Highway Vehicles comment response 28.

8 Comment: The EIS should analyze the effects of other programs on WSAs and the effects of not protecting those parcels found to have wilderness characteristics.

Response: The general effects of various management actions on WSAs are described in Section 4.23.3. Site-specific analyses for the actions of other programs would be done on a case-by-case basis.

9 Comment: BLM should protect the wilderness characteristics of wilderness-quality lands.

Response: BLM policy does not allow the designation of new WSAs or the addition of lands to existing WSAs. The management actions analyzed in Alternative C to protect parcels found to have wilderness characteristics includes the following: designation as Class II ARM, designation as limited to designated roads for OHV and mechanized vehicle use, retention as public land, and ROW exclusion or avoidance. All the parcels currently found to have wilderness characteristics are located within the Mineral Withdrawal Area, and are, therefore, not open to mineral leasing or entry. Protections of these characteristics within the Proposed RMP/FEIS include mineral withdrawal, OHV and mechanized vehicles limited to designated roads, and retention as public land.

10 Comment: The purpose of DRMP/DEIS Map 2.18 is not clear from the map key.

Response: DRMP/DEIS Map 2.18 shows those land parcels (in addition to the existing WSAs and the Steens Mountain Wilderness) that the BLM has found to have wilderness characteristics.

11 Comment: The BLM should refer to H-6301-1. It provides direction for protecting wilderness character in the RMP/EIS process.

Response: H-6310-1, the Wilderness Inventory and Study Procedure Handbook, was rescinded on June 20, 2003 and is no longer used.

12 Comment: Contracts for work in WSAs should include language on the WSA IMP.

Response: WSA IMP requirements are applied as appropriate on a case-by-case basis. This is not an DRMP level decision.

13 Comment: The use of surface disturbing equipment for suppressing WSA wildland fires should not be restricted. Mechanical or mechanized suppression and presuppression activities are not totally precluded in designated wilderness.

Response: WSA management is guided by the WSA IMP, not the Wilderness Act. The WSA IMP specifically states on pages 48-49 that the BLM will use caution to avoid unnecessary impairment of the area's suitability for wilderness preservation. "Light-Hand-On-The-Land" fire suppression tactics will be used. Specific authorization is required before earth moving equipment is used in a WSA. Suppression methods that may be used include the use of power tools, aircraft, and motorized fire fighting equipment while applying "light-hand-on-the-land" techniques. More detail can be found in the WSA IMP.

14 Comment: The BLM should designate additional WSAs through the DRMP process.

15 Comment: BLM should re-inventory the lands for wilderness values and should re-assess the suitability of the WSAs that were not recommended for wilderness designation.

Response: As a result of the settlement of Utah v. Norton, the BLM is no longer able to designate new WSAs under FLPMA Section 202, make new wilderness suitability recommendations, or manage any additional lands under FLPMA Section 603. This authority expired in 1993 with BLM's recommendations to Congress on the suitability or nonsuitability of the existing WSAs as wilderness. The BLM may manage lands found to have wilderness characteristics through a variety of land use plan decisions to protect the identified wilderness characteristics. The land use plan decisions include, but are not limited to, ARM class designation, OHV designation, lands and realty designations, and conditions of use to be attached to permits, leases, or other authorizations. This language has been added to Section 3.23.

16 Comment: The BLM should designate additional acreage as wilderness.

Response: Only Congress can designate an area as wilderness. Since the Final Wilderness Inventory decisions of 1980, no new WSAs have been designated in the Planning Area. However, Congress did add over 170,000 acres to the National Wilderness Preservation System with the designation of the Steens Mountain Wilderness in the Steens Act of 2000.

17 Comment: A citizens' WSA proposal should be discussed in the EIS.

Response: Text has been added to Section 3.1.

18 Comment: Lands recommended for WSA designation should be considered for ACEC status.

Response: Only those areas that an ID Team found to have "Relevant and Important Values" are retained or proposed for ACEC status. The citizens' WSA proposals, in general, do not have the required "Relevant and Important Values." A portion of one citizens' WSA proposal is proposed as the Serrano Point ACEC (679 acres) in the Proposed DRMP and Alternative C.

19 Comment: Ranchers and hunters should be allowed to travel off road in WSAs.

Response: Off-road travel is currently not allowed in WSAs by any public land user. Landowners, grazing permittees, hunters, and any other motorized or mechanized vehicle user are not allowed to drive cross-country in any WSA. WSAs or portions of WSAs cannot be designated as "open" for OHV and motorized vehicle use, unless they are sand dune or snow areas for use by appropriate sand or snow vehicles or where an area was designated open prior to October 21, 1976. There is also no provision in the WSA IMP to allow other than emergency exceptions to the prohibition on off-road travel. Additionally, Section 112 (b)(1) of the Steens Act prohibits the use of motorized and mechanized vehicles off road in the CMPA. Typically, grazing permittees access range improvements for maintenance activities over inventoried ways rather than cross-country travel.

20 Comment: All WSA cherrystem roads and ways should be closed.

Response: In accordance with the WSA IMP, the use of OHVs and mechanized vehicles is limited to designated cherrystem roads and ways or to those cherrystem roads and ways that existed at the time of the wilderness inventory. An emergency closure of specific roads or ways associated with a WSA could be implemented if undue and unnecessary

degradation of resource values by motorized vehicles should occur, or where there is a need to provide for public safety or resolve user conflicts.

21 Comment: WSA cherrystem roads and ways should remain open for access to these areas.

Response: The WSA cherrystem roads and ways are proposed to remain open in Proposed DRMP and Alternatives A, C, and E. Only Alternative B would close these travel routes.

22 Comment: Designate all WSAs as limited seasonally to OHV and mechanized vehicle

Response: Seasonal OHV and mechanized vehicle closures are proposed in response to specific health and safety concerns and for specific resource protection issues. WSA designation, by itself, does not warrant a seasonal closure.

23 Comment: BLM should describe its process for managing OHV designation violations.

Response: This would be part of an activity level plan. For example, the Wilderness and Wild and Scenic River Plan addresses monitoring and thresholds for changed management based on motorized vehicle intrusions into the Steens Mountain Wilderness. A TP for the CMPA will be completed by December 2005. A TP for the AMU will be completed by December 2008..

24 Comment: Lands released from WSA designation in the future should be assigned an OHV designation of limited to designated ways and trails for OHV and mechanized vehicle use.

Response: These lands would be evaluated at the time of release and an appropriate OHV designation proposed. Maintenance of an existing designation or change to a new designation would be based on laws, regulations, and policies in place at that time and the rationale or provisions given by Congress in the specific release language.

Wild and Scenic Rivers

1 Comment: It is unclear from the Draft RMP/EIS what the conclusions of the BLM's 1997 evaluation were, but Appendix N on the Draft RMP/EIS states that each and every river considered is "not suitable" for inclusion in the system. It is confusing, then, when the Draft RMP/EIS states that "all eligible rivers will be evaluated for suitability for potential inclusion into the National WSR System by Congress." The document then later suggests that Appendix N constitutes this "Wild and Scenic Rivers Suitability Evaluation". Section 5(d)(1) directs that the BLM must: In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials.

Response: BLM Manual 8351, Wild and Scenic Rivers, Policy and Program Direction for Identification, Evaluation, and Management defines eligibility as "qualification of a river for inclusion into the National WSRs System through determination that it is free-flowing and with its adjacent land area posesses at least one river-related value considered to be outstandingly remarkable." As discussed on page 2-220 of the DRMP/DEIS, rivers within the Planning Area were evaluated for their eligibility for inclusion to the National WSRs System. The evaluation of rivers for their eligibility and subsequent suitability, was conducted by a BLM ID team in preparation for the 1998 Draft SEORMP. The evaluations followed the eligibility basis for determination provided in BLM Manual 8351 and identified twelve rivers as eligible as identified on 3-65 and Appendix N of the DRMP/DEIS (with the exception of Wildhorse Creek, which was designated by Congress through the Steens Act). Therefore, the remaining rivers were found not eligible because they were determined not to posses outstandingly remarkable values. BLM Manual 8351 further states that "each eligible river segment is further evaluated in the DRMP process to assess whether or not it would be suitable for inclusion in the National WSRs System" and "the planning determination of suitability provides the basis for any decision to recommend legislation". The 11 rivers evaluated as eligible were found not suitable for inclusion into the National WSRs System as described in Appendix N. River segments determined nonsuitable in the Proposed RMP/FEIS shall be managed in accordance with the management objectives as outlined in the DRMP (BLM Manual 8351).

2 Comment: General comments were received as to either designating or not designating more Wild and Scenic Rivers in the Planning Area.

Response: The BLM evaluates rivers for their eligibility and suitability for inclusion in the National WSRs System which provides the basis for recommended legislation. See the description in the response to Comment 1.

3 Comment: Alternative A says "The following eligible rivers would continue to be managed in conformance with BLM Manual 8351 for protective management of eligible WSRs". Since the Preferred Alternative recommends absolutely no rivers in the Planning Area suitable to be designated as a Wild and Scenic River by Congress, the current protection afforded 120 miles of 11 rivers that have been considered eligible since being evaluated 6 years ago will be lost. Please explain how BLM justifies decreased protection on these rivers, some of which are within the CMPA where ecological protection is to be enhanced, and some of which are 303(d) listed by Oregon.

Response: River segments determined eligible but nonsuitable in the Proposed RMP/FEIS shall be managed in accordance with the management objectives as outlined in the DRMP (BLM Manual 8351). These management objectives and strategies provide adequate protection of these streams. The alternatives and effects are described under the respective resources, including discussion of CWA 303(d) listed waters.

4 Comment: BLM should go beyond Alternative C and recommend 179 miles of rivers as suitable for WSR status, as identified, described and mapped by ONDA on Oregon High Desert Protection Act brochure and shown in the Citizens' Alternative. These qualify every bit as much as the ones designated in the Steens Act. This gives BLM the opportunity to enhance the water quality of these streams and protect their existing ORVs (scenery, recreation, geology, history, pre-history, culture, wildlife, fish) from the negative impacts of dams and other water developments, construction of buildings and roads, mining activities, and overgrazing.

Response: BLM Manual 8351 directs the BLM to include an alternative that provides for designation of all eligible river segments. Alternative C proposes recommending all eligible river segments as administratively suitable for potential designation by Congress as WSRs. Rivers listed in the Oregon High Desert Protection Act brochure are included in the eligibility, and when appropriate, suitability assessments. Those that were not included are Deep Creek, Ankle Creek, Mud Creek, Little Fish Creek, and Dry Creek. Ankle Creek and Mud Creek were designated as WSRs the Steens Act. The public land portion of Deep Creek was functionally included through administratively delineated WSR boundaries associated with the designation of the Donner und Blitzen River. Dry Creek is contained within wilderness or WSA in the CMPA. The process for evaluating and determining eligibility and suitability of potential WSRs was followed in accordance with BLM policy and completed in 1997 and 1998. No additional information has warranted change of these prior determinations.

5 Comment: The impacts of reclassifying Riddle Brothers Ranch Historic District, the Page Springs and Jackman Park campgrounds, as well as, the Blitzen Crossing were not properly considered or described in the EIS.

Response: No recommendations for reclassification of river segments associated with the Riddle Brothers Ranch Historic District, the Page Springs and Jackman Park Campgrounds, and Blitzen Crossing are included in the Proposed RMP/FEIS.. The text discloses the improvements that existed on the date of Wild River designation, and BLM's intention to continue to use and maintain these improvements over time.

6 Comment: The impact of alternatives that would not recommend any rivers as "administratively suitable" for potential WSR designation was not analyzed or disclosed.

Response: Manual 8351 at .52C1 states "For river segments determined nonsuitable in the DRMP, the river shall be managed in accordance with the management objectives as outlined in the DRMP". Therefore, proposed actions and associated direct, indirect, and cumulative effects are presented in the Proposed RMP/FEIS under the respective resources.

7 Comment: The RMP/EIS identifies 800 miles (by adding totals in Table 3.1 and 3.2) of perennial rivers in the Planning Area. Approximately 220 miles are now either designated WSRs or eligible for such designation. But information about the other 580 miles of perennial streams in the Planning Area is missing.

Response: The stream miles identified in DRMP/DEIS Table 3.1 and 3.2 are an approximation generated from GIS that encompasses the entire area including private lands, state lands, and the Malheur NWR. The public land streams were evaluated by a BLM ID team for inclusion in the National WSRs System as discussed in the Proposed RMP/FEIS.

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