U.S. Department of the Interior
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3050 N.E. 3rd Street
Prineville, Oregon 97754

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Upper Deschutes Resource Management Plan and Environmental Impact Statement

Volume 3 - Appendices

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

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Appendix A Alternatives Described in Detail

Introduction

Land Use Plan decisions are prescribed by the Federal Land Policy Management Act (FLPMA), and further described or suggested by Manual and Handbook direction. This direction establishes specific components that are addressed in this document. These include:

- **Objectives -** resource or area specific outcomes against which future actions must be measured for consistency with overall plan purposes. These objectives may vary by alternative.

- **Allocations/Allowable Uses -** specific management direction for how certain resources will be emphasized, uses that may or would be prohibited, or conditions under which certain uses may be permitted.

- **Guidelines** - sideboards set in relation to how management objectives can be accomplished, or expected methods of achieving objectives. Often guidelines can be described as "mitigation" or "conservation measures" established to protect specific resources while retaining site of the ultimate objective of the action. Guidelines may be modified if alternative methods can be demonstrated to meet associated objectives.

- **Rationale -** the reasoning behind the development of specific objectives or guidelines. This is not a required element, but is provided to help to understand and implement or in future amend specific objectives, allocations, or allowable uses. The rationale answers the question "why" a particular objective is developed either in relation to broad goals and legal mandates, or specific issues related to the planning area.

These components are important for understanding the details and implementing any of these alternatives, however, this level of detail is not critical for an overall understanding of the differences between the alternatives. Therefore, these detailed components are included in Appendix A for each of the alternatives. This Chapter will include a briefer summary of the key components of each of the alternatives.

Management Direction Common to All Alternatives

Ecosystem Health And Diversity

Vegetation

Noxious Weeds

<u>Objective V – 1:</u> Maintain noxious weed-free plant communities or restore plant communities with noxious weed infestations through use of broad-scale integrated weed management strategies. During vegetative management planning, also consider opportunities to manage other undesirable non-native or invasive species.

Rationale:
The rapid expansion of noxious and other non-native weeds in portions of the planning area is one of the greatest threats to the integrity of native plant communities. Noxious weeds reduce the value of native plant communities in several ways (see Affected Environment – Vegetation).

Guidelines:

- All land management activities and projects would assess the risk of introducing or spreading weeds. Integrated weed management strategies would be incorporated into the planning, design, implementation, monitoring, and follow-up actions of all ground-disturbing projects and activity plans.
- Integrated weed management strategies would incorporate some or all of these objectives: detection, inventory, prevention, containment, control, and eradication of noxious weeds. Strategies may also target other undesirable plant communities as appropriate and practicable.
- A balanced ecosystem approach for management of undesirable vegetation could include one or more of the following techniques: cultural, manual, mechanical, prescribed fire, competitive seeding, biological, and chemical.
- When possible, grazing management practices would be designed to help control noxious weeds and other undesirable plants (such as cheatgrass, medusahead and thistles).
- Opportunities would be sought to form partnerships with other public agencies and adjacent landowners to develop regionally effective and cost-efficient weed management strategies.
- All treatments would be in accordance with current guidelines in the "Prineville District Integrated Weed Management Environmental Assessment (OR-053-3-062)" available at the BLM Prineville District Office.
- Where possible, weed management within the planning area would be prioritized as follows:
  1. Prevent new infestations by limiting weed seed dispersal, minimizing soil disturbance, and properly managing desirable vegetation.
  2. Detect and eradicate new invaders
  3. Target roadways, watercourses, campgrounds, utility corridors and other high disturbance areas for a prevention and containment program.
  4. Emphasize control of large-scale infestations (limiting the spread of noxious weeds and reducing the infestation level).
  5. Focus initial efforts on small, manageable units with a component of desirable native plants, and then focus on the remaining infestation. Start from the outside and work toward the center of the infestation.
- Prevention measures would include provisions in all land management activities, projects and agreements to inspect or certify that vehicles, equipment, livestock, supplies, and materials entering, using, or transporting across public lands are free of noxious weed seed or other reproductive parts of noxious weeds.
- Consider limiting season of use for ground disturbing activities to prevent the spread of weeds during and immediately after the flowering and seed production period.
- Consideration would be given to potential for spread of cheatgrass and other undesirable plants that could occur with disturbance from land uses or vegetation treatments, particularly within the lower elevation pumice sand community types.

Wildlife

<u>Objective W – 1</u>: Ensure that actions are consistent with the conservation needs of special status species and do not contribute to the need to list special status species or jeopardize the continued existence of listed species (see Chapter 3 for current list of special status species). Specific guidance is provided in Special status species Manual Section 6840. Seek opportunities to conserve and improve special status species and habitats for native animals and wildlife in the development of land use plans, activity plans, and in other BLM authorized, funded or approved activities (BLM Manual 6840-Special Status Species Management, Endangered Species Act).

Rationale:
Protection and recovery of threatened and endangered species is required by the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) as amended.

Conservation and protection of habitats for designated special status species, and other state or federally protected species, is directed by Bureau policy in BLM Manual 6840.

The Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington provide a clear statement of agency policy and direction to promote healthy sustainable rangeland ecosystems, restore and improve public rangelands and to provide sustainable resources to support the livestock industry.

The Bureau is directed under Executive Order No. 13186 to protect, restore, enhance and manage habitat of migratory birds and prevent the loss or degradation of remaining habitats on BLM. Also, this executive order directs the BLM to "ensure that environmental analysis of federal actions required by the NEPA or other established environmental review processes evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern."

Allocations/Allowable Uses:

A. Habitat modification

- Vegetative habitats could be maintained or improved using a variety of techniques, such as mowing of shrubs, prescribed burning, livestock grazing and commercial and non-commercial tree cutting.

B. Disturbance actions

- Allow actions that do not cause negative effects, from human disturbance, to a federally listed or proposed species during seasonally sensitive periods (i.e. breeding, nesting, winter roosting, etc.). Actions that may cause disturbance could be managed using either year round and/or seasonal restrictions and/or distance buffers. These restrictions most often apply directly to the presence of people, not livestock (See Table 2-4, Seasonal Restriction and Distance Buffers, for a list of other species that have required seasonal restrictions, seasonal restriction dates and distance buffers).
- Human activities, such as recreation, range management, timber operations and mining would not be allowed within ¼ to ½ half mile of active bald eagle nest sites and nearby perches from January 1, to August 31. Winter roosts would be managed similarly with the exception of different seasonal restriction dates.

<u>Guidelines:</u>

A. Habitat Modification

- Vegetation management actions that occur within habitats of federally listed or propose species would maintain or improve the conditions that support those species and/or be consistent with landform, climate, and biological and physical characteristics of the ecosystem (B/LP RMP, p.121).
- In situations where data are insufficient to make an assessment of proposed actions, surveys of potential habitats would be made before a decision is made to take any action that could affect special status species (B/LP RMP p.122).

B. Disturbance Actions

- Restrict activities that may cause disturbance to federally listed or proposed species. Disturbance activities include, but are not limited to, human presence from walking to riding a motorized vehicle, and creating loud noises (chain sawing, blasting), on-site or at a distance (1/4 – 1 mile). During seasonal use periods, limit activities within ¼ to ½ mile (and up to 1 mile if blasting) of bald eagle nests, perches and roosts (See Table 2-2, Seasonal Restriction and Distance Buffers, for a list of other species that have required seasonal restrictions, seasonal restriction dates and distance buffers).
  1. New roads and trails would be located away from important habitats[1] (i.e. located at least ¼ mile away from bald eagle habitats).

[1] "Important habitat" is a general term that includes seasonal habitats, such as winter ranges and breeding sites; habitat structure, such as snags and down logs; and unique features, such as cliffs and caves. Refer to Table IH for a more complete listing.

2. Sensitive wildlife sites (i.e. raptor nests, perch trees and roosts, and great blue heron rookeries) would be managed to minimize disturbance by maintaining seasonal closures through the last date that species has been known to nest or re-nest. Prior to disturbing activities, surveys would be conducted to determine presence/absence of special status species. Allow the action to proceed if field exam indicates the nest is inactive on or after that date.
3. Conduct periodic surveys of potential raptor habitats and monitor active and historic sites to determine occupancy and management consistency (B/LP RMP, modified, p. 97).

Maintain and improve existing and potential habitats:
A. Habitat Modification
- Maintain existing shrub-steppe habitats in the existing sage grouse range in order to sustain sage grouse populations and protect options for the future (Information Bulletin (IB) No. OR-200-334).

B. Disturbance Actions
- Where possible, design or redesign, travel routes to contribute to the conservation of special status species, and relocate roads and trails away from important habitats.

Objective W – 2: Restore, maintain, or enhance those resources necessary to support, as site potential and authorities allow, a full compliment of native species in their historical proportions.

Rationale:
As directed under the Federal Land Policy and Management Act of 1976 public lands would be managed in a manner that protects ecological values, maintains their natural condition and provides food and habitat for wildlife.

As directed in BLM Manual 6840 - Special Status Species Management, the BLM would take actions that progress towards the conditions indicating attainment of the Fundamentals of Rangeland Health (described in 43 CFR 4180.1) and associated Standards (43 CFR 4180.2).

Allocations/Allowable Uses:
A. Habitat modification
- Vegetative habitats would be maintained or improved using a variety of techniques, such as, mowing of shrubs, prescribed burning, livestock grazing and/or commercial timber harvest and non-commercial tree cutting.

Guidelines:
A. Habitat Modification
- In order to restore native plants, areas disturbed during project construction would be seeded with a mix of native grasses, forbs, and shrubs to meet site-specific needs or habitat requirements (B/LP RMP, 97).
- Non-native species could be used where they would contribute to the recovery of the site, contribute to soil conservation, and/or preparing the site for eventual occupation by native plant species and would not impede the growth of native plants.
- Permitted activities would be restricted in all areas where vegetation manipulation (human or naturally caused) occurs and results in sensitive soil and plant conditions, or the site already has sensitive soils and/or plant conditions. These permitted activities include, but are not limited to, livestock grazing, off-road vehicle travel, recreational events, construction of new roads and trails, and timber harvests.
- Range developments would be designed to achieve both wildlife and livestock grazing management objectives.
- Where natural springs exist and are developed, the development would provide a more dependable water source for wildlife as well as livestock. Water troughs would

accommodate use by wildlife and livestock, and would be constructed with wildlife escape devices. The spring area and the overflow would be fenced to exclude livestock trampling.
- Where pipelines are developed to deliver water more than two miles from an existing water source, the water system would be designed to provide water for wildlife between July and October (B/LP RMP, p. 97).

B. Disturbance Actions
- Manage important wildlife habitats to minimize human disturbance by maintaining seasonal closures throughout the sensitive period (See Table 2-2 for a list of species that have required seasonal restrictions, the restriction dates, and distance buffers).
- In seasonally important wildlife habitats (winter range, nest sites, roosts, etc.), major construction and maintenance work would be scheduled to avoid or minimize disturbance to wildlife (B/LP RMP, p. 97).
- Timber sales would be designed to provide sufficient cover to maintain the existing deer migration corridor through the La Pine area.

Existing laws, policies and plans:
- Fish and wildlife habitat management impacts would continue to be evaluated on a case-by-case basis as part of project-level planning (i.e., grazing, recreation and timber management plans, right-of-way applications, etc.).
- Evaluations would consider the significance of the proposed projects and the sensitivity of fish and wildlife habitats in the affected areas. Stipulations would be attached as appropriate to assure compatibility of projects with management objectives for fish and wildlife habitat.

Objective W – 3: Maintain and restore special habitat components or features that provide important contributions to a variety of species. These features include, but are not limited to caves, cliffs, and playas.

Rationale:
The Federal Cave Resources Protection Act of 1988 directs the agency to:
Prohibit any person who, without prior authorization from the Secretary knowingly destroys, disturbs, defaces, mars, alters, removes or harms any significant cave or alters the free movement of any animal or plant life into or out of any significant cave located on Federal lands.

The Interim Cave Management Policy (Instruction Memorandum No. OR-95-021) provides for the following:
- Where known or potential adverse impacts from human use to threatened, endangered, and/or sensitive plants or animals, cultural resources, biological deposits (i.e. middens, skeletal remains, etc.), or geologic/paleontologic/mineral features are present, then the responsible authorized officer shall act to protect these resources. Such actions could include information/education, closures (seasonally or yearlong), written authorization for activities, or other appropriate measures.
- On public lands administered by the BLM, no new surface disturbing activities would be authorized within a 350 foot radius of a cave opening or any known cave passages which may adversely impact any significant or potentially significant cave resource value.

The Bald Eagle Protection Act: Protection of Bald and Golden Eagles provides for the protection of bald and golden eagles by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. Take includes pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting or disturbing bald and golden eagles.[2]

[2] The special habitat components or features described here were identified as critical to the long-term conservation of a variety of species by Wisdom et al. (2000) in Source Habitats for Terrestrial Vertebrates of Focus in the Interior Columbia Basin, and by Quigley and Arbelbide (1997) in Assessment of Ecosystem Components (ICBEMP Prop. Dec., p. 64 – modified).

Guidelines:
Protect existing habitat

A. Habitat modification
- When approving habitat modification activities, determine the importance of special habitat features to special status species, and maintain the integrity of the site.
- Where possible, avoid or minimize changes to special habitat features.

B. Disturbance actions
- Minimize activities that could influence wildlife use of special habitat features by using one or more techniques appropriate to the species' needs and status. These techniques could include:
  1. Seasonal restrictions
  2. Distance buffers
  3. Signs
  4. Closures
  5. Relocating disturbance (i.e. moving trails, etc.)
- Identify, and, where appropriate, maintain, restore or enhance wetland habitats such as playas, springs, and other riparian areas.

Objective W – 4: Maintain a current inventory of wildlife resources throughout the planning area that facilitates on-going management as well as future planning needs.

Rationale:
- FLPMA [Section 201 (43 U.S.C. 1711) a] directs BLM to prepare and maintain on a continuing basis an inventory of all public lands and their resource values (BLM manual 6600 Authority).
- The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321-17: 83 Stat.852: p.1, 91-190) directs federal agencies to use ecological information in the planning and development of resources-oriented projects.
- BLM Manual 6840 – Special Status Species Management, directs the Field Office Manager to conduct and maintain current inventories for special status species on public lands.
- BLM Fish and Wildlife 2000 directs field offices to identify and monitor key wildlife habitats.

Allocations/Allowable Uses:
- Conduct and record systematic inventories of populations and distributions of listed and special status species, and species of public interest.
- Conduct monitoring and evaluation studies on listed and special status species, and species of public interest on a regular periodic basis.

Guidelines:
A. Habitat modification
- Map the habitat of all special status species and species of local importance. Periodically update the maps as new information becomes available and as habitats change relative to land management actions and natural events.

B. Disturbance actions
- Map the locations of active and historic important wildlife habitats (i.e. raptor nests, deer, elk and pronghorn winter range, sage grouse leks, etc.).
- Periodically monitor these habitats and survey potential habitats for additional activity.
- Map the land use activities that may cause negative impacts to these habitats.

C. Maintain and improve existing and potential habitat

- Conduct literature searches and identify potential habitat altering actions that may have a negative impact on important wildlife resources and develop mitigating measures to lessen the negative affects.
- Conduct literature searches and identify potential disturbance related actions that may have a negative impact on important wildlife species and develop mitigating measures to lessen the negative affects.

Hydrology

Riparian

Objective H – 1: Management actions within riparian areas will include measures to protect or restore natural functions[3]. Management techniques would maintain or improve current good to excellent stream bank stability and riparian vegetative condition. Riparian habitat needs would be considered in developing livestock grazing systems and pasture designs and would be evaluated according to the Fundamentals of Rangeland Health.

Rationale:
FLPMA directs and requires BLM to comply with State water quality standards and manage public land in a manner that will preserve and protect certain land in its natural condition. In addition to FLPMA, numerous laws, regulations, policies, Executive orders, and MOUs and agreements direct BLM to manage its riparian/wetland areas for biological diversity, and the productivity, and sustainability for the benefit of the Nation and its economy.

BLM policies relating to riparian/wetland areas include the following:

- Focus management on entire watersheds using an ecosystem approach and involving all interested landowners and affected parties;
- Achieve riparian/wetland area improvement and maintenance objectives through the management of existing and future uses;
- Prescribe riparian/wetland management based on site-specific physical, biological, and chemical condition and potential; and
- Use interdisciplinary teams to inventory, monitor, and evaluate management of riparian/wetland areas and to revise management where objectives are not being met.

The Standards for Rangeland Health and Guidelines fro Livestock Grazing Management for Public Lands in Oregon and Washington meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health).

Guidelines:
Livestock grazing would be modified where the standard for riparian-wetland function is not being achieved, or where measurable progress is not made toward achieving the standard.

Watershed/Hydrologic Function

Objective H – 2: Soils will be managed to maintain productivity and to minimize erosion.

Rationale:
FLPMA directs the BLM to manage the public lands for long-term needs of future generations for renewable and non-renewable resources, including watershed. This

[3] As defined by Executive Orders 11988 and 11990 and the Oregon-Washington Riparian Plan (1987).

includes management of the various resources without permanent impairment of the productivity of the land and the quality of the environment.

Guidelines:

- Corrective actions will take place, where practicable, to resolve erosive conditions. Surface disturbance at all project sites will continue to be held to a minimum.
- Disturbed soil will be rehabilitated to blend into the surrounding soil surface and reseeded as needed with a mixture of grasses, forbs, and browse as applicable to replace ground cover and reduce soil loss from wind and water erosion.

Objective H – 3: Allotments will be evaluated according to the Fundamentals of Rangeland Health to ensure water quality complies with State Standards and achieves, or is making significant progress toward achieving, established BLM objectives.

Rationale:
The Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health).

Guidelines:
Modify livestock grazing where the standard for watershed function is not being achieved, or where measurable progress is not made toward achieving the standard.

Water Quality

Objective H – 4: Existing water quality will be maintained or enhanced consistent with or exceeding Oregon's water quality management plans and will meet or exceed Oregon's Forest Practices Act.

Rationale:
The "Federal Water Pollution Control Act" (commonly known as the "Clean Water Act" [CWA]) of 1977, as amended, requires the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters. Mandates of the Act establish the EPA as administrator and the states (e.g., Oregon) as implementers of the Act. The BLM is responsible to manage the requirements of the Act on land they administer, but primacy in implementing the Act is retained by Oregon. BLM is required to maintain water quality where it presently meets EPA-approved Oregon State water quality standards and improve water quality on public land where it does not meet standards. State developed total maximum daily loads (TMDLs) and State approved water quality management plans are required for waterbodies in subbasins and watersheds containing water quality limited segments (Appendix E) (as defined by section 303(d) of the CWA) where water quality is not meeting standards. In addition to the Act, numerous laws, regulations, policies, and Executive orders direct BLM to manage for water quality for the benefit of the Nation and its economy.

Water quality is important not only for human use but also for proper ecosystem function. Management practices such as grazing, mining, recreation, timber harvesting, and other forms of vegetation management for restoring and maintaining water quality would be designed for healthy sustainable and functional rangeland ecosystems as described in Standards for Rangeland Health, 1997.

Guidelines:
The BLM will comply with the Federal CWA and the State DEQ's program by employing the joint USFS and BLM protocol for addressing CWA section 303(d) listed waters. One goal of the strategy is to address all waters on BLM-administered lands generally within the timeline established by the State of Oregon DEQ. The BLM will take actions relative

to 303(d) listed water bodies in accordance with the protocol as outlined in Appendix E (Protocol for 303(d) listed Streams).

Objective H – 3: Allotments will be evaluated according to the Fundamentals of Rangeland Health to ensure water quality complies with State Standards and achieves, or is making significant progress toward achieving, established BLM objectives.

Rationale:
The Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health).

Guidelines:
Livestock grazing will be modified where the standard for water quality is not being achieved, or where measurable progress is not made toward achieving the standard.

Special Management Areas

Special Management Areas within the Upper Deschutes Plan area include Areas of Critical Environmental Concern (ACEC), Research Natural Areas (RNA), Wilderness Study Areas (WSA), and Caves. Each of these areas has special management direction that reflects the values for which each of these areas or sites are managed. Specific management direction that is provided for Wild and Scenic Rivers and river corridors within the planning area boundary remains in place is provided in the W&SR Plans prepared since the adoption of the B/LP RMP.

ACECs

ACECs are areas designated for special management. In the Upper Deschutes area, some of the ACECs designated in the past have additional overlying designations. These include the two RNAs (which are also ACECs), the Badlands WSA (a portion of which is also an ACEC), and the Chimney Rock segment of the Lower Crooked Wild and Scenic River (a portion of which is an ACEC).

Objective SMA – 1: Retain existing and/or designate ACECs where relevance and importance criteria are met and special management is required to protect the identified values. Management activities and resource uses within ACECs would not impair the values for which the ACEC was designated.

Rationale:
An ACEC is a special designation created by Congress in the 1976 Federal Land Policy and Management Act (FLPMA). Under FLPMA, the Secretary of the Interior and the BLM were directed to designate ACEC within the public lands where special management attention is required to protect and prevent irreparable damage to important cultural, historic or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

Allocations/Allowable Uses:
Unless specifically addressed in other guidance, allow uses that do not adversely affect the values for which the ACEC was designated.

Guidelines:
During proposed use evaluations, consider the context, extent, and duration of modifications to resource conditions that contribute to the values for which the ACEC was designated.

Peck's Milkvetch ACEC

Objective SMA - 1a : Provide conditions that emphasize and protect populations of Peck's milkvetch.

Rationale:
The ACEC is the central, known habitat for a Federal candidate plant; therefore the ACEC has been determined significant. The high levels of public use of the area pose potential threats to this plant; therefore the ACEC has been determined relevant.

Allocations/Allowable Uses:
Continue designation of the existing Peck's Milkvetch ACEC.

Guidelines:
- **Livestock grazing**: Allowed providing restrictions or stipulations are designed to maintain or enhance special values.
- **Minerals:** Mineral material sales, development of mining claims, and geophysical exploration would be restricted to protect the special values of this ACEC. Approved plans of operation would have stipulations to protect special values. Surface occupancy for fluid mineral leasing would not be allowed.

Wagon Road ACEC

Objective SMA-1b: Highlight and protect the integrity of the segment of the historic Huntington Road located in Township 17, Range 12, Section 1 (see "existing ACEC" shown on Map 7) and provide for its use as an interpretive resource.

Rationale:
The ACEC contains one of the few known, relatively intact segments of Huntington Road; a mid 19th century military route between The Dalles and Fort Klamath (Klamath Falls), Oregon. The BLM and Deschutes County Historical Society entered into a partnership and interpreted the road and its historical features for the benefit of the public in 1993. The BLM, in accordance with the National Cultural Programmatic Agreement (1997) and the Protocol for Managing Cultural Resources on Lands Administered by the Bureau of Land Management in Oregon, considers this segment of Huntington Road as eligible to the National Register. The high levels of public use in the area pose potential threats to the integrity of this feature; therefore the ACEC has been determined relevant.

Allocations/Allowable Uses:
Continue existing segment of the southern-most portion of the existing Wagon Road ACEC (located south of McGrath Road) that constitutes approximately 1.25 miles of public land located in Township 17, Range 12, Section 1 (see Map 7). This ACEC would cover about 90 acres, including a 300-foot distance on either side of the road to protect associated historic features.
- **Fire management**: Wildfire would be fought aggressively if within, or threatening the ACEC. Firelines would not be constructed within the ACEC and surface disturbance would be kept to the minimum amount necessary. Prescribed fire would not be allowed.
- **Livestock grazing**: Allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Recreation**: All forms of non-motorized, primitive recreation would be permitted except for horseback riding and non-motorized vehicle use along the road alignment south of McGrath road. Opportunities for the designation of a pedestrian trail system with interpretive signs would be pursued. OHV use along the historic road south of McGrath Road would not be allowed.

- **Roads and rights-of-way**: No new rights-of-way would be allowed.
- **Rockhounding**: Would not be allowed.

Guidelines:
- Periodic field examinations would assess the condition of the ACEC.
- The fence that surrounds Section 1 in which the ACEC is located would be examined periodically. Segments of the fence needing repair would be mended as necessary.
- The partnership between the BLM and the Deschutes County Historical Society for interpretive development and educational products for the ACEC would continue.

Research Natural Areas (RNAs)

Objective SMA – 1c: Provide components of the national system of RNAs. The Natural Heritage Act calls for the establishment of a "discrete and limited system" of natural heritage conservation areas, which have "substantially retained their natural character" and which "represent the full range of Oregon's natural heritage resources."

Rationale:
The RNA provides the south aspect representation of western juniper/big sagebrush/ bluebunch wheatgrass and juniper/bunchgrass communities. (The area fills the cell need for this community as identified in the Oregon Natural Heritage Plan). This cell need is not otherwise represented by an RNA in the High Lava Plains Province.

Allocations/Allowable Uses:
Continue designation of Horse Ridge and Powell Buttes as RNAs/ACECs.
- **Fire management**: To be consistent with the District's Fire Management Plan. Prescribed fire would be allowed as well as suppression activities, providing restrictions or stipulations are designed to maintain or enhance special values.
- **Livestock grazing**: Deferred rotation grazing management would be implemented, allowing grazing only after Peck's milkvetch dormancy at least every other year.
- **Mineral development**: Plans of operation must be submitted and approved prior to any development of mining claims in the Powell Butte RNA. Approved plans of operation would have stipulations to protect the values of this RNA. Surface occupancy for fluid mineral leasing would not be allowed. Geophysical exploration would also be restricted protect the natural values for which the RNA was designated.

The Horse Ridge RNA area is withdrawn from locatable mineral entry under the 1872 mining laws. Surface occupancy for fluid mineral leasing would not be allowed. Geophysical exploration would be restricted protect the natural values for which the RNA was designated.

- **OHV use**: Not allowed.
- **Roads and rights-of-way**: Not allowed.
- **Rockhounding:** The collection of any rock materials would not be allowed.

Badlands ACEC

Objective SMA – 1d: The values for which this ACEC was designated would be maintained, with all uses not impairing the ACEC values. Specific values identified for the ACEC include primitive recreation opportunities, geologic formations, a prehistoric river canyon, pictographs, and old-growth juniper woodland.

Rationale:
The ACEC is an area of statewide interest. The high levels of public use in the area pose potential threats from firewood theft, rock collection/harvest, and by vandalism to cultural resources.

Allocations/Allowable Uses:
Continue designation of the Badlands ACEC. The Badlands ACEC would be removed from designation if the Badlands WSA becomes a designated Wilderness.

- **Mineral development**: Mineral development would not be allowed in the Badlands ACEC.

Objective SMA – 2: Increase the availability of public information concerning ACECs (boundaries, management guidelines, reasons for designation, etc.) to provide for better public support of these areas.

Guidelines:
This would include, but not be limited to, perimeter signing/identification, the publication and dissemination of educational/interpretive brochures, news releases, and field trips.

Wilderness Study Areas

Objective SMA - 4: Manage Wilderness Study Areas to maintain wilderness suitability consistent with the 1995 "Interim Management Policy for Lands under Wilderness Review" (IMP).

Rationale:
Steelhead Falls and Badlands WSAs are existing WSAs located in the planning area. BLM policy (H-8550-1) is to manage these areas under interim management policy (IMP) until Congress either designates these lands as wilderness or releases them for other purposes.

Allocations/Allowable Uses:
Continue designation of Badlands and Steelhead Falls Wilderness Study Areas.

- **Minerals:** All WSAs are closed to mineral leasing. Plans of operations must be submitted prior to the development of any mining claims. Approved plans of operation must meet the non-impairment standard of the IMP. Geophysical exploration would also be restricted to protect wilderness suitability.

Caves

Objective SMA - 5: Manage caves nominated for significance or determined significant with an emphasis on educational, research, and protection of cave resources. Manage activities and use to not impair the nominated values for which the cave may be determined significant.

Rationale:
The Federal Cave Resources Protection Act of 1988 directs the agency to:

- Secure, protect, and preserve significant caves on Federal lands for the perpetual use, enjoyment, and benefit of all people; and
- Foster increased cooperation and exchange of information between governmental authorities and those who use caves located on Federal lands for scientific, education, or recreational purposes.

It is the policy of the United States that Federal lands be managed in a manner which protects and maintains, to the extent practical, significant caves.

This Act prohibits any person who, without prior authorization from the Secretary knowingly destroys, disturbs, defaces, mars, alters, removes or harms any significant cave or alters the free movement of any animal or plant life into or out of any significant cave located on Federal lands.

Allocations/Allowable Uses:
The following nominated caves within the planning area have been determined to be Significant under the FCRPA (with the year of determination):
- Horse Butte Indian Cave (1995)
- Pictograph (Stout) Cave (1995)
- Redmond Cave (1995)
- Garbage Cave #1* (1997) [4]
- Garbage Cave #2*(1997)
- Three Vulture Cave*(1997)
- Williams Cave*(1997)
- Stevens Road Cave*(1997)
- Unnamed Car Cave*(1997)

All remaining caves that have been nominated for significant cave status will be reviewed, and a decision made regarding whether or not they qualify as a significant cave.

The following activities would be allowed:
- Recreational or other human activities are allowed in caves consistent with protecting other cave resource values.
- Where known or potential adverse impacts from human use to threatened, endangered, and/or sensitive plants or animals, cultural resources, biological deposits (i.e., middens, skeletal remains, etc.), or geologic/paleontologic/mineral features are present, then the responsible authorized officer shall act to protect these resources.
- On public lands administered by the BLM, no new surface disturbing activities would be authorized within a 350 foot radius of a cave opening or any known cave passages which may adversely impact any significant or potentially significant cave resource value.

The following are prohibited acts in caves on BLM managed lands (43 CFR 8360.0-7):
- Willfully defacing, removing, or destroying plants or their parts, soils, rocks or minerals or cave resources.
- Building, maintaining, attending, or using any fire, campfire, or stove
- Smoking
- Camping
- Possessing, discharging or using any kind of fireworks or other pyrotechnic devices
- Discharging a firearm, air rifle, gas gun or paint gun.
- Possessing a domestic animal
- Depositing or disposing of human waste
- Digging, excavation, or displacement of natural and/or cultural features
- Entering without written authorization, if required
- Use and possession of chalk or hand drying agents for climbing which are not natural appearing

Guidelines:
Make determinations of Significance for those caves nominated for significance within the planning area, according to the following FCRPA criteria (43 CFR Part 37.11(c)):
- **Biota**: The cave provides seasonal or yearlong habitat for organisms or animals or contains species or subspecies of flora or fauna native to caves, or are sensitive to disruption, or are found on State or Federal sensitive, threatened, or endangered species lists.
- **Cultural**: The cave contains historic properties or archeological resources or other features that are included in or eligible for inclusion in the National Register of Historic Places because of its research importance for history or prehistory, its historical associations, or other historical or traditional significance.

[4] The BLM managed land containing these caves was claimed by the State of Oregon under State in-lieu selection process (1997) and is no longer under Federal management.

- **Geologic/Mineralogic/Paleontologic**: The cave possesses one or more of the following features: (1) Geologic or mineral features that are fragile, or that exhibit interesting formation processes, or that are otherwise useful for study; (2) Deposits of sediments or features useful for evaluating past events; (3) Paleontological resources with potential to contribute useful educational and scientific information.
- **Hydrologic**: The cave is part of a hydrologic system or contains water that is important to humans, biota, or development of cave resources.
- **Recreational**: The cave provides or could provide recreational opportunities or scenic values.
- **Educational or Scientific**: The cave offers opportunities for educational or scientific use; or, the cave is virtually in a pristine state, lacking evidence or contemporary human disturbance or impact; or, the length, volume, total depth, pit depth, height, or similar measurements are notable.

Land Uses

Livestock Grazing

Objective LG – 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Rationale:
BLM planning manuals direct BLM to reduce threats to public health, safety, and property as well as provide guidance for grazing management.

FLPMA, Public Rangeland Improvement Act (PRIA), Taylor Grazing Act, and other acts, direct the management of public land for multiple use and sustained yield. Desired outcomes may take social and economic values into consideration (p. III-5, BLM H-1601-1 Land Use Planning Handbook).

FLPMA directs the BLM to improve forage conditions, with resulting benefits to wildlife, watershed protection, and livestock production.

The Standards for Rangeland Health (1997 BLM) direct the BLM to modify or discontinue livestock grazing prior to the start of the next grazing year if livestock are found to be a significant contributing factor to failure to attain a Standard. The Standards address watershed function (upland and riparian), ecological processes, water quality, and habitat for native, T&E and locally important species.

Public who commented on the AMS urged the BLM to modify or discontinue grazing in sensitive areas, critical plant/animal habitats, and areas not grazed in many years.

Allocations/Allowable Uses:
All areas currently closed to livestock grazing would stay closed.

Guidelines:
- Modify or discontinue livestock grazing if Rangeland Health Assessment shows livestock are contributing to the failure of an area to meet the Standards for Rangeland Health (BLM, 1997). The Standards address watershed function (upland and riparian), ecological processes (nutrient cycling, energy flow, hydrologic cycle), water quality (surface and ground), and habitat for native, locally important, or rare plant and animal species.
- Restrict or prohibit livestock grazing and rangeland projects in ACECs, WSAs, and Wild and Scenic Rivers, if the use is not compatible with the values for which the areas are designated. See full description of objectives and guidelines in the Special Management Areas section.

- Prevent BLM-permitted livestock from straying onto private land in closed range, where requested by private landowner.
- Leave currently unallotted (no permitted livestock grazing) areas in the northern portion of the planning area unallotted.
- Allotments that are vacant may be used for temporary, non-renewable grazing use.

Minerals

Objective MN – 1: Allow leasable, saleable and locatable mineral prospecting, exploration, and development on BLM administered lands, while protecting other land values (see Land Use Goal above).

Rationale:

- The Mining Law of 1872 as amended provides citizens of the United States the opportunity to explore for, discover, and purchase certain valuable (locatable) mineral deposits on those federal lands open for that purpose.
- The Mineral Leasing Act of 1920 as amended authorizes the BLM to grant leases for development of deposits of coal, phosphate, potash, sodium, sulfur and other leasable minerals on federal public domain lands open for this purpose and on lands having federal reserved minerals.
- The Materials Act of 1947 as amended authorizes the BLM to sell mineral materials at fair market value and to grant free-use permits for mineral materials to non-profit organizations and other Federal, state, and local government agencies.
- The Geothermal Steam Act of 1970 as amended authorizes the BLM to grant leases for geothermal exploration and development on federal public lands open for this purpose.
- The Federal Land Policy and Management Act of 1976 (FLPMA) directs the management of public land for multiple use and to prevent unnecessary or undue degradation of the land.
- 43 CFR Parts 3100, 3200, 3600, and 3800 regulate onshore oil and gas leasing, geothermal leasing, mineral materials disposal, and mining claims under the general mining laws respectively.

Allocations/Allowable Uses:

Public lands open to mineral uses may be explored and developed for mineral resources in accordance with the 43 CFR Parts 3000 through 3800:

1. Where not withdrawn from mineral entry or under discretionary closure;
2. In a manner that will not cause unnecessary or undue degradation of the landscape; and
3. In a manner consistent with applicable land use plans and Federal and state laws with respect to (1) air and water quality, (2) noise, (3) solid and liquid waste disposal, (4) fisheries, wildlife, and plant habitat, and (5) cultural and paleontological resources.

The following activities would be allowed:

- 396,185 acres are available for locatable mineral entry under the 1872 mining laws.
- 366,640 acres are available for mineral leasing.
- All surface disturbances on mining claims including disturbances resulting from casual use and operations under a notice or plan must be reclaimed. Reclamation shall include but is not limited to:
  1. Saving of topsoil for final application after reshaping of disturbed areas has been completed;
  2. Measures to control erosion, landslides, and water runoff, and the spread of noxious weeds;
  3. Measures to isolate, remove, or control toxic materials;

4. Reshaping of the area disturbed, application of the topsoil, and re-vegetation of the disturbed areas, where reasonably practicable; and
5. Rehabilitation of fisheries and wildlife habitat.

- Surface occupancy for fluid mineral leasing is not allowed on 16,480 acres surrounding Prineville Reservoir.
- Reserved Federal mineral estate (Federally owned minerals in non-Federally owned lands) may be explored and developed for mineral resources.

Coal, coal bed methane, oil shale, and tar sands are considered to be absent from the planning area and are not addressed in this plan.

Guidelines:

General

- Manage leasable, saleable and locatable mineral operations, including exploration, drilling, casual use, and operations under a notice or plan of operations so as to prevent unnecessary or undue degradation of public lands, i.e., cause no disturbance greater than what would normally result from actions of a prudent operator in usual, customary, and proficient operations of similar character while taking into consideration the effects of the operations on other resources and land uses.
- Manage all mining operations to protect wildlife winter range and sensitive plant and animal habitat, riparian areas, and visual resources through seasonal and other restrictions.
- Monitor and inspect all mining sites to ensure compliance with notices and plans of operation including reclamation requirements.
- Conveyances of mineral interest owned by the United States, where the surface is or will be under non-Federal ownership will be made to the existing or proposed owner after finding:
  1. That there are no known valuable mineral deposits in the land, or
  2. That the reservation of mineral rights in the United States would interfere with or preclude non-mineral development of the land and that such development is a more beneficial use of the land than mineral development.

Special Management Areas

- Mineral material sales are not allowed in ACECs, WSAs or RNAs listed as closed to this use.
- Mineral material sales will be restricted in ACECs, WSAs and RNAs not listed as closed to this use in a manner that preserves the values for which the these areas are designated.
- Fluid mineral leasing is not allowed in WSAs.
- Fluid mineral leasing and locatable mineral development are restricted in all ACECs and RNAs to protect the values for which these areas are designated.
- Locatable mineral development is restricted in WSAs to prevent impairment of the suitability of these areas for inclusion into the wilderness system.

Objective MN - 2: Make public lands available for recreational rock collecting consistent with the Federal Land Policy and Management Act (FLPMA) requirements for outdoor recreation opportunities while:

1. **Protecting the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archeological values;**
2. **Preserving and protecting public lands in their natural condition, where appropriate; and**
3. **Providing food and habitat for fish, wildlife, and domestic animals.**

Rationale:

Legal Authorities:

- The Federal Land Policy and Management Act of 1976 (FLPMA) directs the

management of public land for multiple use and to prevent unnecessary or undue degradation.
- 43 CFR Subpart 3622 provides for the non-commercial collection of petrified wood from public lands for personal use.
- 43 CFR Subpart 8365.1-5 provides for the non-commercial collection of rocks, mineral specimens, and common invertebrate fossils, and semi-precious gemstones from public lands for non-commercial use.

Allocations/Allowable Uses:
- Per 43 CFR 8365.1-5 (b)(2), except on developed recreation sites and areas, or where otherwise prohibited and posted, the collection of rocks, invertebrate fossils and mineral specimens including petrified wood shall be in reasonable amounts for non-commercial use only.
- Per 43 CFR 3622.4(a)(1), Collection of petrified wood without charge is restricted to 25 pounds plus one piece per person per day and may not exceed 250 pounds per year. Quotas from multiple persons may not be pooled to remove pieces larger than 250 pounds. No petrified wood specimen weighing more than 250 pounds shall be removed without a permit from the authorized officer.
- Per 43 CFR 3622.4(a)(2) and 43 CFR 8365.1(a)(3), no person shall use explosives or mechanical devices (except metal detectors) to aid in the collection of rock materials.

Guidelines:
- Develop a rockhounding management plan for North Ochoco Reservoir.
- Monitor rockhounding sites through visitor use surveys, photographs, and periodic soil and vegetative condition inventories to determine disturbance attributable to recreation. Use baseline data to determine limits of acceptable change.
- Continue management of the North Ochoco Reservoir and Eagle Rock sites for recreational rockhounding.

Special Forest and Range Products

Objective FP – 1: Manage forest and woodlands to provide for social and economic values, including wood products, consistent with ecosystem sustainability and other resource management objectives.

Rationale:
The Federal Land Policy and Management Act declares that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Allocations/Allowable Uses
- Manage approximately 41,110 acres of commercial forestland in the La Pine block and approximately 1,080 acres of commercial forestland in the northern area in a sustainable manner to ensure the availability of forest products in perpetuity for social/economic needs.
- Allow harvest of up to 2,000 cords of firewood and other wood products from the approximately 170,000 acres of juniper woodlands within the planning area.

Guidelines
- Harvest can be accomplished by a variety of manual and mechanized techniques including chainsaw, pick-up trucks, feller-bunchers, skidders, portable chippers, and other wheeled or tracked equipment.

- Forest product outputs for the next 30-40 years in the La Pine area would be limited to relatively minor quantities in accordance with current direction in the Brothers/La Pine RMP.
- Cutting areas would be designed to blend with the natural landscape and topography.

Objective FP – 2: Help achieve the goals and objectives of the Oregon Parks and Recreation Department - La Pine State Park Master Plan.

Rationale:
BLM timber occurs on 1,768 acres within La Pine State Park. This land was formerly public domain land that was conveyed to Oregon Parks and Recreation Department in the mid 1960s within two patents issued (pursuant to OR 01533 and OR 16986) under authority of the Recreation and Public Purposes Act. As a condition of the conveyance, BLM retained title to all present and future vegetative resources on these parcels.

Guidelines:
- Manage the BLM-owned vegetative resource, including timber harvest and fuels reduction, in La Pine State Park considering direction provided in the Oregon Parks and Recreation Department - La Pine State Park Master Plan.
- Because the vegetative resource is federally owned, vegetative treatments proposed on BLM patent lands within the State Park would also be managed in accordance with the guidelines in the Upper Deschutes RMP and the appropriate level of analysis required by the National Environmental Policy Act.

Military Uses

Objective MU – 1: Ensure consistency of planned and approved activities with environmental requirements, integrated resource management plans, and conflict resolution with neighbors on public lands authorized for long-term and short-term military use.

Rationale:
The military is responsible for rehabilitation activities and resource protection under federal law, internal policy, and agreement with BLM. These laws, policies, and agreements remain in force and are named in part below:

A. OMD's compliance with the standard terms and conditions as specified in 43 CFR Part 2920.7 Terms and Conditions.

B. OMD's compliance with such other terms and conditions as authorized in 43 CFR Part 2920.7 Terms and Conditions as specified in the permit/lease to include but not limited to such provisions as:
1. OMD's responsibility to provide for fire protection/suppression during training activities.
2. The prohibitions on the possession or use of live (projectile firing) ammunition by military units during training on the public lands.
3. The continuation of OMD's land rehabilitation program in cooperation with the BLM with the objective of maintaining or exceeding range land conditions as specified in the BLM's Resource Management Plan for the federal public lands within and around the Biak Training Center.
4. OMD's cooperation with the BLM in management of livestock grazing, wildlife, wildlife habitat, and recreation resources as might be agreed to under separate memorandums of understanding between the agencies.

Guidelines:
- Terms and conditions would be established as part of the Use Authorization in order to mitigate effects of use.

- The military would follow all military regulations concerning environmental protection, natural resources, cultural resources, ranges and training, safety, and fire and emergency services.
- Military use would be reviewed on a yearly basis.

Recreation

<u>Objective R – 1:</u> Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

<u>Rationale:</u>
FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM managed lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users.

<u>Allocations/Allowable Uses:</u>
The following areas would be designated as Closed to motor vehicles:
- Horse Ridge RNA/ISA
- Smith Rock block
- The airport allotment and Rickard Road areas
- Barnes Butte area
- Redmond Caves
- Jaguar Road and Harper Road parcels (Middle Deschutes)
- Small area closures in Dry Canyon (Cline Buttes) and adjacent to La Pine State Park
- Upper Deschutes consistent with Wild and Scenic River Plan
- Middle Deschutes consistent with Wild and Scenic River Plan
- Lower Crooked River consistent with Wild and Scenic River Plan

<u>Guidelines:</u>

- An area management (i.e., trails) plan would be prepared for the Cline Buttes area.
- The BLM would continue to pursue a cooperative agreement to manage the area known as the ODOT pit. If acquired, the BLM would develop the site as a permanent casual-use staging area, warm up area, and the hillclimb areas behind the play area would be closed, but the play area itself would be Open year-round. Improvements may include vault toilet, load up ramp, information kiosk, etc.
- A primitive campground would be located in the North Millican area; typical improvements would include a cindered road loop, vault toilet, and a group gathering area with a fire pit. A staging area would be associated with the camping area.
- Roads and other areas in the area known as the Cinder Pit (North Millican) would be managed as follows:
  - One casual use staging area would be developed in the North Area at the cinder pit. This staging area would have a graveled parking area, loading ramp, and an information bulletin board.
  - A warm-up area would be developed at the cinder pit. The area would consist of about a 35-acre area, with ten acres fenced and signed, primarily for use by children.
  - The hillclimb area at the cinder pit would be maintained.
- Roads and/or trails located on private property that is acquired through exchanges, sales, or acquisition of easements would be evaluated for addition to the road and trail system. Priority would be given to roads that provide key linkages or provide loop opportunities, or roads and trails that would replace other routes with resource or safety concerns.

- An event staging area would be located in the Millican Plateau area; typical improvements would include graveled parking areas, loading ramps, and information kiosks.
- Cattleguards would be placed where designated trails cross fences to eliminate the problem of gates being left open or closed, contrary to the needs of grazing permittees. Gates would be installed next to cattleguards to accommodate equestrian use.
- Trail maintenance would be the minimum necessary to promote visitor safety and resource protection, and to maintain assigned trail difficulty ratings.

Objective R - 3: Provide for projects, programs, and permits that promote a diverse range of recreation opportunities. Provide for individual, group, and competitive event recreational use that could not be reasonably accommodated on private land.

Rationale:
FLPMA provides for recreational use of public land as an integral part of multiple use management. BLM Strategic Plan includes direction for serving both present and future publics. However, on an individual basis, visitors may lack the skills (technical ability, local knowledge) or gear, to achieve their recreational goals. Visitors may also wish to recreate on BLM lands in large groups, or engage in competitive events; activities which may include increased risks to natural or cultural resources, impacted social experiences, and degraded facilities. These types of recreational opportunities are not normally provided by the BLM. Demand for these types of recreational use is rapidly increasing now, and is expected to continue to increase in the future.

Guidelines:
All alternatives would provide opportunities for recreation services to be provided by others on BLM administered lands. Special Recreation Permits would be required for all commercial and competitive uses on public lands. All alternatives would allow for R&PP (Recreation and Public Purposes Act) leases to provide for recreation opportunities managed by others (e.g., shooting ranges), and would provide for rockhounding opportunities, by managing specific areas for rockhounding use (see Minerals, Rockhounding for details).

Objective R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Allocations/Allowable Uses:
The Airport Allotment, Rickard Road area, and Smith Rock Block would be designated Closed to motor vehicles.

Guidelines:
An area management (i.e., trails) plan would be prepared for the Cline Buttes area.

Transportation and Utilities

Objective TU-1: Provide new or modified rights-of-way for transportation/utility corridors and communication/energy sites to meet expected demands and minimize environmental impacts.

Rationale:
The Federal Land Policy and Management Act, Section 503 (43 U.S.C. 1763) provides criteria applicable for the designation of right-of-way corridors. In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practical, and each right-of-way or permit shall reserve to the Secretary concerned the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way granted pursuant to this Act. Any existing transportation and utility corridors may be designated as transportation and utility corridors pursuant to this subsection without further review.

Federal regulations contained in 43 CFR Subpart Sec. 2806.1, provide guidance for the designation of right-of-way corridors. The authorized officer of BLM may, based upon his/her motion or receipt of an application, designate right-of-way corridors across any public lands in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way.

Allocations/Allowable Uses:
- All transportation/utility corridors identified by the Western Regional Corridor Study are designated as transportation/utility corridors. Existing communications sites in the planning area are identified.
- Areas of critical environmental concern, wilderness study areas, and Wild and Scenic Rivers are designated as right-of-way exclusion areas.
- All areas identified as having special status plant or animal species are designated as avoidance areas.

Guidelines:
- Public lands will continue to be available for rights-of-way, including multiple use and single use utility/transportation corridors, following existing routes, and roads.
- Corridor widths vary depending on the number of parallel facilities, but are a minimum of 1,000 feet on each side of the existing centerline, unless adjacent to exclusion areas.
- Applicants are encouraged to locate new facilities adjacent to existing facilities to the extent technically and economically feasible and meet resource objectives.
- All right-of-way applications will be reviewed using the criteria of following existing corridors wherever possible and to avoid the proliferation of separate rights-of-way.
- All areas having high or sensitive (VRM classifications 1-3) visual qualities will be avoided or appropriate mitigation measures taken.
- Each rright-of-way will be limited to the area necessary for operation and maintenance. The project will consider the protection of public safety and will do no unnecessary damage to the environment.
- Each right-of-way will contain terms and conditions requiring compliance with environmental quality standards applicable to Federal or State law.
- Each right-of-way grant or permit will reserve to the BLM the right to issue additional rights for compatible uses on or adjacent to the project.

Land Ownership

Objective LO-1(Z-1): Identify lands for retention based on resource values and overall management objectives. Lands allocated for retention are identified as having high public resource values. They include areas that would generally be retained in public ownership, and where emphasis would be placed on increasing public land holdings.

Rationale:
Public lands in Central Oregon represent a variety of resource values, including but not limited to native or natural species dominance, archaeological values, special or unique

plant and animal habitats, support for wildlife populations, recreational opportunities, solitude and open space, providing undeveloped space between burgeoning population areas.

Allocations/Allowable Uses:

- Those public lands in Wild and Scenic River areas, identified for retention in the Middle Deschutes/Lower Crooked River (Chimney Rock Segment) Management Plan and designated in the Brothers/La Pine Resource Management Plan would remain Z-1.[5]
- Retain in federal ownership all habitat essential for the survival and recovery of any federally listed or proposed species or BLM sensitive species, including historic habitat that has retained it's potential to sustain listed species and is deemed to be essential for species survival (BLM Manual 6840- Special Status Species Management). However, trading of land to acquire habitats of equal or better in value would be considered.

Objective LO-2 (Z – 2): Identify parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values. Certain of these lands may be identified for disposal for lands with higher public values.

Rationale:

Lands identified for exchange offer flexibility for acquisition of lands that have important resource values or that may improve the administration of existing lands. The BLM retains the option to consider the disposal of all properties for the best interests of the public under the appropriate review process. Retention is directly consistent with objectives that emphasize developing a land pattern for the protection of resources. Retention also indirectly benefits acquiring land in a pattern to benefit resources.

Guidelines:

- Parcels generally having the potential for high public resource values to retain, may be exchanged for private parcels with higher public resource values, or that would block up larger blocks of public lands, or that would provide connectivity between larger blocks of public lands. These parcels, identified as Z-2, may be disposed of only through a beneficial exchange.
- Do not dispose of lands that contain special status species habitats unless the parcel to be disposed of would have a conservation easement, and/or the parcel to acquire contains similar resources of equal or better quality for special status species.

Objective LO-3 (Z-3)[6]: Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits, that may not be cost effective for the BLM to administer, or that would represent a greater public benefit in other ownership.

Rationale:

Many BLM lands are isolated parcels that have limited resource values or no public or administrative access. Lands adjacent to growing communities often are categorized as the least productive lands, and therefore are high priority for expansion of urban growth boundaries when compared with lands of higher productivity. Community expansion was provided for in the Brothers/La Pine RMP and was identified as an appropriate need throughout the Upper Deschutes EIS/RMP alternative development process.

Lands that share boundaries with private lands are sometimes subject to inadvertent trespass. While the bulk of a parcel may represent one or more public values, inadvertent trespass that includes part of a structure, for instance, has lost public value. If the trespass

[5] Early in the process these public lands were placed outside the scope because they had more recent plans that met Congressional mandates. However, specific acquisition parcels were not identified in the river plans; and have, consequently, been identified in this plan.

[6] Under each alternative all the majority of properties identified as suitable for sale or exchange (Z-3) were previously identified as Z-3 under the Brothers/LaPine RMP. Each alternative, however, identifies a different set of properties as Z-3.

was inadvertent, such as in an erroneous survey conducted under earlier standards; or, if the cost to remedy the trespass is not commensurate with the restored values, disposal of these properties would be facilitated.

Current legislation (BACA Bill) allows for funds generated from sales of Z-3 lands identified in BLP to be retained by the BLM and applied to state-wide land acquisition purposes.

Allocations/Allowable Uses:
Selected public lands identified as Z-3 in Brothers/La Pine RMP would continue as Z-3 and qualify for the purposes of BACA. These lands include isolated parcels between Bend and Redmond, isolated parcels around Prineville, and isolated parcels northwest of La Pine.

Guidelines

- Trade or sell small, isolated parcels to acquire lands adjacent to and/or surrounded by larger parcels of BLM or other federal, state or county administered lands.
- Lands allocated for potential disposal in land tenure Zone 3 in this RMP may be retained if the consultations, clearances, reports, or future site specific Environmental Assessments show any resource values worthy of permanent Federal retention. Any exchange, sale, or transfer of public lands would be subject to appropriate analysis under NEPA, with applicable cultural, botanical or special status species clearances, as well as required mineral reports.
- BLM retains the options to reconsider the disposal of all properties for the best interests of the public under the appropriate review process. Disposal is consistent with objectives that emphasize developing a land pattern for the protection of resources also furthers objectives that emphasize acquiring public land to benefit resources.
- Designate as Z-3 any parcels determined to be unsuitable for retention.

Objective LO-4: Provide land for community needs and uses consistent with public land management mandates.

Rationale:
Public lands abut or surround many of the expanding communities in the basin, including the City of Redmond and the community of La Pine. Under State land use law, BLM administered lands are often the lands most "urbanizable". In La Pine, BLM administered lands are within and around the community, making them highly desirable for urban infrastructure and to supply future needs for parks and open spaces.

Guidelines:

- Public land would be categorized specifically for community expansion when a genuine need for lands has been identified through an urban reserve or other appropriate study. Such studies consider trade-offs in values between unique resources identified on those public lands but not recognized or prioritized by State Land Use urbanization processes.
- Identify lands for community expansion that have particular value to communities for future infrastructure or other expansion needs, (including expansion of urban growth boundaries) or when another agency may have greater administrative capabilities in regard to particular parcels. These lands are highlighted for, but are not restricted to these uses, and would always have an underlying value of either retention or disposal related to the agency's overall land ownership objectives. Sale or exchange of that land could occur in support of land acquisition objectives of the agency, regardless of the prospective buyer's purpose.

Easements
Use easements to compliment acquisitions, in lieu of acquisition for conservation or access as appropriate to further public management objectives.

Public Health and Safety

The Brothers/La Pine Resource Management Plan does not address the issue of firearms within the planning area. It does acknowledge that hunting "occurs throughout the planning area." Subsequent Federal Register firearm closures have been established to protect wildlife resources and other natural and cultural features, reduce vandalism, and to improve public safety. These closures include raptor closures at Badlands Rock and Fryrear Road, and high use closures at Rosland OHV area and Mayfield Pond.

Guidelines:

See Table A-1 below (Closure Guidelines per Federal Register).

Archaeology

Objective A-1: Locate, protect and preserve archaeological resources in accordance with existing legal authorities and policies, with a special emphasis on "at-risk" significant archaeological resources.

Table A-1. Closure Guidelines per Federal Register

Closure Area[1,7]	Closure Type	Closure Period	Purpose	Federal Register
Badlands Rock	Closed to shooting*	March 1 to August 31	Reduce negative impacts to a nesting pair of prairie falcons.	June 9, 2000 Vol. 65, No. 112
Fryrear Road Area	Closed to shooting*.	January 1 to August 31	Protect nesting golden eagles.	January 16, 1998 Vol. 63, No. 11
Rosland OHV Area	Closed to shooting*	Year round	Increase visitor safety and public satisfaction and to reduce impacts to soils, vegetation, wildlife, and cultural resources.	August 27, 1998 Vol. 63, No. 166
Mayfield Pond	Closed to shooting* except when legally hunting game birds, game mammals, or furbearers during official state waterfowl, upland game, big game, and furbearer seasons.	Year round	Protect wildlife resources and other natural values, reduce vandalism, and improve public safety.	July 24, 1997 Vol. 62, No. 142

[1] All existing closures provide for the authorized officer to make exceptions to the closure on a case-by-case basis.

* Shooting is defined as the discharge of firearms. A firearm is defined as a weapon, by whatever name known, which is designed to expel a projectile by the action of powder and which is readily capable of use as a weapon.

[7] All existing closures provide for the authorized officer to make exceptions to the closure on a case-by-case basis.

Rationale:

- The Federal Land Management and Policy Act (FLPMA), directs the BLM to administer archaeological resources on public lands in a manner that will protect them and provide for their proper use.
- The Archaeological Resources Protection Act (ARPA), as amended, defines and protects archaeological resources on Federal lands, establishes a permit system for resource recovery, requires agencies to survey lands under their jurisdiction that are likely to contain the most scientifically valuable archaeological resources, and establishes civil and criminal penalties for an individual(s) that violate the Act.
- The National Historic Preservation Act (NHPA), as amended, provides a national policy for historic preservation, establishes a National Register of Historic Places (NRHP) designation for important properties, protects sites from destruction without appropriate data recovery, and requires that historic properties be utilized in agency missions when warranted.
- Executive Order 11593, directs Federal agencies to inventory public lands and to nominate eligible properties to the NRHP.
- BLM 8100 provides management policy and use allocations for the disposition and utilization of agency-administered heritage resources.

Guidelines:

Follow the guidance provided in the National Cultural Programmatic Agreement (1997) and the Protocol for Managing Cultural Resources on Lands Administered by the BLM in Oregon (1998).

At a minimum, survey 50 acres annually in areas considered to be of high probability the location and discoverability of significant archaeological sites.

Management Direction Common to Alternatives 2-7

A number of changes to the No Action alternative would be implemented in the Common to Alternatives 2 - 7 (action alternatives). These primarily reflect other suggested guidance not official policy such as the sage grouse guidelines, or are generally supported by the interdisciplinary team without need for comparison across the alternatives.

Ecosystem Health and Diversity

Vegetation

Ecosystem Maintenance and Restoration

Objective V - 2: Maintain and restore healthy, diverse and productive native plant communities appropriate to local site conditions. Manage vegetation structure, density, species composition, patch size, pattern, and distribution to reduce the occurrence of uncharacteristically large and severe disturbances. Maintain or mimic natural disturbance regimes so that plant communities are resilient to periodic outbreaks of insects, disease and wildfire. Identify opportunities to actively re-pattern vegetation on the landscape to conditions more consistent with landform, climate, biological, and physical components of the ecosystem.

Rationale:
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from the "natural" state that existed prior to European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term.

Guidelines:
- Vegetative restoration treatments would be accomplished by a variety of methods including, but not limited to, mechanical, prescribed fire, and grazing. Specific project prescriptions would be appropriate to site conditions, plant community types, and resource objectives, and would be detailed in project-level plans and NEPA analyses.
- Guidelines for restoration/maintenance of ecosystems utilizing prescribed fire are discussed in more detail in the Fire/Fuels Guidelines.
- Where ecosystems are in good condition, apply management to ensure the maintenance of good conditions and, where the condition of ecosystems is not as

good, keep conditions from deteriorating further until they can be restored, either passively or actively.

- Rehabilitation would be considered whenever there is damage caused by natural or human-caused events such as erosion, fire, trespass, mining, road construction, and other ground disturbing activities. Weed management would also be integral to most rehabilitation efforts.
- Guidelines for rehabilitation of burned areas are discussed in more detail in Fire/Fuels Guidelines.
- Seeding or planting of grasses, forbs, shrubs and trees would occur where appropriate to achieve a variety of objectives such as: stabilizing soils, restoring native communities, converting to more desirable plant communities, improving wildlife habitat, and influencing potential fire behavior in the wildland urban interface.
- Use native species for a majority of restoration/rehabilitation treatments. Examples of when use of non-natives may be appropriate include:
  1. When advantageous for quick soil stabilization
  2. When aggressive competition with invasive weeds is needed
  3. When non-natives are significantly more cost-effective and result in a much greater area treated
  4. When natives are not capable of achieving objectives
  5. When non-natives can contribute to overall restoration success
- Increase the potential for re-seeding success by utilizing stock adapted to or appropriate for local conditions. Use native seeds or seedlings obtained from local genetic stock whenever practicable.
- Potential project areas would be evaluated for expected rehabilitation success given a reasonable level of treatment effort and investment. Areas that are so damaged or altered so as to have transitioned beyond the threshold of restoration success may be deferred in favor of areas that have greater opportunity for success.
- Utilize wildland/urban interface fire zone treatments to maintain or contribute early seral (low shrub, perennial grass, forb) structure and composition to desired landscape vegetative communities.
- Restoration treatments would promote native herbaceous cover to reduce the amount of bare, exposed soil for erosion control and displacement of weeds.
- Restore the distribution and vigor of bitterbrush stands through vegetative treatments designed to reduce competing plants, create a variety of bitterbrush age classes, and create conditions conducive to bitterbrush natural regeneration.
- Increase the health and ecological dominance of ponderosa pine (where sites are appropriate for ponderosa pine). Favor retention of large trees. Create stands with stocking levels and fuel loads that are more resilient to wildfire, insects, and disease. A series of periodic, non-commercial thinning, commercial thinning, and prescribed fire treatments would be used to achieve and maintain the desired species composition and stand structure (Dave Harmon, pers. comm.).
- On sites that would support ponderosa pine, ponderosa would be favored over other tree species for prescriptions involving planting or natural regeneration. Leave trees left in shelterwood, seed trees, and fire salvage treatments would include the healthiest available ponderosa pine, regardless of size or age.
- Use a variety of measures to protect planted and naturally regenerated seedlings from the effects of trampling, browsing, and girdling by livestock and wildlife. Such measures could include: suspension of grazing, fencing, tubing, netting, and animal repellents.
- Maintain/create snags and down logs at levels that would consider historic conditions, wildlife habitat needs, and objectives for fuels treatments in wildland urban interface areas.
- Restore riparian vegetation wherever it occurs within larger-scale upland vegetative treatments. Important hardwood riparian vegetative types occurring within the planning area requiring special attention would include aspen, alder, willow, currant, chokecherry, oceanspray, and mock-orange. Due to the different plant communities and site conditions involved, site-specific prescriptions would be developed for

riparian treatments. Additional protection from damage by domestic livestock, deer and elk should be considered.

- Incorporate measures to protect microbiotic crusts where practicable during vegetative treatments and other authorized activities. Promoting conditions favorable for retention and development of micro-biotic crusts.
- Retain non-commercial vegetative and woody residues from mechanical vegetative treatments scattered on-site wherever possible to:
  1. Maintain soil nutrients and long-term site productivity
  2. Maintain soil organic matter
  3. Provide site protection from wind and water erosion
  4. Facilitate native plant recolonization by providing micro-site amelioration of extremes of heat and cold
- Vegetative and woody residues from mechanical treatments would be placed in a manner that does not block trails or create safety hazards.

Stewardship Units

- Consider the use of "stewardship units" wherever practicable to directly involve local citizen groups, individual volunteers, adjacent homeowners, nearby residents, and small contractors to help accomplish natural resource protection and enhancement work. A stewardship unit is a small parcel of public land where workers/volunteers have obtained BLM approval to do low-impact treatments such as small diameter tree thinning, pruning, brush cutting, hand piling, lop and scatter, and other treatments to help accomplish ecosystem restoration and fuels reduction objectives within or adjacent to communities. Workers would also be able to obtain permits to remove firewood, posts, poles and other products resulting from restoration treatments.
- Layout project areas and units, which are operationally suitable, for small contractors and non-industrial workers. Provide adequate instruction and guidance to workers/volunteers on operational procedures, techniques, and safety to achieve desired objectives. Issue written authorization with appropriate requirements and map or some other designation of areas.

Special Status Plants

<u>Objective V - 3:</u> Special status plant species are managed such that BLM actions do not contribute to the need to federally list as threatened or endangered.

<u>Rationale:</u>
The BLM has legal responsibilities and policy requirements to protect and provide habitat for threatened, endangered and proposed species. The Endangered Species Act of 1973 declares that: "The United States has pledged itself…to conserve to the extent practicable the various species of fish, wildlife, and plants facing extinction…Meeting these responsibilities requires protection and maintenance of high quality habitat and restoration of degraded habitats necessary for the recovery of these species. These areas include both occupied habitat and designated critical habitat for federally listed threatened, endangered or proposed species within the planning area."

<u>Guidelines:</u>

- Management would include a combination of protection, restoration and enhancement depending on individual species, population condition and dynamics, and larger scale treatment opportunities.
- Where practicable, vegetative treatments would incorporate active habitat improvement for the conservation of special status plant species. Experience and research findings would help dictate appropriate vegetative treatments to improve habitat for the specific special status species within the planning area.
- Prior to implementing any projects that could potentially affect special status plant species, surveys would be conducted and documented, including any site-specific management recommendations.

Shrub-Steppe Communities

<u>Objective V - 4:</u> Maintain/restore large contiguous stands of healthy, productive and diverse native shrub/steppe plant communities.

<u>Guidelines:</u>
- Minimize disturbance related activities by limiting motorized travel to designated roads and trails.
- Mimic natural processes with vegetation management efforts in the Badlands WSA so as not to impair the area's suitability for wilderness designation.

Old-Growth Juniper Woodlands

<u>Objective V - 5:</u> Protect and restore the health and integrity of old-growth juniper woodlands and savannah.

<u>Rationale:</u>
Old-growth western juniper woodlands in the pumice sands of Central Oregon are unique in their age, size and extent. Of the 8 million acres of western juniper in the intermountain west, only an estimated 3-5 percent is considered to be old-growth. The planning area contains an estimated 155,000 acres of old-growth juniper woodlands. Ideal conditions of soil, climate and topography converge in Central Oregon to allow juniper to attain its maximum potential for size and age of individual trees and density and range for contiguous old-growth stands. The oldest (1,600 years) western juniper tree found to date is located within the planning area. Continued human population growth and associated increases in development and public land use in Central Oregon is causing fragmentation and degradation of this important habitat type. Large contiguous stands of old woodlands provide habitat for late-seral dependent species, scenic quality, and education and interpretation opportunities.

<u>Guidelines:</u>
- Design and authorization of land uses and activities such as new or expanded ROWs, special use permits, and any ground-disturbing activities would consider the following factors:
  1. Quality of affected old-growth woodland values
  2. Relative importance of the proposed use or activity
  3. A full range of site location or route options, including non-BLM land.
- Considering the above factors, if a land use or activity is authorized, reasonable mitigation measures shall be incorporated into the design or special requirements to protect and enhance old-growth woodland values (See ROW).
- ACECs with old-growth woodlands (as designated within alternatives) would receive high priority for vegetation treatment (see ACEC management guidelines). Priority would also be given to high quality woodlands with a large component of young juniper and a high potential for response.
- Implement prescriptions that will maintain an uneven-age structure (consistent with natural old-growth woodland succession and structural development).

Late and Old Structure Ponderosa and Lodgepole Pine

<u>Objective V - 6:</u> Maintain and promote old forest structure and conditions through active treatments and restoration activities. Protect existing and developing old forests from human development and land uses and from severe natural disturbances. Develop and maintain stand structures that are relatively complex with highly variable tree densities, healthy and diverse understory composition, and abundant snags and down logs.

Rationale:
Due to past logging practices, human developments, and wildfire, old ponderosa pine forest structure within the planning area has been degraded, both in extent and condition, from historical to current periods. Similarly, in the lodgepole pine, the mountain pine beetle epidemic and subsequent aggressive salvage logging has greatly reduced the proportion of mature lodgepole pine habitat. Mature forest structure supports a variety of wildlife and understory plant species that depend on old forest conditions for all or portions of their life cycle. Old forest also contributes to foreground scenic quality and provides opportunities for education and research.

Guidelines:
- Maintain existing late and old structure ponderosa pine stands using thinning, harvesting, prescribed fire, and other techniques. Stand structure, condition, composition, density, snag and down log levels, fuel loading and arrangement, and litter and duff depth would be matched to the desired fire regime. In stands with substantial disturbance, individual remnant old trees would be targeted for maintenance.
- Approximately ninety percent (12,800 acres) of remaining mature lodgepole pine stands in the La Pine area would be maintained in mature/old structure during the life of this plan.

Ecosystem Condition and Assessment

Objective V - 7: Obtain and efficiently display information to help in analyses at all levels ranging from broad-scale assessments to site-specific projects.

Rationale:
Gathering of resource condition information is critical in order to assess restoration needs, prescriptions, cost-benefit, priorities, and treatment success.

Specifically, existing and potential natural vegetation classification and map information is needed to:

1. Describe the diversity of vegetation occupying a site.
2. Characterize the effect of disturbances or management on species (particularly TES) and community distributions.
3. Identify desired objectives and related management opportunities.
4. Document successional relationships and communities within potential natural vegetative or ecological types.
5. Streamline monitoring design and facilitate extrapolation of monitoring interpretations.
6. Assess resource conditions, determine capability and suitability, and evaluate forest and rangeland health.
7. Assess risks for invasive species and fire.
8. Conduct project planning and watershed analysis, and predict activity outcomes at the project or RMP planning scales.
9. More effectively communicate with our neighbors and partners.

Guidelines:
- Project proposals would consider an assessment of resource conditions, and ecosystem health risks and opportunities at appropriate scales. Current and historic conditions and trends will be a consideration in all project proposals and treatment prescriptions.
- Geographically prioritize condition assessments according to the objectives of the Resource Management Plan and proposed treatment priorities.
- Assessments would be conducted using the most current and relevant guidance such as that in the "Standards for Rangeland Health and Guidelines for Grazing Management" (BLM, 1997), President Bush's "Healthy Forest Initiative" (2003),

the National Fire Plan (2002, and Governor Kitzhaber's "An 11-Point Strategy for Restoring Eastern Oregon Forests, Watersheds and Communities" (1997).

- Existing vegetative mapping and database programs such as the Forest Operations Inventory (FOI), Soil and Vegetation Inventory Method (SVIM), and Ecological Site Inventory (ESI), and others will be updated and utilized to their maximum potential until they become outdated or replaced with more accurate mapping and inventory efforts.
- Standards and procedures for collecting, storing, and displaying information should be compatible with those of the Forest Service and other agencies whenever practicable to facilitate cross-jurisdictional watershed and other landscape-level analysis.
- Stored information can take many forms including, field surveys and inventories, photo points, aerial photography, remote sensing, scientific research, and empirical data from other landowner/agency experience. For preservation and retrieval efficiency, Geographic Information Systems and other computerized database programs are the preferred methods for storing and displaying information.
- Potential project areas would be evaluated for expected rehabilitation success given a reasonable level of treatment effort and investment. Areas that are so damaged or altered as to have transitioned beyond the threshold of restoration success may be deferred in favor of areas that have greater opportunity for success.

Wildlife

<u>Objective W – 1:</u> Conserve federally listed species and the ecosystems on which they depend (Manual 6840, p. 0.1). Ensure that actions requiring authorization or approval by the BLM are consistent with the conservation needs of special status species and do not contribute to the need to list any special status species under provisions of the ESA, or designate additional sensitive species under provisions of BLM Manual 6840-Special Status Species Management 6840, p. 0.2).

<u>Rationale:</u>
The Agency is directed to contribute to the recovery of federally listed or proposed species (or subspecies or populations) across their ranges by maintaining and restoring habitat quality, quantity and effectiveness (ICBEMP Prop. Dec. p. 69).

Meeting these responsibilities requires maintenance of high quality habitat and restoration of degraded habitats necessary for the recovery of these species (ICBEMP Suppl. Draft EIS Ch. 3, p. 84).

- There is new information that has been provided as a result of the Interior Columbia Basin Ecosystem Management Project (ICBEMP), in a document titled Scientific Assessment (Quigley and Arbelbide, 1997). New information from this source and others includes:
- Recent Biological Opinions issued under the Endangered Species Act indicating additional guidance is needed to protect some plants and animals in portions of the planning area;
- Downward trends in ecological integrity, based on the condition of soil and vegetation, and perceived impacts from land uses including recreation, grazing, agriculture and urban or rural development (Quigley and Arbelbide, 1997);
- An increase in fragmentation and loss of plant and animal species diversity or genetic resilience due to loss of connectivity within and between blocks of upland forest, shrub-steppe and riparian habitats (Quigley and Arbelbide, 1997);
- Noxious weed encroachment and the expansion of juniper and other woody species beyond their historic range of variability (Quigley and Arbelbide, 1997);
- New requirements for plant and animal species habitat (Quigley and Arbelbide, 1997);

- The importance of late and old seral species, historic disturbance factors such as fire on the landscape, and sustainable use and development on public lands (Quigley and Arbelbide, 1997);
- Identification of high priority areas and special emphasis watersheds for restoration activities within the Upper Deschutes basin (Quigley and Arbelbide, 1997).

Allocations/Allowable Uses:

- Include current and future potential important landscape features into an overall Bald Eagle Habitat conservation strategy where current populations and suitable habitat occurs near Prineville Reservoir and Grizzly Mountain.
- Management techniques, such as altering or removing trees and shrubs, prescribed and managed wildland fire, livestock grazing, and planting may be used to maintain or improve habitat conditions.
- Management activities would be designed and implemented to be consistent with adopted conservation strategies and current, accepted science. For example, where appropriate, actions would be consistent with the Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines as directed in IB No. OR-2000-334. This management strategy is to be implemented in concert with the process established in BLM's "Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands in Oregon and Washington" and other applicable laws, regulations, and policies.

Guidelines:

- Reduce competition to roost and nest trees
- Enhance conditions for future large perch/nest trees
- As new habitat areas or future potential habitat[8] areas become known, consider including them into the designated Bald Eagle Habitat Areas and managing them with an emphasis on Bald eagles.
- Action would be taken, when practical, to determine the distribution, abundance, reason for current status, and management needs of special status species occurring on BLM lands, and would evaluate needed management for the conservation of these species. The District would also document observations of, and minimize impacts to Bureau assessment and Bureau tracking species.

A. Habitat Modification

- Vegetation altering activities could occur in sage grouse habitat where it does not result in the long-term loss of habitats or contribute to the need to list.
- Balance the need for restorative actions to address long-term threats to listed and proposed species with the short-term need to protect listed and proposed species and their habitats.
- Prior to any action that may negatively affect important habitats of special status species develop a conservation strategy for that species. For example, a bat management strategy may focus on caves, cliffs, rock out-crops and snags. Until such a strategy could be developed, inventory key features and close (seasonally or permanently) areas (caves, cliffs, adjacent roads) where necessary to manage for bats or other special status species.
- Management activities in the habitat of listed, candidate threatened, or endangered and sensitive species would maintain or improve habitat conditions and/or not prevent or retard attainment of future desirable habitat conditions (B/LP RMP modified, p. 121).

[8] "Future potential habitats" are areas that either historically were or naturally have the potential to develop into bald eagle habitat. These areas would typically consist of ponderosa pine stands or individual trees, cliffs or rock outcrops that could be restored or grow to provide nesting, perching or roosting habitats.

B. Disturbance Actions

- Disturbance activities could occur in sage grouse habitat where they do not disrupt breeding and over-wintering activities or compromise the suitability of the habitat.
- Design and implement relevant management activities to be consistent with BLM adopted recovery plans, conservation strategies, and other appropriate reports.
- Develop an interdisciplinary interim species response matrix that includes documented (from literature searches) responses of the species to management activities or natural phenomena. This information would be used to determine management activities for which mitigation measures should be recommended or are needed.
- Identify needs to protect special status species and their habitats during authorizing activities by conducting a thorough assessment of the wildlife resources, documenting the findings in a "Wildlife Situation Report" and including the findings in appropriate NEPA documents. These assessments would :
  1. Review the Wildlife Observations Database and conduct field surveys during appropriate seasons to identify existing habitat conditions and species occurrences and habitat associations.
  2. Examine impacts and develop mitigation measures to be applied to project implementation requirements.
  3. Identify opportunities for habitat enhancement as part of project design
  4. Apply contract stipulations to allow work to be stopped if special status species are discovered to be present in or adjacent to a project area.
  5. Adjust clearance and mitigation activities to accommodate additions or deletions in official listings of special status species.
- Evaluate effects of Bureau actions on federally listed, proposed, candidate, state listed, Bureau sensitive or assessment species in accordance with management direction. Impacts to these species would be evaluated through the NEPA process (Instruction Memorandum No. OR-91-57).
- Seek opportunities to conserve and improve special status species and habitats for native animals and wildlife in BLM authorized activities.

Townsend Big-Eared Bats - Redmond Caves

Allocations/Allowable Uses:

- Provide suitable habitat for the restoration of bat populations (including Townsend's big-eared bats) in a portion of the lava tube system known as Redmond Caves.
- Human uses may be excluded from some portion of the system (See also Special Management Areas).

Guidelines:

Assess habitat potential within all caves and identify which caves (if any) that contain potentially suitable habitat for bats (especially, Townsend's big-eared bat). Identify one cave that has high potential for occupation/reoccupation by bats and emphasize habitat restoration/ interpretation for that cave/lava tube.

Objective W - 2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities, meet ODFW management objective numbers for deer and elk.

Wildlife Emphasis Descriptions

To meet this objective, each of the geographic areas is allocated at one of three management emphasis levels (primary, secondary or minor emphasis). Definitions and guidelines for how these would be met are:

Primary wildlife emphasis means wildlife is one of the few management programs that indicate important management consideration and have guidelines that reflect a greater

degree of importance. Areas allocated to primary emphasis are intended to benefit wildlife and retain high use by wildlife.

Guidelines:
- habitat effectiveness[9] should be 70 percent or greater,
- where possible, maintain large un-fragmented patches (1000 to 2,000 acres),
- target low densities of open motorized travel routes (approximately $\leq$1.5 mi/mi^2),
- rate as a high priority for habitat restoration treatments,
- group use restrictions.

Secondary wildlife emphasis is where wildlife is one of several resource management programs that are of focus in an area, and typically receive a lower level of management consideration. Management guidelines reflect a lower degree of importance than primary emphasis areas. Areas allocated to a secondary are intended to support wildlife and maintain a moderate amount of use by wildlife.

Guidelines:
- habitat effectiveness should be 50 percent or greater,
- maintain moderate size un-fragmented habitat patches(400 to 800 acres),
- target moderate densities of open motorized travel routes (approximately $\leq$2.5 mi/mi^2)

Minor wildlife emphasis is where wildlife typically receives a lower level of consideration to most other resource management programs. These areas, as a whole, should still contribute to species occurrence and distribution, but typically are not the focus of intense management efforts for wildlife. Guidelines generally are tied to minimum legal requirements identified in the sections on "common" guidance (Standards for Rangeland Health, BLM Special Status Species Policy (6840), and the Threatened and Endangered Species Act.

For each geographic area, emphasis, allowable uses, and additional guidelines are noted.

Badlands

Allocations/Allowable Uses:
Primary emphasis would be for deer and elk winter range, pronghorn year-round and connectivity habitats.

Guidelines:
Avoid actions that create barriers to pronghorn movements in connectivity corridors. Emphasize shrub-steppe and open savannah habitat restoration.

Bend/Redmond

Allocations/Allowable Uses:
Main Block: Minor emphasis for pronghorn year-round habitat; limit motorized travel to designated roads and trails (with the exception of the OMD).

Guidelines:
Coordinate with ODFW and Oregon Military Department to develop a habitat management plan for pronghorn and other species that use shrub-steppe, savannah and juniper woodland habitats.

[9] Habitat effectiveness is used as an index to measure the percentage of available habitat that is usable by elk and is used as a guideline for some alternatives. The Habitat Effectiveness Index for Elk on Blue Mountain Winter Ranges developed by Thomas et. al. (1988) will be used with modifications developed from findings in Roloff et. al. (2001) and Rowland et. al. (2000) to assess impacts caused by motorized travel. Note that because of fragmented ownership and differing road jurisdictions, this guideline may not be achievable in some geographic areas.

Maintain and improve the potential for a connectivity corridor east of Redmond and crossing Highway 126 by:

1. considering the potential suitability of the corridor and effects upon it when evaluating alignments for motorized road or trail access through the area
2. emphasizing habitat restoration to provide suitable connectivity habitat.

Cline Buttes

Allocations/Allowable Uses:
Main Block: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
Southwest: Secondary emphasis for deer, elk and raptor habitat; limit motorized travel to designated roads.

Horse Ridge

Allocations/Allowable Uses:
Skeleton Fire: Primary emphasis for deer and elk winter range and pronghorn year round habitat. Limit motorized travel to designated roads.
Main Block: Primary emphasis for deer and elk winter range, pronghorn year round habitat, and sage grouse habitats.

Guidelines:
Additional Management guidelines vary by alternative.

La Pine

Allocations/Allowable Uses:
Northern portion: Primary emphasis for elk and deer winter range and deer migration corridors; limit motorized travel to designated roads.

Isolated parcels along the Little Deschutes River: Primary emphasis for riparian habitats, deer migration, elk winter range and raptor nesting and foraging habitats; closed to motorized vehicles.

Millican Plateau

Allocations/Allowable Uses:
Main: Minor wildlife emphasis except the Mayfield link[10] that varies by alternative.
Wild and Scenic River Corridor: Primary emphasis for deer and pronghorn winter range, and riparian and raptor nesting and foraging habitats. The area would be limited to designated roads between Highway 27 and the river; closed between Highway 27 and the canyon rim and the river and canyon rim.

Northwest

Allocations/Allowable Uses
Primary emphasis for deer and elk winter range and raptor nesting and foraging habitats. Seasonally (12/01 to 03/31) close motorized trails and some roads in this area.

Guidelines:
Motorized access to trailheads or developed sites would be allowed.

[10] The Mayfield link is on the west side of the block north of Alfalfa.

Prineville

Allocations/Allowable Uses
Section 32 north of Ochoco Reservoir: Primary emphasis on deer winter range and raptor nesting and foraging habitats. Closed to motorized travel. Other activities may be subject to seasonal restrictions or limitations on types of use depending upon their potential effects to raptor habitat (See Table 2-1).
Powell Buttes: Primary emphasis on year-round deer habitat. Closed to motorized use.

Prineville Reservoir

Allocations/Allowable Uses
Eagle Rock: Primary emphasis for deer and elk winter range and elk connectivity habitat. Limit motorized travel to designated roads and trails and seasonally (12-1 to 4-30) close the area to motorized travel.
Lower Crooked River (W&S River): Primary emphasis for deer, riparian and raptor habitats; Closed to motorized use.

Smith Rock

Allocations/Allowable Uses
Primary emphasis for deer winter range and raptor nesting and foraging habitats. Closed to motorized travel. Limit mechanized and horse travel to designated routes.

See Table 2-1 for distance or seasonal restrictions that could be applied to climbing activities.

Steamboat Rock

Allocations/Allowable Uses
Wild and Scenic River, Wilderness Study Area and River Riparian Habitats in the Scattered Parcels: Primary emphasis for riparian habitats, deer and elk winter range and raptor nesting and foraging habitats; limit motorized travel to designated roads.

Tumalo

Allocations/Allowable Uses
Primary emphasis for deer and elk winter range; either seasonally (12-1 to 3-31) closed to motorized travel, or closed year round to motorized travel.

Objective W - 3: Protect and restore special habitat components or features that contribute to the productivity of species. These features include, but are not limited to caves, cliffs, playas, riparian areas and wetlands, foraging areas, and snags and down wood. Maintain and/or recruit adequate numbers, species and sizes of snags and levels of downed wood to contribute meaningfully to the needs of wildlife, invertebrates, fungi, bryophytes, saprophytes, lichens, other organisms, long-term soil productivity, nutrient cycling, carbon cycles and other ecosystem processes (See also Vegetation, Ecosystem Maintenance and Restoration).

Rationale:
As directed under the Federal Land Policy and Management Act of 1976, public lands would be managed in a manner that protects ecological values, maintains their natural condition and provides food and habitat for wildlife. Special habitat components are often limited across the landscape, and thus are more important to those species that depend upon those features for some portion of their lifecycle than more abundant features of the landscape.

Snags and downed logs are important components of forest and woodland ecosystems. They provide essential habitat for wildlife and other organisms, long-term soil productivity and several ecosystem processes. They store carbon and nutrients and provide site improvement following extreme disturbance. Large diameter snags are especially valuable to a wide array of species because they offer greater surface area, more opportunity for cavities, and greater longevity. Hann et al. (1997) found that snag and coarse woody debris levels have declined in roaded and harvested areas. Providing for the appropriate species, numbers and sizes of snags maintains the value of the stand for wildlife.

Allocations/Allowable Uses

- Provide suitable special habitat components across the planning area.
- Special habitats could be maintained or improved using a variety of techniques, such as mowing of shrubs, prescribed burning, livestock grazing and/timber harvests.
- Rock quarries could be developed on cliffs or talus slopes not occupied by special status species.

Guidelines:

- Consider wildlife values when developing mining reclamation/rehabilitation plans
- Wherever practical avoid special habitat components when constructing new roads.

Snags and Dead and Down Wood

Consider the natural variability in number and size of snags and downed logs across landscapes, through time, and in context of biomass levels under which soils and species evolved.

Except where public safety is a concern, forest and woodland management activities would retain enough snags and large coarse woody debris in treatment areas at levels sufficient to support species of cavity-nesting birds at 100 percent of potential population levels. Except for safety concerns and fire hazards management actions would:

1. Retain all soft snags
2. Retain scattered hard snags and large live trees, both to provide the current needs of hard snag dependant species and to serve as a source of future hard and soft snags.
3. Retain approximately 8 large live trees per acre in regeneration harvest units to provide a legacy, bridging past and future forests. These trees are not to be counted toward future snag recruitment as described above.
4. Where densities are below the established, desired range, initiate management activities to increase snag levels through snag recruitment (ICBEMP Proposed Decision p. 48).

The potential population levels for snags described above would be determined using one the following three methods:

1. Use the interim standard densities (described in ICBEMP Supplemental Draft EIS Volume 2/Appendix 12/Page 12-13, Tables 1, 2 and 3) for snags and downed wood to be used in designing field projects, or;
2. Use the amounts that are described in Wildlife-Habitat Relationships in Oregon and Washington (Johnson and O'Neil, 2001) Chapter 24/Page 596, Tables 1, 2 and 3, or;
3. Determine more precisely, site specific natural variability of snag and down log amounts for the planning area. In making these determinations, use the snag analysis and coarse woody debris process described in Appendix 12 of the ICBEMP Supplemental Draft environmental EIS, Volume 2, or use or develop a similar process appropriate for local conditions. If using or developing a new process, it must have a scientific basis, using information from the literature and/or studies on historical conditions to determine snag sizes and average numbers. Consider leaving or recruiting additional snag numbers and coarse woody debris levels in areas that have been burned.

Harvest Operations/Vegetation Treatments

- Dead and down woody material would be retained in amounts that are within the range of natural variability for the plant community, to the extent compatible with reforestation objectives, fire hazard reduction standards, and public safety/trail use.
- Coarse woody debris would be left in place across the unit, not piled and burned for wildlife habitat. Whole tree removal and piling would be planned only where needed for reforestation or fire hazard reduction
- Salvage of dead and down material would be conducted where an adequate amount of such material would be retained to provide sufficient habitat to maintain populations of dependant wildlife.

Structural Developments

- Guzzlers (artificial structures that collect rain water and then regulate the flow to a drinking basin) would be installed only where they facilitate distribution of target wildlife species. Maintenance of existing guzzlers would receive priority funding over the development of new guzzlers, except when managing for special status species.
- To the maximum extent feasible, guzzlers would be located away from existing designated trails to avoid the potential for seasonal trail closures or rerouting of trails.
- In suitable habitats, where important nesting structures are absent, install nesting platforms, nest boxes, and other structures to improve habitat conditions for snag dependant species.
- New fence would generally be built to standard Bureau wildlife specifications to allow wildlife passage, with the exception of fences built specifically to keep ungulates out of an area or fences built to meet specific public safety or other administrative purposes. Existing fences not meeting standard Bureau wildlife specification would be modified to meet the standard when major reconstruction is done or as funding allows.

Objective W - 5: Determine the distributions, abundance, reasons for current status, habitat, and management needs of Special Status Species occurring on BLM lands, and evaluate the significance of these lands and BLM actions for the conservation of these species.

Rationale:

Conservation of habitats for Bureau designated special status species, and other state or federally protected species, is directed by Bureau policy in BLM manual 6840. This manual also directs the agency to provide habitat for threatened, endangered and proposed species. Meeting these responsibilities requires maintenance of high quality habitat and restoration of degraded habitats necessary for species recovery.

FLPMA directs the BLM to maintain an inventory of all public lands and their resource values.

The National Environmental Policy Act (1969) also directs federal agencies to use ecological information in the planning and development of resource-oriented projects.

Guidelines:

- Record observations of and minimize impacts to BLM assessment and tracking species.
- Prior to initiating ground disturbing projects within potential habitat of candidate, sensitive, tracking and assessment species, review habitat and management relationships for species of focus to assess key wildlife issues concerning these species and identify conservation measures and management opportunities to address these issues.
- In coordination with other federal and state natural resource management agencies develop a long-term conservation strategy for managing sage grouse habitats. Until that time, use the guidelines from the Greater Sage Grouse and Sagebrush-Steppe Ecosystems Management Guidelines (2000).

Hydrology

Riparian

Objective H - 5: Maintain, conserve (protect), and/or restore aquatic and riparian-dependent terrestrial resources.

Rationale:
Riparian Conservation Areas (RCAs) are intended to: maintain and restore riparian structures and functions; benefit fish and riparian-dependent resources; enhance conservation of organisms that depend on the transition zone between upslope and the stream; and improve connectivity of travel and dispersal corridors for terrestrial animals and plants, and aquatic organisms.

Guidelines:
- Management options would focus on uses and activities that allow for the protection, maintenance, and restoration of RCA's and upland watersheds and measurable progress toward the attainment of water quality standards and PFC, within the stream and/or RCA's. Interim RCA widths would be applied for planning purposes where activities would not adversely affect riparian processes and functions.
- Interim RCAs consist of the stream channel and the area on either side of the stream extending from the edges of the active channel to the extent of the floodprone width (Rosgen 1996). Where proposed activities may adversely affect riparian processes and functions, more site-specific RCAs would be developed based on second tier criteria. Second tier criteria to be considered in applying more site-specific RCA delineation include identifying the dominant physical and biological features that influence the riparian network, and addressing important biophysical functions and processes.
- Possible activities that may require second tier delineation of RCAs include, but are not limited to, juniper management (where more trees are proposed to be left within the RCA), livestock grazing, roads, trails, new ROWs, and rockhounding.

Objective H – 6: Restore, maintain, or improve riparian vegetation and habitat diversity to achieve healthy and productive riparian areas and wetlands.

Rationale:
FLPMA directs and requires BLM to comply with State water quality standards and manage public land in a manner that will preserve and protect certain land in its natural condition. In addition to FLPMA, Executive Orders 11988 and 11990, and the Oregon-Washington Riparian Plan (1987) direct BLM to manage its riparian/wetland areas for biological diversity, and the productivity, and sustainability for the benefit of the Nation and its economy. Adequate amounts of healthy riparian and wetland vegetation are critical to fully functioning aquatic, riparian, and wetland systems, which are necessary for riparian and wetland-dependent species. Past alterations to vegetation have resulted in riparian habitat conditions that are less than optimal for aquatic and riparian-dependent species. Therefore, restoration of riparian habitat of sufficient quality, patch size, and distribution is necessary to support healthy populations of native fish and riparian-dependent species.

BLM policies relating to riparian/wetland areas include the following:

1. Focus management on entire watersheds using an ecosystem approach and involving all interested landowners and affected parties;
2. Achieve riparian/wetland area improvement and maintenance objectives through the management of existing and future uses;
3. Prescribe riparian/wetland management based on site-specific physical, biological, and chemical condition and potential; and

4. Use interdisciplinary teams to inventory, monitor, and evaluate management of riparian/wetland areas and to revise management where objectives are not being met.

Guidelines:

- Areas not in PFC would be managed to attain an upward trend in the composition and structure of key riparian/wetland vegetation and desired physical characteristics of the stream channel. Managed uses and activities in RCAs not affect progress toward attainment of State water quality standards, PFC, and RMOs (Riparian Management Objective). Uses and activities in these riparian/wetland areas would be adjusted or excluded from the RCA if current management would not allow for the maintenance or measurable progress toward the attainment of PFC. Exclusion would be in the form of buffered exclusion areas or the use of temporary and permanent fencing. Management options for uses and activities would allow for measurable progress toward the attainment of water quality, PFC, and RMOs within RCA's at a positive annual rate.
- Restoration emphasis should be placed on providing diversity in plant species and structure, such as shrubs and large trees, which occurred in the area historically.
- Restore the extent and diversity of wet and moist meadow and riparian plant communities using techniques such as burning, cutting encroaching conifers, planting native hardwoods, grazing management, fencing, and managing uplands for improved hydrologic function.

Objective H - 7 : Riparian and aquatic habitats support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations.

Rationale:

FLPMA, Executive Orders 11988 and 11990, and the Oregon-Washington Riparian Plan (1987) direct BLM to manage its riparian/wetland areas for biological diversity, productivity, and sustainability for the benefit of the Nation and its economy. The intent of this objective is to ensure that adequate amounts of riparian and wetland vegetation are sustained or increased in the long term. Studies conducted during the ICBEMP identified past alterations to vegetation on BLM-administered lands have resulted in riparian habitat conditions that are less than optimal for aquatic and riparian–dependent species. Riparian ecosystem function, as determined by the amount and type of vegetation cover, has decreased since historic times.

Guidelines:

- Late successional riparian vegetation is in amounts and distribution similar to historic conditions.
- Complex instream structure formed from woody debris, aquatic plants, roots, undercut banks, or boulders, serves as cover for all life cycle stages.
- Biologically diverse habitats are maintained to ensure the presence of organisms and processes necessary to sustain native aquatic communities over the long term. Adequate spatial distribution of these communities is maintained, avoiding habitat fragmentation and allowing for recolonization of populations after disturbance. A diversity of breeding habitats for aquatic species provides clean gravels, quiet backwaters, and emergent and submergent vegetation. Rearing habitats for larvae and fry are available in backwaters, shallow edges, and other protected sites.

Water Quality

Objective H - 8: Ensure that surface water and ground water 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 Oregon Department of Environmental Quality (ODEQ). Where water quality does not meet

the water quality standards, water quality will not degrade to the point at which it impacts beneficial use. This will be achieved through improved riparian vegetation, stream shade, and stream channel function. For streams with water quality limited segments (impaired waters) as defined by section 303(d) of the CWA, management activities would be implemented with the intent to restore water quality to levels that meet State water quality standards.

Rationale:
The "Federal Water Pollution Control Act" (commonly known as the "Clean Water Act" [CWA]) of 1977, as amended, requires the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters. Mandates of the Act establish the EPA as administrator and the states (e.g., Oregon) as implementers of the Act. The BLM is responsible to manage the requirements of the Act on land they administer, but primacy in implementing the Act is retained by Oregon. BLM is required to maintain water quality where it presently meets EPA-approved Oregon State water quality standards and improve water quality on public land where it does not meet standards. State developed total maximum daily loads (TMDLs) and State approved water quality management plans are required for water bodies in subbasins and watersheds containing water quality limited segments (Appendix E) (as defined by section 303(d) of the CWA) where water quality is not meeting standards. In addition to the Act, numerous laws, regulations, policies, and Executive orders direct BLM to manage for water quality for the benefit of the Nation and its economy.

Water quality is important not only for human use but also for proper ecosystem function. Management practices such as grazing, mining, recreation, forest harvesting, and other forms of vegetation management for restoring and maintaining water quality would be designed for healthy sustainable and functional rangeland ecosystems as described in Standards for Rangeland Health, 1997.

Guidelines:
- Eliminate all non-designated roads and maintain designated roads to reduce gullying and rilling in RCAs of intermittent and perennial streams.
- Streams and water bodies not meeting State water quality standards and/or PFC would be managed to attain an upward trend in the composition and structure of key riparian/wetland vegetation and desired physical characteristics of the stream channel.
- Uses and activities within the RCA and contributing upland watershed areas that adversely affect water quality and/or lead to stream channel or riparian/wetland resource degradation would be adjusted, restricted, or limited if water quality and PFC cannot be attained or maintained with existing management.

Allocations/Allowable Uses:
For streams with water quality limited segments identified by the State of Oregon, uses and activities would be allowed in watersheds only if they would have no adverse effects on restoring water quality to required State water quality standards while protecting and enhancing natural values. Public use would be allowed along streams and around other water bodies, as long as State water quality standards are either attained at the same or greater rate than if the use or activity were absent or maintained. Management would be adjusted as needed for those uses and activities that are not leading to the attainment of State water quality standards.

Watershed/Hydrologic Function

Objective H - 9: Where the capability exists, restore, maintain and improve upland and hydrologic function through the reduction of overland flow, increased infiltration, and improved floodplain function.

Rationale:
FLPMA directs the BLM to manage the public lands for long-term needs of future generations for renewable and non-renewable resources, including watershed. This includes management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. The Fundamentals of Rangeland Health stated in 43 CFR 4180 also require that watersheds are in, or are making significant progress toward, properly functioning physical condition so that soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform so that water quantity and the timing and duration of flow is improved. Management actions would repattern vegetation patches and succession/disturbance regimes in order to sustain hydrologic processes characteristic of the geoclimatic setting. Restoration of landscape succession/disturbance regimes would maintain and promote (a) healthy, productive, and diverse plant and animal communities as appropriate to soil type, climate, and landform; and (b) ecological processes of nutrient cycling, energy flow, and the hydrologic cycle. The Soil and Water Resources Conservation Act of 1977 (16 U.S.C. 2001) provides for conservation, protection and enhancement of soil, water, and related resources.

Guidelines:
- Complete Rangeland Health Assessments and implement measures to meet standards. Appropriate action shall be taken if the assessment determines that livestock are a significant contributing factor to the failure to achieve the standards and conform to guidelines.
- Reduce compaction and artificial conduits for overland flow of water by eliminating all non-designated roads and trails. Road designation would occur in project-specific documents. Any road that is not designated as either a local road or motorized would be closed to motorized use. Some designated roads may have seasonal closures. Prioritize non-system roads and trails for closure in areas of sensitive soils or located within RCAs. Maintain all BLM designated system roads to reduce concentration of water on roads as outlined in BLM Manual 9113 (also see Appendix F), and BLM Manual 9114 for trails.
- Work cooperatively with State Agencies, including OWRD, ODFW, Parks and Recreation, and ODEQ to protect and maintain water resources (both quantity and quality) of BLM-administered rivers, streams, and springs and their associated resources as consumptive use increases in the Upper Deschutes sub-basin. Where negotiations and cooperative efforts fail to protect water resources, utilize federal authorities to fulfill mandates as outlined by Congress and in the BLM's Manual and policy directives.
- Infiltration will be improved and overland flow reduced to promote ground cover by managing juniper, lodgepole pine, and ponderosa pine in a portion of Verified High Priority Restoration and Aquatic Stronghold Areas (see Maps 5 and 6).[11]

Objective H - 10: Within the Broad Scale High Restoration Priority Sub-basins, which includes the entire Upper Crooked sub-basin shown on Map S-14, determine actual restoration needs prior to any large scale site disturbing activities that could affect hydrologic function.

Rationale:
In addition to FLPMA and Fundamentals of Rangeland Health, the Upper Crooked Sub-basin is considered a broad-scale high restoration priority. Identification of this sub-basin as a broad-scale high restoration priority was based on: 1) risk to aquatic and terrestrial species and their habitats from natural disturbances; 2) opportunity to reduce those risks, improve habitats, provide connectivity for and expand scarce aquatic and

[11] Verified High Priority Restoration Areas are characterized by zones of slightly higher precipitation, deeper soils, on slopes >15%. This setting provides optimum habitat for dense juniper stands that result in extensive surface erosion, gullying, rilling, and loss of soil productivity.

terrestrial habitats; 3) hydrologic processes; 4) economic value to human communities; and 5) ability to restore other biophysical and/or social needs where opportunities exist. The intent is to restore hydrologic processes to ensure favorable water quality conditions for aquatic, riparian, and municipal uses. Focus of efforts within the Upper Crooked sub-basin would concentrate restoration efforts (such as aquatic, water quality, vegetation management, reestablishing fire), and to make restoration activities more effective and efficient.

Guidelines:

- Validate and, as necessary, refine the subwatershed locations using existing finer scale information.
- Focus restoration activities on entire watershed using an ecosystem approach and involving all interested landowners and affected parties;
- Prescribe restoration activities based on site-specific physical, biological, and chemical condition and site potential.

Objective H - 11: Secure exiting habitats that support the strongest populations of wide-ranging aquatic species. Securing can mean either reducing threats within the subwatershed or reducing threats in adjacent subwatersheds that would prevent achievement of subwatershed objectives.

Rationale:

Subwatersheds identified on Map S-14 represent areas that support the strongest fish populations and highest native diversity and integrity. These subwatersheds serve as the foundation of a conservation strategy and a starting point for a restoration strategy. Securing these subwatersheds from internal or adjacent threats to watershed function and structure would enhance the short-term persistence of aquatic species and diversity. This action is necessary to ensure a source of individuals to colonize available habitats following natural recovery or restoration.

Guidelines:

- Validate and, as necessary, refine the subwatershed locations using existing finer scale information.
- Design aquatic/riparian restoration actions to influence temporal (through time) and spatial (placement on the ground) diversity of productive aquatic habitat and key aspects of structure and function, such as channel morphology and hydrologic and sediment regimes; riparian vegetation condition and complexity; aquatic habitat complexity; and channel structure (wood and bank stability).
- Focus aquatic/riparian restoration where minimal investment can improve or secure the largest amount of productive habitat and diverse riparian-dependent species communities.

Fire/Fuels Management

Objective FF – 1: Provide an appropriate management response on all wildland fires, with emphasis on firefighter and public safety. When assigning priorities, decisions would be based on relative values to be protected commensurate with fire management costs.

Rationale:

Protection of human life (firefighter and public safety) is the highest priority during a wildland fire. Once firefighters have been assigned to a fire, their safety becomes the highest value to be protected. Property and natural and cultural resources are lower priorities.

The "Review Update of the 1995 Federal Wildland Fire Management Policy" acknowledges that fire is a critical natural process and must be reintroduced into the

ecosystem on a landscape scale. Wildland fire management decisions are based on approved fire management and activity level plans, this RMP, and the best available science. The policy further emphasizes that for natural ignitions (i.e., lightning caused), a manager must have the ability to choose from the full spectrum of fire management actions—from prompt suppression to allowing fire to function in its natural ecological role. The "Interior Columbia Basin Final Environmental Impact Statement" (USDA-FS and USDI-BLM 2000) states that wildland fire management strategies and suppression activities should minimize damage to long-term ecosystem function, and should emphasize protection, restoration, or maintenance of key habitats.

The Central Oregon Fire Management Plan was completed in 2002, and addresses fire suppression and fuels management on all federal lands for the Deschutes National Forest, the Ochoco National Forest, and the Prineville District BLM. The fire management plan outlines the appropriate management response, including full suppression and modified suppression, throughout the Central Oregon. It also identifies conditions and potential locations for wildland fire use and for prescribed fires, as well as other factors pertaining to fire management in the COFMS (Central Oregon Fire Management Service) area.

Guidelines:

- Provide for an appropriate management response of initial attack and full suppression on all wildland fires.
- Use natural and human-created barriers (i.e., roads) as available for control lines.
- Use of heavy equipment in ACECs, WSAs, and RNAs would be avoided. Exceptions may be granted by the field manager to protect public and firefighter safety, other Federal, state and private property, and commodity areas. During times of multiple ignitions and limited suppression resources, place highest priority on suppression resources to protect communities from wildland fire. If used, heavy equipment would be restricted to existing roads and trails. Use of retardant would be allowed within these areas for initial attack.
- Retardant use during extended attack would be considered as a part of the wildland fire situation analysis, considering the resource values at risk and public and firefighter safety.

Objective FF – 2: Rehabilitate burned areas to mitigate the adverse effects of wildland fire on soil and vegetation in a cost-effective manner and to minimize the possibility of wildland fire recurrence or invasion of weeds.

Rationale:

The "Emergency Fire Rehabilitation Handbook" (H-1742-1) (USDI-BLM 1998) outlines the process for implementing emergency fire rehabilitation projects following wildland fires and wildland fire use. Emergency fire rehabilitation funds may be used to:

- Protect life, property, and soil, water, and vegetation resources;
- Prevent unacceptable onsite or offsite damage;
- Facilitate meeting land use plan objectives and other Federal laws; and
- Reduce the invasion and establishment of undesirable or invasive vegetation species.

Guidelines:

1. Areas burned by wildland fire would be rested from grazing for a minimum of two growing seasons. Rest for less than two growing seasons may be justified on a case-by-case basis.
2. Other temporary use restrictions, such as no off-road travel, may be imposed where warranted.
3. Emergency fire rehabilitation activities would be implemented after wildland fire. Separate environmental analysis would only be completed for emergency fire rehabilitation projects that are outside the scope of activities described in the burn rehabilitation plan.

<u>Objective FF – 3</u>: Restore and maintain ecosystems consistent with land uses and historic fire regimes through wildland fire use, prescribed fire, and other methods. Reduce areas of high fuel loading resulting from years of fire suppression that may contribute to extreme fire behavior.

<u>Rationale:</u>
Both the "Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin" (USDA-FS and USDI-BLM 1996) and the "Review Update of the 1995 Federal Wildland Fire Management Policy and Program Review" recognize fire's essential role as an ecological process. COFMS is charged with clearly defining fire management goals, objectives, and actions in comprehensive fire management plans, which are tiered to this RMP. Fire management plans include identification of areas for and prescribed fire.

The "Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin" (USDA-FS and USDI-BLM 1996) emphasizes that strategic watershed-scale fuel management and fire planning, often integrating a variety of treatment methods, would cost-effectively reduce fuel hazards to acceptable levels and achieve both ecosystem health and resource benefits. Fire management programs and activities should be based upon protecting resources, minimizing costs, and achieving land management objectives. They must also be economically viable. The "Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin" (USDA-FS and USDI-BLM 1996) also stresses the use of fire to restore and sustain ecosystem health based on sound scientific principles and information. This must also be balanced with other societal goals, including public health and safety, air quality, and other specific environmental concerns.

Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost or consequences of either doing or not doing an activity.

<u>Guidelines:</u>
- The fire management plan will identify conditions and potential locations for prescribed fires, as well as other factors pertaining to fire management in the RMP area.
- Vegetative management treatments will be designed to break up treated and untreated areas in a mosaic effect.
- Areas burned by prescribed fire would be rested from grazing for a minimum of two growing seasons. Rest for less than two growing seasons may be justified on a case-by-case basis.
- Other temporary use restrictions, such as no off-road travel, may be imposed where warranted.
- Use prescribed fire and mechanical, and biological hazardous fuels reduction treatments on a case-by-case basis to improve forage base and restore natural processes. Where these treatment areas intersect special management areas, the fuels management project design will incorporate the objective of the special management area.

<u>Objective FF – 4</u>: In the wildland urban interface, the management of live and dead vegetation to provide for human safety in the event of o wildland fire under hot, dry summer weather conditions will be the top management priority. Treatments will be designed to allow for manageable low flame lengths, while still considering recreation opportunities, wildlife habitat and corridors, visual quality, air and water quality, and public access issues

Rationale:
With the protection of human life as the highest priority during a wildland fire, fuel conditions should be managed adjacent to communities at risk that allow for safe operations during fire suppression.

All hazardous fuels management activities in the wildland urban interface (WUI) will take place following site specific analysis. That analysis must consider the amount and arrangement of fuel that will contribute to wildland fire behavior under high and extreme summer weather conditions. Objectives for fuels management in the WUI should be linked to obtaining fire behavior that yields the desired results, including safety of the public and fire suppression forces. Hazardous fuels reduction objectives may be met through a combination of fuels treatments including thinning, mowing, pruning, piling, burning, grazing, or other approaches that reduce the three dimensional fuel profiles and reduce the risk of crown fire or uncontrollable surface fire.

The size of the WUI varies with vegetative type, based on potential fire behavior. Forest fuels are heavy and can support extreme fire behavior, with crown fire and long range spotting contributing to safety concerns and resistance to control. In these areas, including lands in the La Pine area and ponderosa pine stands near Tumalo and Sisters, the WUI zone is 1.5 miles from the mapped communities at risk as published in the 2001 Federal Register. For communities surrounded by rangelands and woodland vegetation types with lighter fuel loadings, that area is described as ½ mile. These zones are considered to be the starting point in which to discuss and analyze hazardous fuels that may threaten firefighters or the public in the event of an unplanned ignition. Actual treatment areas may be narrower or wider than that, depending upon site-specific objectives and conditions of fuels and topography that are adjacent to communities.

Guidelines:
Fuels Management in Forested Wildland Urban Interface Zones

- For site specific planning, the forested WUI zone would be subdivided into three bands with treatments designed to give desired fire behavior given 90th percentile summer weather conditions. The actual width of these three bands and treatment prescriptions would vary according to site-specific conditions such as vegetation/fuel type/density/structure, proximity of homes to property boundaries, prevailing winds, topographic and other natural fuel breaks, etc. The area may be between 1000 feet and 1.5 miles in width.
  1. The first band, nearest to homes and private property, would managed for conditions that would not support crown fire, and would only allow for surface fires with flame lengths of less than 2 feet under 90th percentile weather conditions.
  2. Treatments in the second band would be designed to prevent crown fire initiation and spread, and keep surface fuel flame lengths below the 3 to 4 foot range under 90th percentile summer weather conditions. Flame lengths below 4 feet are considered to be a safe environment for suppression forces to engage in direct attack of the fire.
  3. Treatments in the third band, farthest away from homes, would be designed to reduce the occurrence, size, and severity of crown fires by breaking up fuel continuities and limiting ladder fuels. Most wildfires would be limited to surface fires less than 4 foot flame lengths under 90th percentile weather, with opportunities for limited passive crown fire (occasional ignition and torching of individual or small groups of overstory trees). Stand replacement fires would be a rare occurrence. Crown fire approaching this zone would fall from the tree canopy to the forest floor in this area due to lack of horizontal and vertical fuel continuity. Treatment objectives would place a higher emphasis on wildlife habitat and silvicultural needs as long as fuel continuities and ladder fuels are reduced on at least 50 percent of the area.
  4. Prescribed fire in the WUI would be used only for burning piles or broadcast burning in smaller areas where smoke and risk could be managed at acceptable

levels. Based on expected re-growth rates in these vegetative types, re-treatment is expected to occur approximately every 15 to 20 years for tree thinning and every 5 to 10 years for brush cutting/mowing.

Fuels Management in Rangeland/Woodland Wildland Urban Interface Zones

- In rangeland or juniper woodland types, the WUI zone is designated at 0.5 miles from communities-at-risk. As in forested areas, the actual width and treatment prescriptions of two treatment bands would vary according to site-specific conditions.
  1. The first band may be 500 to 600 feet wide. Approximately 50 to 70 percent of the area within this band would be treated to prevent crown fires and keep surface fuel flame lengths in the 1 to 2 foot range.
     i. Brush treatments would be initiated when shrub canopy exceeds 50 percent or is greater than 2 feet in height.
     ii. Thinning in this area would favor leaving older juniper (greater than 150 years old) and removal of younger trees.
     iii. All naturally occurring juniper snags would be left within this band. An exception to this would be snags less than 6 inches dbh in a fire-killed juniper stand. In this case dead trees would be reduced to a density of 5 to 7 trees per acre.
     iv. No hazard trees would be left within reach of property, roads or other facilities.
- The second band would be 600 feet to ½ mile wide. Treatments would be designed to reduce the occurrence, size, and severity of fires by breaking up fuel continuities and limiting ladder fuels.
     i. Wildfires would be limited to ground fires with flame lengths of 3 to 4 feet in height.
     ii. Crown fires would not occur under 90th percentile summer weather conditions. There may be an occasional ignition of individual or small groups of juniper trees under extremely windy conditions.
     iii. Juniper less than 150 years old would occur in small clumps of dense juniper where needed for hiding cover, and would be discouraged elsewhere.
     iv. Most of the old juniper would be left.
     v. Treatment objectives would place a higher emphasis on wildlife habitat and woodland management objectives as long as fuel continuity and ladder fuels are reduced such that crown fires do not occur. Mosaic patterns of old juniper, shrub, and grass types would be emphasized.
     vi. Prescribed fire would be used only for burning piles or broadcast burning in smaller areas where smoke and risk could be managed at acceptable levels. Based on expected re-growth rates in these vegetative types, re-treatment is expected to occur approximately every 15 to 20 years. All treatments will consider potential of introduction and spread of exotic annuals and noxious weeds.

Priority Setting in the WUI

Risk from the undesired effects of wildland fire is not the same for each community within the plan area. Priority treatments will be done adjacent to those communities that have the following characteristics:

1. Heavy fuel loading and high potential for crown fire or fast moving surface fire at the 90th percentile weather conditions, especially if those fuels are "upwind" given the dominant summer wind directions.
2. The community is physically close to federal lands, with structures or other improvements within 1 mile of BLM lands.
3. The community is actively involved in the hazardous fuels reduction effort, matching federal efforts on private lands, coordinating fuels reduction or suppression capability improvements with the protection agencies like ODF or city/rural fire districts, and taking steps to improve the survivability of their community.
4. Opportunities exist to meet multiple objectives with the fuel treatment activities, including improvement of wildlife habitat, recreation opportunities, visual quality,

restoration of ecosystem integrity, or opportunity to provide marketable products or energy from the removal of hazardous fuels.

WUI fuel treatments and potential social conflicts
Where WUI intersects other specially designated areas such as WSA, wild and scenic river corridors, ACECs, or RNAs, the fuels objectives will be pursued within the framework of the objective for the special management designation.

Reduction of hazardous fuels in the WUI may increase conflicts between recreational users and adjacent landowners, increase incidents of unauthorized use, and could potentially impact visual quality, wildlife habitats, populations of rare plant species, spread of exotic species, or availability of forage or small wood products to the public. To better manage public use of BLM land, and to reduce the potential adverse impacts of fuels treatments to adjacent landowners, site specific analysis should include mitigating measures in the project design. Those measures may include:

- Educational approaches, including posting of signs and working with the adjacent homeowners to enlist their support for appropriate use of BLM land.
- Physical barriers left or installed as part of the fuels treatment, including boulder placement, log barriers, fences, and vegetative patches or strips left in deliberate patterns to discourage unauthorized use
- Design features should be employed to reduce the potential indirect effects of the fuels treatment on designated trails. It may be appropriate to move or close designated trails or roads within the WUI zone to reduce conflicts between users and adjacent landowners.
- Where backyard stewardship contracts are forged to treat the hazardous fuels at the WUI, consider including an agreement with adjacent landowner/stewards to refrain from accessing their private lands or other BLM land through the treated area.

Air Quality

Objective AQ-1: Meet the national ambient air quality standards (NAAQS) as described in the CAA.

Rationale:
Out of all of the possible management activities considered, smoke produced from wild and prescribed fires would be the main factor affecting air quality. Smoke may limit a land manager's ability to use larger and more frequent wildland fire for restoration and maintenance of fire-dependent ecosystems.

The CAA requires Federal agencies to comply with all Federal, state, and local air pollution requirements. The CAA also requires each state to develop a state implementation plan to ensure that the national ambient air quality standards are attained and maintained for the criteria pollutants. The ODEQ is responsible for producing the state implementation plan, but delegates the smoke management portion to the Oregon Department of Forestry. As part of the state implementation plan, the Oregon Department of Forestry developed instructions and requirements for wildland and prescribed fire emissions in the smoke management plan. Federal agencies are required to ensure that their actions conform to state implementation plans.

The national ambient air quality standards are described in the CAA and have been established for six pollutants. Of these six criteria pollutants, natural resource management activities largely affect only one—the production of particulate matter. Most particulate matter produced from fire is less than 10 micrometers (PM10) in diameter, which is the size class that is regulated. Because fire and smoke are a natural part of forest and rangeland ecosystems, PM10 produced from fire does not seriously affect

these ecosystems. At the current time, PM2.5 is being studied by the State of Oregon, and ODEQ data is being collected to determine attainment status. This study should be completed within the next couple of years. However, it does have effects on human health.

Guidelines:
Guidelines are provided for federal agencies in the Smoke Management Guide for Prescribed and Wildland Fire, 2001 Edition. The following smoke management and emission reduction techniques should be considered in project specific NEPA when:

- Air quality is raised as a significant issue in scoping,
- The project includes burning,
- The project includes significant road construction, road use or other soil disturbing procedures where fugitive dust may be a concern,
- The project includes significant machinery operation in close proximity to publicly accessible areas,
- The project may have any impact on air quality in a Class I area,
- The project may have any impact on sensitive vistas or visibility in a Class I area
- The area is in close proximity to a non-attainment area, or
- The project will make a significant amount of firewood available to the public.

The appropriate level of analysis for each project will vary with the size of the project. If an air quality analysis is deemed unnecessary, the NEPA document should state that potential air quality impacts were considered but were determined to be inconsequential, and a justification for this statement must be included.

NEPA Analysis of Air Quality
A complete disclosure of air quality impacts in a NEPA document should include the following information:
- Description of the air quality environment of the project area
- Description of alternative fuel treatments considered and reasons why they were not selected over prescribed fire.
- Quantification of the fuels to be burned (areas, tons, types).
- Description of the types of burning planned (broadcast, piles, understory, etc)
- Description of measures taken to reduce emissions and emission impacts.
- Estimation of the amount and timing of emissions to be released.
- Description of the regulatory and permit requirements for burning.
- Modeled estimates of where smoke could go under certain common and worst case meteorological scenarios and focusing on new or increased impacts on down wind communities, visibility impacts on Class I areas, etc.

Smoke Management Techniques
Air quality protection and smoke management may include the following techniques:
A. Reducing the Amount of Emissions
1. **Reduce the area burned through project design.**
   a. Burn concentrations of fuels rather than burning 100 percent of the area
   b. Isolate fuels that have the potential to smolder for long periods of time (large logs, snags, deep pockets of duff) with fireline, lighting patterns that avoid these areas, use of snow or natural barriers, scattering fuels, or spraying targeted fuels with foam or other fire retardant material prior to burning.
   c. Mosaic burning to exclude more moist areas or mimic natural ignition patterns.
2. **Reduce the fuel load to reduce overall emissions or eliminate the need for burning.**
   a. Mechanical removal of fuels including yarding of whole trees, logging slash, or brush removed for offsite utilization.

b. Mechanical processing such as chipping, mowing or other masticating of biomass, redistributing to increase soil contact and speed decomposition processes
c. Firewood sales where the public has easy access.
d. Biomass used for energy conversion at cogeneration facilities.
e. Biomass utilization for pulp, methanol, wood pellets, garden bedding, or specialty forest products.
f. Ungulate grazing and browsing live or brushy fuels to reduce fuel loading prior to burning, or to increase the burn frequency.

3. **Reduce the fuel consumed in prescribed fire.**
   a. Burn when large wood fuels are moist and unlikely to consume.
   b. Burn with moist litter and duff conditions in forest ecosystems.
   c. Schedule burns immediately before a precipitation event based on weather forecasts to limit consumption of large fuels.
   d. Burn before large fuels cure, within 3-4 drying months of a harvest activity in forest types.
4. **Schedule burning before new fuels appear.**
   Burn before litter falls or greens-up. Less fuel will be available for consumption, so fewer emissions.
5. **Increase combustion efficiency.** Burn to shift the majority of consumption away from the smoldering phase of combustion and into the more efficient flaming phase to reduce emissions.
   a. Burn clean, dry piles.
   b. Burn pattern design to use backing fire, which moves more slowly with more complete combustion than head fire.
   c. Burn under dry conditions to increase combustion efficiency in target fuel size classes.
   d. Rapid mop-up to reduce smoldering phase of combustion.
   e. Aerial ignition/mass ignition to speed combustion.
   f. Use of air curtain incinerators, large metal containers or pits in which combustion is aided by powerful fans to force additional oxygen into combustion process.

B. Redistribute the Emissions

1. Burn when dispersion is good with an unstable atmosphere.
2. Share the air shed with other agencies and smoke producers to reduce the likelihood of smoke impacts, by coordinating with ODF in compliance with the Smoke Management Plan for Oregon.
3. Avoid sensitive areas, burning when winds are favorable to carry smoke away from highways, populated areas, and scenic vistas.
4. Burn larger units in smaller subunits over several days to limit short-term emissions.
5. Burn more frequently, managing fuel accumulation and producing fewer emissions with each burn.

Special Management Areas

Special Management Areas within the Upper Deschutes RMP boundary include Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), Wilderness Study Areas (WSAs), Wild and Scenic Rivers (W&SR), and caves.

ACECs Summary

One addition to an existing ACEC, Historic Roads, would be designated, and one existing ACEC, Lower Crooked River, would be removed from ACEC designation. The objectives and guidelines identified in this section apply to all of the “action” Alternatives.

Objective SMA – 1: Retain existing and/or designate ACECs where relevance and importance criteria are met and special management is required to protect the identified values. Management activities and resource uses within ACECs would not impair the values for which the ACEC was designated.

Rationale:
An ACEC is a special designation created by Congress (FLPMA, 1976). Under FLPMA, the Secretary of the Interior and the BLM were directed to designate ACECs within the public lands where special management attention is required to protect and prevent irreparable damage to important cultural, historic or scenic values, sigh and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

Guidelines:
Evaluate proposed uses within ACECs to determine whether those values for which the ACEC was designated would be adversely affected

For areas designated ACEC, the following guidelines would apply as outlined for each ACEC under Common to All Alternatives, and would also include the following:

- **Land Ownership**: Adjustments out of Federal ownership would generally not occur within existing ACECs.
- **Forest and Range Products**: Generally, harvesting of wood products and special forest and range products would not be allowed except in conjunction with restoration treatments or if it is consistent with the values of the ACEC. Harvesting of wood products and special forest and range products would be prohibited in the Badlands WSA, Powell Butte RNA and Horse Ridge RNA.
- **Land Ownership**: Recreation and Public Purposes Act (R&PP) leases would not be issued for lands within ACECs unless such leases would be non-patent leases and would not impair the values for which the ACEC was designated.

Badlands ACEC

Objective SMA – 3: Eliminate all or portions of ACECs that no longer meet relevance and importance criteria (see Map 7).

Allocations/Allowable Uses:
Remove the Badlands ACEC designation if the Badlands WSA becomes a designated wilderness.

Wagon Roads ACEC`

Objective SMA – 1c: Protect and maintain the segments of the historic Horner, Huntington and Bend-Prineville roads designated as an ACEC.

Rationale:
The Federal Land Policy and Management Act (FLPMA) of 1976 gives priority to the designation and protection of ACECs and to the prevention of irreparable damage to the important resources of the ACEC. ACEC designation is the principle BLM designation where special management is required to protect important natural, cultural and scenic resources.

The ACEC contains relatively intact segments of historic Huntington Road, Bend-Prineville Road, and Horner Road and various historic features associated with them. The roads were developed between the 1860s and 1908 and represent excellent examples of transportation systems during the pioneer and early settlement periods of central Oregon. The road segments in the proposed Wagon Roads ACEC have been assessed by archaeologists employed in the private sector and the BLM and are considered eligible for inclusion to the National Register of Historic Places.

Allocations/Allowable Uses[12]:
This option would designate approximately 6 miles of historic Horner Road and approximately 5 miles of the historic Bend-Prineville Road as an ACEC. The ACEC would constitute approximately 986 linear acres, including a 300 foot distance on either side of the road segments to protect associated historic features (see Map 7).

- **Roads and Rights-of-Way:** No new discretionary roads and rights-of-ways would be allowed within the ACEC.
- **Livestock Grazing:** Livestock would not be allowed to concentrate in the ACEC. No livestock developments would be permitted within the ACEC.
- **Recreation:** The ACEC would be closed to overnight camping, use of paintball guns, and OHV use. In addition, geo-caching activities and firearm discharge within the fence enclosure that surrounds the segment of Huntington Road in Section 1 would not be allowed. Opportunities for the designation of an interpretive pedestrian trail system would be pursued. OHV use would be allowed on designated trails within the 300 foot area on either side of each road (except the southernmost segment), to the extent necessary to create safe and maintainable trail crossings. OHV trails that parallel the historic roads would be located beyond 300 feet from each side of the road to the maximum extent feasible. Special Recreation Permits (SRPs) would be issued for foot traffic events/group use only on the road segments. No competitive events would be allowed except at designated trail or road crossing points.
- **Military Use:** Tracked military vehicles would not be allowed on the historic roads. Locations where tracked vehicles would cross the historic roads have been determined in consultation with the Oregon Military Department.
- **Vegetation and Wildlife Habitat Management:** Would be to maintain and enhance the special values of the ACEC.
- **Minerals:** An area one mile of either side of the roads for which this ACEC is designated would be closed to mineral material sales and leasing. Geophysical exploration would be restricted to protect the special values of this ACEC. Plans of operation would be submitted by prospective applicants and approved by the BLM prior to any development of mining claims. Approved plans of operation would have stipulations to protect the values of this ACEC.
- **Rockhounding:** The collection of any rock materials would not be allowed.
- **Partnerships:** The partnership between the BLM and the Deschutes County Historical Society for interpretive development and educational products for that portion of ACEC in township 17, range 12, section 1 would continue.
- **Cultural Resources:** Efforts to complete a cultural resource survey and documentation of the historic road segments and their associated features would be pursued.
- **Stewardships:** Opportunities for establishing a site stewardship program between the BLM and the Archaeological Society of Central Oregon (ASCO) to monitor the condition of the historic road segments would be pursued.
- **Partnerships:** Pursue opportunities to form partnerships between the BLM and interested parties to develop an interpretive pedestrian trail system along segments of the historic roads.
- **Boundaries:** The boundaries of the Wagon Road ACEC would be revised.

Tumalo Canals ACEC

Tumalo Canals would be designated as an ACEC in Alternatives 2 – 7

Objective SMA – 1d: Protect and maintain the historic Tumalo Canals and provide for its use as an interpretive resource.

[12] Note: All Common to all Alternative allowable uses and guidelines for Wagon Roads ACEC would also apply to additional segments identified in Common to Alternatives 2 – 7.

Allocations/Allowable Uses:

- **Boundaries:** Designate approximately 1,050 acres in Cline Buttes as the Tumalo Canals ACEC (see Map 7). An area (approximately 40 acres) adjacent to and east of Barr Road would be closed to motorized use and managed specifically for interpretive use.
- **Minerals:** Mineral material sales and surface occupancy for fluid mineral leasing would not be allowed. Geophysical exploration would be restricted to protect the special values of the ACEC. Plans of operation must be submitted and approved prior to any development of mining claims. Approved plans of operation would have stipulations to protect the values of this ACEC.
- **Rockhounding:** The collection of any rock materials would not be allowed.
- **Prescribed fire treatments**: Would not be allowed within the fenced area of the Tumalo Canals.
- **Livestock Grazing:** The ACEC would be fenced to eliminate livestock grazing.
- **Recreation**: The fenced area east of Barr Road would be managed for interpretive use and closed to overnight use, campfires, mountain bike and equestrian use, target shooting and geocaching.
- **Interpretive trails**: would be developed, along with signs and brochures.
- **New rights-of-way**: would only be considered within existing utility corridors, along county roads or BLM arterial roads. Decommissioned roads would be obliterated and rehabilitated unless a compatible use is identified such as converting a road to a trail or preserving a historic route.
- **Vegetation and wildlife habitat management**: Projects would be an integral part of ACEC management and would be designed to maintain or enhance the ACEC values. Restoration/improvement of native plant communities, old-growth juniper woodlands, and habitat for raptors, neotropical birds and threatened, endangered or other special status plants and animals would be emphasized. Long-term vegetation maintenance would be designed to emulate natural processes.

Objective SMA – 3: Eliminate portions of ACECs that no longer meet relevance and importance criteria (see Map 7).

Wagon Road ACEC

Rationale:
Since the Brothers/La Pine RMP/ROD was published in 1989, the two road segments noted have been reassessed. That reassessment found that those two road segments do not meet the criteria for relevance and importance for which an ACEC is designated.

Allocations/Allowable Uses:
The central and northern segments of the Wagon Road ACEC located in township 16, range 13, section 21 and township 15, range 13, section 33 respectively would be removed from ACEC designation.

Lower Crooked River ACEC

Rationale:
There is overlaying Congressional Wild and Scenic River designation for this ACEC. This designation, which has occurred since the B/LP RMP, and the travel management policy Common to Alternatives 2-7 fully protect the values for which the ACEC was designated and the area no longer meets the relevance criteria for ACEC designation.

Allocations/Allowable Uses:
The ACEC designation for the Lower Crooked River ACEC would be removed.

Wilderness Study Areas

Objective SMA - 4: Manage Wilderness Study Areas to maintain wilderness suitability consistent with the 1995 "Interim Management Policy for Lands under Wilderness Review" (IMP).

Rationale:
The BLM is required to maintain the suitability of the Badlands and Steelhead Falls for possible future wilderness designation by Congress. General management policy for these areas is set forth in the Interim Management Policy for Lands Under Wilderness Review (1995). Like most of the BLM land in the planning area, these two areas are receiving increasing visitation and use by the public. Both local and out of area visitation is increasing, resulting in user conflicts, safety issues, visitor dissatisfaction, and resource impacts.

Allocations/Allowable Uses:
Wilderness Study Areas would be closed to paintball and geo-caching use.

Guidelines:
- Survey and locate boundaries of each WSA on the ground.
- Use signs, fences and other appropriate mechanisms to define and mark the boundaries of the WSA.
- Vegetation management efforts would be designed to mimic natural processes to avoid impairment of the area's suitability for wilderness designation.

Caves

Objective SMA - 6: Determine whether nominated caves meet criteria for significance.

Rationale:
The Federal Cave Resources Protection Act of 1988 directs the agency to:
- Secure, protect, and preserve significant caves on Federal lands for the perpetual use, enjoyment, and benefit of all people; and
- Foster increased cooperation and exchange of information between governmental authorities and those who use caves located on Federal lands for scientific, education, or recreational purposes.

It is the policy of the United States that Federal lands be managed in a manner which protects and maintains, to the extent practical, significant caves.

This Act prohibits any person who, without prior authorization from the Secretary knowingly destroys, disturbs, defaces, mars, alters, removes or harms any significant cave or alters the free movement of any animal or plant life into or out of any significant cave located on Federal lands.

Guidelines:
- Surveys would be conducted to determine the significance of all caves that have been nominated for significance under the FCRPA.
- New caves would be surveyed for significance, and the list will be periodically updated.

Objective SMA - 5: Manage caves nominated for significance or determined significant with an emphasis on education, research, and protection of cave resources. Manage activities and use to not impair the nominated values for which the cave may be determined significant.

Rationale:
A number of caves within the planning area were nominated as "significant" under the Federal Caves Resource protection Act (FCRPA), and final determinations of cave values have not been completed. The FCRPA (1988) and BLM Washington/Oregon Policy directs the BLM to manage nominated or significant determined caves in accordance with the provisions of the FCRPA and interim Cave Management Policy. This objective would emphasize a need to continue to pursue funding and partnership opportunities to determine the significance of nominated caves and develop specific management plans to address their unique resources.

Guidelines:
- As funding permits, a management plan would be developed for each significant cave. It will include an inventory and mapping of cave resources, research and monitoring programs, and if necessary, a clean-up or rehabilitation program.
- All caves determined significant and all nominated caves waiting determinations would be protected as follows (in addition to applicable FCRPA guidelines):
  1. Trees would not be harvested in a 150 to 200 foot radius around cave entrances and in feeder drainages with slopes of less than 30 degrees. There would be no ground disturbing activities on slopes steeper than 30 degrees adjacent to cave entrances.
  2. Similar buffers would be maintained around direct drainages into caves, this includes sinkholes, cave collapse areas know to open into a cave's drainage system, and perennial, intermittent or ephemeral streams flowing into caves.
  3. Clearing of vegetation, except for noxious weeds, would be prohibited within 250 feet of the entrance to cave with significant populations of bats.

Objective SMA - 7: Visitor use would be managed to allow public use of caves while placing an emphasis on protection of cave resources in all significant caves or caves nominated for significance.

Rationale:
The FCRPA and BLM Washington/Oregon Policy direct the BLM to manage nominated or significant determined caves in accordance with the provisions of the FCRPA and interim Cave Management Policy. Group uses in caves are limited to specific party sizes for caves located on adjacent Deschutes National Forest lands.

Allocations/Allowable Uses:
- Group use of caves would only be allowed under Special Recreation Permit authorizations. Limit group size to six to eight people at one time and no more than three tours per cave per day. Group use under permit must comply with seasonal restrictions and provisions of the FCRPA.
- Access to all Significant/nominated Caves would be restricted to foot access only. Mountain bike, horse, or motor vehicle use is not allowed in caves.[13]
- Prohibit possession and use of alcoholic beverages as defined by state law in all caves.
- For caves with designated parking areas, consider providing a visitor register to collect information on the visitors name, purpose, number in party, comments and use patterns. Caves with high resource concerns and those with active volunteer/stewardship programs will be considered as priorities for visitor registers.
- For caves with designated parking areas, provide signs with cave information, cave etiquette and leave no trace ethics.
- Significant/nominated caves are closed to geocache use.
- Prohibit the use of glass containers within caves to reduce litter and provide a safer environment for cave visitors.
- Designate Badlands A and Badlands B Caves within Badlands WSA as Significant Caves under the FCRPA due to their geologic values.
  1. The use and possession of chalk or hand-drying agents would be prohibited.

Guidelines:
- For caves with designated parking areas, institute a visitor register to collect information on the visitors name, purpose, number in party, comments and use patterns.
- For caves with designated parking areas, provide signs with cave information, cave etiquette and leave no trace information.
- Where appropriate, signs will be located to minimize advertisement of the cave location, and to provide information to those who already know the cave's location.
- Maintain current native plant populations or rehabilitate denuded areas at cave entrances by encouraging foot traffic in designated areas only (mark entry trails).
- Provide multi-agency consistency with seasonal closure periods. Hibernacula closure dates would be approximately October 15 to May 1, and maternity closure dates would be April 15 to September 30.

Area Specific

Redmond Caves

Objective SMA – 5a: Manage the Redmond Caves parcel to protect and maintain the resources of Redmond Caves, including biologic, cultural, and geologic features. Provide for recreational use that is consistent with management of these cave resources.

Rationale:
The FCRPA and BLM Washington/Oregon Policy direct the BLM to manage nominated or significant determined caves in accordance with the provisions of the FCRPA and interim Cave Management Policy.

Allocations/Allowable Uses:
The 40-acre Redmond Caves parcel is closed to the following activities:
- motorized and mechanized vehicles.
- campfires.
- overnight use, except under permit.
- geocache use.
- paintball use.
- rockhounding
- mineral material sales and leasing.

Guidelines:
- The site would be fenced with a designated parking area provided.
- Foot trails would be marked and signed on the parcel.

Pictograph Cave

Objective SMA – 5b: Manage Pictograph (Stout) Cave to protect scientific values and cave resources (including habitat for bats), and to meet the requirements of the FCRPA. Recreation management would be oriented toward interpretive and educational opportunities.

Rationale:
The FCRPA and BLM Washington/Oregon Policy direct the BLM to manage nominated or significant determined caves in accordance with the provisions of the FCRPA and interim Cave Management Policy.

[13] Exceptions may be provided for handicap accessibility.

Guidelines:
- Access to the cave would remain hike in only, and no developed or designated roads or trails will be built to provide access to the cave site. No designated parking area would be provided.
- Signs would be placed at the cave informing visitors of cave management policy.

Land Uses

Livestock Grazing

Objective LG-1: Same as for Management Direction Common to All Alternatives.

Rationale:
Same as for Management Direction Common to All Alternatives.

Allocations/Allowable Uses:
Same as for Management Direction Common to All Alternatives.

Guidelines:
- Set maximum allowable "conflict thresholds" and take actions as necessary to keep risk of conflicts between livestock and adjacent private landowners below these thresholds. The maximum allowable conflict level varies by alternative.
- Allow livestock grazing only in areas where costs to patrol gates/fences and costs to fence closed range are below a certain level (the level varies by alternative).
- Allow prescribed livestock grazing to control weeds, reduce fire danger, or accomplish other management objectives, regardless of parcel status (including active, vacant, or area of discontinued grazing), unless evidence shows other grazing systems are compatible with the objectives for which the area is designated.
- Provide additional protection for Peck's milkvetch in ACECs, as described in ACEC section.
- Fence Mayfield Pond and provide offsite water to the permittee.

Minerals

Objective MN - 3: Meet the increasing demand for saleable minerals while mitigating mining conflicts with recreation, residents, natural resources and other management objectives.

Rationale:
The Brothers/La Pine RMP (1989) did not anticipate the rapid population growth of Central Oregon, growth in demand for aggregate materials, and increasing mining conflicts with recreation, residents, and wildlife. Local residents and recreational users have voiced objections to the noise, dust, scenic degradation, and increased traffic associated with mining (see AMS).

Allocations/Allowable Uses:
- Public lands not withdrawn from mineral entry or under discretionary closure may be explored and/or developed for saleable mineral material and fluid mineral resources where conflicts with recreation, residents and natural resources do not exist or can be mitigated. Development of valid mining claims must include measures to mitigate conflicts with recreation and residents in notices and plans of operation where such conflicts exist.
- Mineral material sales are and surface occupancy for fluid mineral leasing are not allowed within 1/8 mile of residentially zoned areas or designated recreation sites.
- Hours of operation for surface mining activities would be allowed as follows:
  1. For mineral material sites with ½ mile of developed recreation sites and

residentially zoned areas, mineral extraction, processing, and equipment operation are restricted to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday.

2. For mineral material sites located farther than ½ mile from developed recreation sites and residentially zoned areas, mineral extraction, processing, and equipment operation are restricted to the hours of 7:00 a.m. to 10:00 p.m. Monday through Friday.
3. No operations shall take place at mineral material sites on weekends (Saturdays and Sundays) or the following legal holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day.

- Blasting would be allowed as follows:
  1. For mineral material sites within one mile of developed recreation sites, residential areas, and agricultural use sites involving the raising of animals, blasting is restricted to the hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.
  2. The operator must provide written notification to land owners and inhabitants within one mile of the mineral material site specifying the days and hours that blasting will occur at least 48 hours prior to the time blasting starts. For extended blasting operations, such notification must be given at least once each month.
  3. No blasting at mineral material sites is allowed on weekends (Saturdays and Sundays) or any of the legal holidays.

Exceptions to the above restriction on mineral material site operations may be granted in conflicts with residents, recreational uses, and other management objectives can be mitigated. Exceptions may also be made for administrative purposes.

Guidelines:

- Manage mineral exploration and development to mitigate potential mining conflicts with recreation and residents.
- To the extent practical, manage mining activities consistent with overall management objectives including but not limited to habitat, ecosystem management, and other land uses (See Wildlife Emphasis Tables, Chapter 2).
- Environmental Assessments written for proposed mineral material sites shall include stipulations for allowable recreation uses of those sites approved for development. Allowable recreation uses shall be specified for periods of active operations and for periods of inactivity over the expected life of each new mineral pit.
- When a new mineral materials site is initially permitted within the Planning Area the BLM would explicitly address the following:
  1. Firearm discharge, generally managing under one of the following guidelines:
     A) No restrictions on firearm discharge
     B) No firearm discharge unless legally hunting
     C) No firearm discharge
  2. Off-Highway Vehicle (OHV) use is generally managed under one of the following guidelines:
     A) No restrictions on motorized use
     B) The type of motorized use is limited
     C) All motorized use is prohibited
  3. Public notice of possible use restrictions: The authorized officer may include stipulations in sales and free use contracts requiring or authorizing operators to post signs and/or provide access control (i.e. fences, gates etc.) for recreational activities.
- Establish buffer zones closed to mineral material sales and surface occupancy for fluid mineral leasing around residentially zoned areas and designated recreation sites.
- Require plans of operation including reclamation plans, fees, or bonds as authorized by 43 CFR Part 3600 for testing, sampling and mining of common variety mineral materials.

Objective MN - 4: Provide recreational rockhounding opportunities while protecting other values. Manage rockhounding resources to provide long-term recreation opportunities while mitigating ground disturbances and discouraging illegal commercial activity and excessive personal use.

Rationale:

- Collection of rocks, fossils, and mineral specimens from public lands for commercial use is an ongoing illegal activity. Excessive quantities of rocks and mineral specimens collected for personal or illegal commercial use will deplete rockhounding sites more rapidly and may result in the loss of future recreational rock collecting opportunities.
- There are currently no reclamation requirements for ground disturbances resulting from rock collecting activities. At many rockhounding sites, numerous holes are left unfilled, tunnel horizontally into the earth, or undermine trees. These activities create hazards to health and safety.
- Under existing management direction, legal rock collecting activities could adversely impact riparian areas and watersheds.
- Some of the rockhounding sites designated in the Brothers/La Pine RMP either do not have materials or lack notable quantities of materials of rockhounding interest.
- The Reservoir Heights and Prineville Reservoir rockhounding sites designated in the B/LP RMP do not have significant amounts of materials of rockhounding interest. The Fischer Canyon rockhounding site has paleontological resources that should be evaluated for significance.

Allocations/Allowable Uses:

- On public lands open to rockhounding, the collection of rocks, semi-precious gemstones, and common invertebrate fossils would be allowed in reasonable amounts and for personal use only. "Reasonable amounts" are defined in this plan as 50 pounds per person per day and not to exceed 500 pounds per year. This limit would not include and is separate from the existing limit on petrified wood collection.
- All persons excavating, digging or otherwise removing soil to explore for, discover, or remove buried rock materials would be required to fill all holes with the original soil prior to departure from the collecting site.
- No person would be allowed to create excavations or holes that undermine the root systems of trees or enter into the ground at a non-vertical angle so as to create a tunnel or overhang. Holes shall not exceed a depth of four feet.
- In all riparian areas and stream channels including the channel banks, rockhounding activities shall be restricted to surface collection only. No person shall excavate, dig, or otherwise remove soil, sand, or gravel in stream channels to explore for, discover, or remove buried rock materials.
- Future rockhounding management plan(s) may place different collection limits and regulations on specific sites.
- Any commercial use would require a permit.

Guidelines:

- Develop rockhounding management plans for specific sites. Establish site-specific regulations based on but not limited to the level of use, conflicts with other users, environmental concerns, and the quantity of rock materials.
- Provide limits on the daily and annual quantities of rock materials that may be collected from BLM-managed lands.
- Require rock collectors to reclaim ground disturbances caused by collecting activities.
- Provide regulations to protect the health and safety of users at rockhounding sites.
- Mitigate rockhounding impacts to riparian areas and watersheds.
- Discontinue management of the Prineville Reservoir, Reservoir Heights, and the portion of the Fischer Canyon site west of Highway 27 for rockhounding.
- Designate the Carey Agate Beds as a recreational rockhounding site.

Special Management Areas:
See the Special Management Areas section for further area-specific direction on rockhounding.

Special Forest And Range Products

Objective FP - 3: Timber harvest would normally be associated with restoration treatments and would be designed to meet objectives for forest health, fuels reduction, hazard tree removal, special status species management, recreation and travel management, and wildlife habitat management.

Rationale:
Most of the accelerated harvest/salvage that was mandated in the Brothers/La Pine RMP due to the pine beetle epidemic has been implemented within the last 15 years. During the next 30-40 years, harvested areas will be allowed to regenerate and return to a productive condition suitable for potential future timber harvest. Therefore, a probable sale quantity (PSQ) will not be projected for the life of this RMP (approximately 15 years). A new PSQ for La Pine commercial forestlands based on sustainable production capability would likely be determined during a future RMP planning effort for the Upper Deschutes Planning Area.

To prevent further declines of forest ecosystem processes and functions, timber harvest would be done for stewardship reasons and would be consistent with ICBEMP objectives such as: reducing risk of severe fire behavior and effects, promoting shade intolerant species, promoting scarce terrestrial habitats, and increasing resiliency to disturbance. Forest product outputs from the northern area will also be limited due to the dry site, low productivity conditions and the scattered land ownership pattern in this area.

Allocations/Allowable Uses:
The land available for commercial forest use will remain the same as originally designated in the Brothers-La Pine RMP with minor changes for land tenure adjustments.

Guidelines:
- Where compatible with restoration and other resource objectives, commercial forestland would continue to be managed for the long-term sustained production of forest products through a program of periodic pre-commercial and small diameter commercial thinning.
- Commercial and pre-commercial thinning and other forest treatments in the La Pine area would occur on up to 1,500 acres per year producing up to 3,000 CCF (hundred cubic feet) per year. Commercial and pre-commercial thinning and other forest treatments in the northern area would occur on up to 80 acres per year producing up to 158 CCF per year. Acres and CCF figures are considered on an average annual basis.
- Harvest of forest products produced from restoration and fuels reduction treatments would occur where practicable and where compatible with other resource objectives. Sale receipts would be used, where allowable under current policies, to help offset treatment costs.
- Promote harvest, utilization, and marketing of small diameter pine and juniper wherever practicable to reduce fuel loading and achieve resource management objectives. Consider entering into partnerships to facilitate the development of new products and new low-impact harvesting techniques for small diameter trees and young juniper. During project environmental analyses, consider the larger societal benefits and tradeoffs of utilizing forest and woodland fuel residues and small tree biomass in products that would serve as a substitute for other products that would have a higher environmental and/or economic cost (i.e. metals, plastics, petroleum-based fuel/products).
- A range of silvicultural systems would be considered to achieve resource objectives as

appropriate to site-specific conditions. Appropriate prescriptions would include, but not be limited to, seed tree, shelterwood, patch cuts, uneven-aged management, and salvage.

- Plantation management treatments including site preparation, planting, replanting, animal damage control, and fertilization would be implemented as appropriate and in accordance with site-specific project plans.
- Snags and down logs would be retained to meet objectives for specific habitat types as specified in Wildlife Guidelines. Harvest practices would be designed to minimize impacts to recreational use of areas. Harvest practices would avoid creating hazards to use of designated trail systems or increase maintenance costs of designated trails. Salvage of killed and damaged trees from wildfire, windthrow, insects, disease and other causes would be considered in conjunction with snag and down wood retention guidelines and other resource objectives, including recovery of economic value.
- When salvage is appropriate, high priority would be given to rapid action to minimize loss of timber value.
- Collection of juniper wood products would be allowed in conjunction with woodland maintenance and restoration treatments, except where restricted within RNAs, WSAs and other special designations.
- Wood products harvest, site preparation, silvicultural operations, and associated activities would be conducted according to Equipment Operating Guidelines and Best Management Practices for protection of soil and water resources (see Appendix F). BLM Handbook and Manual guidelines/management direction for machine operations and resource protection would also be followed where applicable.
- Harvest of forest and woodland products would comply with all applicable travel management regulations.

Objective FP - 4: Provide for maintenance and safety of facilities within and adjacent to urban areas, residential areas, major roads, trails, facilities, and recreational developments.

Rationale:
Forested areas with insects, disease and mortality result in occasional hazard trees. Hazard trees are dead standing or green trees that are leaning or have other defects such that they pose a safety hazard to local residents, travelers, recreationists, private property, and facilities.

General Guidelines:

- Cutting and removal of individual or small groups of hazard trees would be allowed where trees pose a safety risk to people or an imminent threat to valuable structures, utilities, roads or other facilities. Cutting and removal of hazardous large snags and old-growth trees would be evaluated on a case-by-case basis. Mitigation measures such as topping trees or relocating low-value structures, in lieu of cutting, would also be considered.
- All vegetative treatment prescriptions should consider multiple objectives, including removal of trees that pose a safety hazard to humans or threat of damage to property.
- Collection of special forest products would comply with all applicable travel management regulations.

Special Forest and Range Products

Guidelines:

- Juniper bough harvest would be allowed in the planning area except within ACECs, campgrounds, river corridors, along major highways and roads, and other restricted areas. Bough collection would be by permit only.
- Restoration treatments using mechanical methods would provide opportunities to harvest juniper for furniture wood, hobby wood, fence posts, boughs, and other uses where available and where appropriate.

- Allow collection of minor amounts of native plants, seed, lichen, and other vegetative products in a sustainable manner and in accordance with permit guidelines established for specific products or specific areas.
- In commercial and personal-use harvest of firewood, opportunities will be sought to transition away from cutting of dead standing trees to utilization of more small-diameter green trees obtained from thinning and fuels reduction treatments.

Military Uses

Objective MU-1: Ensure consistency of planned and approved activities with environmental requirements, integrated resource management plans, and conflict resolution with neighbors on public lands authorized for long-term and short-term military use.

Rationale:
Serves to coordinate and parallel military and BLM activities.

Guidelines:
The military will follow all military and BLM regulations concerning environmental protection, natural resources, cultural resources, ranges and training, safety, and fire and emergency services.

Objective MU - 2: Provide a reliable land base suitable for meeting short and long-term resource management and national and state readiness needs.

Rationale:
The National Guard, OMD, and the BLM have worked in partnership since 1942 to authorize training and resource management activities on public lands in the planning area. The OMD has invested substantial funds over the past years in developing a base for long-term training on their withdrawn lands, relying on the permitted use of adjacent public lands for much of their training activities. This relationship has also provided resource management benefits in recent years with the advent of new environmental requirements for the military. These requirements include developing integrated resource and cultural management plans for training areas, and providing opportunities for federal and state defense funds to be used for ecological restoration in areas with identified long-term commitments for military training exercises. Land available for these activities is becoming increasingly limited throughout the state and the country as urban and residential incursion into these areas of traditional use increase.

Guidelines:
- Authorize long-term use (minimum of 30 years) for military training.
- Review military use on a yearly basis.
- Authorize additional short-term uses on public lands outside of long-term use areas where integrated resource management and training objectives can be met.

Objective MU - 3: Provide areas sufficient to avoid continual use of the same training areas.

Rationale:
Rotation of training activities to different areas will allow for re-vegetation and better long term protection of natural resources.

Guidelines:
- Designate seasonal use of specified areas to allow for rotation of military training use in order to minimize use conflicts with livestock grazing, recreation, and wildlife, and provide for rest and rotation of land use while still providing lands for military training.

- Select small areas of concentration and prepare the area by providing gravel cover, barriers, road improvement/maintenance or other engineering works to reduce general area resource damage.
- Emphasize or consider multiple public uses when selecting types and locations of improvements.

Visual Resources

Objective VR - 1: Manage all BLM administered lands in the planning area to meet the following Visual Resource Management Classes:
- **VRM Class 1 areas – Preserve the existing character of landscapes.**
- **VRM Class 2 areas – Retain the existing character of landscapes.**
- **VRM Class 3 areas – Partially retain the existing character of the landscape.**
- **VRM Class 4 areas – Allow major modifications of existing character of landscapes.**
- **VRM Class 5 areas – Areas in need of rehabilitation from a visual resource standpoint.**

Rationale:
Section 102(8) of FLPMA declares that public land would be managed to protect the quality of scenic values and, where appropriate, to preserve and protect certain public land in its natural condition. NEPA, Section 101(b), requires Federal agencies to "assure for all Americans…esthetically pleasing surroundings." Section 102 of NEPA requires agencies to "utilize a systematic, interdisciplinary approach, which would ensure the integrated use of…environmental design in the planning and decision making process." Guidelines for the identification of VRM Classes on public lands are contained in BLM Manual Handbook 8410-1, Visual Resource Inventory.

Objectives for managing visual resources on BLM administered lands are established through the RMP process by defining visual resource management (VRM) classes. The establishment of visual resource management classes on public land is based on an evaluation of the landscape's scenic qualities (mapped as Variety Classes), public sensitivity about scenic qualities of certain areas (mapped as Sensitivity Levels), and the visibility of affected land from Key Observation Points (KOPs) such as major travel corridors (mapped as Distance Zones). VRM classes represent the relative value of visual resources, with Class 1 and 2 being the most valued, Class 3 representing a moderate value, and Class 4 being of least value. Areas can also be identified through the RMP process as Class 5, where the natural character of the landscape has been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications. This classification also applies to areas where there is potential to increase an area's visual quality; Class 5 is often used as an interim classification until objectives of another VRM Class can be reached. Known Observation Points (KOPs) are identified to establish these distance zones and levels of visual sensitivity (See Appendix H for a description of the establishment of VRM classes and KOPs in the planning area).

Allocations/Allowable Uses:

VRM Class	Acres
Class 1	32,928
Class 2	37,590
Class 3	88,179
Class 4	246,163
Class 5	8

See Visual Resources Classification Map 22 for the location of visual resource management classes. The following list identifies general areas that are included in each

VRM Class in the UDRMP area:

VRM Class 1:
Badlands WSA
Steelhead Falls WSA
Horse Ridge RNA/ACEC/ISA

VRM Class 2:
Areas visible from Prineville Reservoir (foreground views)
Smith Rock block
Horse Ridge and Dry Canyon
Portions of West Butte area
Dry Canyon in Cline Buttes
Deschutes River corridor
Crooked River corridor
Ochoco Reservoir parcel
Cline Buttes slopes visible from the Redmond area
Wagon Road ACEC
Powell Butte RNA
Redmond Caves parcel

VRM Class 3:
Skeleton Fire area
West Butte area
Areas visible from Prineville Reservoir (background views)
Smith Canyon area
Immediate foreground view of State Highway 20, 26, 27, 126, Powell Butte Highway, Juniper Canyon Road, Reservoir Road, except where superceded by other VRM Class designations

VRM Class 4:
Remainder of planning area

VRM Class 5:
Crooked River Canyon area north of Chimney Rock Wild and Scenic River segment

Objective VR-1a: Manage VRM Class 1 lands to preserve the existing character of the landscape. Natural, ecological changes dominate; the level of change provided by management actions should be very low and not attract attention. (See also Wilderness Study Area section)

Objective VR-1b: Manage landscapes seen from high use travel routes, recreation destinations, special management areas, or that provide a visual backdrop to communities for low levels of change to the characteristic landscape. In these areas, management activities may be seen but should not attract the attention of the casual observer. Changes should repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

These areas are generally identified as VRM Class 1 or 2; however, project specific analysis may require an increase or decrease in VRM Class depending on existence of new Key Observation Points or project specific determination of seen areas.

Objective VR-1c: Manage VRM Class 3 lands for moderate levels of change to the characteristic landscape. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

<u>Objective VR-1d</u>: Manage VRM Class 4 lands for moderate levels of change to the characteristic landscape. Management activities may dominate the view and be the major focus of viewer attention. Every attempt will be made to minimize the effect of management actions through careful location, minimal disturbance, and repeating the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

<u>Rationale:</u>
Section 102(8) of FLPMA declares that public land would be managed to protect the quality of scenic values and, where appropriate, to preserve and protect certain public land in its natural condition. NEPA, Section 101(b), requires Federal agencies to "assure for all Americans…esthetically pleasing surroundings." Section 102 of NEPA requires agencies to "utilize a systematic, interdisciplinary approach, which would ensure the integrated use of…environmental design in the planning and decision making process." Guidelines for the identification of VRM Classes on public lands are contained in BLM Manual Handbook 8410-1, Visual Resource Inventory.

<u>Guidelines:</u>

- All surface disturbing activities under permit or lease or done by BLM would require visual resource analysis using BLM's contrast rating methodology. Visual design considerations shall be incorporated into all surface-disturbing projects regardless of size or potential impact. Projects would be designed to resolve and minimize potential impacts and meet or exceed the visual resource management class objectives. Project specific analysis will be done based on the following:

  1. Emphasis shall be placed on providing this input at the earliest stage of project or permit planning, so as to minimize costly redesign or mitigation at later phases of project design and development. BLM would request project specific visual resource information from project proponents, including design plans, construction drawings, concept plans, etc. prior to starting work on permit approval or environmental assessments or environmental impact statements.
  2. Project specific analysis of visual resource impacts will include an evaluation of new Key Observation Points, including new recreation facilities, trails, and community areas. A project specific determination of seen areas, distance zones and appropriate VRM Class will be done using the VRM mapping in the UDRMP as a baseline.
  3. BLM would conduct project monitoring, with an emphasis on monitoring during project construction to assure visual resource mitigation measures are adhered to.

- Parking facilities, structures, structural range improvements, and recreational facilities would normally be placed where they are not visible from known observations points (KOPs). Emphasis would be placed on providing signs to direct recreational visitors to parking areas and facilities instead. Where it is not possible to screen recreational facilities or other structures, or where public safety issues require these facilities to be visible, they would be designed to blend with the elements found in the natural landscape and remain subordinate to the overall strength of the landscape being viewed.
- New roads, ROWs and other surface disturbing projects would be designed to meet the Visual Resource Management Class of the affected area. Routes likely to be popular with recreational visitors would be designed and maintained to enhance the area's scenic qualities. Road improvements or new road construction in VRM Class I or II areas would use non-reflective surfaces such as Corten Steel guard rails to minimize contrast with the surrounding landscape. Materials would be specified before ROW permits are issued.
- New roads or utility ROWs will be constructed when new routes would enhance, improve, or protect an area's scenic qualities better than improvement of existing roads or expanding or co-located ROWs.

- Landscapes containing negative visual elements, including, but not limited to, braided or extremely dense road networks, garbage piles, unstable cut or fill slopes, open pits, or numerous damaged trees/stumps, would be rehabilitated.
- Identify and rehabilitate negative visual elements on public lands within the immediate foreground (0 to ¼ mile) corridor of travel routes through special areas (ACECs, RNAs, Wild and Scenic River Corridors, WSAs) and along designated scenic or backcountry byways, trails, and major travel routes through the planning area.
- New helispots, gravel pits, gravel stockpile locations, claypits, and borrow areas would be located out of foreground view from KOPs. If a site is not available outside of the immediate (0 to ¼ mile) foreground view of KOPs, then appropriate mitigation will be determined (e.g., screening, project design, berms, etc.) prior to permits being issued.
- Improve entry signage to BLM lands in the planning area, considering the use of native rock foundations, BLM logo signs, and wording that identifies the name of each specific area, etc. A priority will be made on using these higher sign standards first on WSAs, ACECs and developed sites.
- All transmission line towers, conductors, and communication antennas would utilize non-reflective surfaces or be painted to minimize visual impacts.
- Vegetation manipulation such as brush removal, juniper thinning, reseeding and prescribed burning will be designed to meet or exceed VRM Classes. Vegetation manipulation projects may include the following design concepts to enhance visual quality:
  1. Treatment objectives in old growth juniper woodlands/savanna would include enhancing foreground visual characteristics of the old-growth juniper woodlands/savanna and the overall scenic quality of the area. Juniper woodland characteristics that would be expected to generate high visual appeal would include:
     a. "Healthy" woodlands with large and old trees of various densities and structure
     b. Understories of diverse native shrub, grasses and forbs
     c. A low occurrence of noxious weeds and other non-native species
     d. High visual diversity with regard to vegetative and geologic features of the characteristic landscape.
  2. Where possible and appropriate, background and vista views would be enhanced by treatments such as thinning, pruning, or clearing corridors through foreground juniper woodlands, emphasizing removal of younger, smaller trees.
  3. All other standard operating procedures for reducing visual effects from mechanical vegetative treatments and prescribed burning would be implemented. Examples of mitigating measures for reducing visual effects could include: closing, scarifying and seeding roads, smoothing berms, chipping or removal of juniper thinning slash instead of piling, cutting stumps at ground level, low intensity prescribed burning to reduce scorch height, and concealing higher intensity juniper treatments with vegetative and topographic screening, leaving individual and groups of trees, and unit edge feathering.
  4. Treatments in old growth juniper woodlands would emphasize treating the "best" old-growth juniper woodlands within major travel corridors, along backcountry byways, and near recreation and residential/urban areas. Primary objectives would be to maintain old woodland health and longevity and to improve or highlight scenic values.
- Cutting or pruning to produce small openings in dense stands to clear vistas or expose other natural features of interest.
- Stand management to clear dead and down trees or promote different ages, sizes, densities, species composition, and vertical layers for increased visual diversity.
- Rehabilitation of sites with noxious weeds, exotic annuals, and other disturbed/unbalanced vegetative communities to transition toward a more natural vegetative landscape.
- Enhancement of visually interesting meadows, riparian areas, and old-growth trees.
- Treatments to improve wildlife viewing, education, and interpretation opportunities.

Recreation

The following describes the objectives for recreation management within the planning area. The first section includes a brief description of the objectives, the rationale for the objectives and the guidelines that apply to the entire planning area and under every alternative.

Objective R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership." Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:
- Provide safe access from public roadways to public lands at locations and distributions appropriate to overall management. Prioritize access points from public roadways as follows:
  1. Paved public roads that are not Expressways (includes county major and minor arterials) are used as a first priority.
  2. Paved collector streets not within local subdivisions are used as a second priority.
  3. Paved or unpaved local subdivisions are used as a third priority.
- Incorporate ODOT corridor management strategies with access designations and possible
- General public access points would be limited to the number necessary to meet recreation and other management objectives.
- Motorized access points not needed or selected for designation/development, but required for other uses (e.g. utility access, grazing access, and other occasional administrative access), may not be open to the public.
- Designate new or move existing access points, when feasible, away from private property boundaries.
- Access, particularly for full-size vehicles, would be limited to one or few points within several miles of urban growth boundaries, especially from high volume state highways or paved county roads. Existing roads that are rights-of-ways may be used as the primary public access point. However if not a necessary component of the transportation system such roads may be closed to the general public to reduce dumping, illegal activities, and cross-country travel.
- Location of trailheads above buried pipelines would be avoided. Where unavoidable, BLM would complete the project in a manner that would ensure that proper pipeline functioning is retained.
- Unless specifically identified and designated as such, all designated trailheads/staging areas will be closed to overnight camping/occupancy and campfires
- Access points would have marked and managed parking areas with physical barriers that define the area. And a range of the following developments depending upon projected use levels:
  1. Trailheads utilized by equestrians or OHV users should be large enough to

accommodate vehicles pulling trailers and designed to minimize or eliminate the need to back a trailer.
2. Informational and regulatory signs
3. Sanitary facilities
4. Site hardening for parking or staging areas

<u>Objective R - 1:</u> Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

<u>Rationale</u>
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

<u>Allocations/Allowable Uses:</u>
All alternatives would designate BLM administered lands within the planning area as Open, Limited, or Closed for the operation of off highway vehicles. Each alternative varies in the amount and distribution of these various travel management designations throughout the planning area. The location and distribution of these travel management designations reflect the overall themes of each alternative. The following criteria are used, along with other resource objectives and goals, in designating travel management objectives for different areas. Areas are Limited to designated roads and trails unless posted as Open.

<u>Criteria:</u>
1. **Open**
   Designate as Open sites managed for intensive and highly managed use (where significant resource or social conflict issues are not expected). As defined in BLMs National OHV Strategy (2000), the "BLM designates areas as Open for intensive Off-Road Vehicle (ORV) use where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-county travel."
2. **Limited**
   Designate as Limited areas where motorized public access is managed to meet specific recreation and resource management objectives. As defined in the BLM's National OHV Strategy, the agency designates areas as Limited where it must restrict motorized ORV use in order to meet specific resource management objectives. These limitations may include:
   - Restricting the types of vehicles uses in an area
   - Restricting motorized vehicles to designated roads and/or trails
   - Limiting the season or time of use.
3. **Closed**
   Designate as Closed areas where motorized use should be restricted to protect resources, ensure visitor safety, or reduce conflicts. Areas are Closed to motor vehicle use where recreation management emphasis is on providing non-motorized recreation

   Areas designated as Closed that are common to Alternatives 2-7 (but not included in Alternative 1) are:

   - Ochoco Reservoir parcel east of Prineville
   - Isolated parcels located along Deschutes River northwest of Redmond

- Sisters Climbing area
- Parcel on State Highway 97 between Bend and Redmond
- Bend-Redmond block south of McGrath Road
- North tip of Millican Plateau along Crooked River and Millican Road
- Isolated parcels in La Pine

Guidelines:

- Any area or seasonal closures would be clearly signed. Signs posted on BLM administered lands by other agencies under cooperative agreement must be approved by the BLM.
- Roads closed to motorized travel by the public may be retained if needed for administrative or public safety purposes.
- OHV trails may be utilized by non-motorized users except when prohibited during special events to provide for public safety. These trails may also be closed during special circumstances for public safety or resource management objectives.
- In areas designated as Closed to motor vehicles, existing ROW roads are encouraged, where possible, to be relocated (i.e. moved to edge of BLM closure area or BLM jurisdiction) if needed to provide better recreation and resource management.
- In areas designated as Closed to motor vehicles, existing roads may be retained or new roads created that provide access to parking areas, trailheads, or other use areas.
- In all areas, construction, placement or maintenance of roads or trails without authorization, contract, or approved operating plan would be prohibited.

Interim Road and Trail Designations:
Until completion of site-specific identification of local road or trail designations, an interim system of local roads and trails would be designated in each geographic subdivision.

Trail Design and Construction:
Provide safe trail crossings by:

- Relocating or eliminating at-grade trail crossings with paved roads, whenever possible, and especially:
  1. When road construction or reconstruction fragments existing trail systems.
  2. When road is subject to highs speed travel. (Identified needs for safer trail crossings include Millican Road/Highway, State Highway 126, State Highway 20, O'Neill Highway, Johnson Market Road, and Powell Butte Highway.)
  3. When either trail system or road is subject to high use levels
  4. When line of sight at crossings is limited.
- Build cattle guards where designated trails and roads cross fences.
- Design trail routes that avoid private property or obtain easements from willing landowners if avoidance is difficult or expensive.
- Design new and realign existing trail routes to make curvilinear routes that offer interesting riding opportunities and would increase the hours of riding for a given mileage of trail system, and decrease the density of the existing trail system.
- Close redundant trails that result in multiple parallel routes.
- Rehabilitate or repair existing high use and/or user-created trails that are dangerous or causing erosion or other resource damage. Trails may be closed temporarily if needed to protect resources or public safety until rehabilitation or reconstruction.

Play Areas

- Rules for safe use, types of vehicles, periods when area may be used may be established for any sites developed.
- Parking, restrooms, picnic tables, etc. may be located within the boundaries of such sites.

Objective R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Allocations/Allowable Uses:
In all areas, construction, placement or maintenance of roads or trails without authorization, contract, or approved operating plan would be prohibited.

All alternatives identify the following areas for non-motorized trail emphasis through travel management or recreation emphasis designations:

- Tumalo block
- Northwest block
- Horse Ridge/Skeleton Fire area
- Dry River Canyon
- Airport allotment
- Taylor Butte area
- Area south of Alfalfa Market Road, north and west of Dodds Road

Guidelines:
- When consistent with plan objectives convert non-designated roads and old travelways to trails for such activities as horseback riding, running, or mountain biking. When possible, rehabilitate these roads to differentiate them from designated roads that occur in the same area and reduce the unintended use of these routes by full size vehicles.
- Incorporate BLM administered non-motorized trails into regional trail networks when consistent with other resource management goals.
- Designate river access points and improve, maintain river access trails to a condition that reduces erosion and resource problems and provides safe access for the public.

Trail Design and Construction
- Close redundant trails.
- Rehabilitate or repair trails that are unsafe or contribute to erosion.
- Design trail routes that avoid private property or obtain easements from willing landowner if avoidance is difficult or expensive.
- Reroute roads and trails that cross private property to create road and trail loops that are exclusively on BLM lands to allow continued recreation use and authorization of SRPs for events that do not require private landowner approval.
- If necessary for public safety or to protect natural conditions, trails may be closed temporarily until rehabilitated or reconstructed.
- Relocate or eliminate at-grade trail crossings whenever possible, and especially:
  1. When road construction or reconstruction fragments existing trail systems.
  2. When road is subject to highs speed travel.
  3. When either trail system or road is subject to high use levels
  4. When line of sight at crossings is limited.
- Provide trail maps and install route markers to designate trails.
- Construct gates for equestrian use adjacent to cattle guards where such structures are built to facilitate motorized travel on shared use trails.

Objective R - 6: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use

management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:

- New facilities may be developed when needed for public safety or to protect resources.
- Development may include but would not be limited to trails, picnic tables, site designations, hardened and delineated parking areas, and permanent toilets.
- Day use and group use areas will be considered, with an emphasis on day use facilities that support areas with designated trail systems or interpretive features.
- When necessary to protect facilities or resources adjacent to facilities, boundaries would be defined through techniques such as signing and/or fencing or other appropriate means.
- Installation of recreation facilities above buried pipelines would be avoided. Where unavoidable, a proper pipeline functioning would be retained.

Group Use/Special Recreation Permits

Objective R - 3: **Provide for projects, programs, and permits that promote a diverse range of recreation opportunities. Provide for individual, group, and competitive event recreational use that could not be reasonably accommodated on private land.**

Rationale:

FLPMA provides for recreational use of public land as an integral part of multiple use management. BLM Strategic Plan includes direction for serving both present and future publics. However, on an individual basis, visitors may lack the skills (technical ability, local knowledge) or gear, to achieve their recreational goals. Visitors may also wish to recreate on BLM lands in large groups, or engage in competitive events; activities which may include increased risks to natural or cultural resources, impacted social experiences, and degraded facilities. These types of recreational opportunities are not normally provided by the BLM. Demand for these types of recreational use is rapidly increasing now, and is expected to continue to increase in the future.

Guidelines:

Special Recreation Permits

Manage SRP authorizations to allow specified recreational use of public lands and related waters. These permits will be used as a mechanism to accommodate specific recreational uses, protect resources, and manage visitor use.

General Direction

- Activities outside of the following guidelines may be permitted based on additional NEPA analysis. That analysis would examine numerous factors including but not limited to:
  1. Impacts to natural and cultural resources,
  2. Impacts to the social experience
  3. Impacts to facilities
  4. Within WSAs, impairment of wilderness suitability

- Prior to the issuance of a Special Recreation Permit for recreational activities, the BLM would assess the proposed activity to determine if it is in the public interest and to assure adequate mitigation of impacts. This assessment would include but not necessarily be limited to:
  1. Need for service – what specific niche does this service provide that cannot otherwise be provided on private lands, or is already provided for on public lands through existing permits?

3. Proposed project mitigations – what are the expected levels of impacts, and what prevention, mitigation, or rehabilitation would be needed to meet resource management objectives for the area.

Commercial Use
Special Recreation Permits for trail dependent annual use (e.g. guided horseback rides, llama pack trips, guided hikes, mountain bike tours etc.) would only be issued for designated trails that are part of BLMs transportation system.

Organized Group Use
- If the BLM determines that use levels in an area is likely to exceed the capacity of facilities such as trailheads, staging areas, and other facilities a reservations system may be developed to meet growing demands for group uses such as group camping, day use for special events, etc with out exceeding the capacity of existing facilities.
- SRPs will be required for all organized group activities involving greater than 20 participants.

Wilderness Study areas

Organized Group Use
- No motorized group use allowed.
- SRPs will be required for all organized group activities involving greater than 12 participants.
- SRPs may be required for organized groups involving less than 12 participants depending upon numerous factors including but not limited to: Proposed activity, season of use, and potential impacts.
- On inventoried routes SRPs will be required for all organized group activities involving great than 12 participants.
- An SRP permit would be required for all organized groups not on an inventoried route.

Competitive Event Use
No competitive events allowed.

Vending
No vending allowed.

<u>Objective R – 7:</u> Provide appropriate recreational opportunities while reducing conflicts between recreational users, and between recreational users and adjacent landowners.

<u>Rationale:</u>
While some overnight recreational use (including camping and hiking) is appropriate in most of the planning area, there are some specific sites where this use is not appropriate, or only appropriate in limited quantities. For example, some areas, like the Wagon Road ACEC, are managed primarily as an interpretive site, and cannot be fully appreciated at night. Other areas, like the parcel north of State Highway 126 and west of the North Unit Canal, are places where visitors have traditionally engaged in prohibited acts, including but not limited to: Illegal dumping, illegal fires, occupancy, vandalism, holding of large unauthorized parties, and resource and cultural damage. While closures to overnight use are not expected to completely address these prohibited acts, the closures should improve existing conditions and greatly assist in enforcement of regulations.

<u>Allowable Uses/Allocation:</u>
Areas closed to camping/overnight use:
Powell Butte RNA
Horse Ridge RNA

Wagon Road ACEC
Tumalo Canal ACEC
Parcel north of State Highway 126 and west of the North Unit Canal
Redmond Caves parcel
BLM parcel north of Highway 126 and adjacent to Cline Falls State Park
40 acre parcel on State Highway 97 south of Deschutes Junction
All designated parking areas, staging areas, and trailheads unless specifically authorized and posted.

Sisters Bouldering Area

Guidelines:

- Additional areas may be closed to all overnight camping if conflicts among users, or between users and adjacent landowners increase, or if resources are being degraded by overnight camping use.
- Unless otherwise authorized by permit, BLM parcels managed for non-motorized exclusive use will be limited to 3 nights of overnight camping per 28 day period, except where closed to all overnight use above.

Objective R - 4: Provide and maintain a wide range of recreation opportunities while meeting overlaying resource management objectives within the planning area and urban interface setting.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. The population in the planning area has the fastest growth rate in the state of Oregon. The demand for year-round outdoor recreation opportunities is placing increasing pressure on BLM urban interface lands. State Comprehensive Outdoor Recreation Plan (SCORP) goals and needs assessment call for recreation facility and trails development to meet the demands of the rapidly growing region.

Policy guidelines in BLM Manual 8300 direct the BLM to designate special units, known as Special Recreation Management Areas in a manner consistent with community, economic and resource goals. Management of these special recreation management areas focuses on providing recreation opportunities that would not otherwise be available to the public, reducing conflicts among users, reducing damage to resources and reducing visitor health and safety problems. The presence of high quality natural resources and the current or potential demand warrants intensive practices to maintain the areas for their scientific, educational, or recreational value, while accommodating the projected increase in use for recreation activities specific to each area. The region's growth and the area's suitability for year-round outdoor recreation have resulted in high use levels, user conflicts, and resource impacts resulting from unmanaged recreation use throughout BLM lands in the planning area.

BLM-managed lands provide for a variety of human and natural resource benefits. As recreation demand in the area grows, emphasizing different recreational opportunities across the area that are integrated with natural resource and other land use management goals would reduce the potential for future conflicts between public land users and neighbors

Allocations/Allowable Uses:
All lands within the planning area would be identified as the BLM Central Oregon Special Recreation Management Area, except those north of Prineville because of the scattered nature of the public land parcels surrounding the area. The specific components of this SRMA are identified (See Map 1) as:

1. Badlands WSA
2. Bend/Redmond Recreation Area
3. Cline Buttes Recreation Area

4. Horse Ridge Recreation Area
5. La Pine Recreation Area
6. Mayfield Recreation Area
7. Millican Plateau OHV Area
8. North Millican OHV Area
9. Northwest Recreation Area
10. Prineville Reservoir Recreation Area
11. Smith Rock Recreation Area
12. South Millican OHV Area
13. Steamboat Rock Recreation Area
14. Tumalo Recreation Area

Guidelines:
The Upper Deschutes RMP would serve as a recreation management plan or would allow the completion of the following required elements of a Special Recreation Area management plan:

1. A designated road system with arterial, collector, and local roads; including existing road segments to be closed, and new road segments to be constructed to make a useable system (no new construction in WSAs).
2. Designated access points, staging areas, parking areas and trailheads
3. A specific trail system layout that includes shared use trails and/or separate motorized and non-motorized trails as dictated by the RMP. Designated trail system layouts would include segments to be closed, segments to retain as is or improve, and new segments to be constructed to make a useable system.
4. Other recreation site improvements, including sign plans, interpretive plans and volunteer agreements.

Geographic Areas

The recreation management direction specific to geographic areas is described below which displays how recreational opportunities are provided throughout the planning area.

Badlands

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership." Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:

- Reduce unauthorized vehicular entry into WSA by using appropriate mechanisms (e.g., fencing, signs, etc.).
- Provide improvements to parking/trailhead areas to better handle equestrian use (e.g., hitching rails, adequate turning radius for trailers, and adequate parking space).

Bend/Redmond

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses
- The main block located between State Highway 126 and Powell Butte Highway would be designated as Limited to designated roads and trails; open year-round.
- Highway 97 parcel would be designated as Closed to motor vehicles.
- 1, 360 area surrounding the southern portion of the Wagon Road ACEC would be designated Closed to motor vehicles.

Guidelines:
- Trail system would be developed in loops and sections to allow area or sectional closures if necessary during OMD training exercises (while maintaining some trails for public use).
- Work with Bureau of Reclamation (BOR), the North Unit Irrigation District (NUID) and OMD to provide additional trail crossing points over the North Unit canal as part of a designated trail system.
- The designated trail system in this Bend/Redmond area will be designed to minimize development of user created trails that require crossing of State Highway 126.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership". Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:
- Appropriate measures would be taken to reduce conflicts and safety hazards due to OHV access across State Route 126.
- Develop trailheads and staging areas for trail systems that help increase public awareness of travel management regulations and other uses of the area, such as OMD training exercises.
- Design should be compatible with the needs of the military.

- Access from the following subdivisions will be non-motorized trail access only: Powell Butte Estates West, Boonesborough and other major subdivisions.
- To support OHV use on a designated trail system, staging areas will be provided. The emphasis for staging area development will be to serve different local customers, with staging areas/trailheads easily accessible for Bend and Prineville residents. Other goals for staging area development will include multiple use needs of the OMD, and the ability to disperse users on the trail system and reduce user conflicts.

Objective R - 3: Provide recreation projects and programs that promote recreation management objectives and support community economic strategies. Provide for competitive and group events that couldn't be reasonably accommodated on private land.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. BLM Strategic Plan direction is to serve the public now and in the future by providing opportunities for environmentally responsible commercial activities.

Guideline:
Work with the City of Redmond to develop the Redmond caves site as an interpretive park site.

Objective R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
The presence of the Wagon Road ACEC and the North Unit Canal provide opportunities for an understandable trail system that has regional trail potential and also high interpretive values.

Guidelines:
- Work with BOR, NUID, Deschutes County, State Parks, OMD, and others to designate and manage the North Unit Canal as a regional, non-motorized trail corridor.
- Consider the development of non-motorized trail connections between the two longer segments of historic road in the Wagon Road ACEC and the North Unit Canal, if the Canal Corridor becomes and regional trail and the values for which the ACEC was designated can be maintained.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
The existing Wagon Road ACEC provides an opportunity for non-motorized recreation, and interpretive use (See SMA, Wagon Road ACEC section). Recreation and travel management for an area surrounding the southernmost portion of the ACEC can increase the areas value as an interpretive and recreation use area.

Guidelines:
- The area south of McGrath Road in the Bend/Redmond block is designated Closed to motor vehicles. (see also SMA Section, Wagon Road ACEC):
- A parking area and interpretive trail system may be developed in the area.
- The area is closed to campfires, overnight use, geocaching, and all firearm discharge, including paintball guns.
- Special Recreation Permits will be limited to group use and foot traffic only. No competitive events will be allowed.

Cline Buttes

<u>Objective R - 1</u>: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

<u>Rationale:</u>
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

<u>Allocations/Allowable Uses:</u>
- Main block (area between Cline Falls Highway and Fryrear Road) would be designated as Limited to Designated Roads and Trails.
- The following parcels are designated as Closed to motorized vehicles:
  1. Harper Road Parcel (see also Water based recreation)
  2. Youngs Avenue Parcel
  3. All parcels located east of the Deschutes River, including the Jaguar Road parcel
  4. BLM Parcel adjacent to Cline Falls State Park
  5. The fenced portion (approximately 40 acres) of the Tumalo Canal located adjacent to, and east of Barr Road

<u>Guideline</u>:
- Manage Barr road cinder pit as a designated OHV play area
- Manage trails in the area between Cline Falls Highway and Barr Road to minimize erosion and visual impacts.

<u>Objective R - 2</u>: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

<u>Rationale</u>:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership". Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

<u>Guidelines</u>:
Provide improvements to Fryrear Road trailhead or develop a replacement trailhead as needed to accommodate additional vehicles and adequate turning radius for horse trailers. Provide signs and information on Sisters area trails if regional trail link is developed along Jordan Road from Sisters to BLM land at Cline Buttes.

<u>Objective R - 5:</u> Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
The portion of the Tumalo Canals ACEC in the area east of Barr Road would be managed for foot traffic only.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
- Provide access and trailheads for motorized and non-motorized trail use.
- Development of group use areas, picnic areas, or other developments may occur as needed.

Horse Ridge

Objective R – 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
The following areas would be designated Closed to motor vehicle use:
- Small parcels surrounding Conestoga Hills Estates.
- The BLM administered lands bounded by State Highway 20 on the east, Rickard Road on the south, and private lands to the west and north.
- Horse Ridge RNA.

The Skeleton Fire area between the Deschutes National Forest boundary, Old Highway 20, private lands at Gosney Road and Horse Ridge would be managed for motorized use on designated roads only.

Guidelines:
Reroute dead-end roads in the area south of State Highway 20 and north of Old Highway 20 (T18S, R14E, Sec. 30, 31,32; T19S, R14E, Sec. 5, 4, 3, 10; T18S, R13E, Sec. 25) to create several interconnected loops and eliminate dead-ends along the south side of State Highway 20.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership." Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:
A trailhead or multiple trailheads would be established to allow for adequate access to, parking, and user information for non-motorized trail use in the Horse Ridge and Skeleton Fire area.

Objective R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
- Designate a non-motorized trail network in the Skeleton Fire area using existing 2-track roads (currently Closed to motorized vehicles) as a base, and including additional trails as needed to complete a system that offers loops of varying lengths.
- Develop non-motorized trails on Horse Ridge that avoid private parcels and allow continuation of existing trail use.
- Designated trails would be located outside the Horse Ridge RNA.
- The BLM administered lands bounded by State Highway 20 on the east, Rickard Road on the south, and private lands to the west and north would be managed for non-motorized trail use on a designated trail system.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have

been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
South Millican Horse Camp meets a minimum standard, with additional site boundary markers, signs and trail information.

La Pine

Objective R – 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
- Motor vehicle travel would be limited to a designated system throughout the majority of the area.
- Approximately 10 small, isolated parcels (generally 40 to 320 acres in size) would be designated as Closed to motor vehicle use.
- Administrative entry for critical activities to ensure public health and safety (i.e. Fire suppression and hazardous fuels treatments) would be granted on a case-by-case basis.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
BLM would work with Deschutes County, State Parks, and the community of La Pine to explore R&PP lease options for park development in La Pine. Development of new park sites would only occur under R&PP lease or if management responsibilities were assumed by another public entity.

Mayfield

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
- Airport Allotment would be Closed to motor vehicles.
- Area within the fence around Mayfield Pond would be Closed to motor vehicles.

Guidelines:
Revised the road system in Main block and area south of Alfalfa Market Road to provide useful loops, avoid dead-end roads, and limit the number of motorized access points from adjacent roads, subdivisions or private property.

Objective R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The existing parking areas at the Airport Allotment, Mayfield Pond, Reynolds Pond, Alfalfa Pond and at the Badlands WSA entrances at Obernolte Road, County Line Road and at Route 5 do not provide adequate parking capacity, resulting in resource damage as vehicle traffic moves into new areas. The lack of designated and managed parking is conflicting with other users, including grazing permittees and irrigation district staff.

The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership." Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:
- Provide designated trailhead and parking facilities to support trail use in the Airport Allotment.
- Provide designated entry points and trailheads that support trail use in the Mayfield block.
- Provide designated access/parking at Mayfield Pond.
- Provide designated access/parking at the Route 5 entrance to the Badlands WSA.
- Consider providing new designated access to the area south of Alfalfa Market Road from Dodds Road.

Objective R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
- Where possible, the road system in Airport allotment area would be modified to create a single track system that includes trail loops and avoids dead-end trails.
- Where possible, roads would be converted to trails.
- Provide a designated, non-motorized trail link outside of the Badlands WSA boundary to a designated parking area at Reynolds Pond to Route 5 entry point in the Badlands.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
Provide site improvements at ponds (toilets, hardened parking, picnic areas, shade structures, trash receptacles, etc.) as needed to increase visitor satisfaction and protect resources.

Millican Plateau

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
The Millican Plateau OHV area would be maintained for OHV use on designated roads and trails (the size of the area and seasons of use may vary by alternative).

The following areas would be designated Closed to motor vehicles:
- Powell Butte RNA/ACEC

- Isolated BLM parcels within the Juniper Acres subdivision
- Isolated block of public land on top of Powell Butte (except for a designated entry road and parking area if private lands or an easement is acquired that provides legal access to BLM administered lands).
- Millican Cliff area on east side of Millican Road

Guidelines:
- Provide additional OHV play area opportunities in Millican Valley, with an emphasis on areas/communities not served by existing facilities (i.e., Millican Plateau/ Prineville)
- Designate trails in the area west of Millican Road and south of Powell Butte.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership." Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines
Develop trailheads to access northern portion of expanded OHV area, while controlling parking and spread of dispersed use.

Objective R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
If legal access is obtained, designate a non-motorized trail system in Powell Buttes and manage all non-motorized (except foot traffic) use as limited to this system.

North Millican

Objective R – 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or

Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
The North Millican OHV area would be maintained for OHV use on designated roads and trails (the size of the area, trail density, and seasons of use may vary by alternative).
- ODOT Pit Play Area would be open year round.
- Hill climbs would be closed and rehabilitated if necessary.

Guidelines:
- Improve ODOT pit to increase usefulness as a staging area and increase safety and user satisfaction at the play area.
- Staging areas would be developed on either side of West Butte Road, to serve public recreational use and allow for events to be focused on one side of West Butte Road or the other.
- Reroute trail #12 from trail #10 intersection to trail #70 intersection, to accommodate a new road alignment in this area. New trail alignment would preserve trail system continuity while allowing a collector road segment to be placed on the existing OHV trail.
- When West Butte Road is upgraded modify the OHV trail system in the area to reduce the need for road crossings and to increase trail mileage on east side of West Butte Road.
- Retain juniper trees in adequate numbers along trail corridors to keep riders on trails and reduce maintenance needs, consistent with other resource objectives.

Objective R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
- If opportunity occurs add grade separated crossings to provide additional trail connections or to separate user types on different crossings.
- A designated trail link would be provided at the upper end of Dry Canyon to link with trails in Horse Ridge area. Consider connection of dry canyon trail routes to existing culverts under State Highway 20 to provide safe crossing of the Highway for trail users.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation

opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
The North Millican Cinder Pit would be redesigned for better and safer OHV use if this can be done without compromising the site's effectiveness for material extraction.

Northwest

Objective R - 3: Provide recreation projects and programs that promote recreation management objectives and support community economic strategies. Provide for competitive and group events that could not be reasonably accommodated on private land.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. BLM Strategic Plan direction is to serve the public now and in the future by providing opportunities for environmentally responsible commercial activities.

Guidelines:
If disposal/exchange of isolated BLM parcels west of Squaw Creek is made a priority, work with local climbing organizations and national groups such as the Access Fund to maintain the Fremont Canyon Bouldering Area as a publicly accessible climbing opportunity.

Prineville

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
The following areas would be designated as Closed to motor vehicles:
- The 160 acre Barnes Butte Parcel
- The 640 acre Ochoco Reservoir parcel
- The Dry Canyon parcel located in T 15 S, R 14 E, Sec. 3

Objective R - 3: Provide recreation projects and programs that promote recreation management objectives and support community economic strategies. Provide for competitive and group events that couldn't be reasonably accommodated on private land.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. BLM Strategic Plan direction is to serve the public now and in the future by providing opportunities for environmentally responsible commercial activities.

Guidelines:
BLM would work with the City of Prineville and Crook County to explore R&PP lease options for park development around Prineville, and specifically for management of Barnes Butte.

Prineville Reservoir

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
Motorized travel in the Taylor Butte area would be Limited to designated roads.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership". Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guideline:
A trailhead would be developed to support trail use on the east side of State Highway 27 south of Powderhouse Cove.

Objective R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
- Work with BOR and State Parks to implement a trail system that provides recreation opportunities consistent with BOR and State Park's management goals for Prineville Reservoir.

- Trail loops in the Taylor Butte area would connect to the proposed Powderhouse Cove boat ramp and parking area.
- The trail system would be designed to provide viewpoints of the reservoir, toward the northwest.

Smith Rock

Objective R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
Develop alternative access to BLM lands adjacent to Smith Rock State Park if:
- Trails in Smith Rock State Park are closed to mountain bikes
- North Unit Canal is identified as a regional trail corridor.

South Millican

Objective R – 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Rationale
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Guideline:
The South Millican OHV area would be maintained for OHV use on designated roads and trails.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership". Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

Guidelines:
Provide a designated trailhead/parking area to access non-motorized trails in the Horse Ridge area. Consider improvements to South Millican Horse Camp if this location can serve the needs of the different types of non-motorized trail users. Consider other locations adjacent to Horse Ridge in this area if those areas provide adequate parking, access to desired trails, and better resource management conditions. Emphasis will be placed on locating the trailhead/parking area in a location that would maximize its use year-round and use for special events.

Objective R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
- Provide a designated trail link from Horse Ridge trails to the existing culvert trail crossing under State Highway 20.
- Mountain bike, equestrian and other non-foot traffic trail use would be limited to a designated trail system in South Millican.

Steamboat Rock

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area contains many small parcels that are surrounded by residential development. The Deschutes River flows through some of these small parcels, which have high resource values and public value. Unmanaged recreational use of many of these parcels has resulted in high social conflicts between adjacent landowners and public land visitors.

The FLPMA provides for recreation use of public land as an integral part of multiple use management. Federal regulations (43 CFR Part 8340) and BLM planning guidance require the BLM to designate all BLM administered lands as either Open, Limited, or Closed in regard to Off-Highway Vehicle use. These designations are to help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users. Smaller areas of BLM administered land are less suited for motorized trail development, unless linked with trail systems in larger, adjacent public land blocks.

Allocations/Allowable Uses:
The following areas would be designated Closed to motor vehicles:
- All isolated parcels northwest of Redmond would be designated as Closed to motor vehicles year-round, except for BPA powerline parcel[14].
- BLM parcel at Crestridge Estates.
- Both BLM parcels at Tetherow Buttes
- The BLM parcel adjacent to Lower Bridge Estates
- Approximately 120-acre area of BLM land north of Parkey Road and NW 81st Street in Crooked River Ranch.

[14] This area, due to multiple access points and private property boundaries, would be difficult to close.

- Vehicle access to Steamboat Rock would be limited to designated parking areas, in order to control the expansion of cleared areas surrounding the rock.

Guidelines:
- Hill-climbs south of Tetherow Crossing subdivision would be rehabilitated and reseeded as would hill climbs and shooting target areas at the Steamboat Rock formation.
- Work with the City of Redmond to provide trail connectivity between the isolated BLM parcel under the BPA powerline corridor and the larger Steamboat Rock block to the north (i.e., designate an easement through the Redmond Sewage treatment pond R&PP lease).
- In consultation with Deschutes County Road department and Crooked River Ranch, upgrade and provide maintenance for the emergency exit route. Consider realigning this route and exit point onto Lower Bridge Road if it provides a safer route and improved resource and recreation management on BLM lands.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The FLPMA provides for recreation use of public land as an integral part of multiple use management. Managed road and trail systems increase public safety, reduce user conflicts, and minimize conflicts between recreationists and adjacent landowners. The existing number of access points into BLM administered land in the urban interface is beyond the ability of BLM to manage in a professional manner, and has led to widespread dumping and resource damage. BLM Manual 8300.06 (6) (a.) directs BLM to maintain recreation facilities in a "manner that fosters pride in public ownership". Roads and/or trails are necessary for BLM personnel to administer the various resource management programs on public land. Access is also needed for fire suppression and fire management. Access is also important for recreationists participating in recreation throughout the planning area.

High use demand, increased developments adjacent to the area, continuing trespass and social conflicts, unmarked and unmaintained trails and continuing accidents, enlarging and expanding access points.

Guidelines:
- Provide permanent toilet facilities at high use trailheads such as Steelhead Falls.
- Close trailheads temporarily at Deschutes and Crooked River if trail conditions warrant closure seasonally or until trail reconstruction or rehabilitation takes place.
- Work to acquire easement or other mechanism to allow foot traffic to both sides of the Deschutes River within the BLM parcel near Crestridge Estates.
- Designate trailheads for hiking access to Deschutes River. Move existing access points away from private residences and provide marked, defined parking areas and signed trails to public portions of river.

Objective R - 5: Provide identifiable, non-motorized recreation opportunities and designated trails to improve visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:

- Determine the need for trail closures, trail rehabilitation, and other measures necessary to maintain Wilderness suitability in the Steelhead Falls WSA and Folley Waters area.
- Provide a designated trail system within the main Steamboat Rock block. Emphasis on road and trail system development in this area will be on reducing density from the current range of approximately 8 miles per square mile to a lower range that provides understandable and useable recreation opportunities and reduces social and resource conflicts.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Developed recreation facilities have been identified as a regional need in the current SCORP needs assessment. Developed recreation facility needs have been identified by local governments seeking to lease BLM land for public purposes. The landscape character of some BLM administered lands provides specific recreation opportunities. The concentration of recreational use in particular locations often leads to impacts and need for more focused recreation and resource management.

Guidelines:
- Organized group activities with over 12 participants require a Special Recreation Permit.
- All competitive events would require a Special Recreation Permit.
- Up to 4 Commercial filming activities per year would be allowed at Steelhead Falls WSA, providing the following**:**
  1. Group size would be limited to no more than eight people.
  2. All activities take place on signed and designated trails.
  3. Motor vehicle use would be limited to Steelhead Falls trailhead and campground area (i.e., designated routes only).
  4. Filming activities only occur during the weekdays and not on holidays.
  5. No helicopters or aircraft are used.
  6. Filming activities do not occur within a 1/4 mile distance from known and active raptor nests.
  7. The BLM would monitor the progress of the filming.
  8. No surface disturbance takes place.
  9. The filming sites shall be maintained in a sanitary condition at all times: waste materials at the sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.
  10. All other standard permit stipulations would be followed**.**

Tumalo

Objective R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
FLPMA provides for recreation use of public land as an integral part of multiple use management. Non-motorized trails and regional trails are identified as a regional need in the current SCORP needs assessment.

Guidelines:
Designate a non-motorized trail system throughout the Tumalo Block.

Transportation and Utilities

Objective TU - 1: Provide new or modified rights-of-way for transportation/utility corridors and communication/energy sites to meet expected demands and minimize environmental impacts.

Allocations/Allowable Uses:
Designate all existing right-of-way routes as local corridors[15] for future collocation of compatible projects.
Potential wind energy development sites in the planning area are identified

Guidelines:
- Locate and design new rights-of-way to minimize fragmentation of public lands, and only construct new projects when the use of existing alignments would have substantially less desirable environmental impacts than new construction.
- Consolidate transportation and utility systems within existing corridors if possible to reduce habitat loss, degradation and fragmentation caused by new construction.

Objective TU – 2: Provide an integrated, functional, safe, efficient, transportation system that meets the minimum needs of the various resources and their users, including:
- **Supports approved land uses that cannot be met on private, state, or county lands**
- **Provides links between local communities**
- **Reduces or minimizes conflicts with adjacent landowners**
- **Supports approved common guidelines of joint jurisdictions**
- **Balances public needs with resource protection**

Rationale:
Section 501 of FLPMA (43 USC 1761) authorizes the Secretary of the Interior to grant, issue, or renew rights-of-way over, upon, under, or through public lands for "reservoirs, canals, pipelines, impoundment, storage, transportation, or distribution of water; systems for generation, transmission, and distribution of electric energy, systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communication; and roads, trails, highways, railroads, or other means of transportation or other systems or facilities which are in the public interest and which require rights-of-way over, upon, under, or through such lands."

Section 505 of FLPMA (43 U.S.C. 1765) also states that each right-of-way grant must:
- "Minimize damage to scenic and esthetic values, fish and wildlife habitat and otherwise protect the environment; require compliance with applicable air and water quality standards; require compliance with State standards for public health and safety, environmental protection, and citing, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards…"

Section 505 also states that each right-of-way grant is subject to terms and conditions to:
- "(i) Protect Federal property and economic interests; (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way; (iii) protect lives and property; (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area

[15] The designation of corridors shall not preclude the granting of separate rights-of-way over, upon, under or through the public lands where the authorized officer determines that confinement to an existing corridor is not appropriate.

for subsistence purposes; (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and (vi) otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto."

The Code of Federal Regulations (CFR) Title 43 Part 2800 establishes procedures for "the orderly and timely processing of applications, grants, permits, amendments, assignments and terminations for rights-of-way and permits over, upon, under or through public lands." It states that the objectives in granting rights-of-way and temporary use permits are to:

(a) Protect the natural resources associated with the public lands and adjacent private or other lands administered by a government agency.
(b) Prevent unnecessary or undue environmental damage to the lands and resources.
(c) Promote the utilization of rights-of-way in common with respect to engineering and technological compatibility, national security and land use plans.
(d) Coordinate, to the fullest extent possible, all actions taken pursuant to this part with State and local governments, interested individuals, and appropriate quasi-public entities."

Allocations/Allowable Uses:

- Local Roads are defined as minimum standard roads that existed through public lands prior to passage of FLPMA, based on evidence found on aerial photos and maps of that period.
- User Created Roads are unauthorized travelways created though public lands since passage of FLPMA, based on evidence found on aerial photos and maps of that period.
- Provide for the realignment of Highway 126, east of Redmond, to avoid the proposed airport runway expansion and clear zone areas.

Guidelines:

- Do not allow activities in local transportation corridors and airport safety zones that would not meet the requirements of these areas.
- Use existing travel routes where possible to provide access and meet road density objectives; however, new alignments may be considered if they provide better resource management, reduce social conflicts, provide better recreation opportunities or if existing routes are determined to be unfeasible.
- Apply minimum design standards for roads to accomplish transportation and resource management objectives. Manage the road system to minimize disturbance to wildlife habitat and reduce conflicts with non-motorized recreational activities.
- Provide adequate road maintenance for safe vehicle use (which does not require passenger car or recreational vehicle standards), and minimize the proliferation of roads and braided road systems.
- Roads providing access to trailheads, staging areas, picnic areas, campgrounds or other developed sites will be maintained to a standard that provides safe access for passenger cars and recreational vehicles (campers, trailers, etc.).
- Where grantees have other existing rights-of-way in the area of a new proposal, they will be required to vacate the existing right, including historic roads as a condition of the new authorization, if it is determined to be in excess of access needs.
- Public access along transportation and utility corridors would be managed to meet recreational and travel management objectives.

Access

- Designation of access points to public lands would provide safe ingress and egress from state highways and county roads. The network of local roads through public lands would be dependent upon administrative needs, recreational use and travel management objectives.

- For areas where motorized use is designated as Limited or Closed, access points/trailheads/and staging areas will be identified and developed based on the following criteria:
  1. Access points will be developed off paved public roads (arterials) as a first priority.
  2. Second priority will be given to developing access points from collector roads, and
  3. Low priority will be given to developing motorized access points from local or subdivision roads.
- Designated motorized access points/staging areas will be located away from residences or other sensitive land uses, to the extent practicable. Authorized rights-of-way may be designated as the primary public access point, or in an effort to reduce social conflicts, could be closed to general public use.
- Approach permits from respective jurisdictions will be obtained for all designated access points.
- The number of motorized access points will be limited near urban areas.
- Retain public use of rights-of-way that provide access to the Middle Deschutes and Crooked River.
- Minimize conflicts between landowners and users of public lands by relocating trails and parking areas away from private property boundaries, wherever feasible.
- Plan cooperatively with the Oregon Department of Transportation, County Road Departments, and other agencies to designate grade-separated crossings for recreation trails on public lands. Emphasis will be placed on the need for safe trail crossings of Millican Road/Highway, State Highway 126, State Highway 20, O'Neil Highway, Johnson Market Road, and the Powell Butte Highway.

Roads

- All local roads that are not needed to meet specific management objectives are available for closure.
- Roadways may be closed that meet the following criteria:
  1. Repeated law enforcement violations exist.
  2. Extremely difficult to maintain at prescribed maintenance levels.
  3. Public safety hazards exist.
  4. Resource damage cannot be mitigated.
  5. Necessary to accomplish other resource objectives.
  6. User created roads not designated for use as a trail or needed for administrative access.
  7. Local roads that "dead end" or do not provide connectivity with the designated transportation system.
- Existing road systems would be designated to create loop routes that return to the same access point. BLM may develop new roads to create understandable loops that rely on fewer access points.
- Motorized access points not selected for designation, but required for other uses, will have locked gates installed. Examples may include utility access roads, grazing access roads, or local roads needed for administrative access.
- Motorized access points will have gates or cattle guards installed to allow for continued grazing activities and to insure visitor safety.
- Plan cooperatively with the Oregon Department of Transportation, County Road Departments, and other agencies to designate grade-separated crossings for recreation trails on public lands. Emphasis will be placed on the need for safe trail crossings of Millican Road/Highway, State Highway 126, State Highway 20, O'Neil Highway, Johnson Market Road, and the Powell Butte Highway.

<u>Objective TU - 3:</u> During the design and application process for proposed new or expanded rights-of-way, incorporate mitigating measures in the plan of development for land restoration, habitat improvement, recreation opportunities, and visual resources.

Rationale:
The planning area contains a high density of roads, railroads, canals, powerlines, and pipelines. As Central Oregon continues to develop, requests for rights-of-way across public land is expected to continue. The presence of these facilities has impacted natural resource and scenic values. Appropriate mitigation during design and development of new or expanded rights-of-way would help compensate for long-term and cumulative impacts to natural resources.

Guidelines:
- An environmental analysis would determine cumulative effects of the proposed project and appropriate mitigating measures.
- BLM's contrast rating system would be used to assess visual resource impacts and develop appropriate mitigation measures or project design changes (see also Visual Resources Section).
- Restoration or improvement work would normally occur adjacent to or in the immediate vicinity of the development.
- Treatments or mitigations may include activities such as seeding, planting, thinning, fencing, and road closures, road and trail realignment, road and trail development, provision of grade-separated crossings, placement of signs, volunteer agreements, etc.
- Specific mitigation requirements would be determined and mutually agreed upon between the applicant and BLM during the design and application phase.

Objective TU – 4: Identify and develop a long-term transportation system for military use that meets specific training objectives, maximizes benefits to other users, including recreation use of public lands, and minimizes impact to natural resources.

Rationale:
Repeated use of a road or other staging area by tanks and other heavy equipment can damage the facilities. Site hardening and surfacing or grading roads can minimize the damage caused by this equipment.

Guidelines:
For repeated activities involving heavy equipment (greater than 10,000 GVW), provide surfacing and maintenance that protects the roadbed.

Land Ownership

Objective LO - 1(Z-1): Identify lands for retention based on resource values and overall management objectives. Lands allocated for retention are identified as having high public resource values. They include areas that would generally be retained in public ownership, and where emphasis would be placed on increasing public land holdings.

Guidelines:
Retention designations would provide for protection and management of resources for public benefits that include but are not limited to:
- Retain public lands along stream corridors, including headwaters with upland buffers.
- Retain public lands with visible highland features including Cline Buttes, Smith Rocks, and Grizzly Mountain.
- Retain public lands that connect large blocks of public lands for wildlife corridors, for access, and for recreation trails.
- Retain large blocks of public ownership to maintain and protect the critical mass of intact ecosystems.
- Retain public lands that provide trail corridors or maintain opportunities for longer distance trail loops or regional trail corridors in rapidly developing areas.

Objective LO - 3 (Z-3)[16]: Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to manage or that would represent a greater public benefit in other ownership.

Guidelines:
Use proceeds of sales (as permitted by BACA Bill) to acquire lands for the purpose of improving the BLM's land ownership pattern.

Objective LO - 4: Provide land for community needs and uses consistent with public land management mandates.

Guidelines:
Lands would be available for community expansion that would provide a greater public benefit being used for community expansion than for other public benefits. These lands would include but are not limited to lands with the following important characteristics:

- Lands integrate the needs identified in Federal and State and local development and resource plans, and the plans of non-profit groups when selecting public lands.
- Sufficient public lands would be selected for ancillary facilities outside the urban growth boundaries that compliment them, for example, airport clear zones.
- Public lands would be maintained as a buffer between communities, thus retaining community identities.

Objective LO - 7: Manage lands to improve the effectiveness of habitats and management capabilities.

Guidelines:

- Block up large blocks of public lands.
- Align boundaries to recognizable features and topography.
- Exchange out of isolated parcels that do not meet the desired conditions.
- When other agencies have interests in public parcels, dispose of the parcels to the agency with the greatest interest and administrative capabilities, or develop management agreements indicating the lead agency and the responsibilities of all agencies.
- Make decisions on land acquisition or disposal based on natural land characteristics and ecological factors, and secondarily to recreational and consumptive uses.

Objective LO - 5: Identify desirable acquisition parcels based on overall resource values and management and administrative objectives.

Rationale:
Many privately held parcels of land provide unique or special values or benefits that would contribute to the overall mission of the BLM. These values or benefits include but are not limited to natural or scenic resource values, public access to existing non-accessible public lands, significant archaeological resources and areas of traditional cultural significance, or to reduce the potential for future fragmentation of habitats that could result from granting access to private lands through BLM-managed lands. Targeting a list of properties desirable for acquisition promotes a basin-wide approach to important resource management such as restoration of Threatened and Endangered species habitats. Identifying these properties allows for more efficient collection of funds to sponsor individual or joint acquisition procedures and facilitate more streamlined land exchanges.

[16] Under each alternative all the majority of properties identified as suitable for sale or exchange (Z-3) were previously identified as Z-3 under the Brothers/LaPine RMP. Each alternative, however, identifies a different set of properties as Z-3.

Within the planning area BLM administered lands often are arranged in small blocks, narrow widths or have private in-holdings that compromise the effectiveness of the habitat. This makes it difficult to manage for natural plant communities and target species.

As the human population continues to grow and spread into rural areas habitats are lost to urban developments, travel corridors become less functional and BLM administered lands provide fewer functions for wildlife. There are important habitats located on private lands that would be better protected if managed under public ownership.

Allocations/Allowable Uses:
Designate the lands in Map 34 as desirable for acquisition.

Guidelines:
Lands would be identified for acquisitions according to, but not limited to, the following:
- Private lands along stream corridors, including headwaters with upland buffers.
- Private lands with visible highland features including Cline Buttes, Smith Rocks, and Grizzly Mountain.
- Private lands that connect large blocks of public lands for wildlife corridors, for access, and for recreation trails.
- Private lands that would block up public ownership to maintain and protect the critical mass of intact ecosystems.
- Private lands that would block up public ownership to reduce social conflicts and maintain legal access and provide trail or road corridors, including private lands along Route 8 in the Badlands WSA.
- Private lands that provide new or add to existing recreation opportunities that are in short supply (e.g., acquisition of lands at ODOT Pit on State Highway 20 to ensure long-term use as an OHV play area and staging area for events).
- Private parcels to acquire should (1) facilitate access to public land and resources, (2) maintain or enhance important public values and uses, or (3) maintain or enhance local social and economic values in public ownership, or (4) facilitate implementation of other aspects of the approved Upper Deschutes RMP.
- All parcels and areas that are selected for acquisition would remain the same throughout the alternatives; although the emphasis on the order or timing of the acquisition may vary according to each alternative (see Map 34 for the location of acquisition parcels).
- Any process for obtaining private parcels would be done only with willing landowners.

Prioritize parcels for acquisition to meet management objectives based on the potential for imminent development. These objectives could include the following considerations (note: these are not in order of priority):
- Reduce the number of developed inholdings.
- Improve wildlife values including habitat for special status species, travel corridors, etc. In prioritizing parcels for acquisition consider lands that have multiple wildlife values, contain habitats of special status species, are in-holdings and/or contribute to effective habitat management practices such as:
  1. Parcels that contain sage grouse habitat;
  2. Parcels located in the La Pine deer and elk travel corridor, especially ones that block-up ownership and/or contain riparian or wetland habitats.
  3. Parcels located along the Crooked River (and adjacent uplands) south of Prineville (to benefit riparian dependent species and potential bighorn sheep re-introduction).
  4. Parcels located in the Alkali Butte area that would help connect federal ownership between the BLM lands in the Reservoir East area with Forest Service administered lands located in the Maury Mountains.
  5. Parcels that contain important habitat for special status species and other species of high public interest or concern.

- Improve or increase riparian or wetland habitats.
- Improve recreation opportunities, including new or improved trail links, expanded existing recreation opportunities that are limited or in high demand, and access to lands that currently have no legal access. These opportunities may include, but are not limited to the following examples:
  1. Acquire lands in the Horse Ridge and Skeleton Fire areas to maintain or provide new trail systems;
  2. Acquire lands surrounding Badlands WSA to better manage wilderness values and provide adequate parking/trailheads;
  3. Acquire land in Dry Canyon at Cline Buttes to maintain trail system connectivity and improve parking/staging areas;
  4. Acquire land in Cline Buttes to provide better trail opportunities and reduce social conflicts;
  5. Retain use of ODOT pit area on State Highway 20,
  6. Provide unique recreation and river access opportunities via acquisition of inholdings along the Deschutes and Crooked River; including the Hollywood Road area at CRR.
- Provide for better management of special management areas/sites such as ACECs, WSAs, etc.

Public Health and Safety

Objective PHS-1: Minimize risk of errant firearm discharge toward users of BLM land and adjacent public land that experience high levels of recreational visitation or commercial use now or within the life of this Plan.

Rationale:
BLM has been given the authority and direction to manage firearm discharge and reduce threats to public health and safety from multiple sources. The Federal Land Policy and Management Act of 1976 (FLPMA), BLM's enabling legislation, directs "In managing the public lands, the Secretary shall…regulate… the use, occupancy, and development of the public lands…(43 U.S.C. §1732(b)." The same section furthermore directs, with consultation from state fish and game departments, "…the Secretary concerned may designate areas of public land … where, and establish periods when, no hunting or fishing will be permitted for reasons of public safety, administration, or compliance with provisions of applicable law." Additional direction can be found in the BLM Manual, and the BLM Strategic Plan. The BLM Manual states one of the goals of the Bureau's visitor service effort shall be to: Make every reasonable attempt to provide the visitor with conditions conducive to having a safe, healthy, and rewarding experience (BLM Manual 8300.06(4)(a)(3)." The BLM Strategic Plan directs the agency to "Serve current and future publics by reducing threats to public health and safety, and property (BLM Strategic Plan, 2000-2005)."

Unregulated firearm discharge poses a threat to human life when large numbers of people are present. With Central Oregon human populations expected to dramatically increase over the life of this Plan, many blocks of BLM land will experience a corresponding increase in the overall amount and concentration of recreational visitation. Beyond numbers alone, the Guidelines section below provides additional attributes that may influence the need for a firearm discharge closure.

Allocations/Allowable Uses:
See Tables A - 2 & A - 3 for specific closures and conditions[17].

[17] All existing closures provide for the authorized officer to make exceptions to the closure on a case-by-case basis.

Table A-2. Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes Block (Cline Falls State Park, BLM land across Hwy 126 from Cline Falls SP, 2 triangular isolated pieces east of Middle Deschutes River, Jaguar Road isolated parcel, Young Avenue isolated parcel)	X	X	X	X
Horse Ridge Block (40-acre and 80-acre peninsulas of BLM on the west side of the Conestoga Hills subdivision)	X	X	X	X
Northwest Block (120-acre north-south isolated block, 2 40-acre southernmost isolated blocks)	X	X	X	X
Bend/Redmond Block (Redmond Caves, isolated 40-acre parcel with white bridge)	X	X	X	X
Steamboat Rock Block (All isolated pieces, BPA station)	X	X	X	X
Prineville Reservoir Block (160 acres surrounded by Prineville Lake Estates, Units 1&2 subdivision)	X	X	X	X
La Pine Block (8 isolated parcels north of La Pine)	X	X	X	X

Table A-3. Closed to all firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Mayfield Pond Block (½ mile around Alfalfa Pond)	X	X	X
Badlands Block (½ mile around Reynolds Pond)	X	X	X
Steamboat Rock Block (Large parcel – north of Lower Bridge Road, Middle Deschutes WSR, isolated pieces along Middle Deschutes and Crooked Rivers north of WSR boundaries, western portion of Steelhead Falls WSA outside Middle Deschutes WSR)	X	X	X
Prineville Reservoir Block (Isolated and limited contiguous BLM lands near the Crooked River)	X	X	X
Millican Plateau Block (Powell Butte RNA)	X	X	X
Prineville Block (Powel Butte Block)	X	X	X
Horse Ridge Block (Horse Ridge RNA)	X	X	X
Smith Rock Block (All BLM lands in the Block)	X	X	X

Guidelines:

- **Areas of High Visitation** - BLM lands, including lands adjacent to other city, county, state and federal agencies that experience heavy concentrations of visitors engaged in non-shooting activities, now and in the near future, may be closed to all firearm discharge[18] or firearm discharge unless legally hunting[19]. Decisions concerning these firearm discharge closures will consider numerous factors including but not limited to: Reports of recreationists being hit, or nearly hit by firearm discharge, type of

[18] A closure to all firearm discharge would not apply to:
1. A person conducing the official business of BLM personnel or their designee, including but not limited to: Acting in defense or protection of an individual, dispatching a critically injured animal for humane purposes, or dispatching a dangerous or damage-causing animal, and
2. Discharge of projectiles with a limited range where, should the shooter miss their target, the projectile is likely to hit the ground before hitting other unintended targets including but not limited to: A bow or compound bow and arrow, a slingshot, a BB gun, or a paintball gun, and
3. Discharge of weapons utilizing "blank" ammunition where no projectile is discharged including but not limited to: Blanks for dog training purposes, or by the military for official training purposes.

[19] Hunting is defined as "To take or attempt to take any wildlife by means involving the use of a weapon or with the assistance of any mammal or bird (ORS 496.004 (10))."

recreational activity, compatibility of activities, type and size of recreational groups, geography, topography, presence of facilities (parking lots, bathrooms, roads, trails, interpretive signs and exhibits), land status of surrounding properties, and ease of closure enforcement.

- **BLM Land** - BLM land considered for closure to all firearm discharge, or all firearm discharge unless legally hunting, will be evaluated for the present and near future intensity of recreational use and other factors identified in the preceding paragraph.
- **Other Public Land** - City, county, state and federal agencies managing land adjoining BLM land where the non-shooting public visits in heavy concentrations may request a closure of firearm discharge on adjoining BLM land. These agencies must have previously implemented a firearm discharge closure on their adjoining land, and the closure must be established under agency law or regulation. Many factors would be considered in the establishment of these closures including those identified in the preceding paragraph.
- **Border closures of large parcels of BLM land** - At the request of a government entity, BLM will consider extending an existing public land closure of all firearm discharge, or all firearm discharge unless legally hunting, into large contiguous parcels of BLM land. Border closure distances will consider ease of boundary identification, and local conditions described above; and will generally be between 150 yards and one mile in depth.
- **Small isolated parcels** - Isolated BLM parcels adjoined on at least 1 side by public lands closed to firearm discharge will be considered for closure to all firearm discharge, or all firearm discharge unless legally hunting, in their entirety if:
  1. The parcel is 365 acres in size, or smaller, or
  2. More than half of the isolated parcel is 1/2-mile in length or width, or narrower.

Objective PHS – 2: In non-motorized areas, provide for a recreation experience compatible with the desired recreation setting and a reduced chance of experiencing people engaged in firearm discharge activities.

Rationale:
Recreationists visiting areas closed to all motorized use are expected to possess a relatively heightened sensitivity to the activity of firearm discharge; these closures to all firearm discharge, or all firearm discharge unless legally hunting, compliment the non-motorized recreation experience and emphasize use compatibility. Recreation experience closures to all firearm discharge substitute hunting and target shooting opportunities for a greater likelihood to recreate in a natural setting with a reduced chance for user conflict. Recreation experience closures to all firearm discharge unless legally hunting maintain hunting opportunities but still provide some reduction in user conflict.

Allocations/Allowable Uses:
See Tables A-2 and A-3 for specific closures and conditions

Guidelines:
Closed to Motorized Vehicles – Areas designated Closed to motorized vehicles will be closed to all firearm discharge, or all firearm discharge unless legally hunting.

Objective PHS – 3: Protect natural and cultural resources from the impacts of firearm discharge.

Rationale:
Natural and cultural resources may also require protection from the impacts of firearm discharge, especially in regard to unique resources, or in areas of repeated problems. Wildlife protection is the most obvious, for example, raptors and bats can be disturbed by the sounds of firearm discharge, and can be killed by firearm projectiles. Geologic and cultural features can also be damaged or destroyed by firearm projectiles. For instance,

blazed trees within the proposed Historic Roads ACEC have already been impacted or destroyed by visitors discharging firearms.

Allocations/Allowable Uses:
See Tables A-2 and A-3 for specific closures and conditions.

Guidelines:
BLM lands with reoccurring firearm discharge problems (identified by staff specialists and/or general public), or lands containing important natural and cultural resources (including but not limited to unique natural resources, sensitive species, geologic features, and historical and archaeological remains) may be closed to all firearm discharge or firearm discharge unless legally hunting.

Objective PHS - 4: In coordination with local governments, reduce risk of errant firearm discharge in and around residentially zoned20 areas adjacent to BLM administered lands.

Rationale:
Unregulated firearm discharge occurring adjacent to residential areas, especially high-density residential areas, can pose a threat to human life. That threat, actual or perceived, varies among the many subdivisions and communities adjacent to BLM land within the planning area. Under this objective, local citizens and their elected officials would initially be required to assess the threat to human life and the need for a firearm discharge closure on private land adjacent to BLM land. City, county and state governments retain the authority to regulate firearm discharge upon their respective lands, and each entity would examine current firearm discharge concerns, and existing management goals. This approach is intended to promote public awareness of the firearm discharge issue, provide for an open discussion of the costs and benefits of proposed closures, and increase support for, and joint enforcement (BLM and local governments) of, any closures that are ultimately implemented. With private land closures in place, the involved city or county may then request BLM implement a complimentary closure on BLM land.

Guidelines:
Private land firearm discharge closures would have to be lawfully established under formal land use processes. Decisions concerning placement of a boundary closure, or closure of an isolated parcel, will consider numerous factors including but not limited to: Reports of recreationists being hit, or nearly hit by firearm discharge, type of recreational activity, compatibility of activities, type and size of recreational groups, geography, topography, presence of facilities (parking lots, bathrooms, roads, trails, interpretive signs and exhibits), land status of surrounding properties, and ease of closure enforcement.

- **Border closures of large parcels of BLM land** - At the request of a government entity, BLM will consider extending an existing private land closure of all firearm discharge into large contiguous parcels of BLM land. Border closure distances will consider ease of boundary identification, and local conditions described above; and will generally be between 150 yards and one mile in depth.
- **Small isolated parcels** - Isolated BLM parcels adjoined on at least 2 sides by residentially-zoned private land that have been closed to all firearm discharge will be considered for closure to all firearm discharge in their entirety if:
  1. The parcel is 365 acres in size, or smaller, or
  2. More than half of the isolated parcel is 1/2-mile in length or width, or narrower.
- **BLM lands within or adjoining City Limits, Urban Growth Boundaries (UGBs), or Unincorporated Communities** - Cities within the planning area have closed all lands within either their city limits or UGBs to all firearm discharge. Unincorporated

[20] May apply to other types of land use zones with non-conforming uses, and high-density residential developments in non-residential zones.

communities may also implement similar closures. Utilizing whichever boundary has been closed to all firearm discharge, a city or unincorporated community (via county government) may request that:

1. Large adjoining parcels of BLM land be considered for a border closure to all firearm discharge as described in Section 1 of the above guidelines, or;
2. Isolated parcels to BLM land would be considered for closure to all firearm discharge in their entirety as described in Section 2 of the above guidelines.

Objective PHS - 5: To protect resource values, preserve public health, safety, and welfare, minimize use conflicts, and maintain a consistent and cooperative working relationship between local, state, and BLM resources without the duplication of new federal law and/or regulations.

Rationale:
Currently BLM rangers can only enforce limited Oregon state and local laws. This limited ability reduces BLM law enforcement's effectiveness, requires increased time and support from state, county, and city law enforcement officers, and diminishes the level of public safety on BLM lands. This measure would not establish any new laws or regulations, only the improved enforcement of existing laws. The public is already accustomed and educated about these existing state laws. With this improved authority BLM law enforcement rangers will be better prepared to respond to and handle violations on BLM land, improve cooperation with law enforcement officers working in adjacent jurisdictions, and further public health and safety.

Guidelines:
Pursuant to 43 CFR 924.0-3 and 9264.1 the following acts are prohibited on BLM land within the UDRMP planning area administered by the Bureau of Land Management:

- Operation and use of a motor vehicle on public lands in violation of Oregon State motor vehicle laws.
- Possession and or use of alcoholic liquor in violation of any Oregon State alcohol liquor laws.
- Taking possession of, occupying, or otherwise using public lands for residential purposes without a permit from the Bureau of Land Management.
- Possession and or use of a firearm in violation of any Oregon State firearm laws.
- Violation of these prohibitions is punishable by a fine of not more than $500 (43 CFR 9264.1 (k) (1)) and any person who knowingly and willfully violates these regulations can be punished by a fine of not more than $1,000 or imprisonment for no more than 12 months, or both (43 CFR 9264.1 (k)(2)).

Objective PHS – 6: Reduce opportunities for illegal dumping of residential, commercial, industrial, and hazardous waste throughout the planning area, especially in habitual dumping areas.

Rationale:
Numerous meetings of the Public Health and Safety Issue Team provided a number of basic observations. First, habitual dumping areas seem most likely to be observed near urban or rural residential areas. Next, most habitual dumping areas can be found along user-created travelways (opposed to the designated road system). A third observation connected dumping activities with full-sized vehicle access.

Guidelines:
Restrict or eliminate access to user-created travelways leading to habitual dumping areas. While dumping is widespread throughout the planning area, the following sites have been identified as being especially problematic:

1. South of Prineville along Millican Road;
2. South of Prineville at juniper Canyon;

3. South of Prineville off Remington Road;
4. South of O'Neil Highway and west of the North Unit Canal;
5. East of Redmond and west of the North Unit Canal;
6. South of Redmond along Airport Avenue;
7. Northeast of Bend off of the Powell Butte Highway;
8. Immediately north and south of Alfalfa Market Road;
9. Barr Road in the southern portion of Cline Buttes;
10. Lands at the State Highway 126/Barr Road/Buckhorn Road intersection;
11. Steamboat Rock area west of Terrebonne and South of Crooked River Ranch;
12. Numerous locations in La Pine.

Objective PHS – 7: Protect public health and safety, maintain appropriate recreation opportunities, and reduce the risk of wildland fire associated with high use, habitual problem areas and/or special management considerations.

Rationale:
Historically, unmanaged campfires have escaped beyond their desired confines, serving as an ignition source for wildland fires. Undesired effects of these fires include threats to human life, property, and natural and cultural resources. These threats are especially significant in urban interface areas synonymous with much of the planning area, where high densities of people and residences can be found. Both communities and individuals have made specific requests for campfire closures as part of the RMP process. Additionally, some areas are managed for recreational experiences that do not include campfires, or campfires may conflict with the values for which an area is managed. Finally, parcels adjacent to the Middle Deschutes and Lower Crooked Wild and Scenic Rivers are closed to campfires for consistency with the existing management direction for the aforementioned special areas.

Allocations/Allowable Uses: The following areas are closed to campfires seasonally, from June 1 to October 15th. If determined necessary, the fire closures could be extended based on existing conditions:
- All BLM parcels in the Steamboat Rock block;
- All BLM parcels in the Smith Rock block;
- Harper Road parcel in Cline Buttes.

The following areas are closed to campfires year-round:
- Powell Butte RNA
- Horse Ridge RNA
- Wagon Road ACEC
- Tumalo Canal ACEC
- BLM parcel north of Highway 126 and adjacent to Cline Falls State Park
- Redmond Caves parcel
- All designated parking areas, staging areas, and trailheads unless specifically authorized and posted.

Archaeology

Objective A - 2: Protect "at-risk," significant archaeological resources from accidental or intentional loss due to human activities and natural causes.

Allocations/Allowable Uses:
The locations of "at-risk," significant archaeological resources would be withdrawn from the activities of surface disturbing mineral material development.

Actions:
"At-risk," significant archaeological resources would include, but not be limited to, the area around Redmond Caves, identified segments of the Horner and Bend-Prineville historic roads, an identified segment of the old Tumalo canal, the area in the vicinity of Pictograph Cave, and the area near Steelhead Falls.

Guidelines:
- Treatment of "at-risk" resources would be based on Table 2-14, severity and immediacy of threats to "at-risk" resources.
- Limit uses and activities at those locations where the use or activity would diminish the historic value of a resource. Future limitations would proceed from least to greatest limitations: 1) sign and post restrictions; 2) fence area; 3) close area to specific uses; and, 4) close area to all use.
- Wildfire within or threatening "at-Risk," significant archaeological resources would be fought aggressively.

Objective A - 3: Increase the public's opportunity to learn about and enjoy the cultural, educational, and recreational uses of heritage resources by interpreting the identified "at-risk," significant archaeological resources found within the planning area.

Rationale:
- The Federal Land Policy and Management Act (FLPMA) directs the BLM to manage heritage resources on public lands in a manner that will provide for their proper use.
- The Archaeological Resources Protection Act (ARPA) requires Federal land managers to provide for public education regarding archaeological resources.
- BLM Manual Section 8111 establishes an agency policy for utilizing any heritage property considered appropriate for interpretation and educational use by members of the general public.
- BLM Strategic Plan Performance Goal Code 01.03.04.01 takes into account proactive measures to manage "At-risk" and/or threatened archaeological and historic properties on public lands.
- BLM Workload Measures/Program Elements "AE" and "AL" take into account the costs associated with preparation of public education and interpretive products that teach public lands users about resource values.

Guidelines:
- Prioritize interpretative development based on combined evaluations of:
  1. Severity and immediacy of threats (see Table 2-14)
  2. Significance of heritage properties as noted in Table 2-15
  3. Opportunities for partnerships/cost sharing (see Table 2-16).
  4. Opportunities for interpretive and public education products as noted in Table 2-17 ("At-risk," significant archaeological resources that have yet been discovered can also be factored into the table for prioritization).
- Pursue partnerships with local Indian tribes, scientific and educational organizations, historical and archaeological societies, communities and interested individuals to study, protect, and interpret "at-risk," significant archaeological resources.
- Interpretive development would be based on prehistoric and historic theme and developed in consultation with local Indian tribes and other interested parties.

Alternative 2

Ecosystem Health and Diversity

Vegetation

Shrub-Steppe Communities

<u>Objective 2V - 4a:</u> Maintain/restore large contiguous stands of healthy, productive and diverse native shrub/steppe plant communities throughout their current range21. Management efforts would maintain the health and condition of current ranges of key plant communities in priority areas and according to specific resource management objectives. These resource management objectives are described in Common to Alternatives 2-7 and in each alternative for wildlife habitats, watershed restoration, weed management, WUI zones, and special status species habitat. Western juniper exists as a co-dominant in many shrub-steppe communities and may influence plant composition, density and structure in these areas.

<u>Rationale:</u>
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed before European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while improving these habitats through restoration in the long-term.

<u>Guidelines:</u>
Maintenance/Restoration
- Reduce composition and density of young (generally less than 150 years old) western juniper. Juniper older than 150 years may be removed in some circumstances if specific restoration needs for wildlife habitat or other natural values exceed the need to maintain the tree component.
- Treatments would leave small groups and individual juniper trees interspersed within units.
- Treatments would retain or develop important hiding cover in essential areas for deer and elk.

[21] The terms "current range" and "historic range" as used in the context of this Upper Deschutes EIS/RMP refers to the distribution of the following major vegetative types mapped within the planning area: late seral shrub-steppe, old-growth juniper, ponderosa pine, and riparian (see Map XX for location of current ranges of vegetation). These are the vegetative types within the planning area that have declined the most in terms of condition/structure and in geographic extent from the historic to current time period. Their decline has created a current deficit representation as compared to their distribution during pre-European settlement times.

Treatment Priorities

- Outside of the wildland-urban interface zone, prescribed fires at appropriate intervals for the local fire regime would be emphasized for shrub-steppe maintenance/ restoration treatments. Determinations of final treatments would include, but not be limited to, considering effects of fire on populations of noxious or invasive non-native plants, smoke management requirements, cost, and integration of treatment outcome with overall ecosystem function objectives.
- Priority areas for restoration treatments would be as follows: source habitats, deer, elk and antelope habitat, bitterbrush stands, watershed restoration areas, weed management areas, riparian areas, wildland-urban interface fire protection zones, and special status plant populations. Sites with substantial erosion/disturbance, either by human or natural causes would also receive priority consideration for treatment.
- Harvest of trees cut within treatment areas would be allowed for production of wood products. Cutting of snags and large down logs would not be allowed except those that pose a significant safety risk.
- Rangeland health assessments would help determine vegetative conditions and treatment priority areas between and within specific allotments.

Old-Growth Juniper Woodlands

Objective 2V – 5a: Protect and promote the health and integrity of old-growth juniper woodlands and savanna[22] throughout its current range (see Map 4 for current old-growth juniper distribution).

Rationale:

Old-growth western juniper woodlands in the pumice sands of Central Oregon are unique in their age, size and extent. Of the 8 million acres of western juniper in the intermountain west, only an estimated 3 percent is considered old-growth.

Ideal conditions of soil, climate and topography converge in Central Oregon to allow juniper to attain its maximum potential for size and age of individual trees and density and range for contiguous old-growth stands. The oldest (1,600 years) western juniper tree found to date is located within the planning area. Continued human population growth and associated increases in development and public land use in Central Oregon is causing fragmentation and degradation of this important habitat type. Large contiguous stands of healthy old woodlands provide habitat for late-seral dependent species, scenic quality, and education/interpretation opportunities.

Guidelines:

Maintenance/Restoration

- Treatment objectives would be based on specific resource management needs and on maintaining distribution and condition of old-growth woodlands/savanna in priority areas within the planning area.
- Specific resource management needs within the range of the old woodlands include projects such as: fire hazard reduction; weed management; visual enhancement; and habitat improvement for special status plant and animal species, late seral dependent species, and big game.

Treatment Priorities

- Priority areas for treatment are sites that have relatively high densities of young juniper establishing in the interspace between the older trees. Treatments would be designed to both, maintain the health and longevity of the old trees, and to increase the amount and diversity of understory shrubs, grasses, and forbs.

[22] The terms "woodland" and "savannah" in the context of this RMP encompass all components of the ecosystem. An "ecosystem" includes all plant and animal life, in addition to physical factors such as soils, water, and geology. The tree component is dominated by western juniper, including both old-growth and younger trees. Woodland management also considers the understory components of the community (shrubs, grasses and forbs). Sagebrush-dominated openings and riparian and wetland vegetative types are also found within the woodlands.

- Priority treatment areas would also include WUI areas, special status plant populations, and special wildlife habitats. Alternative 2 would put a greater emphasis on managing vegetation for big-game habitat and a lesser emphasis on managing for special status and non-game habitats.
- Sites with substantial erosion or with weed infestations would also receive priority consideration for treatment. These sites would be evaluated for relative ecological values and potential for response given reasonable rehabilitation efforts.
- Treat old-growth woodlands in the WUI (generally within ¼ mile of homes) by thinning back to five – seven trees per acre for increased fire protection. No cut tree diameter limit is specified but generally, the largest, oldest, and healthiest trees would be retained.
- Harvest of trees cut within treatment areas would be allowed for production of wood products. Cutting of snags and large down logs would not be allowed except those that pose a significant safety risk.
- Allow cutting/harvest of green trees up to 18 inches DBH east of State Route 27. Some of these trees may exceed 150 years. Public use firewood and post/pole cutting areas may be designated in this area.
- West of State Route 27, allow cutting/harvest of juniper only in conjunction with rehabilitation treatments as stated above, fuels reduction, clearing for ROWs, or other allowed projects to achieve other resource or development objectives. Trees cut and removed during restoration or fuels management treatments would generally be limited to trees less than 150 years old and based on absence of old-growth physical characteristics. Individual trees showing characteristics of old-growth, regardless of size, would generally not be cut.

Lodgepole and Ponderosa Pine Forest

Objective 2V - 6a: Maintain and promote healthy and diverse lodgepole and ponderosa pine forest ecosystems.[23] Manage stand structure, density, species composition, patch size, pattern, and distribution to reduce the occurrence of uncharacteristically large and severe disturbances. Maintain or mimic natural disturbance regimes so that stands are resilient to periodic outbreaks of insects, disease and wildfire.

Rationale:
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed before European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while enhancing these habitats through restoration in the long-term.

[23] The term "forest ecosystem" in the context of this RMP encompasses all physical and biological components of the landscape. The tree component in the forests located within the planning area is dominated by lodgepole pine or ponderosa pine. Management of the small amounts of shrub-dominated openings and riparian and wetland vegetative types would also be considered within management guidelines for lodgepole and ponderosa pine forest types.

Guidelines:

Maintenance/Restoration

Ponderosa pine would be favored in mixed stands, although ponderosa and lodgepole pine would be managed as co-dominants where both species are in a healthy condition. Competing juniper would be reduced in ponderosa stands in the northern area. Most old-growth juniper in these mixed stands that are not competing with large ponderosa pine would be left for diversity.

Treatment Priorities

Treatments would be designed to achieve specific resource objectives identified for projects within priority areas. Priority treatment areas would include: special wildlife habitats, WUI areas, old ponderosa pine stands and areas with isolated remnant old trees, young stands of even-aged lodgepole pine, and special status plant populations. Alternative 2 would put a greater emphasis on managing deer and elk habitat and a lesser emphasis on managing for special status and non-game habitats.

Late and Old Structure Ponderosa and Lodgepole Pine

Objective 2V – 6b: Manage ponderosa pine to maintain a dominant or co-dominant status, including existing late and old structure habitat, throughout its current range. Provide for a balance of biological, social and economic needs in an urban/wildland setting.

Guidelines:

- Treatments within ponderosa pine forests would promote long-term sustainability of representative stands of early, mid, and late seral ponderosa pine within its current range and reduce future risk of occurrence and extent of damage caused by insects, disease, and stand-replacement wildfires, and meet wildlife habitat management objectives.
- Outside of the WUI, prescribed fire at appropriate intervals for old and mature ponderosa pine would be emphasized.

Wildlife

Objective 2W - 6: Restore terrestrial source habitats to provide for multiple species needs. Restore vegetation cover types and structural stages within in their current distribution, which have declined substantially from historical levels. Re-pattern vegetation patches more consistent with characteristic natural disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem.

Rationale:

The source habitat management concepts used in this plan have been adapted from the Interior Columbia Basin Ecosystem Management Project's strategy for managing terrestrial source habitats. This is part of the "Step-down" process of applying broad-scale science findings to a site-specific planning area as identified in ICBEMP.

Allocations/Allowable Uses:

Establish representative components of naturally occurring vegetative types across the planning area within the current range of plant communities in sufficient size and frequency to serve as source habitats[24] for species groups that are dependent upon those habitats. See also vegetation objectives.

[24] The source habitat component of the resource management plan is developed to consider and provide habitat for productive and diverse populations and communities of plant and animal species; provide for recovery of listed species; provide habitat capable of supporting harvestable resources; and provide for habitats on BLM administered lands. The focus of the source habitat direction is to change declining trends in terrestrial habitats by maintaining important vegetation characteristics (such as plant species composition, rangeland and forest vegetation structure, snags, and coarse woody debris) which various terrestrial species need to survive and reproduce.

Guidelines:
Motorized travel would be limited to designated routes.

Geographic Areas

Objective 2W – 2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities, contribute to meeting ODFW management objective numbers for deer and elk.

Bend/Redmond
Allocations/Allowable Uses:
North Block: Minor wildlife emphasis; Limit motorized travel to designated roads and trails.

Cline Buttes
Allocations/Allowable Uses:
Maston Allotment: Primary emphasis along the Deschutes River for elk, riparian and raptor habitats; close to motorized travel.
Canyons and Southeast: Minor wildlife emphasis; Limit motorized travel to designated roads and trails.

Guidelines:
Prioritize high for habitat improvements.

La Pine
Allocations/Allowable Uses:
South of Rosland Play Area: minor wildlife emphasis; motorized use would be allowed on designated roads and trails.

Mayfield
Allocations/Allowable Uses:
Main: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
South of Alfalfa Market Road: Secondary emphasis for deer winter range and pronghorn year-round and connectivity habitats; limit motorized travel to designated roads.

Guidelines:
- Identify the pronghorn connectivity corridor as a high priority for habitat restoration treatments.
- Provide for pronghorn connectivity habitat adjacent to the Badlands.

Millican Plateau
Allocations/Allowable Uses:
South and Crooked River Rim: Minor wildlife emphasis; limited to designated roads and trails.
Mayfield Link: Minor emphasis for pronghorn connectivity habitat. Limit motorized travel to designated roads and trails.

North Millican
Allocations/Allowable Uses:
Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Prineville
Allocations/Allowable Uses:
Combs Flat: Secondary wildlife emphasis for deer and pronghorn winter range and year-round pronghorn habitat; limit motorized travel to designated roads.

Northern Scattered Parcels: Secondary emphasis for mostly deer winter range, but some elk winter range; limit motorized travel to designated roads.
Miscellaneous Scattered Parcels: Secondary emphasis mostly for deer winter range, but some pronghorn year-round habitat; limit motorized travel to designated roads.

Prineville Reservoir
Allocations/Allowable Uses:
West Eagle Rock: Secondary emphasis for deer winter range and pronghorn year round habitat; limit motorized travel to designated roads.
Taylor Butte: Secondary emphasis for deer winter range and raptor nesting and foraging habitats; limit motorized travel to designated roads.
Main Block, Reservoir North and Chimney Rock: Minor emphasis for wildlife; limit motorized travel to designated roads and trails.

South Millican
Allocations/Allowable Uses:
Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Steamboat Rock
Allocations/Allowable Uses:
Main Block and River Riparian Habitat in Main Block: Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Tumalo
Allocations/Allowable Uses:
Some portions closed to motorized use and others limit motorized travel to designated roads and trails.

Guidelines:
Non-motorized use limited to designated trails.

Special Management Areas

Caves
Portions of Pictograph Cave would be closed to the installation of bolted climbing routes to protect archaeological resources. Installation of bolted climbing routes would be allowed in approved areas within the cave after site-specific resource survey work. Seasonal closures would be maintained for bat hibernacula from October 15 – May 1.

Land Uses

Livestock Grazing

Objective 2LG - 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-29 shows just those areas available in this alternative.

Guidelines:
- Resolve conflicts between livestock grazing and other uses, resources, and adjacent landowners on a case-by-case basis, under existing law, regulation, and BLM policy, allowing up to "high conflicts" (See explanation of conflict in Chapter 2 Livestock Grazing section).

- Allow livestock grazing regardless of demand level (See explanation of demand in Chapter 2 Livestock Grazing section).

Minerals

Objective 2MN - 3: Meet the increasing demand for saleable minerals while mitigating mining conflicts with recreation, residents, natural resources and other management objectives (See Map S-23 Minerals Alternative 2).

Rationale:
The conflict mitigation standards established by this alternative provide guidelines for managing mining conflicts with residents and recreation while meeting the regional demand for mineral resources.

Allocations/Allowable Uses:
- 334,893 acres are available for mineral material sales.
- Mineral material sales would not occur within 1/8 mile of residentially zoned areas or designated recreation sites.
- Roads that feed from BLM-managed land into residentially zoned areas may be used for mining-related traffic only if alternate routes are not available.
- Seasonal restrictions on all mineral operations would apply to 11,327 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 38, 151 acres.

Guidelines:
- Allow up to a high conflict level with recreation and residents as defined in Table 2-12.
- Allow mining conflict levels with wildlife by geographic area (Table 2-12).

ACEC Guidelines: See ACEC section.

Military Uses

Objective 2MU - 1: Ensure consistency of planned and approved activities with environmental requirements, integrated resource management plans, and conflict resolution with neighbors on public lands authorized for long-term and short-term military use.

Allocations/Allowable Uses:
Training Area Boundaries
Military training would be permitted as shown in Map 35, on approximately 36,397 acres of the BLM-managed lands located south of the O'Neil Highway; north of the Bend Sewage Treatment facility, Bend Airport, and BLM Road 6589-B; east of Highway 97; and west of the private lands within the Powell Butte Community.

Total Area Available by Classification Type (Type of Training) (A, B, C, D, E, LZ/DZ): From the current permitted area, the boundary would be adjusted in Areas C and E (lands east and south of the currently permitted area) to reduce concentration of military training on remaining lands, straighten boundaries, and expand the safety buffer around LZ/DZ in Area E. The boundary of the area north of Highway 126 would include a ¼ of a mile buffer inside the public lands boundary on the east side, except for the access from the north from the O'Neal.

Buffer Areas
No military activity would be permitted within ¼ mile of the urban growth boundary of the City of Redmond, except as needed to access the approved training area.

Recreation

Planning Area Wide

<u>Objective 2R – 4:</u> Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

<u>Guidelines:</u>
See Table A-4.

Geographic Areas
Table A-4 above displays how recreational opportunities are dispersed throughout the planning area in Alternative 2. The recreation management direction specific to geographic areas is described below.

Badlands
Alternative 2 would manage the Badlands WSA consistent with IMP guidelines. Motorized travel would be restricted to a designated network of inventoried routes. The area would remain open year round for public use, both motorized and non-motorized. Improvements would be made at entry areas, to allow for better defined parking areas, trailhead, and improvements of boundary fences to help minimize entry at undesignated locations and cross-country travel.

<u>Objective 2R - 1:</u> Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Table A-4 Recreation Emphasis

Alternative 2	Multi-use separate facilities	Multi-use shared facilities	Non-motorized recreation emphasis	Non-motorized recreation exclusive	Non-recreation emphasis	Roads only emphasis
Cline Buttes		X		(minor)		
Northwest			X	(minor)		
La Pine		X	X	(minor)		
Bend-Redmond		X		(minor)		
Mayfield		X	X	(minor)		
South Millican		X				
North Millican		X				
Millican Plateau		X		(minor)	(minor)	
Prineville Reservoir		X	X	(minor)		
Steamboat Rock		X		X		
Badlands		X				
Horse Ridge			X		(minor)	
Prineville			X	(minor)		X

Allocations/Allowable Uses:
Area managed as Limited to designated roads (See Map 9):
- Route 8 (approximately 8 miles), Route 9, and parts of routes 4, 5, 6, and 7 (approximately 12 miles) would be designated Open to motor vehicles.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines
Motorized access points would include:
- Route 8 entrance off State Highway 20,
- Route 8 entrance off County Line Road,
- Route 5 entrance.

Develop a designated parking area with defined boundaries at the Route 8 entrance off State Highway 20 (See also North Millican section – developed recreation).

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and public land neighbors.

Rationale:
Existing, inventoried routes in the Badlands WSA include many routes not open to motor vehicles. The use of these routes by non-motorized recreationists is popular. In order to maintain the area's wilderness suitability under IMP, the spread or lengthening of these routes through casual use needs to be avoided. Providing identifiable and understandable route systems for these users would help manage the use and avoid impairment of wilderness suitability.

Guidelines:
- Mountain bikes are limited to designated, inventoried routes. Mountain bicyclists would be encouraged to stay on existing, inventoried routes by creating a non-motorized route map for the Badlands.
- Existing non-inventoried routes would be signed as Closed to mountain bikes.

Bend/Redmond
While the area's management changes from an Open to a Limited designation, all recreation types would be expected to share the same trails (with the exception of a North Unit Canal regional trail and trails within the Wagon Road ACEC). Select roads of historic and cultural value may be removed from the designated road system. Site improvement goals would include staging areas, an OHV play area, and grade-separated crossings of State Highway 126, Powell Butte Highway, and other new rights-of-way roads. The number of motorized access points into the area would be reduced.

Objective 2R – 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Use:
The main block located between State Highway 126 and Powell Butte Highway would be designated as Limited to designated roads and trails; open year-round.

The isolated 40 acre, Highway 97 parcel would be designated as Closed to motor vehicles.

Cline Buttes
The entire Cline Buttes block would be managed for multiple uses, with motorized and non-motorized users sharing most of a designated road and trail system. Approximately 25 to 40 miles of multi-use trails are designated within Cline Buttes. Several smaller trail loops are provided for non-motorized use, these include some of the designated trails alongside the Tumalo Canals, and any trails designated within ½ mile of the Deschutes River. The area has a designated system of access points, which are improved and have identifiable boundaries.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Entire block designated as Limited to designated roads and trails, except for ½ mile buffer along the Deschutes River, which would be designated Closed to motor vehicles.

Guidelines:
- Majority of trail system would be a two-way OHV trail system that would be shared by all users. A portion of the trail system would be designed to promote technical, slow speed riding opportunities.
- The area would be managed for a multi-use trail system goal of 25 to 40 miles of designated trail.
- Locate OHV staging area to minimize conflicts with adjacent landowners. Major OHV staging area would be located at the northern end of Barr Road to minimize conflicts with adjacent residential land use.
- Develop four-wheel drive technical trail route in Cline Buttes block between Barr Road and Cline Falls highway. Design route for slow speed four-wheel drive use, while meeting visual resource objectives.

Horse Ridge
Under this alternative, the management focus for the Skeleton Fire area and Horse Ridge would be on non-motorized trail use on designated trails. Designated roads would be present in these areas, but at a low density and layout similar to what is currently available. Some existing roads would be reopened in the Skeleton Fire area, to allow for loop drives and recreational use by hikers, runners, etc. Existing 2-track roads that are currently closed to motorized use may be included as part of a designated, signed, non-motorized trail system. Improvements would be made to parking and staging areas to serve hikers, equestrians, mountain bikers and others.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The increasing popularity of the Horse Ridge area for a wide variety of recreational activities, coupled with the increased residential development within and adjacent to BLM public lands, increases the need for an understandable, maintained trail system. A designated trail and road system would help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users.

Allocations/Allowable Uses:
Horse Ridge would be designated as Limited to designated roads only, with the exception of closed areas described under Common to Alternatives 2-7 (Small parcels adjacent to Conestoga Hills, Rickard Road, and the Horse Ridge RNA).

Guidelines:

- Roads closed after the Skeleton Fire (1996) to decrease introduction of noxious weeds during rehabilitation may be reopened if they provide useful loops for recreational use and do not contribute to conflicts with the neighboring Conestoga Hill subdivision.
- Re-open BLM Road OR 11057 between BLM Road OR 6516 and Stookey Flat Road to provide an additional, shorter loop drive through the Skeleton Fire area, and allow for recreational use that begins and ends at one trailhead or entry point (which is currently unavailable in the area).
- If easements or land exchanges do occur in the southern and southeastern portion of Horse Ridge that allow for public road access through Golden Basin, designate this route as a through route for motorized vehicles.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:

- Create a designated trailhead at the northwest end of Horse Ridge or the southeast end of the Skeleton Fire area to allow easy access for non-motorized trail users from the Bend area. Emphasize location of trailhead that allows quick access to higher elevation trails.
- Retain the existing horse camp trailhead off Evans Well Road in South Millican.

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:

The entire area's proximity to Bend and easy access off State Highway 20 have resulted in increased levels of trail use by equestrians, hikers, runners, and mountain bicyclists who use existing roads throughout the area, game trails, and user improved or created trails. Despite the high levels of use, typically occurring in fall and winter, there is no designated, understandable trail system for this use, leading to creation of new trails and trespass on private property.

Guidelines:

- Designate non-motorized trail system in the Horse Ridge area that avoids the RNA and private property. Trails would include higher elevation areas in Horse Ridge, as well as trails in the Skeleton Fire area.
- Reroute existing mountain bike trails to avoid crossing through the Horse Ridge RNA.
- Work with private property owners to acquire easements, purchase or exchange lands to allow for trail development in the area.
- Work with private property owners to acquire easements, purchase, or exchange lands to allow for trail connection between the Horse Ridge area and the area between the old Highway 20 and the new State Highway 20 (location: T 19 S, R 14 E, Sec. 2).

La Pine

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:

Motor vehicle travel would be limited to a designated system throughout the majority of the area (i.e., in those areas not closed).

Approximately 10 small, isolated parcels (generally 40 to 320 acres in size) would be designated as Closed to motor vehicle use.

Mayfield
This alternative allows for more motorized use in the main block than is presently provided. The main block would be managed for motorized use on a larger designated road network than the current system. Designation of additional motorized trails in the area would be emphasized. The focus of a designated, motorized trail system would be on the center and northern portion of the main block, to minimize conflicts with adjacent landowners. This alternative places an emphasis on motorized trail connectivity to Millican Plateau, retaining public lands on both sides of Johnson Market Road.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The Mayfield area has been managed for use only on designated roads for the last seven to eight years in an effort to reduce resource damage and minimize conflicts with adjacent residential land use.

Allocations/Allowable Uses:
- Main block between Powell Butte Highway and Alfalfa Market Road would be designated as Limited to designated roads and trails.
- The Airport Allotment area would be designated Closed to motor vehicles.
- Area south of Alfalfa Market Road would be designated as Limited to designated roads.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
Limit motorized access points into main block to no more than:
- 1 entry from Powell Butte Highway,
- 1 entry from Alfalfa Market Road,
- 1 entry from Cascade View Estates,
- 1 entry from Johnson Market Road if a safe crossing of Johnson Market Road is available to link the Mayfield Pond block to Millican Plateau.

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Trails in main block would be shared use trails for both motorized and non-motorized users.
- Designated trails in block of land south of Alfalfa Market Road would be for non-motorized use only.
- Designated trails in airport allotment parcel would be for non-motorized use only.

Millican Plateau
The recreation management emphasis for the area would be OHV opportunities. The existing boundaries of the Millican Valley OHV area are expanded and the designated, year-round trail system would be increased, particularly in the western and northern portions of the area. Improvements are made to the staging areas, and provisions are made for safe, grade separated crossings of Millican and Reservoir Roads. While most of the area would be managed for OHV use on designated trails, both the Powell Butte RNA and the isolated parcel at the top of Powell Butte remain closed to motor vehicles.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Current northern half of Millican Plateau area would be expanded.

Guidelines:
- OHV area encompasses the entire area north of Reservoir Road, east of Johnson Market Road and west of Crooked River Wild and Scenic River, except for Powell Butte and the Powell Butte RNA.
- Designate additional trails in area between Millican Road and Johnson Market Road.
- Designate additional trails in area east of Road 6555-b to allow for one or more trail loops and provide a trail access to viewpoints of the Crooked River Canyon.
- Include West Butte area east of the old Millican OHV area boundary within the OHV area boundary.
- Provide technical trail Class III riding opportunity in the West Butte area by designing one technical route above Trail 25.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
If legal access is obtained, provide one or two non-motorized trailheads to BLM lands on Powell Butte.
- Relocate the Four Corners Staging area to better serve both the North Millican and Millican Plateau areas. Relocate the staging area if a larger site can be found, outside of the direct viewshed of Reservoir Road or Millican Road can be found.

Objective 2R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
Non-motorized use is occurring both on the designated OHV system trails, and in other areas or on existing trails that are not part of the OHV system. Non-motorized trail users want trails of their own that offer unique riding opportunities. Use on these trails is unmanaged, and the lack of trail maps or user information tends to increase the development of new trails and redundant parking/staging areas.

Guidelines:
If legal access is obtained, designate a non-motorized trail system in Powell Buttes and manage all non-motorized (except foot traffic) use as limited to this system. Close and rehabilitate other user created trails.

North Millican
Alternative 2 manages the area for multiple use, with a small portion of the area located adjacent to the Badlands WSA emphasizing non-motorized trails. The alternative would improve trailheads and create a group use area at the base of Dry Canyon, which would replace the dispersed parking and camping occurring in the area presently. Many of the improvements established in the Millican Valley Plan would be implemented.

The existing boundaries of the Millican Valley OHV area would be expanded and the designated trail system would be increased, particularly in the eastern portion of the area. Long, straight, high-speed trail alignments would be replaced by more technical routes that offer more variety, and longer riding experiences. Trails are realigned to take

advantage of fewer safe crossings of Millican/West Butte Road and frontage trails are developed as needed to collect trail traffic and route it to designated crossings. The trail system would be improved to allow better stand-alone riding opportunities on both the west and east side of West Butte Road.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
The entire area would be designated as Limited to designated road and trails.

Guidelines:
- Hillclimbs at ODOT pit play area would remain closed, hillclimb area would be monitored and additional rehabilitation efforts would be made if necessary.
- Additional direction for new trail development on both sides of West Butte Road (refer to Common to All Alternatives).
- Maintain culverts under Highway 20 as motorized trail links.
- Provide a technical, Class II loop of approximately 13 miles on both sides of Smith Canyon.
- Include West Butte area east of the old Millican OHV area boundary within the OHV area boundary.
- Work with proper authorities to ensure that large culverts or other similar grade separated crossings are provided across West Butte Road when the route is developed. Grade separated crossings would be provided in adequate number (a minimum of three in highway area) to provide for trail system connectivity.
- Provide additional trail loops in the new portion of the Millican OHV area (east of Trails 25 and 27) while maintaining a low trail density. The primary emphasis would be placed on very low trail densities and on non-motorized use.
- Provide technical trail Class III riding opportunity in the West Butte area by designing one technical route above Trail 25.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
- Develop trailhead and parking area at base of Dry Canyon.
- Separate staging areas would be developed on the west and east sides of Millican/West Butte Road to serve the trails on either side of this road alignment.

Objective 2R - 5: Provide identifiable non-motorized recreational opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among and neighbors.

Rationale:
Non-motorized use is occurring both on the designated OHV system trails, and in other areas or on existing trails that are not part of the OHV system. Non-motorized trail users want trails of their own that offer unique riding opportunities. Use on these trails is unmanaged, and the lack of trail maps or user information tends to increase the development of new trails and redundant parking/staging areas.

Guidelines:
- Existing trails that are not part of the Millican Valley OHV trail system (e.g., Dry Canyon) may be designated as non-motorized trails and available year-round to this use.

- Provide a trail link from at base of Dry Canyon to the Route 8 entry kiosk area at the Badlands WSA.
- Trails would be maintained for hiking, equestrian use, and technical mountain bike use.
- Designate non-motorized trails in the area between North Millican and Badlands.

Objective 2R – 7: Provide developed or urban based recreational opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with neighboring landowners.

Guidelines:
- Develop an improved parking/staging area at existing West Butte staging area or adjacent to ODOT pit area to provide for groups and event crowds.
- Develop group use and camping site near COSSA Shooting range to support shooting events, trail use events and other group use activities. This facility would be operated on a reservation system
- Develop a primitive camping area at base of Dry Canyon.
- Develop a primitive group use area or campsite to support OHV oriented camping in the area if consistent with plan objectives.

Northwest
The area would be managed for both motorized and non-motorized recreation. Emphasis for motorized trail development would be on providing future connections to larger trail systems on Crooked River National Grasslands (CRNG), if needed. The area would be closed to motorized use seasonally to match adjacent policy on CRNG, but remains open year-round for non-motorized use. The Sisters Climbing area would be managed with an emphasis on rock climbing use, and would be signed and identifiable as BLM managed land.

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Designate a hiking only trail on the east side of Holmes Road (T14 S, R 11 E, Sec 11, 12, 14, 22, and 23). Convert existing unimproved roads in the area to serve as designated non-motorized trails by half-tracking.
- Manage all trails, including the trail link to Alder Springs Trail as year-round trails for non-motorized use.

Objective 2R - 9: Provide for motorized use opportunities in conjunction/cooperation with adjacent land management agencies.

Allocations/Allowable Uses:
- Motorized travel in main block would be limited to designated roads and trails and limited to April1 thru November 30.
- Motorized travel in isolated parcels west of Squaw Creek Limited to designated roads and limited to April 1 thru November 30.
- Designate Cascade Mountain/Willamette Valley Wagon Road (CM/WV) as a shared use BLM system designated trail that links to the access road for Alder Springs Trailhead. Consider development of one or more loop trails off the main CM/WV trail.

Guidelines:
- OHV trail system would emphasize connections if CRNG develops trail system to the north or if a trail connection to Cline Buttes is made through easement, land purchase, or land exchange.

- Allow for a hiking only trail on the east side of Holmes Road (T14 S, R 11 E, Sec 11, 12, 14, 22, and 23). Convert existing unimproved roads in the area to serve as designated non-motorized trails by half-tracking.
- Manage all trails, including the trail link to Alder Springs Trail as year-round trails for non-motorized use.

Prineville
Alternative 2 treats the area much like the current management, keeping most of the scattered tracts Open to motorized use year-round, and not providing any recreation infrastructure or management. A few problem areas are treated with more specific detail, mainly to respond to erosion or road maintenance problems, or problem dumping areas.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Entire area designated as Limited to designated roads and trails, except the BLM parcel near the Juniper Canyon summit would be designated as use Limited to designated roads from March 16 thru November 30.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guideline:
Develop a trailhead in the Eagle Rock area.

Objective 2R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
Non-motorized use is occurring in the area. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). Non-motorized trailheads at Prineville Reservoir State Park have been identified by Oregon State Parks and BOR as a management goal. The development of non-motorized trail loops consistent with State Park goals requires designation of trails on both BOR and BLM managed lands.

Guidelines:
- Develop a designated trail system in the Eagle Rock area, with a trail link to Prineville Reservoir.
- Provisions would be made for allowing non-motorized access to the area at all designated trailheads if the area is closed seasonally to motor vehicle use.

Prineville Reservoir
Most of the area would be designated as Limited to designated roads and trails, with priority given to designating OHV trails in larger blocks in the eastern portion of area. The Powderhouse Cove/Taylor Butte (Taylor Butte travel is Limited under Common to Alternatives 2-7) area would be Limited to designated roads only, and provides hiking trails as an additional recreation experience for Prineville Reservoir State Park visitors.

Objective 2R – 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- Most of area would be designated as Limited to designated roads and trails except:
- Powderhouse Cove/Taylor Butte area east of State Highway 27 and south of the reservoir would be managed for motorized roads only.
- All isolated parcels, including parcels east of Bear Creek arm, and scattered tracts at the eastern edge of the area would be designated as Limited to designated roads.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
- Develop trailheads and parking areas when and where there is a demonstrated need. Where feasible designated non-motorized trails would utilize State Park/BOR trailhead facilities or developed sites.
- A separate non-motorized trailhead would be provided off State Highway 27 at Taylor Butte.

Objective 2R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
Non-motorized use is occurring in the area. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). Oregon State Parks and BOR have identified non-motorized trailheads at Prineville Reservoir State Park as a management goal. The development of non-motorized trail loops consistent with State Park goals requires designation of trails on both BOR and BLM managed lands.

Guidelines:
- The Taylor Butte/Powderhouse Cove areas would be managed to develop non-motorized trails to offer an additional recreation opportunity for Prineville Reservoir State Park visitors.
- Designated trails in this area would be coordinated with BOR and State Parks.
- Trails would be designed to provide viewpoints to the northwest and over the reservoir.

Smith Rock
The entire block would be Closed to motorized vehicles. Additional non-motorized trails may be created, both to solve resource issues and to meet the demand for hiking, mountain biking, and equestrian trail opportunities.

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Allow development of additional trails to reduce impacts at climbing areas and to provide additional mountain bike, hiking, and equestrian use opportunities.
- Coordinate trail development with SRSP and CRNG.
- Trails would be designed and located to protect resources and scenic values.

South Millican
Under this alternative, the management focus for the South Millican area would be on maintaining the area as an OHV area, with use allowed on designated roads and trails year-round. Existing trail connections to the North Millican area would be maintained.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The South Millican area is an existing OHV area, which also contains important wildlife habitat, particularly for sage grouse. The area is increasingly used for a variety of recreational activities. The area's proximity to Bend and easy access off State Highway 20 will ensure continued popularity of this area.

Allocations/Allowable Uses:
The South Millican and Fox Butte areas which would be Limited to designated roads and trails.

Objective 2R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
Primary staging area for casual use and events in the South Millican Area would be located approximately 1-½ miles west of Millican and one mile south of State Highway 20. Improvements would include bulletin board, loading ramp, and toilets as use levels warrant.

Steamboat Rock
The main public land block within the Steamboat Rock area would be managed for dispersed use, with both motorized and non-motorized use sharing trails and roads. The number of access points would be reduced, and the remaining designated access points would be improved, hardened, and would have defined boundaries. New roads or trails are created to link existing roads back to common access points or trailheads. The river parcels adjacent to Crooked River Ranch continue to be managed to emphasize non-motorized use. Isolated parcels northwest of Redmond are managed exclusively for non-motorized use, with access improvements to allow access to the middle Deschutes River while minimizing conflicts with landowners.

Objective 2R - 1: Manage off highway motorized vehicle use on BLM managed land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The increasing popularity of the Steamboat Rock area for a wide variety of recreation activities, coupled with the increased residential development within and adjacent to BLM public lands, increases the need for an understandable, maintained trail system. A limited number of access points and a designated trail and road system would help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts among users.

Allocations/Allowable Uses:
- Main Steamboat Rock Block would be Limited to designated roads and trails.
- The Deschutes River corridor within Main Steamboat Rock block would be managed as a non-motorized use area (See Map 9).

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Non-motorized use in the main Steamboat Rock Block would be managed to use the same roads and trail systems as OHV users. Exceptions to this policy would be the area immediately adjacent to the Tetherow Crossing Subdivision and Crooked River Ranch, which would have designated non-motorized trails to avoid conflicts between residents and recreationists.

Tumalo
Motorized trails in main portion of the Tumalo Block (the area north of Tumalo Reservoir) would be considered for development. However, trail development would only be considered if connections to a larger trail system on the Deschutes National Forest or at Cline Buttes are available. The BLM lands to the south of Tumalo Reservoir are Closed to motor vehicles, and are managed for non-motorized trail use on designated trails only.

Objective 2R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Designate non-motorized trails in the main Tumalo Block, with an emphasis on loop trails with relatively few access points and on connections to the Deschutes National Forest system.
- Some trails in the main block would be shared trails if motorized trails are designated.

Objective 2R - 8: Provide for motorized use opportunities in conjunction/cooperation with adjacent land management agencies.

Allocations/Allowable Uses:
- Motorized travel would be limited to April 1 thru November 31.
- Motorized travel in main block limited to designated roads and trails.
- Motorized travel in the smaller block of BLM land to the south of Tumalo Reservoir would be limited to designated roads only.

Guidelines:
Develop motorized trails in the main block of BLM land north of Tumalo Reservoir if it becomes possible to connect to larger trail systems or roads on Deschutes National Forest.

Transportation and Utilities

Objective 2TU – 5: Provide for an integrated transportation system that fully utilizes existing, historic road systems and minimizes increases of new rights-of-way on BLM-managed lands.

Rationale:
BLM-managed lands in the planning area include numerous road rights-of-way that are outside of federal jurisdiction to manage. In most cases, these roads come under the jurisdiction of various counties. Absent any other agreements, maintenance levels and future development of the road system is dependent upon overall county development objectives, and does not consider impacts of those and other uses on the natural resource values on BLM-administered lands.

This alternative would emphasize continued use of that system with any desired natural resource mitigation for those systems addressed in the absence of new, discretionary road designations, or in the designation of BLM-managed arterials, collectors, and eventually, local roads.

Allocations/Allowable Uses:

- Designate the road network and transportation/utility corridors as shown on Map 2 and Map S-2.
- Allocate a transportation/utility corridor adjacent to the Burlington Northern/Santa Fe (BN/SF) railroad right-of-way approximately ½ mile wide south of Redmond, extending to Deschutes Junction.
- Designate a regional transportation corridor between south Redmond near the fairgrounds and north Bend near Deschutes Junction.
- Identifies 25 percent of the planning area in a primary wildlife emphasis designation and 20 percent in either a non-motorized emphasis or non-motorized exclusive designation

Guidelines:

Designate BLM collectors using existing county rights-of way and known county roads, including known historic roads wherever reasonable to meet administrative and public access needs.

- Except as designated in Common to Alternatives 2-7, new rights-of-way for regional or local transportation systems would generally not be granted on BLM-managed lands.
- County standards would determine road maintenance standards of known county roads, including known historic roads. BLM-administrated roads maintenance standards would be kept at the lowest possible range to provide reasonable access for the public.

Land Ownership

Objective 2LO – 3: Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to manage or that would represent a greater public benefit in other ownership.

Rationale:

Under the BACA bill legislation, proceeds from sales of lands identified in the Brothers-La Pine RMP as Z-3 lands would be available for use within the state for acquisitions of lands. Under this alternative, land sales would be closely tied to acquisition proposals for this area to provide for the greatest opportunity of funds from sales being made available for local acquisitions.

Allocations/Allowable Uses:

Designate the lands in Map 31 as Z-3 (approximately 12,993 acres).

Guidelines:

Use proceeds of sales (as permitted by BACA Bill) to acquire lands for the improvement of BLM's land ownership pattern.

Objective 2LO – 4: Provide land for community needs and uses consistent with public land management mandates

Rationale:

This alternative emphasizes making available for community expansion those lands most likely to be needed by the community as identified by the City of Redmond's Urban Reserve study, and to provide park and open space areas in the community of La Pine.

Allocations/Allowable Uses:

Designate the lands in Map 31 for Community Expansion (approximately 5,323 acres).

Guidelines:

Request participation by the cities and county to provide, in the future, detailed planning

for an interweaving system of parks and open spaces among the community expansion projects.

Objective 2LO – 5: **Identify parcels to target for acquisition based on overall resource values and management and administrative objectives.**

Rationale:
In keeping with the overall emphasis of Alternative 2, acquisition priorities would be on lands that provide for the greatest range of uses.

Allocations/Allowable Uses:
Designate the lands in Map 31 for acquisition.

Guidelines:
Prioritize lands available for acquisition based on greatest public benefits provided by that acquisition.

Objective 2LO - 6: **Maintain or create large consolidated blocks of public land; provide for recreational, botanical, and wildlife connectivity on public land; and allow for the greatest range of existing uses [FLPMA 102(a)(7) & 202(c)(1)].**

Rationale:
Overall, public comment on the AMS and in the Issue Team was almost unanimously opposed to disposal of public lands. This alternative emphasizes a high level of retention of public lands to meet a variety of public land uses.

Allocations/Allowable Uses:
Designate the lands in Map 31 as Z-1 (approximately 358,314 acres). This area includes blocks of public lands identified as Z-1 including Tumalo, Cline Buttes, Bend/Redmond Core, Smith Rocks, Mayfield, Badlands, Horse Ridge, Reservoir West, Reservoir East, Southeast, and the majority of public lands in La Pine north and south of the community. Other, smaller parcels of public land identified include Grizzly Mountain, Ochoco Reservoir, and Juniper Canyon.

Objective 2LO - 8: Provide options to obtain private parcels with better resource values, emphasizing recreation opportunities and wildlife corridors. Develop an exchange base to provide connectivity to Cline Buttes from Northwest, Steamboat Rock and Tumalo. Consolidate public lands west and south of the Cline Buttes while disposing of the public lands to the northwest, where the adjacent private lands have been heavily developed. Provide public access to the Powell Buttes. Consolidate public lands in Horse Ridge and Southeast into large blocks. Provide for consolidation of other BLM managed lands.

Rationale:
Lands available for exchange provide opportunities to improve administrative boundaries, promote long-term desired land ownership patterns, and provide trading stock for acquisition of more desirable lands. Alternative 2 would emphasize trading of isolated and fringe parcels and areas adjacent to increasing rural or urban development for recreation opportunities and wildlife corridors.

Allocations/Allowable Uses:
Designate the lands in Map 31 as Z-2 (approximately 22,279 acres).

Guidelines:
Public parcels selected for disposal and private parcels selected for acquisition may be from any portion of the planning area.

Public Health and Safety

Objective 2PHS - 8: The objectives are the same as those common to Alternatives 2 – 7 and would emphasize minimizing firearm discharge restrictions and regulations.

Allocations/Allowable Uses:
No areas would be closed to all firearm discharge.
Areas listed in Table A-5 are closed to all firearm discharge unless legally hunting:

Table A-5. Closed to all firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Cline Buttes (Canal ACEC)	X	X	X
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road)	X	X	X
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC)	X	X	X
Mayfield Block (Airport parcel)	X	X	X
Prineville Reservoir Block (BLM land ½ mile east of the Lower Crooked WSR plus lands contiguous with, east of, and north of the WSR boundary	X	X	X
Horse Ridge Block (North of Rickard Road, South of Hwy. 20)	X	X	

Alternative 3

Ecosystem Health and Diversity

Vegetation

Shrub Steppe Communities

<u>Objectives 3V – 4b:</u> Maintain/restore large contiguous stands of healthy, productive and diverse native shrub/steppe plant communities throughout their historic range[25]. Restoration and expansion of key plant communities would approximate historic stand structure and geographic range as defined by conditions existing at pre-European settlement times. On most historic shrub-steppe sites, western juniper would be reduced to widely spaced old-growth trees or small patches on ridgetops or other appropriate locations where trees would contribute to biodiversity at the landscape level.

<u>Rationale:</u>
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to white European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term.

<u>Guidelines:</u>
Maintenance/Restoration
- Restoring historic fire regimes wherever possible outside the wildland-urban interface would be emphasized to improve/maintain the condition and expand the extent of shrub-steppe communities to historic ranges.
- Composition, density, and distribution of young western juniper would be reduced to historic levels. Juniper older than 150 years may be removed in some circumstances if specific restoration needs for wildlife habitat or other natural values exceed the need to maintain the tree component.
- A primary criterion for prescribing treatment is when juniper occurs at a density and/or distribution outside its historic range of variability.
- Within the next 15 years cutting and/or prescribed fire would occur on shrub-steppe currently occupied with young juniper.

[25] The terms "current range" and "historic range" as used in the context of this Upper Deschutes EIS/RMP refers to the distribution of the following major vegetative types mapped within the planning area: late seral shrub-steppe, old-growth juniper, ponderosa pine, and riparian (see Map XX for location of current ranges of vegetation). These are the vegetative types within the planning area that have declined the most in terms of condition/structure and in geographic extent from the historic to current time period. Their decline has created a current deficit representation as compared to their distribution during pre-European settlement times.

- Where ecologically appropriate, restore or maintain stands of large contiguous sagebrush communities in patches of 400 acres and larger. Design of landscape patterns would include connectivity of large shrub-steppe patches.
- Vegetative habitat needs of non-game sagebrush-steppe obligate species would be considered in treatment design.

Treatment Priorities
Project design would be based on a landscape level restoration of broad vegetative types. Priorities for treatment would focus on areas that would show the biggest ecological gain for a given level of treatment intensity or investment. Cost-benefit ratios would help determine project priority and scale. Priorities would include restoration of sage grouse and other special status species and non-game habitat. Areas that have transitioned beyond the threshold of restoration success with reasonable treatment effort and expense would receive lower priority.

Old-Growth Juniper Woodlands

Objectives 3V – 5b: Protect and promote the health and integrity of old-growth juniper woodlands/savanna. In addition to protection and maintenance of existing old-growth, treatments would also be designed to restore old-growth in selected areas within its historic range.

Rationale:
Old-growth western juniper woodlands in the pumice sands of Central Oregon are unique in their age, size and extent. Of the eight million acres of western juniper in the intermountain west, only an estimated three to five percent is considered to be old-growth.

Ideal conditions of soil, climate and topography converge in Central Oregon to allow juniper to attain its maximum potential for size and age of individual trees and density and range for contiguous old-growth stands. The oldest (1,600 years) western juniper tree found to date is located within the planning area. Continued human population growth and associated increases in development and public land use in Central Oregon is causing fragmentation and degradation of this important habitat type. Large healthy contiguous stands of old woodlands provide habitat for late-seral dependent species, scenic quality, and education/interpretation opportunities.

Guidelines:

Maintenance/Restoration
- Treatment objectives would be based on restoring historic condition and range of old-growth woodlands/savanna within the planning area. Prescriptions would allow for, or mimic, natural disturbances wherever practicable. Treatment intensity and acreage would be higher than under Alternative 2, subject to budget limitations.

Treatment Priorities
- Priority treatment areas would include many of the priorities indicated within Alternative 2 but would treat larger units and attempt to expand current range of old woodlands toward historic range. Selected old-growth stands with high ecological values would receive be high priority for treatment. Specific areas and boundaries of old-growth woodland priority treatment areas are subject to change based on updated inventory information.
- Other priority areas would be sites that have relatively high densities of young juniper establishing in the interspace between the older trees. Treatments would be designed to both maintain the health and longevity of the old trees and to increase the amount and diversity of understory shrubs, grasses, and forbs. In addition, treatment priorities would also include key areas where evidence indicates old-growth

woodland/savanna existed during pre-European settlement times and where there is potential to re-establish old-growth characteristics in the future. These areas could include old homesteads cleared for farming, crested wheatgrass seedings, firewood harvest areas, or other juniper site conversion project areas. Alternative 3 would put a greater emphasis on managing special status and non-game habitats, and a lesser emphasis on managing for big-game habitat.

- Field surveys and historical accounts would help estimate pre-settlement structure/composition of plant communities. This information would be used to develop restoration prescriptions and treatment priorities that would move plant communities back toward historic range and conditions. Old woodland structural and composition components would include large old trees, multiple age classes, dead standing trees, dead down trees, shrub, grass, and forb densities and proportions similar to historic levels and distribution.
- Allow cutting/harvest of green trees up to 18 inches DBH east of State Route 27. Harvest of juniper west of State Route 27 would generally be allowed only in conjunction with restoration treatments, fuels reduction, or clearing for ROWs or other approved facilities or developments. Trees cut and removed during restoration or fuels management treatments would generally be limited to trees less than 150 years old and based on physical characteristics. Individual trees showing characteristics of old-growth, regardless of size, would generally not be cut. Cutting or removal of snags and large down logs would not be allowed.

Lodgepole and Ponderosa Pine Forest

Objective 3V - 6c: Maintain and promote healthy and diverse lodgepole and ponderosa pine forest ecosystems. Manage stand structure, density, species composition, patch size, pattern, and distribution to provide an environment in which fire intensity can be managed for human safety and fire effects are compatible with other management objectives. Maintain or mimic natural disturbance regimes so that stands are resilient to periodic outbreaks of insects, disease and wildfire. Manage ponderosa pine to maintain a dominant status throughout its range. Provide for a balance of biological, social and economic needs in an urban/wildland setting.

Rationale:
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term. Ponderosa pine is important from an ecological perspective because of its relative scarcity in the planning area and its inherent resiliency to disease and fire.

Guidelines:

- Treatments would be designed to transition to more stable self-sustaining ecosystems to prevent large-scale occurrences of insects, disease and fire. Promote stand structures and landscape patterns that would limit the risk and reduce extent of damage caused by large-scale natural disturbance processes.
- Ponderosa pine would be restored to its former dominance and structure within its historic range. Lodgepole pine and juniper would be aggressively thinned where it is encroaching into and competing with ponderosa pine stands. Most old-growth juniper found in these mixed stands would be left for diversity.
- Treatment units and habitat patch size would generally be larger than under Alternative 2 and based on larger-scale treatments to mimic natural disturbance processes and to restore healthy ecosystems. In lodgepole pine sites, thinning would be more intensive with wider spacing, more acres treated, and/or more frequent treatment entries.
- Isolated groups and individual ponderosa pine trees, particularly in the La Pine and Cline Buttes areas, would be targeted for protection and enhancement to maintain biodiversity and aesthetic values associated with these trees. Large isolated pine trees are particularly valuable as nesting, perching, and roosting habitat for raptors. Treatments would include radius thinning within at least 30 feet around each tree to reduce competition from lodgepole pine and western juniper.

Objective 3V – 6d: Maintain existing late and old structure ponderosa pine and promote its redevelopment throughout its historic range within the planning area.

Rationale:
Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances.

Guidelines:

- Treatments within ponderosa pine forests would promote long-term sustainability of representative stands of early, mid, and late seral ponderosa pine within its historic range and reduce future risk of occurrence and extent of damage caused by insects, disease, and stand-replacement wildfires, and meet wildlife habitat management objectives.
- Maintain and restore old and mature ponderosa pine forest structure and expand its range toward historic levels, including areas affected by past logging practices and species transition, to re-establish ponderosa pine dominance and mature structure over time.
- Field surveys and historical accounts would help estimate pre-settlement range, structure, and composition of old and mature forest stands. Old and mature forest structure components include size, age, and density of trees, down logs, canopy structure, and understory composition.

Treatment Priorities
Priority treatment areas are those sites that are at high risk of unnaturally severe disturbance events and have a relatively high potential for response to treatments to alleviate those risks. Treatments would work toward restoring deficient habitats to approximate historic landscape patterns and proportions on a relatively large scale.

Wildlife

Objective 3W-6a: Restore terrestrial source habitats to provide for species needs with a focus toward biological diversity. Increase the geographic extent of vegetation cover type and structural stages that have declined substantially from the historical to the current period, and re-pattern the vegetation patches so they are consistent with natural disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem.

Rationale:
The Interior Columbia Basin Ecosystem Management Project scientific findings highlighted changes that have taken place in vegetation composition and structure, which have resulted in a scarcity of some habitats while others are over-represented. Habitats often are established where they are not resilient to disturbance or sustainable in the long term. By re-patterning terrestrial habitats to be more consistent with the historic disturbance regime and other historic ecosystem characteristics, the evidence indicates habitats may be more resilient and sustainable. At the same time, re-patterning would provide the habitats that have declined historically.

Allocations/Allowable Uses:
Establish representative components of naturally occurring vegetative types across the planning area within the historic range of plant communities in sufficient size and frequency to serve as source habitats[26] for species groups that are dependent upon those habitats.

Guidelines:
Consider using prescribed fire (and other techniques) for reducing woody species, such as juniper, on sites where they are displacing the native understory vegetation and where perennial grasses are still present in adequate amounts to be conducive to fire.

Geographic Areas

Objective 3W–2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities meet ODFW management objective numbers for deer and elk (B/LP RMP, p. 12, slightly modified).

Under Alternative 3, wildlife management emphasis would be the same as outlined for Alternatives 2-7. In addition, this alternative would establish additional direction for the following areas:

Bend/Redmond
Allocations/Allowable Uses:
Along Highway 126: Secondary emphasis for potential pronghorn connectivity corridor running north and south from the Main Block to the Northern Block. Limit motorized travel to designated roads and trails (except for OMD permitted activities).

Guidelines: Maintain and improve the potential for a connectivity corridor east of Redmond and crossing Highway 126 by:
1. considering the potential suitability of the corridor and effects upon it when evaluating alignments for motorized road or trail access through the area
2. emphasizing habitat restoration to provide suitable connectivity habitat

[26] See earlier report for definition of source habitat.

Cline Buttes
Allocations/Allowable Uses:
Southeast Block[27]: Primary emphasis for deer and elk winter range, and raptor nesting and foraging habitat. Closed to motorized travel except for ROW and non-BLM roads.
Canyon Complex east of Fryrear Road: Secondary emphasis for deer and elk winter range and raptor nesting and foraging. Maintain low motorized trail densities.
Maston Allotment: Primary emphasis for elk and riparian and raptor habitats; Closed to motorized travel.

Guidelines
Southeast Block: Emphasize vegetation management for shrub-steppe and open savannah habitats.
Canyon Complex: Emphasize vegetation management for shrub-steppe and open savannah habitats.

Horse Ridge
Allocations/Allowable Uses:
Main Block: Limit motorized travel to designated road and trails seasonally.

Guidelines:
Limit mechanized use to designated roads and trails.
Non-motorized trail dependant special recreation events (trail rides, races, etc.) would be allowed on designated roads and trails. A maximum of 2 events (motorized or non-motorized) could be held per month, with events up to 2 days long allowed. Each permitted event would be separated by at least 12 days with no scheduled events.

La Pine
Allocations/Allowable Uses:
Southern Area: Primary emphasis for deer migration and elk winter range habitats; Limit motorized travel to designated roads only.

Guidelines:
During fuel treatments maintain clumps and stringers of denser cover to provide screening and security habitat for migrating deer and wintering elk.

Mayfield
Allocation/ Allowable Uses:
Main Block: Secondary emphasis for pronghorn year-round and connectivity habitats; limit motorized travel to designated roads.
South of Alfalfa Market Road: Primary emphasis for pronghorn year-round and connectivity habitats and deer winter range; closed to motorized travel.

Millican Plateau
Allocations/Allowable Uses:
South: Secondary wildlife emphasis for sage grouse winter and breeding habitats, deer and elk winter range and pronghorn year-round and connectivity habitats; Limit motorized travel to designated roads and trails and seasonally close some roads at designated snow depths.
Crooked River Rim: Primary wildlife emphasis for pronghorn and deer winter range, and raptor nesting and adjacent foraging habitats; closed to motorized travel
Mayfield Link: Primary emphasis for pronghorn connectivity habitat. Limit motorized travel to designated roads and trails.

[27]Includes the area of the Maston Allotment, east of Barr Road, west of Cline Falls Highway and south of the access road to the Cline Buttes gravel pit.

Guidelines:
Crooked River Rim: High priority for habitat restoration.

North Millican
Allocations/Allowable Uses:
Dry Canyon and Main Block: Primary emphasis for deer and elk winter range, pronghorn year-round and connectivity habitats and sage grouse winter habitat. Secondary emphasis for sage grouse breeding habitat. Limit motorized travel to designated roads and trails seasonally.

Guidelines:
Dry Canyon and Main Block: Seasonally close the area to OHV use from December 1st through April 30th. Maintain low densities of roads that are open year-round. High priority for habitat restoration.

Northwest
Allocations/Allowable Uses:
West Block: Primary emphasis for deer and elk winter range, and raptor nesting and adjacent foraging habitats. Closed to motorized travel (except for the bouldering area)

Guidelines:
West Block Prioritize high for habitat restoration.

Prineville
Allocations/Allowable Uses:
Combs Flat: Secondary wildlife emphasis for deer winter range and pronghorn winter range and year-round habitat; limit motorized travel to designated roads.
Northern Scattered Parcels: Secondary emphasis for mostly deer winter range, but some elk winter range; limit motorized travel to designated roads.
Miscellaneous Scattered Parcels: Secondary emphasis mostly for deer winter range, but some pronghorn year-round habitat; limit motorized travel to designated roads.

Prineville Reservoir
Allocations/Allowable Uses:
Eagle Rock West: Secondary emphasis for deer winter range and pronghorn year-round habitat; Limit motorized travel to designated roads only.
Taylor Butte: Primary emphasis for deer winter range and raptor nesting and adjacent foraging habitats. Motorized travel is limited to designated roads
Chimney Rock: Primary emphasis for deer winter range and raptor nesting and adjacent foraging habitats. Closed to motorized travel.
Main Block: Primary emphasis for deer winter range, elk winter range and connectivity habitats, and raptor nesting and adjacent foraging habitats. In the Sanford Creek area motorized travel is limited to designated roads and seasonally closed. In the Salt Creek area motorized travel is limited to designated roads.
Reservoir North: Primary emphasis for deer winter range, elk winter range and connectivity habitats, pronghorn year-round habitat, and raptor nesting and adjacent foraging habitats. Motorized travel is limited to designated roads and trails and seasonally closed December 1 through April 30.

Guidelines:
Chimney Rock: Prioritize high for habitat restoration.

South Millican
Allocations/Allowable Uses:
Primary emphasis for sage grouse breeding and winter habitats, deer and elk winter range and pronghorn year-round habitat; Limit motorized travel to designated roads and trails.

Guidelines:
Close the area to OHV use from December 1 through July 31 and prioritize high for habitat restoration (shrub-steppe).

Steamboat Rock
Allocations/Allowable Uses:
Main Block: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
River Riparian Habitat in Main Block: Primary emphasis for raptors, riparian, deer and elk habitats; Closed to motorized travel.

Tumalo
Allocations/Allowable Uses:
Closed to motorized travel. Limit mechanized and horse travel to designated routes.

Hydrology

Riparian

Objective 3H – 7a: Riparian habitats support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations similar to historic conditions.

Rationale:
FLPMA directs BLM to manage its riparian/wetland areas for biological diversity, productivity, and sustainability for the benefit of the Nation and its economy.

The intent of this objective is to ensure that adequate amounts of riparian and wetland vegetation are sustained or increased in the long term. ICBEMP identifies past alterations to vegetation on BLM-administered lands that have resulted in riparian habitat conditions that are less than optimal for aquatic and riparian–dependent species. Riparian ecosystem function, as determined by the amount and type of vegetation cover, has decreased as since historic times.

Guideline:
Late successional riparian vegetation is in amounts and distribution similar to historic conditions.

Watershed/Hydrologic Function

Objective 3H – 9a: Where the capability exists, restore, maintain and improve upland and hydrologic function through the reduction of overland flow, increased infiltration, and improved floodplain function similar to historic levels.

Rationale:
In addition to FLPMA and Fundamentals of Rangeland Health, ICBEMP science and LMP strategy stress the need for management actions to sustain hydrologic processes characteristic of the geo-climatic setting by maintaining and promoting (a) healthy, productive, and diverse plant and animal communities as appropriate to soil type, climate, and landform; and (b) ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

Guideline:
Emphasize moving vegetation composition and densities to structural and physical historic ranges to promote infiltration and minimize overland flow.

Special Management Areas

ACECs

Badlands WSA

Objective 3SMA – 4a: Manage recreation use within the WSA to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors, while maintaining Wilderness suitability.

Rationale:
The Badlands WSA is located relatively close to Bend; therefore the area receives increased levels of use. BLM policy directs the agency to manage the WSA to maintain its suitability for wilderness designation by Congress. Management of recreation activities under BLM policy requires a designated travel system and no creation of additional routes within the WSA

Guidelines:
See Alt. 3 Recreation, Badlands Geographic Area

Alfalfa Market Road ACEC

Objectives 3SMA – 1g: Protect and/or promote the health and integrity of the old growth juniper woodland ecosystem and its associated wildlife and recreational values. 4,100 acres would be designated.

Allocations/Allowable Uses:
Designate approximately 4,200 acres South of Alfalfa Market Road.

- **Livestock grazing**: Would be allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Minerals:** Mineral material sales, development of mining claims, and geophysical exploration would be restricted to protect the special values of the ACEC. Plans of operation must be submitted and approved prior to any issuance of free use permits or sales contracts or prior to the development of mining claims. Approved plans of operation would have stipulations to protect the values of this ACEC. Surface occupancy for fluid mineral leasing would not be allowed.
- **Roads and rights-of-way:** After the permanent BLM road network would be established and implemented, new roads would only be considered if they replace a similar mileage of existing road. Decommissioned roads would be obliterated and rehabilitated unless a compatible use is identified such as converting a road to a trail or preserving a historic route. New rights-of-way would only be considered within existing utility corridors or along county roads or BLM arterial roads.
- **Rockhounding:** The collection of any rock materials would not be allowed.
- **Firearm Discharge**: The ACEC would be closed to firearm discharge unless hunting.

Guidelines:
Vegetation and wildlife habitat management:

- Such projects would be an integral part of ACEC management and would be designed to maintain or enhance the ACEC values.
- Restoration/improvement of native plant communities, old-growth juniper woodlands, and habitat for raptors, neotropical birds and threatened, endangered or other special status plants and animals would be emphasized.
- Long-term vegetation maintenance would be designed to emulate natural processes and return historic diversities.

Juniper Woodland ACEC

Objective 3SMA – 1h: Protect and/or promote the health and integrity of the old growth juniper woodland ecosystem and its associated wildlife, special status plant (Peck's milkvetch), historical (Tumalo Canals) and recreational values.

Allocations/Allowable Uses:
Designate approximately 31,000 acres in the Cline Buttes SMRA.

- **Land tenure:** The ACEC would be within Land Tenure Zone 2, which would allow adjustments provided there is no net loss of acreage within the ACEC and the management goals could still be attained. Acquired lands within the ACEC would be added to the ACEC designation.
- **Livestock grazing**: Would generally be allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Minerals:** Mineral material sales, development of mining claims, and geophysical exploration would be restricted to protect the special values of this ACEC. Plans of operation must be submitted and approved prior to any issuance of free use permits or sales contracts or prior to the development of mining claims. Mineral material sales would not be allowed east of Barr Road in the south ½ of Sections 29 and 30 and the north ½ of Sections 31 and 32 of T15S, R12E to protect the Tumalo Canals. Surface occupancy for fluid mineral leasing would not be allowed. Approved plans of operation would have stipulations to protect the values of this ACEC.
- **Prescribed fire:** Such treatments would not be allowed within the fenced area of the Tumalo Canals.
- **Rockhounding:** The collection of any rock materials would not be allowed.
- **Firearm discharge**: The portion of the ACEC that includes the Maston Allotment and is east of the Cline Buttes Highway would be closed to firearm discharge unless hunting.

Guidelines:

- **Recreation:** Non-motorized recreation would be emphasized, especially in the area east of the Cline Buttes Highway and the area east of Barr Road.
- **Roads and rights-of-way:** After the permanent BLM road network is established and implemented, new roads would only be considered if they replace a similar mileage of existing road. New rights-of-way would only be considered within existing utility corridors or along county roads or BLM arterial roads.
- **Vegetation and wildlife habitat management:** Such projects would be an integral part of ACEC management and would be designed to maintain or enhance the ACEC values. Restoration/improvement of native plant communities, old-growth juniper woodlands, and habitat for raptors, neotropical birds and threatened, endangered or other special status plants and animals would be emphasized. Long-term vegetation maintenance would be designed to emulate natural processes.
- Interpretive trails would be developed, along with signs and brochures.
- Small developments, such as picnic areas at trailheads and/or interpretive areas, would be developed as needed.
- The immediate area surrounding the Tumalo Canals would be fenced and closed to mountain biking, horseback riding, livestock grazing, OHV use, target shooting and dispersed camping.
- Decommissioned roads would be obliterated and rehabilitated unless a compatible use is identified such as converting a road to a trail or preserving a historic route.

Smith Rock ACEC

Objective 3SMA – 1i: Protect a 2,120-acre area adjacent to Smith Rock State Park to provide for high scenic quality and dispersed recreation.

Allocations/Allowable Uses

- **Livestock grazing:** Would generally be allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Minerals:** Mineral material sales and surface occupancy for fluid mineral leasing would not be allowed. Plans of operation must be submitted and approved prior to any development of mining claims. Approved plans of operation would have stipulations to protect the values of this ACEC. Geophysical exploration would also be restricted to protect the natural values for which the ACEC was designated.
- **Roads and rights-of-way:** New rights-of-way would not be considered.
- **Rockhounding:** Rockhounding would be limited to surface collection only. Persons may not dig, excavate, or otherwise remove soil to explore for, discover, or collect buried rock materials.
- **Firearm discharge**: Firearm discharge would not be allowed unless hunting.

Guidelines:

- **Vegetation and wildlife habitat management**: Such projects would be designed to maintain or enhance the ACEC values. Long-term vegetation maintenance would be designed to emulate natural processes.
- The area would be withdrawn from mineral entry under the Mining Law of 1872.

Caves

Objective 3SMA - 8: With the Exception of Redmond Caves (See CT 2 - 7),close all significant caves and caves nominated for significance under the "Federal Cave Resources Protection Act" until a site management plan is developed that provides protection for wildlife and other cave resources before allowing human uses.

Pictograph Cave would be closed except for interpretive use under permit.

Land Uses

Livestock Grazing

Objective 3LG-1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-29 shows just those areas available in this alternative.
Allow livestock grazing at any demand level (See explanation of demand in Chapter 2 Livestock Grazing section).

Guidelines:
Resolve conflicts between livestock grazing and adjacent private landowners, on a case-by-case basis, under existing law, regulation, and BLM policy, allowing up to "high conflicts" (See explanation of conflicts in Chapter 2, Livestock Grazing section).

Minerals

Objective 3MN-3a: Manage conflicts with an emphasis on mitigating mining conflicts with ecosystem and wildlife habitat management objectives in source habitats. Mitigate mining conflicts with recreation and residents as in Alternative 2. (See Map S-24 Minerals Alternative 3).

Rationale:
The conflict mitigation standards established by this alternative provide management guidelines for developing and maintaining healthy ecosystem balance while meeting regional demand for mineral resources. In addition, these standards provide guidelines for mitigating mining conflicts with residents and recreation.

Allocations/Allowable Uses:
- 332,774 acres are available for mineral material sales.
- Mineral material sales may not occur within 1/8 mile of residentially zoned areas or designated recreation sites.
- Roads that feed from BLM-managed lands into residentially zoned areas may be used for mining-related traffic only if alternate routes are not available.
- Seasonal restrictions on all mineral operations would apply to 88,994 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 75,481 acres.

Guidelines:
- Allow up to a high conflict level with recreation and residents.
- Allow mining conflict levels with wildlife by geographic area as outlined in Table 2-12:

ACEC Guidelines: See ACEC Alternatives

Military Uses

Objective 3MU – 4: Provide for a historically consistent level of military training area in the smallest possible area, overlapping training within the same area.

Allocations/Allowable Uses:
Training Area Boundaries
Military use is permitted as shown in Map 35 on approximately 21,094 acres. The training area permitted in this alternative would be south of Highway 126, crossing Powell Buttes Highway. The permitted area would be east of the Roberts Field and North Unit Canal. It would be north of BLM road 6589-B. The permitted area would be west of the private land ownership in the rural community of Powell Buttes. The old clay pit north of Highway 126 would also be included. The area described is the same as the No Action Alternative minus all lands west of the North Unit Canal up to the lands adjacent to the east boundary of the airport.

Recreation

Planning Area Wide

Objective 3R – 4: Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

Guidelines:
See Table A-6

Geographic Areas

Table A-6 above displays how recreational opportunities are dispersed throughout the planning area in Alternative 3. The recreation management direction specific to geographic areas is described below.

Table A - 6 Recreation Emphasis

Alternative 3	Multi-use separate facilities	Multi-use shared facilities	Non-motorized recreation emphasis	Non-motorized recreation exclusive	Non-recreation emphasis	Roads only emphasis
Cline Buttes	X			X		(minor)
Northwest			X	(minor)		
La Pine		X	X			
Bend-Redmond		X		(minor)		
Mayfield			X	X		
South Millican		X				
North Millican		X		(minor)		
Millican Plateau		X		X	(minor)	
Prineville Reservoir		X	X	X		
Steamboat Rock	X			X		
Badlands				X		
Horse Ridge			X		(minor)	
Prineville				(minor)		X
Tumalo				X		

Badlands
The area's management would move more toward a primitive, non-motorized recreation experience, with the entire area being closed to motor vehicles, except for administrative use. Mechanized use (e.g., mountain bikes, horse drawn carts) would be allowed on designated, inventoried routes. Designated parking and trailhead improvements would be a high priority under this alternative, in order to provide adequate parking for vehicles and trailers that currently park in dispersed locations within the WSA.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
The Badlands WSA would be Closed to all motorized vehicle use, except administrative use (including patrols and Interim Management Plan monitoring).

Guidelines:
- Mechanized use allowed year-round on a designated system of inventoried routes that connect to each of the existing trailheads – Obernolte Road, Milepost 16, Route 8 north, Route 8 south, Route 5 and Reynolds Pond to Route 5.
- Route along main canal Closed to motorized use, but Open for administrative use. Work with COID to provide canal crossings as needed.

<u>Objective 3R - 2:</u> Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

<u>Rationale:</u>
Improvement of designated parking areas is needed to accommodate large number of vehicles that are now parking in numerous dispersed locations within the Badlands WSA boundary.

<u>Guidelines:</u>
- Develop a designated parking area with defined boundaries at the Route 8 entrance off State Highway 20. Priority would be given to development of this area outside the WSA boundary (See also North Millican section – Urban based recreation and Access).
- Develop a designated parking area with defined boundaries at the County Line Road entrance. Parking area should be the smallest possible while decreasing the amount of private land trespass and cutting of WSA boundary fences and cross country vehicle travel within the WSA.
- Improve Milepost 16 trailhead to allow for additional vehicles and better turning radius.
- Develop an improved, designated parking area at Reynolds Pond, and provide a designated trail link outside the WSA from this parking area to the current Route 5 entrance area (along satellite COID canal along WSA boundary). This parking area would be easier to access than the current Route 5 entry, and would allow for an increase in recreation opportunities while increasing the BLM's ability to patrol and manage the access point.

Bend/Redmond
Alternative 3 provides a similar level of management as Alternative 2; however, this Alternative identifies the area north of State Highway 126 as having a lower trail density than in Alternative 2. This alternative places more emphasis than Alternative 2 on moving trails away from existing subdivisions to the extent feasible. While the area's management changes from an Open to a Limited designation, all recreation users are expected to share the same trails (with the exception of a possible North Unit Canal regional trail and trails within the fenced portion of the Wagon Road ACEC. Select roads of historic and cultural value may be removed from the designated road system. Site improvement goals would include staging areas; an OHV play area; additional trail bridge crossings of the north unit canal; and grade separated crossings of State Highway 126, Powell Butte Highway, and other new arterials or highways rights-of-way roads.

<u>Objective 3R - 1:</u> Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

<u>Rationale:</u>
The Bend/Redmond area is one of the larger, contiguous areas of BLM land within close proximity to Bend and Redmond. Although the area's topography is not as varied or interesting for OHV use as the existing established use areas, it does offer opportunities for longer length winter riding that are close to Bend and Redmond and easily accessed short rides.

<u>Guidelines:</u>
- Would develop two-way OHV trail system designed primarily for OHVs, but Open to all users.
- Would provide opportunities for 3 to 4 hours of riding.
- Trail and road system density in area north of State Highway 126 would be lower than the designated trail and road system south of State Highway 126.

Cline Buttes
Recreational users in Cline Buttes would be segregated to minimize conflicts to a significant degree. Motorized use would be managed with an emphasis on designated roads. The Maston Allotment would be managed for primitive, non-motorized recreation experiences, and many areas in Cline Buttes emphasize designation of non-motorized trails, including the upper portions of the Buttes, the historic canals, and the canyon areas.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The Cline Buttes area has been designated as Limited to OHV use since the BLP RMP; however no trail or road system was ever identified. The increased recreational use of the area, and the increased residential and resort development in the area have resulted in user conflicts, resource impacts, and dissatisfaction among recreational users.

Allocations/Allowable Uses:
The main block south of State Highway 126 and generally west of Barr Road would be designated as Limited to designated roads and trails. Except:
- The canyon complex east of Fryrear Road and south of State Highway 126 would be Closed to motorized travel.
- The area north of State Highway 126 would be designated as Limited to designated roads and trails.
- The area east of Cline Falls highway (Maston Allotment) and the area east of Barr Road, west of Cline Falls Highway, and south of the access road to the Cline Buttes gravel pit (Cline Buttes Old Growth Juniper ACEC) would be designated as Closed to motor vehicles.

Guidelines:
- Multiple or shared use trail system goal of approximately 25 to 30 miles within the areas designated as Limited to designated roads and trails.
- Within areas designated as Limited, emphasis would be placed on managing for motorized use on roads, although some motorized trails would be designated as needed to provide a variety of riding experiences and to connect the road system into useable loops. Smaller loop trails near the Barr Road Cinder pit would be provided for motorized use.
- Road system in Cline Buttes would be revised to make useful loops, avoid dead-end roads, and reduce the number of motorized access points from adjacent roads or private property.
- Areas identified as wildlife corridors: 1) the McKenzie Butte area between Cline Buttes and Squaw Creek; and 2) the Innes Market Road/Dusty Loop area between Cline Buttes and Tumalo, would be managed for lower motorized trail densities than the rest of the Cline Buttes block.

Objective 3R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guideline:
- Limit the number of access points to areas closed to OHV use to approximately 2 or three designated trailheads.
- Trailheads would be developed to provide designated, off-street parking and would designed to accommodate horse trailers

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
- Trail emphasis for this area would be primarily on non-motorized.
- Historic canals on both sides of Barr Road would be managed as an interpretive hiking trail, to the maximum extent feasible, while avoiding trespass and minimizing conflicts with adjacent landowners.
- Manage equestrian and mountain bike use on a designated trail system. Within the geographic subdivision, give priority to establishing a designated trail system within the Cline Buttes Juniper Woodland ACEC.
- Provide designated trail opportunities for mountain biking in the higher elevation portions of Cline Buttes, provided legal access exists and trespass would be minimized and visual resource management classes are met.

Horse Ridge
Under this alternative, the management focus for the Skeleton Fire area and Horse Ridge would be on non-motorized trail use on designated trails. Designated roads would be present in these areas, but at a low density and layout similar to what is currently available. Existing 2-track roads that are currently Closed to motorized use would be considered for inclusion as part of a designated, signed, non-motorized trail system.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
The entire area's proximity to Bend and easy access off State Highway 20 have resulted in increased levels of trail use by equestrians, hikers, runners, and mountain bicyclists who use existing roads throughout the area, game trails, and user improved or created trails. Despite the high levels of use, typically occurring in fall and winter, there is no designated, understandable trail system for this use, leading to creation of new trails and trespass on private property.

Guidelines:
- Roads in the old Skeleton Fire area and Horse Ridge would be realigned or closed to create a trail network for non-motorized use that provides loops and connections to designated park areas and Horse Ridge and the Skeleton Fire area.
- Mechanized use allowed on designated trails and roads throughout Skeleton Fire and Horse Ridge Area.
- A designated, non-motorized trail connection would be provided between the Horse Ridge area and the area between the old and new State Highway 20 routes and from Horse Ridge and the Dry River Canyon area.

La Pine
Under Alternative 3, motorized use would be Limited to a designated road system. Some designated OHV trail connections could be developed from the Rosland OHV play area east to the Deschutes National Forest.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses
The La Pine block would be managed as Limited to designated roads only, except (see Map 10):
- The area surrounding and east of the Rosland OHV Play area would be Limited to designated roads and trails.
- Isolated public land blocks within the La Pine area would be managed as Closed to motor vehicles. These blocks generally range from 40 acres to 500 acres in size.

Guideline:
Recreation emphasis for this area would be to provide trail links to Deschutes National Forest roads and/or trails.

Mayfield
Motorized vehicle use in the main block of public lands north of Alfalfa Market Road and south of Powell Butte Highway would be Limited to designated roads only, with most of the road use occurring in the northern half of the block. Motorized access points would be provided at Alfalfa Market Road and Powell Butte Highway, but no other locations. A signed trail system would be established in the block for equestrian/non-motorized use. The road to Mayfield Pond would be rerouted further away from the pond or would end at a parking area prior to the pond. The area south of Alfalfa Market Road (Alfalfa ACEC) would be Closed to motor vehicle use year-round, and would be managed for recreation use on a designated trail system, which includes closed roads, roads converted to trails, and new trail construction.

Objective R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- Main block between Alfalfa Market Road and Powell Butte Highway would be designated as Limited to designated roads only.
- The Alfalfa ACEC would be designated as Closed to motor vehicles.
- The area outside of the Alfalfa ACEC boundary and west of Dodds Road would be designated Closed to motor vehicles.
- The area east of Dodds Road would be Limited to designated roads only, in order to allow continued access to Reynolds Pond.

Guidelines:
- Roads in the area east of Dodds Road would be limited to canal access roads and one access road to Reynolds Pond.
- Other than these roads, the management emphasis for this area would be on non-motorized trails and a trail link from Reynolds Pond parking area to the Badlands Route 5 trailhead.

Objective 3R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines
- General public use, motorized access points into the area would be limited to one access point from Powell Butte Highway and one access point from Alfalfa Market Road.
- To support the motorized vehicle closure within the Alfalfa ACEC, the area would be fenced, and a designated parking area created at one location along Alfalfa Market Road. Other access points would be provided, but would be minor access gates, without improved parking.
- A parking area would be created near Dodds Road at the access road to Alfalfa

Pond. Access to the pond would be non-motorized. The road would be retained for administrative access.
- Relocate the road to Mayfield Pond, moving the road away from the pond and creating a designated parking area and trail to the pond/picnic area.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
- Non-motorized use (except hiking) would be Limited to designated roads and trails when a designated system is implemented.
- Manage non-motorized use by developing a designated, signed, non-motorized trail system in the following areas:
  1. The main block (north of Alfalfa Market Road);
  2. The Alfalfa ACEC and the area between the ACEC boundary and west of Dodds Road;
  3. The Airport Allotment.
- Create a designated, non-motorized trail link between the Reynolds Pond parking area and the Badlands WSA Route 5 trailhead.

Millican Plateau
The area would be managed for OHV use on designated roads and trails, similar to the present management (Alternative 1). The area north of Kitchen Hill and south of Reservoir Road would be managed for year round use on designated roads and trails, except under conditions of heavy snowfall, as specified in the Final Judgment for the Millican Valley Plan. An area along the Crooked River Canyon (i.e., east of Road 6555-b) would be Closed to motorized vehicles.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area currently receives a high level of OHV use, and already has a designated trail system. The area's growing population and use as a recreation destination would likely increase the levels of use the area currently receives. In addition, the likely paving of West Butte and Millican Road would lead to increased safety issues for the OHV trail system that crosses the newly paved road in numerous places. Realignment of trails, closing of other trails, and new trail construction is needed to ensure the trail system connects to safe crossing points.

Allocations/Allowable Uses:
- The area north of Kitchen Hill and south of Reservoir Road would be managed for OHV use on designated roads and trails year-round. This area would be Closed to OHV use during the period between December 1 and April 30 when snow depths exceed specified depths.
- The area east of Road 6555-b and west of the Crooked River would be designated as Closed to motor vehicles.

Guidelines:
Snow depth would be measured at the current designated measurement locations and averaged. If the applicable snow depth is exceeded, the area shall be posted closed at kiosks with 48 hours and remain closed until the snow depth falls below the applicable amount.

Snow Closures:

TIME PERIOD	SNOW DEPTH (INCHES)
Dec. 1 – Dec. 14	6.8
Dec. 15 - Dec. 31	9.1
Jan. 1 – Jan. 14	11.0
Jan. 15 – Jan. 3	12.7
Feb. 1 – Feb. 14	14.4
Feb. 15 – Feb. 29	11.9
Mar. 1 – Mar. 14	9.3
Mar. 15 – Mar. 31	7.0
April 1 – April 14	4.2
April 15 – April 30	2.2

North Millican Area

Alternative 3 manages the area for shared use, with a small portion of the area located adjacent to the Badlands WSA emphasizing non-motorized trails. The entire area would be Open to motorized use from May 1 thru November 30. The alternative would establish improved trailheads, and a group use area at the base of Dry Canyon, which would replace the dispersed parking and camping occurring in the area presently. Many of the improvements established in the Millican Valley Plan would be implemented.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:

The area currently receives a high level of OHV use, and already has a designated trail system. The area's growing population and use as a recreation destination would likely increase the levels of use the area currently receives. In addition, the likely paving of West Butte Road would lead to increased safety issues for the OHV trail system that crosses the newly paved West Butte Road in numerous places. Realignment of trails, closing of other trails, and new trail construction is needed to ensure the trail system connects to safe crossing points.

Allocations/Allowable Uses:

Area would be Limited to designated roads and trails and motorized travel would be limited to May 1 thru November 30.

Guidelines:

- The North Millican Cinder Pit would be retained as an OHV play area. The Cinder Pit would be redesigned for better and safer OHV use if this can be done without compromising the site's effectiveness for material extraction.
- Purchase ODOT Pit to ensure long-term use as an OHV play area and staging area for events. BLM to purchase or exchange Deschutes County and ODOT owned lands.
- Maintain culverts under Highway 20 for motorized trail links during period when adjacent roads and trails are Open to motorized use.

Objective 3R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:

Develop trailhead and parking area at base of Dry Canyon.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
The entire area's proximity to Bend and easy access off State Highway 20 have resulted in increased levels of trail use by equestrians, hikers, runners, and mountain bicyclists who use existing roads throughout the area, game trails, and user improved or created trails. Despite the high levels of use, typically occurring in fall and winter, there is no designated, understandable trail system for this use, leading to creation of new trails and trespass on private property.

Guidelines:
- Entire area would be open for mountain biking and equestrian trail use on designated trail system.
- A portion of area would emphasize designated, non-motorized trails. This area would include Dry Canyon and the area north of Trail 41.
- A designated trail link would be provided from Dry Canyon to the Route 8 entrance to the Badlands WSA.
- Existing trails that are not part of the Millican Valley OHV trail system (e.g., Dry Canyon) would be designated as non-motorized trails.
- Some trails in the larger North Millican area would be constructed, maintained or revised to accommodate needs of non-motorized recreational users who would be using the area during the winter/early spring motorized closure period (Dec. 1 through April 30).
- If legal access is obtained, designate a non-motorized trail system in Powell Buttes and manage all non-motorized (except foot traffic) use as Limited to this system. Close and rehabilitate other user created trails.

Objective R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
- In conjunction with trailhead and parking area, develop a primitive camping area at the base of Dry Canyon.
- Develop competitive event staging area at existing West Butte staging area or at ODOT Pit Play area.
- Consider developed group use and camping site near COSSA Shooting range, to be operated on a reservation system to support shooting events, trail use events and other group use activities.

Northwest
The area would be managed with an emphasis on non-motorized recreation use, with motorized use being limited to designated roads only in the main block, while the scattered parcels west of Squaw Creek are closed to motorized use. A seasonal restriction on motorized use would be in place, consistent with adjacent policy on the Crooked River National Grasslands (CRNG); however, the area remains open year-round for non-motorized use. Non-motorized trails and additional trailheads to serve them are provided.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized travel in main block Limited to designated roads and limited to April 1 through November 30.
Isolated parcels west of Squaw Creek would be Closed to motorized travel, except for Sisters Climbing Area.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Consider Cascade Mountain/Willamette Valley Wagon Road as a non-motorized trail. Construct new trail alignments as necessary to avoid private property in T 14 S, R 11 E, Section 15, realigning trail ¼ mile or more away from private lands to the maximum extent feasible. Construct new trail alignment to link CMWV trail to access road for Alder Springs Trailhead. Consider development of one or more loop trails off main CMWV trail.
- Consider a hiking only trail on the east side of Holmes Road (T14 S, R 11 E, Sections 11, 12, 14, 22, and 23). Convert existing unimproved roads in the area to serve as designated non-motorized trails by half-tracking.
- Manage all trails, including the trail link to Alder Springs Trail as year-round trails for non-motorized use.

Prineville
Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Guidelines:
OHV use would be Limited to designated roads in the isolated parcels north of Prineville.

Prineville Reservoir
The area would be managed primarily for motorized use on a limited designated road system, with the trails focus being the development of non-motorized trails adjacent to the Crooked River and Prineville Reservoir. The area between the County Boat Ramp and the Chimney Rock Trail on the Crooked River would be managed for non-motorized use only. The northeastern portion of the area (the Sanford Creek drainage) would be managed for little motorized access, with designated roads only being open seasonally. The remainder of the area including lands on either side of the Bear Creek arm of Prineville Reservoir would be Limited to designated roads only year-round. These BLM lands would have designated, non-motorized trails that link to BOR/State Park managed sites at Prineville Reservoir.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
Much of the area exists in a fragmented land ownership pattern. In addition, BLM lands are located adjacent to Prineville Reservoir and the Lower Crooked River; therefore, some wildlife management concerns exist here. In addition, recreation users often use both BLM lands and the adjacent Prineville Reservoir State Park.

Allocations/Allowable Uses:
Same as Alternative 2 except:
- Area north of upper Portion of Prineville Reservoir is designated Limited to designated roads and motorized travel would be Limited to May 1 thru November 30.

- Area between County Boat Ramp and Chimney Rock Trail would be Closed to motor vehicles.
- Motorized travel would be Limited to designated roads (Taylor Butte travel is Limited under Common to Alternatives 2-7), except:
  1. Within the Sanford Creek area motorized travel would be Limited to designated roads and OHV use would be limited to May 1 thru November 30.

Objective 3R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:
- Designated non-motorized trails would utilize State Park/BOR trailhead facilities where feasible.
- A trailhead for non-motorized users would be provided off State Highway 27 at Taylor Butte.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
The area currently has no managed or designated trail system, and recreation use conflicts have occurred due to the different management goals of BLM, BOR, State Parks and ODF&W. BOR and State Parks have identified trailheads and non-motorized trail goals in their current planning efforts for Prineville Reservoir.

Guidelines:
- The area north of Prineville Reservoir and immediately east of the Crooked River would be managed for non-motorized trail use on designated trails only. If roads Closed to motorized travel are suitable for a non motorized trail system they may be converted to non-motorized trails. Roads not needed would be obliterated.
- The existing Chimney Rock trail would be extended into a trail system with several loops that ultimately connects to BOR and State Parks managed trailhead near the County Boat Ramp.
- A non-motorized trailhead and parking area would be developed on the north side of this area; other access points would be the Chimney Rock Trailhead, and a trailhead near the County Boat Ramp.
- Develop designated, non-motorized trails in the Taylor Butte/Powderhouse Cove area that would connect to BOR/State Park facilities, provide loops in the Powderhouse Cove area, and link Roberts Bay to the Bear Creek site.
- Designated trails in the Taylor Butte area would be coordinated with BOR and State Parks.

Smith Rock
Alternative 3, like all alternatives, closes the entire block to motorized vehicles. This alternative does not allow for additional trail development for non-motorized trail use, other than trail rerouting to solve resource or user safety problems at climbing areas. The designated trail link from Smith Rock State Park to the Grey Butte Trail would be maintained.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
No new trail development would occur other than trail improvements to access climbing areas and solve erosion, visual resource, or other resource issues

South Millican Area
The South Millican Area remains Open to motorized use on designated roads and trails but would be Closed seasonally to OHV use from December 1 to July 31. Connections to North Millican and National Forest trails systems could be developed in the future.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
South Millican OHV area and Fox Butte Area are Limited to designated roads and trails and motorized use would be Limited to August 1 thru November 30.

Guidelines:
- Primary staging area for casual use and events in the South Millican Area would be located approximately 1-½ miles west of Millican and one mile south of State Highway 20. Typical improvements would include bulletin board, loading ramp, and toilets as use levels warrant.
- No motorized trail connections would be developed linking South Millican to Deschutes National Forest.

Steamboat Rock
Main Steamboat Rock Block would be Limited to designated roads and to OHVs only (no full size vehicles) in an effort to reduce conflicts between residential areas and public land visitors and to reduce illegal dumping prevalent in the area. The number of access points would be reduced, and new roads would be created to link existing roads back to common access points or trailheads. A separate trail system for non-motorized use would be developed. A high level of signage and public information would be put in place to maximize user compliance on trail system regulations. The river parcels adjacent to Crooked River Ranch would continue to be managed to emphasize non-motorized use. Isolated parcels northwest of Redmond are managed exclusively for non-motorized use, with access improvements to allow access to the middle Deschutes River while minimizing conflicts with landowners.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The Steamboat Rock area has been designated as Open to OHV use since the B/LP RMP; however the proliferation of user created roads and trails, along with massive and widespread garbage dumping, has led to resource impacts, user conflicts, and dissatisfaction among most visitors to the area.

Allocations/Allowable Uses:
Main block managed as Limited to designated roads only, and Limited to Class I and III OHVs only (no full size vehicles).

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:

- A separate trail system for non-motorized use would be designated in the main Steamboat Rock block. Non-motorized recreationists may also use the OHV roads and trails.
- Mountain bikers and equestrians would be required to stay on designated trails in the main Steamboat Rock block.

Tumalo

The Tumalo Block would be closed to motorized use year-round, and the recreation management emphasis would be on providing non-motorized opportunities (hiking, mountain biking, and equestrian use) on designated trails year-round. Designated, improved, and managed parking areas and trailheads are developed. A designated, non-motorized trail system would be developed and signed in both larger parcels north and south of Tumalo Reservoir. In order to control motor vehicle access into the parcels, the boundaries are fenced. Unlike other alternatives that stress non-motorized trail development, this alternative explicitly calls for no development of regional trails through the area.

Objective 3R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:

The entire area would be Closed to motorized use.

Objective 3R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guidelines:

Identify designated access points, parking areas and trailheads to support the non-motorized trail system. Limit the number of access points through trail layout and rehabilitation efforts.

Objective 3R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:

- Designate a system of non-motorized trails in both the main Tumalo Block and the area south of Tumalo Reservoir.
- Close or rehabilitate existing unimproved roads in the area to serve as designated trails by half-tracking.
- No regional trails would be designated through BLM lands within the main Tumalo Block. Any regional trail connections would be required to use the Sisemore Road corridor or the Brooks Scanlon corridor as the regional trail connector.

Transportation and Utilities

Objective 3TU – 6: Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Rationale:

Management to accommodate growth would focus on protecting and improving "key" ecological areas.

Allocations/Allowable Uses:

- Designate the road network and transportation/utility corridors as shown on Map 3 and Map S-3.
- Allocate a transportation/utility corridor adjacent to the BN-SF railroad right-of-way approximately ½ mile wide south of Redmond, extending to Quarry Road.
- Allocate a reduced area for a regional transportation corridor, connecting with an interchange at Quarry Road on Highway 97 rather than extending south to Deschutes Junction.
- Designate a regional transportation corridor between south Redmond to connect with an interchange at or around Quarry Road.
- Identifies 63 percent of the planning area in a primary wildlife emphasis designation and 36 percent in either a non-motorized emphasis or non-motorized exclusive designation

Guidelines:
Designate arterials and collectors that provide for access to and through BLM- managed lands that emphasize low to moderate conflict levels within source habitats. Conflict levels would consider contributions of motorized trail systems, road systems not under BLM jurisdiction, future right-of-way potential. Up to high levels of conflict would be permitted outside of source habitats.

Land Ownership

Objective 3LO-2: Retain with an option to Exchange (Z-2) (see CTA): Identify parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values.

Rationale:
Targets lands available for sale or exchange that provide specific benefits with an emphasis on wildlife management objectives or providing open space and parks for urban connections and recreational opportunities

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-2 (approximately 33,556 acres).

Guidelines:

- Exchanged parcels may be from anywhere within the planning area.
- Dispose of isolated or fringe public parcels to provide options to obtain private parcels with better resource values with an emphasis on ecological condition.
- Isolated and fringe parcels are located west and northwest of Cline Buttes and north of the Mayfield Pond area. Other parcels include Steamboat Rock, Alfalfa, Juniper Acres, Millican, Bend Airport, and four parcels north of La Pine.
- Parcels selected were west and north of Cline Buttes to serve as an exchange base to provide connectivity to Cline Buttes from Northwest and Tumalo. Also emphasized was consolidation of public lands west and south of Cline Buttes. Parcels to the south and west of Powell Buttes were selected to provide connectivity to the Powell Buttes parcels, with a lesser emphasis on consolidation. Lands were designated Z-2 in La Pine to provide connectivity or consolidation in the area of La Pine State Park. Lands designated Z-2 in Horse Ridge and Southeast were selected to consolidate the large blocks.

Objective 3LO – 3a: Provide land for wildlife habitat through the sale of public lands that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to manage or that would represent a greater public benefit in other ownership.

Rationale:
Keep opportunities for funds from land sales available under the BACA Bill, and tie those sales closely to acquisition of lands with a priority on important wildlife benefits.

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-3 (approximately 7,889 acres). Parcels identified as suitable for disposal include isolated parcels between Bend and Redmond, two isolated parcels northwest of Redmond, and isolated parcels around Prineville.

Guidelines:
Whenever possible pair disposal actions with acquisitions so, though they are two separate transactions, the transactions occur simultaneously.

Objective 3LO – 4a: Provide transition zones between highly developed urban areas and large blocks of primarily undeveloped natural landscapes.

Rationale:
There is a continuing challenge to public land managers as urban centers become increasingly densely developed, and expanding highway systems dominate the natural landscape. The transition between a "natural" wild land and a city often results in sublimation of the natural landscape to a partially or completely altered landscape. Transition zones between the natural, native landscape and urban centers that include gradual changes from developed to natural landscapes can provide physical buffers and open space often valued by urban dwellers. These zones offer opportunities for clearly separating fast-growing urban areas and can often provide limited wildlife benefits as well.

Allocations/Allowable Uses:
Designate the lands in Map 32 for community expansion (approximately 3,121 acres). Public lands identified for community expansion for parks and transportation corridors with compatible facilities are located south of Redmond and east of Highway 97 and adjacent to the Burlington Northern and Santa Fe railroad tracks. Parcels identified for community expansion for park purposes only are Barnes Butte northeast of Prineville; and public lands adjacent to the north, east, and south boundaries of the community of La Pine.

Guidelines:
Allow for sale or exchange of lands for community expansion that would support parks, open spaces, green belts along transportation corridors, alternative commuting options, or other uses that would provide direct or indirect benefits associated with transitioning from urban to natural or native landscapes.

Objective 3LO – 5a: Consolidate public lands in Zones 1 and 2 to protect and improve the best ecological areas and provide for the passage of wildlife, to provide access to public lands, and to increase the spectrum of recreation opportunities.

Allocations/Allowable Uses:
Designate the lands in Map 32 as desirable acquisition parcels. These parcels include those between Northwest and Cline Buttes, Smith Rock and Bend/Redmond, Tumalo and Cline Buttes, Bend/Redmond and Cline Buttes, and Mayfield and the Badlands.

Objective 3LO - 6: Maintain or create large consolidated blocks of public land; provide for recreational, botanical, and wildlife connectivity on public land; and allow for the greatest range of existing uses.

Rationale:
Emphasizes maintenance of public lands that provide long-term benefits to wildlife and recreation management objectives.

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-1 (approximately 358,841 acres). Blocks of public lands identified as Z-1 include Tumalo, Cline Buttes, Bend/Redmond Core, Smith Rocks, Mayfield, Badlands, Horse Ridge, Reservoir East, Reservoir West, Southeast, Highway, and the majority of public lands in La Pine north and south of the community. Other, smaller parcels of public land identified include Grizzly Mountain, Ochoco Reservoir, and Redmond Caves.

Public Health and Safety

Objective 3PHS – 9: The objectives are the same as those Common to Alternatives 2-7 with an emphasis on protection of key source habitats and reducing conflicts with ecosystem and wildlife habitat objectives. This alternative also emphasizes the use of ACECs, and designates the entire planning area as a Special Recreation Management Area (SRMA).

Rationale:
This alternative emphasizes additional closures to all firearm discharge to protect natural and cultural resources within ACECs and RNAs. Additional recreation experience closures are implemented to compliment recreational emphasis.

Allocations/Allowable Uses:
The following areas, listed in Tables A-7 and A-8, are:

Table A-7 Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes (Canal ACEC)	X	X	X	
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road)	X	X	X	X
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC)	X	X	X	X
Mayfield Block (Airport parcel)	X	X	X	X
Horse Ridge Block (North of Rickard Road, South of Hwy. 20)	X	X		X

Table A-8 Closed to firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Steamboat Rock Block (All BLM land south of Lower Bridge Road outside of the WSR corridor)	X	X	X
Northwest Block (All BLM land not closed to all firearm discharge CT Alts 2-7)	X	X	
Cline Buttes Block (Maston Allotment)	X	X	X
Tumalo Block (Entire block expect for the 700-acre parcel south of Tumalo Reservoir Road)	X	X	X
Mayfield Pond Block (Alfalfa ACEC and adjacent lands to the southeast)	X	X	X
Horse Ridge Block (BLM land between new and old Highway 20)	X	X	X
Badlands Block (Entire Badlands Block except 1/4 mile around Badlands Rock from March 1 to August 31)	X	X	X
Prineville Reservoir Block (BLM lands contiguous and east of Lower Crooked WSR and contiguous and west of BOR/Prineville Reservoir)		X	X
Millican Plateau Block (BLM lands contiguous and west of the Lower Crooked WSR, and east of Road 6665)		X	X
La Pine Block (Entire block except for parcels closed to all firearm discharge CT Alts 2-6)	X	X	X

Alternative 4

Ecosystem Health and Diversity

Vegetation

Shrub Steppe Communities
Same as Alternative 2.

Old-Growth Juniper Woodlands
Same as Alternative 2, except there would be two proposed old-growth Juniper Woodland ACECs.

Lodgepole Pine and Ponderosa Forest
Same as Alternative 2

Wildlife

Geographic Areas

Objective 4W–2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities meet ODFW management objective numbers for deer and elk (Brothers/La Pine RMP, p. 12, slightly modified).

Under Alternative 4, wildlife management emphasis would be the same as outlined for Alternatives 2-7. In addition, this alternative would establish additional direction for the following areas:

Bend-Redmond
Allocations/Allowable Uses:
North: Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Cline Buttes
Allocations/Allowable Uses:
Dry Canyon and Southeast: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
Maston: Secondary emphasis for elk, raptors and riparian areas; limit motorized travel to designated roads and trails.

Horse Ridge
Allocation/ Allowable Uses:
Limit motorized travel to designated roads only.

La Pine
Allocations/Allowable Uses:
Southern Block: Minor emphasis for deer migration and elk. Limit motorized travel to designated roads and trails.

Mayfield
Allocations/Allowable Uses:
Main: Minor emphasis for pronghorn year-round habitat and connectivity; Limit motorized travel to designated roads and trails.
South Alfalfa: Primary emphasis for deer and year-round pronghorn habitat and connectivity; limiting motorized travel to designated roads only.

Millican Plateau
Allocations/Allowable Uses:
South: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
Crooked River Rim: Secondary emphasis for deer and pronghorn winter range and raptor nesting and foraging habitats; limit motorized travel to designated roads.
Mayfield Link: Secondary emphasis for pronghorn connectivity routes; limit motorized travel to designated roads only.

North Millican
Allocations/Allowable Uses:
North Millican West and Dry Canyon: Primary emphasis for deer and elk, and pronghorn year-round habitat and connectivity. Secondary emphasis for sage grouse. Limit motorized travel to designated roads and trails seasonally.
East: Minor wildlife emphasis; Limit motorized travel to designated roads and trails.

Prineville
Allocations/Allowable Uses:
Grizzly/Scattered North Parcels: Mostly minor wildlife emphasis though some secondary emphasis for deer and elk winter range; limit motorized travel to designated roads and trails.
Combs Flat: Secondary emphasis for deer and for pronghorn year-round and winter range; limit motorized travel to designated roads and trails in larger blocks, limit motorized travel to designated roads only in part of Dry Creek.
Miscellaneous scattered parcels of BLM administered lands: Primary emphasis for deer and pronghorn year-round habitat; closed to motorized travel.

Prineville Reservoir
Allocations/Allowable Uses:
West Eagle Rock, Chimney Rock and Reservoir North: Minor wildlife emphasis; limiting motorized travel to designated roads and trails.
Main: Primary emphasis for deer, elk connectivity and raptor habitats; closed to motorized travel.
Taylor Butte: Primary emphasis for deer and raptors; closed to motorized use.

Guidelines:
Non-motorized trails would be available, especially in areas adjacent to BOR lands where trails could connect to provide a functional trail system.

South Millican
Allocations/Allowable Uses:
Secondary emphasis for sage grouse breeding and winter habitats, deer and elk winter range and pronghorn year-round habitat; limit motorized travel to designated roads only.

Steamboat Rock
Allocations/Allowable Uses:
Main: Minor wildlife emphasis; limit motorized travel to designated roads and limited to OHVs (no full size vehicles).
River in Main Block: Primary emphasis for raptors, riparian, deer and elk; closed to motorized travel.

Tumalo
Allocations/Allowable Uses:
Limit motorized travel to designated roads seasonally.

Special Management Areas

ACECs:

Alfalfa Market Road ACEC
See Alternative 3.

Juniper Woodlands ACEC
See Alternative 3.

Sage Grouse ACEC

Objective 4SMA – 1j: Protect an 8,000-acre area south and east of Horse Ridge to provide for an undisturbed wintering area for sage grouse, a special status species.

Allocations/Allowable Uses:

- **Land tenure:** The ACEC would be within Land Tenure Zone 2, which would allow adjustments provided there is no net loss of acreage within the ACEC and the management goals could still be attained. Acquired lands within the ACEC would be added to the ACEC designation.
- **Livestock grazing**: Would generally be allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Minerals**: Mineral material sales, development of mining claims, and geophysical exploration would be restricted to protect the special values of the ACEC. Plans of operation must be submitted and approved prior to any issuance of free use permits or sales contracts or prior to the development of mining claims. Approved plans of operation would have stipulations to protect the values of this ACEC. Surface occupancy for fluid mineral leasing would not be allowed.
- **Rockhounding**: Rockhounding would be limited to surface collection only. Persons may not dig, excavate, or otherwise remove soil to explore for, discover, or collect buried rock materials.

Guidelines:

- **Roads and rights-of-way**: After the permanent BLM road network is established and implemented, new roads would only be considered if they replace a similar mileage of existing road. New rights-of-way would only be considered within existing utility corridors or along county roads or BLM arterial roads.
- **Vegetation and wildlife habitat management**: Such projects would be designed to maintain or enhance the ACEC values. Long-term vegetation maintenance would be designed to emulate natural processes.
- **Access:** would be restricted from most of the ACEC during the winter months to allow sage grouse an undisturbed area in which to winter.
- **Decommissioned roads**: would be obliterated and rehabilitated unless a compatible use is identified such as converting a road to a trail or preserving a historic route.

Caves
Pictograph Cave would be closed seasonally (October 15 – May 1) for a bat hibernacula. Bolted climbing routes would be allowed in Pictograph Cave subject to site specific analysis.

Land Uses

Livestock Grazing

Objective 4LG - 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-30 shows just those areas available in this alternative.

Guidelines:
- Modify livestock grazing as necessary so that conflicts with adjacent private landowners do not exceed "moderate,"
- Livestock grazing is allowed when demand is moderate or high.

Minerals

Objective 4MN – 3a: Manage conflicts with an emphasis on mitigating mining conflicts with ecosystem and wildlife habitat management objectives in source habitats. Mitigate mining conflicts with recreation and residents as in Alternative 2. (See Map S-25 Minerals Alternative 4).

Rationale:
The conflict mitigation standards established by this alternative provide management guidelines for developing and maintaining healthy ecosystem balance while meeting regional demand for mineral resources. In addition, these standards provide guidelines for mitigating mining conflicts with residents and recreation.

Allocations/Allowable Uses:
- 332,774 acres are available for mineral material sales.
- Mineral material sales may not occur within 1/8 mile of residentially zoned areas or designated recreation sites.
- New mineral material sites may not be developed on BLM-administered lands where alternative source(s) are available within 30 miles driving distance of construction site(s) where the mineral materials would be used or commercial distribution centers where the mineral materials would be sold as raw materials or as finished products.
- Seasonal restrictions on all mineral operations would apply to 64,723 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 65,364 acres.

Guidelines:
- Allow up to a high conflict level with recreation and residents.
- Allow mining conflict levels with wildlife by geographic area as outlined in Table 2-12:

ACEC Guidelines: See ACEC Alternatives

Military Uses

Objective 4MU – 5: Reduce disturbance by military operations to residents of adjacent private lands while providing a training area about the same size presently available.

Rationale:
Residents of adjacent private lands are likely to be disturbed by noise and dust if military operations take place immediately adjacent to their residences.

Allocations/Allowable Uses:

Training Area Boundaries:

Military use is permitted as shown in Map 35. The training area permitted in this alternative would be south of Highway 126, and cross Powell Buttes Highway. It would also be south of Roberts Field and Deschutes County Fairgrounds, and approximately Horner Road. From north to south, the permitted area would be east of Roberts Field, the Redmond powerline, North Unit Canal, and Boonesborough Subdivision. It would be north of Bend Sewage Treatment Facility and BLM road 6589-B. The permitted area would extend to the private land ownership in the rural community of Powell Buttes. The old clay pit north of Highway 126 would also be included in the training area. Training would no longer be permitted in that portion of Area A around Pronghorn Resort and in the area under consideration for access, frontage, or bypass routes east of Highway 97.

Buffers:

A quarter mile buffer in the training area would be included to restrict training activities adjacent to subdivisions for the purpose of avoiding conflicts. Military training activities such as compass courses or infantry routes inside the buffer are appropriate activities, while equipment transport training are not.

Recreation

Planning Area Wide

Objective 4R – 4: Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

Guidelines:

See Table A-9.

Table A – 9 Recreation Emphasis

Alternative 4	Multi-use separate facilities	Multi-use shared facilities	Non-motorized recreation emphasis	Non-motorized recreation exclusive	Non-recreation emphasis	Roads only emphasis
Cline Buttes		X	X	(minor)		(minor)
Northwest			X	(minor)		
La Pine		X		(minor)		X
Bend-Redmond		X		(minor)		
Mayfield		X	X	(minor)		
South Millican			X			
North Millican		X				
Millican Plateau		X	X	(minor)	(minor)	
Prineville Reservoir		X	X	X		(minor)
Steamboat Rock		X		X		
Badlands		X				
Horse Ridge			X	(minor)	(minor)	
Prineville		X		(minor)		X
Tumalo			X			

Geographic Areas

Table A-9 above displays how recreational opportunities are dispersed throughout the planning area in Alternative 4. The recreation management direction specific to geographic areas is described below.

Badlands
The area would be open seasonally to motorized use on a designated system of inventoried routes. Mechanized use (e.g., mountain bikes, horse drawn carts) would be allowed on designated routes. Designated parking and trailhead improvements would be a high priority under this alternative, in order to provide adequate parking for vehicles and trailers outside the WSA boundary during the period the area is closed to motorized use.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among users and neighbors.

Allocations/Allowable Uses:
Area managed as Limited to Designated roads. Motor vehicle use would be limited to May 1 thru November 30 on the following routes:
- Route 8 (approximately 8 miles)
- Route 9
- Routes 4, 5, 6, and 7 (approximately 12 miles).

Objective 4R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
- Motorized access points would include the Route 8 entrance off State Highway 20, Route 8 entrance off County Line Road, and the Route 5 entrance.
- To control access increase boundary fencing and area designations of the WSA boundary. Priority would be given to completing and repairing fence along the eastern and northern boundary of the WSA.
- Improve parking areas as needed to accommodate larger number of vehicles that are now parking in numerous dispersed locations within the Badlands WSA boundary.
- Develop a designated parking area with defined boundaries at the Route 8 entrance off State Highway 20. Priority would be given to development of this area outside the WSA boundary (See also Highway section – developed recreation).
- Improve Milepost 16 trailhead to allow for additional vehicles and better turning radius.
- Develop and improve designated parking area at Reynolds Pond and provide a designated trail link outside the WSA from this parking area to the current Route 5 entrance area. Work with COID to provide canal crossings as needed.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
The WSA would be open year-round on a designated network of the inventoried routes, which include, but would be not necessarily limited to:
- Route 8
- Route 9

- Routes 4, 5, 6, 7
- Route 10 connection to eastern WSA boundary
- Routes connected to Obernolte Road trailhead

Bend/Redmond
Same as Alternative 2

Cline Buttes
Cline Buttes would be designated as Limited to designated roads and trails. Recreational uses are segregated more than Alternative 2, but less than Alternative 3. The Maston Allotment area east of Cline Falls Highway would be managed for motorized use on roads only while providing designated trails for non-motorized recreation. A portion of the historic Tumalo canals on the east side of Barr Road would also be managed for non-motorized use. The majority of the canyon trails in the northwest portion of Cline Buttes are also managed for non-motorized use, but some of the canyon trails would be included in a motorized trail system, to allow for variety in trail riding opportunities.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
The Maston Allotment area east of Cline Falls Highway would be designated as Limited to designated roads.

Guidelines:
- No roads would be located within ¼ mile of the river.
- The canyons in the northwestern portion of Cline Buttes would be managed for both motorized and non-motorized use, on separate trails that utilize different loops and separate drainages as much as possible.
- Retain Barr road cinder pit as a designated OHV play area.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Locate OHV staging area to minimize conflicts with adjacent landowners.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Work with ODOT and County road department to provide for grade separated trail crossings at Cline Falls Highway and State Highway 126.
- Manage equestrian use on a designated trail system. Within the geographic subdivision, give priority to establishing a designated trail system first within the Maston Allotment and the Canyon complex in the northwest portion of Cline Buttes.
- Provide designated trail opportunities for mountain biking. Emphasis would be on providing designated trail opportunities in the higher elevation portions of Cline Buttes, provided legal access exists and trespass would be minimized.

Horse Ridge
Under this alternative, trail use in the area would be managed for non-motorized use. Motorized use would be restricted to a relatively sparse network of designated roads. Improvements would be made to parking areas, trailheads, and primitive camping

areas to provide for better visitor services and protect resources at currently unmanaged dispersed use areas.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among users and neighbors.

Allocations/Allowable Uses:
Entire area (Skeleton Fire area and Horse Ridge) limited to designated roads with the exception of those areas that would be Closed in Common to Alternatives 2-7 (area around Conestoga Hills, Rickard Road area, and the Horse Ridge RNA).

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Hiking would be permitted throughout the area all year while other non motorized uses would be limited to designated trails, year-round.
- To promote non-motorized trail use in the Horse Ridge Area, new trails would be developed and existing trails may be closed and rehabilitated with an emphasis on providing less trail density in the flatter areas of South Millican and new trail opportunities on the mid and upper slope areas of Horse Ridge.
- Develop designated non-motorized trail connections from South Millican and Horse Ridge to the Dry Canyon area north of State Highway 20, the Skeleton Fire area, and the area between the old Highway 20 alignment and the current State Highway 20.

La Pine
Same as Common to All Alternatives

Objective 4R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
Most of the blocks of BLM administered public lands are small and do not offer high quality OHV riding opportunities or can withstand high levels of use in an unmanaged setting; however, the area is popular for riding and motorized use due to its location adjacent to residential areas of La Pine.

Allocations/Allowable Uses:
Entire La Pine block would be designated as Limited to existing roads and trails except: Area north of Rosland OHV Play Area and adjacent to La Pine State Park would be designated as Limited to designated roads only.

Guidelines:
The area east of Rosland OHV Play area would be retained for trail corridors that connect to existing roads on the Deschutes National Forest.

Mayfield
Under Alternative 4, the Mayfield area would be managed for shared use, with the larger block of public lands north of Alfalfa Market Road being managed for motorized use on both roads and trails. The area south of Alfalfa Market Road would be managed for non-motorized trail use, while keeping a select number of roads open.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area receives OHV use on a regular basis, primarily from local area residents and from others seeking less crowded conditions than Millican Valley. There would be no designated trail system and the existing designated road system would be not signed or identifiable. These conditions have led to an increase in user created trails, and conflicts between recreation visitors and between recreationists and landowners adjacent to BLM lands.

Allocations/Allowable Uses:
Main block between Powell Butte Highway and Alfalfa Market Road would be Limited to designated roads and trails.
Area south of Alfalfa Market Road would be Limited to designated roads only.

Objective 4R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
- Limit motorized access points into main block to no more than one entry at Powell Butte Highway, and one entry at Alfalfa Market Road.
- To provide better managed recreation opportunities, the road leading to Mayfield Pond would be rerouted further away from the east edge of the pond if an appropriate bypass alignment exists.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Millican Plateau
The majority of the area (Millican Plateau) would be managed for year-round OHV use on designated roads and trails. Small portions of the northern and western edges of this area would have additional motor vehicle restrictions for wildlife conservation or to better protect the Powell Butte ACEC. A small area would be closed to motor vehicle use year-round to reduce the incidence of illegal dumping.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area comprises a major portion of the existing Millican Valley OHV area, and receives both local and out of area visitation. The location of access points, staging areas, and trail crossings of Millican/West Butte Road require revisions to ensure public safety when Millican/West Butte Road becomes a paved road/truck route. Trail system design should allow for stand alone riding opportunities on either side of the newly paved Millican Road and Reservoir Road, to minimize OHVs crossing a paved, high speed road.

Allocations/Allowable Uses:
The majority of the area would be designated as Limited to designated roads and trails, available year-round. The northern tip of the area would be Limited to designated roads only with a smaller area Closed year-round to motor vehicle use. The western edge of the area (surrounding Powell Butte ACEC) would be designated as Limited to designated roads only.

Guidelines:
- The boundary along the powerlines between the Millican Valley OHV area and the Badlands WSA would be fenced to separate motorized from non-motorized uses of these two areas.
- Four corners staging area may be relocated to a location further away from the view of Reservoir Road and in an area that better serves both North Millican and Millican Plateau areas.

Objective 4R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Develop staging areas, trailheads, parking, and "warm-up" areas in the Millican Plateau.

North Millican
Alternative 4 manages the area for seasonal motorized use on designated roads and trails. The area west of West Butte Road would be closed to motorized use from January 1 to April 30th, annually. The remainder of the area would be open to motorized use year-round on designated roads and trails. Additional trail miles would be provided in the eastern portion of the OHV area, in order to compensate for the loss of trail riding opportunities due to seasonal closure in the area west of West Butte Road. An additional play area would be developed in the area to compensate for the seasonal closure of the ODOT pit and the Cinder Pit in the Highway area. The majority of the area is managed for multiple use on a trail system predominantly designed and maintained for OHV use, with the exception of an area adjacent to the Badlands WSA (i.e., northwest of Road 6521) and the Dry Canyon area adjacent to State Highway 20. Trails in these areas would be provided solely for non-motorized use.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area comprises a major portion of the existing Millican Valley OHV area, and receives both local and out of area visitation. The location of access points, staging areas, and trail crossings of Millican/West Butte Road require revisions to ensure public safety when Millican/West Butte Road becomes a paved road/truck route. Trail system design should allow for stand alone riding opportunities on either side of the newly paved West Butte road, to minimize OHVs crossing a paved, high speed road.

Allocations/Allowable Uses:
OHV use would be Limited to designated roads and trails and to May 1 thru December 31.

Guidelines:
- Reduce OHV trail density. (See Alternative 4 – Southeast Area, Travel Management for expansion of OHV area into Southeast Corner of the Southeast Geographic Subdivision).
- Grade separated crossings between South Millican and North Millican would be closed to motorized use
- Increase trail mileage by in the eastern portion of the area, including designated trail loops east of Routes 25 and 27.
- The OHV area would be expanded to include trails in the Rodman Rim area
- A new play area would be developed to the east of West Butte Road to provide recreation opportunities during the time period the ODOT Pit and Cinder Pit are closed to motorized use.

Objective R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Provide trailhead and parking area at base of Dry Canyon.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Provide a trail link from proposed trailhead at the base of dry to the Route 8 entry kiosk area at the Badlands WSA.
- Dry Canyon and the area north of Trail 41 would be managed for hiking, equestrian use, and technical mountain bike use by designating non motorized trails
- The existing grade separated crossing of State Highway 20 would be connected to Dry River Canyon by a designated trail.

Objective 4R - 6: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
- In conjunction with trailhead and parking area, develop a primitive camping area at the base of Dry Canyon.
- Provide group use and camping site near COSSA Shooting range if such a facility meets plan objectives and consider a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities.

Northwest
The area would be managed for multiple use; however, there would be less emphasis placed on motorized recreation than Alternative 2. Motorized trail use would be only considered if necessary to complete larger trail systems on adjacent Crooked River National Grasslands (CRNG) that require access or connections on BLM to create a functional system. A seasonal restriction on motorized use would be in place, consistent with adjacent policy on the CRNG; however, the area remains open year-round for non-motorized use. Non-motorized trails and additional trailheads to serve them are provided. The Sisters Bouldering area would be managed specifically for climbing use, and would be identifiable as BLM administered land.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized travel would be Limited to designated roads and motorized travel on BLM roads would be limited to April 1 thru November 30.
Isolated parcels west of Squaw Creek would be designated Closed to motorized use.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
Same as Alternative 3

Objective 4R - 6: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
Same as Alternative 2

Prineville
This alternative changes the management emphasis of the area, closing all the small, isolated tracts of BLM administered land north of Prineville to motorized use. The larger blocks of BLM land in this area would be managed as Limited to designated roads and trails year-round. The lands to the south of Prineville and north of Prineville Reservoir would be managed for use on designated roads only, or for use on designated roads and trails.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
Most of the blocks of BLM administered public lands are small and do not offer high quality OHV riding opportunities or can withstand high levels of use in an unmanaged setting.

Allocations/Allowable Uses:
- Small parcels located north and east of Prineville designated as Closed.
- Larger parcels located north of Prineville would be designated as Limited to designated roads and trails.
- 640 acre Ochoco Reservoir parcel located north of State Highway 26 would be designated as Closed.
- The 120 acre parcel with a dry canyon feature would be also Closed to motorized vehicles (T 15 S, R 14 E, Sec. 3).
- The BLM parcel near the Juniper Canyon summit would be designated as Limited to designated roads and motorized travel would be limited to March 16 thru November 30.
- Parcels located near Juniper Canyon would be designated as Limited to designated roads.
- Parcels located at south end of area would be designated as Limited to designated roads and trails.

Objective 4R - 3: Provide for projects, programs, and permits that promote a diverse range of recreation opportunities. Provide for individual, group, and competitive event recreational use that could not be reasonably accommodated on private land.

Guideline:
Consider establishment of OHV play area or shooting range in Prineville area if a partner can be found to manage and maintain the area.

Prineville Reservoir
The entire area north of Prineville reservoir and east of the Crooked River would be managed for motorized use on designated roads and trails. The area south of Prineville Reservoir and east of State Highway 27 would be managed primarily for non-motorized trail use, while retaining motorized access for hunting, rockhounding and other activities

through a system of designated roads open year-round. Designated trail systems would connect to trailheads on either BLM or BOR/State Park managed lands.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among users and neighbors.

Rationale:
The area comprises a major portion of the existing Millican Valley OHV area, and receives both local and out of area visitation. The location of access points, staging areas, and trail crossings of Millican/West Butte Road require revisions to ensure public safety when Millican/West Butte Road becomes a paved road/truck route. Trail system design should allow for stand alone riding opportunities on either side of the newly paved West Butte road, to minimize OHVs crossing a paved, high speed road.

Allocations/Allowable Uses:
- OHV use would be Limited to designated roads and trails north of Prineville Reservoir and east of the Crooked River.
- Motorized use in the area north of Road 6590-B would be Limited to May 1 thru November 30.
- Area south of Prineville Reservoir and east of State Highway 27 would be managed as Limited to designated roads (Taylor Butte travel is Limited under Common to Alternatives 2-7).

Objective 4R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Provide trailheads and parking areas near Prineville Reservoir. Designated non-motorized trails would utilize State Park/BOR trailhead facilities where feasible.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Rationale:
The area currently has no managed or designated trail system. BOR and State Parks have identified trailheads in the area around Prineville Reservoir and non-motorized trail goals in their current planning process.

Guidelines:
- The area west of the Crooked River and east of Road 6555-B would be managed for non-motorized trail use only. A designated trail system would be developed in the area that links to a trailhead off State Highway 27 near Taylor Butte.
- Designated, non-motorized trails would be provided in the Taylor Butte/ Powderhouse Cove area. A separate non-motorized trailhead would be provided off State Highway 27 at Taylor Butte. Designated trails in this area would be coordinated with BOR and State Parks.
- Designated, non-motorized trails would be provided in the area, with an emphasis toward connections to BOR/State Park facilities, providing loops in the Powderhouse Cove area, and linking Roberts Bay to the Bear Creek site.

Smith Rock
Same as Alternative 2

South Millican Area

Under this alternative, the use emphasis for South Millican would be on a relatively sparse network of roads for motorized use. Designated, non-motorized trails would be provided; however the emphasis would be on developing trails on the adjacent Horse Ridge area and leaving fewer trails on the flatter South Millican area.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Entire South Millican area is Limited to designated roads only, open year-round.

Guidelines:
The grade separated crossings under State Highway 20 would be Closed to motorized use.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
- Hiking would be permitted throughout the area all year while other non motorized uses would be limited to designated trails, year-round.
- To promote non-motorized trail use in the Horse Ridge Area, new trails would be developed and existing trails may be closed and rehabilitated with an emphasis on providing less trail density in the flatter areas of South Millican and new trail opportunities on the mid and upper slope areas of Horse Ridge.
- Develop designated non-motorized trail connections from South Millican and Horse Ridge to the Dry Canyon area north of State Highway 20, the Skeleton Fire area, and the area between the old Highway 20 alignment and the current State Highway 20.

Steamboat Rock
Similar to Alternative 3 except that motorized use would be limited to designate roads and trails and no full size vehicles would be allowed. All OHV use would be excluded from river corridors.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Main block designated as Limited to designated roads and trails and Limited to Class I and III OHVs (no full size vehicles) except:
- Deschutes River corridor would be Closed to all motorized use.
- Remaining portions of area subdivision would be managed as described for Common to 2-7.

Tumalo
The recreation management emphasis for the area would be on non-motorized trail. Motorized use would be limited to designated roads. Due its smaller size, the block of BLM land south of Tumalo Reservoir would be Closed to motorized use, and would be managed for year-round recreation use on designated, non-motorized trails.

Objective 4R - 1: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized use Limited to designated roads in main block north of Tumalo Reservoir. The smaller block of BLM land south of Tumalo Reservoir would be Closed to motorized use.

Guidelines:
- Motorized use in main block would be allowed on Sizemore Road, with other loop roads considered if they provide recreation opportunities while avoiding need for/or creation of additional access points, and limit conflicts with neighbors or resource values.
- Seek land exchanges, purchases, or easements to provide trail link between the Tumalo Block and Cline Buttes to the northeast. Work with Oregon Department of Transportation and Deschutes County to ensure that grade separated trail crossings are considered in any major highway improvements for the area.

Objective 4R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among users and neighbors.

Guidelines:
- Designate a system of non-motorized trails in both the main Tumalo Block and the area south of Tumalo Reservoir.
- Work with Deschutes National Forest, Deschutes County and others to provide regional trail link opportunities between Bend and Sisters, and between Tumalo and Cline Buttes.

Transportation and Utilities

Objective 4TU - 6: Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Rationale:
In addition to rationale under Alternative 3, this alternative provides for key, non-highway arterial connections between the northeast side of Bend and Redmond defined as a long-term county need in the South Redmond Collaborative Planning Group process. Allocation of a new transportation corridor would include an agreement by Deschutes County to vacate a similar amount of "legacy" road within the same block, thus reducing habitat fragmentation and disturbance within this area.

Allocations/Allowable Uses:
- Designate the road network and transportation / utility corridors as shown on Map 3 and Map S-4
- Allocates a transportation/utility corridor adjacent to the BN-SF railroad right-of-way approximately ½ mile wide south of Redmond, extending to Deschutes Junction.
- Allocates a corridor to connect with Deschutes Junction and include an interchange at Quarry Avenue.
- Identifies 39 percent of the planning area in a primary wildlife emphasis designation and 39 percent in either a non-motorized emphasis or non-motorized exclusive designation

Land Ownership

Objective 4LO – 1a: Retain public lands to increase the spectrum of recreation opportunities and emphasize wildlife corridors.

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-1 (approximately 353,334 acres). Blocks of public lands identified as Z-1 include the north Tumalo, Cline Buttes, Bend/Redmond Core, Steamboat Rock, Smith Rocks, Mayfield Pond, Badlands, Horse Ridge, Reservoir East, Reservoir West, Southeast, Highway, and the majority of public lands in La Pine north and south of the community. Other, smaller parcels of public land identified include Grizzly Mountain and Redmond Caves.

Objective 4LO – 2a: Identify isolated and fringe public parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values, emphasizing recreation opportunities and wildlife corridors. Create an exchange base to provide connectivity to Cline Buttes from Northwest, Steamboat Rock, and Tumalo blocks. Consolidate public lands west and south of Cline Buttes while eliminating the public lands to the northwest, which have been heavily developed. Provide connectivity for and consolidation of the Powell Buttes parcels. Consolidate and provide connectivity between Grizzly Mountain and Ochoco National Forest. Provide connectivity through the La Pine State Park and south of the community of La Pine. Consolidate or add to larger blocks.

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-2 (approximately 31,460 acres). Parcels include those adjacent to cities, towns, and communities that may be exchanged for lands with higher public values for community expansion and other public purposes. Isolated and fringe parcels are located around Cline Buttes, around Steamboat Rock, the south Powell Buttes area, around Alfalfa, east of Grizzly Mountain, the south Tumalo area, the Skelton Cave area, the Bend/Redmond Core, and north and west of Wickiup Junction in La Pine. Other parcels include Powell Buttes, Juniper Acres, Millican, and north of Prineville Reservoir.

Guidelines:
Disposals involving exchange or the proceeds of a sale may occur only when the private parcels and public parcels are in the same locale.

Objective 4LO - 3:(see CTA section): Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to administer or that would represent a greater public benefit in other ownership.

Allocations/Allowable Uses:
Designate the lands in Map 32 as Z-3 (approximately 10,102 acres). Selected public lands include isolated parcels between Bend and Redmond, isolated parcels northwest of Redmond and isolated and fringe parcels around Prineville.

Guidelines:
- All proceeds from sale, if they become available, will be used to acquire lands in the same locale and all acquired lands from exchange will be in the same locale as the lands disposed for the purpose of improving land pattern.
- Disposals involving exchange or the proceeds of a sale may occur only when the private parcels and public parcels are in the same locale.

Objective 4LO - 4: Provide land for community needs and uses consistent with public land management mandates

Allocations/Allowable Uses:
Designate the lands in Map 32 for Community Expansion (approximately 8,512 acres). The public lands identified for community expansion near Redmond are located east of Redmond, north of Highway 126, and west the North Unit canal; and south of Redmond,

east of Highway 97, and north of the proposed Pronghorn Destination Resort. In La Pine the areas identified are south of Wickiup Junction, east of Highway 97, and northeast and west of the community of La Pine.

Guidelines:
Require intensive participation by the cities and county to provide, in the future, detailed planning for an interweaving system of parks and open spaces among the community expansion projects. Use of lands for community expansion would be limited to parks and open spaces.

Objective 4LO – 5b: Acquisition priority would be for recreation purposes and for wildlife and ecological purposes, and secondarily for community purposes and BLM management purposes while not significantly reducing the amount of public lands in any portion of the planning area.

Allocations/Allowable Uses:
Designate the lands in Map 32 for acquisition. Parcels of interest include those between Smith Rock and Bend/Redmond, Tumalo and Cline Buttes, Northwest and Cline Buttes, Bend/Redmond and Cline Buttes, and Mayfield and the Badlands.

Guidelines:
Acquisitions involving exchange or the proceeds of a sale may occur only when the private parcels and public parcels are in the same locale.

Public Health and Safety

Objective 4PHS - 10: The objectives are the same as those Common to Alternatives 2-7 with an emphasis on increasing the spectrum of recreation opportunities, often separating conflicting uses. Source habitats and ACECs receive special attention, while the most of the area is designated a Special Recreation Management Area (SRMA).

Rationale:
This alternative emphasizes additional closures to all firearm discharge to protect natural and cultural resources within ACECs and RNAs. In conjunction with the Recreation Issue Team measures, additional recreation experience closures are implemented under the SRMA designation, but there are fewer firearm discharge closures than in Alternative 3.

Allocations/Allowable Uses:
The areas identified in Tables A-10 and A-11 would be closed to all closed to all firearm discharge and to firearm discharge unless legally hunting, respectively.

Table A – 10 Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes (Canal ACEC)	X	X	X	
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road)	X	X	X	X
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC)	X	X	X	X
Mayfield Block (Airport parcel)	X	X	X	X
Horse Ridge Block (North of Rickard Road, South of Hwy. 20)	X	X		X

Table A – 11 Closed to firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Steamboat Rock Block (All BLM land south of Lower Bridge Road outside of the WSR corridor except for BLM land in the middle of the contiguous block)	X	X	X
Northwest Block (All BLM land not closed to all firearm discharge CT Alts 2-7)	X	X	

Alternative 5

Ecosystem Health and Diversity

Vegetation

Shrub-Steppe Communities
Same as Alternative 2

Old-Growth Juniper Woodlands
Same as Alternative 2.

Lodgepole Pine and Ponderosa Pine Forest
Same as Alternative 2

Wildlife

Planning Area Wide

Objective 5W - 6: Restore terrestrial source habitats to provide for multiple species needs and maintain important conditions for deer and elk. Restore vegetation cover types in their current distribution, and restore structural stages that have declined substantially from the historical to the current period. Re-pattern the vegetation patches so they are more consistent with disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem.

Allocations/Allowable Uses:
Same as Alternative 2.

Geographic Areas

Objective 5W–2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities meet ODFW management objective numbers for deer and elk (Brothers/La Pine RMP, p. 12, slightly modified).

Under Alternative 5, wildlife management emphasis would be the same as outlined for Alternatives 2-7. In addition, this alternative would establish additional direction for the following areas:

Bend/Redmond
Allocations/Allowable Uses:
North: Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Cline Buttes
Allocations/Allowable Uses:
Dry Canyon: Minor wildlife emphasis; limit motorized travel to designated roads only.
Maston: Primary emphasis for elk, raptors, and riparian; close the area year-round to motorized travel.
Southeast: Secondary emphasis for deer, elk and raptor habitat; limit motorized travel to designated roads only.

Horse Ridge
Allocations/Allowable Uses:
Skeleton Fire: limit motorized travel to designated roads.
Main: Closed to motorized use except some roads seasonally.

Guidelines:
Emphasize non-motorized use and trails would be developed for use throughout the year.

La Pine
Allocations/Allowable Uses:
South: Minor wildlife emphasis; limit motorized travel to designated roads and trails.

Mayfield
Allocations/Allowable Uses:
Main: Secondary emphasis for year-round pronghorn habitat and connectivity; limit motorized travel to designated roads only.
South Alfalfa: Secondary emphasis for deer, and for year-round habitat and connectivity for pronghorn; limit motorized travel to designated roads only.

Guidelines:
Manage for connectivity habitat and for year-round habitat for pronghorn, throughout the area.
Manage the area for non-motorized trails.

Millican Plateau
Allocations/Allowable Uses:
Crooked River Rim: Primary emphasis for pronghorn and deer winter range, and raptor nesting and adjacent foraging habitats; closed to motorized travel.
South: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
Mayfield Link: Secondary for pronghorn connectivity routes; limited to designated roads only.

North Millican
Allocations/Allowable Uses:
North Millican West and East: Secondary emphasis for deer, elk and sage grouse, and for year-round habitat and connectivity for pronghorn; limit motorized travel seasonally to designated roads and trails.
Dry Canyon: Primary emphasis for deer, elk and sage grouse; limit motorized travel to designated roads only.

Guidelines:
Manage for year-round and for connectivity habitats for pronghorn.
Manage for sage grouse habitats by using seasonal closures (December 1 to April 30).

Northwest
Allocations/Allowable Uses:
Limit motorized travel to designated roads seasonally.

Guidelines:
The area would remain Open to non-motorized trail use year round.

Prineville
Allocations/Allowable Uses:
Grizzly/Scattered North Parcels: The Grizzly mountain area would have some primary and some secondary emphasis for deer and elk.
Miscellaneous scattered parcels: Primary and secondary wildlife emphasis for deer and pronghorn connectivity. In the small isolated parcels north of Prineville, motorized travel would be Limited to designated roads only.
Combs Flat: The southern two sections have a minor wildlife emphasis; limit motorized travel to designated roads and trails.

Prineville Reservoir
Allocations/Allowable Uses:
Chimney Rock: Primary emphasis for deer and raptors habitats; Closed to motor vehicles.
West Eagle Rock: Minor wildlife emphasis; limit motorized travel to designated roads and trails.
Main: Secondary emphasis for deer and elk connectivity routes as well as raptor habitat; limited to designated roads.
Taylor Butte: Both primary and secondary emphasis for deer and raptor habitats; limit motorized travel to designated roads.
Reservoir North: Secondary emphasis for deer, elk connectivity routes and raptor habitats; limit motorized travel to designated roads.

South Millican
Allocations/Allowable Uses:
Secondary emphasis for sage grouse winter range and breeding and nesting habitat; limit motorized travel to designated roads and trails.

Guidelines:
Manage for sage grouse lekking and nesting habitats, in the South Millican area, with a seasonal closure from February 15 – July 31.

Steamboat Rock
Allocations/Allowable Uses:
Main: Primary emphasis for elk and raptors; limit motorized travel to designated roads only.
River in Main Block: Primary emphasis for deer, elk, raptors and riparian habitat; limit motorized travel to designated roads seasonally.

Guidelines:
Manage for non-motorized recreation with a designated trail system.

Tumalo
Allocations/Allowable Uses:
Limit motorized travel to designated roads seasonally.

Special Management Areas

ACECs

Peck's Milkvetch ACEC
Original ACEC plus 15,000-acre addition, totaling 18,902 acres.

Objective 5SMA – 1a: Protect and/or enhance the habitat for Peck's milkvetch, a species listed as threatened by the State of Oregon.

Allocations/Allowable Uses:
Although the Peck's Milkvetch ACEC is expanded under this alternative, the guidelines are the same as in CTC.

Tumalo Canals ACEC
See Alternative 2.

Juniper Woodlands ACEC

Objective 5SMA – 1k: Protect and/or promote the health and integrity of the old growth juniper woodland ecosystem and its associated wildlife, including critical mule deer winter range.

Allocations/Allowable Uses:
- **Land tenure**: The ACEC would be within Land Tenure Zone 2, which would allow adjustments provided there is no net loss of acreage within the ACEC and the management goals could still be attained. Acquired lands within the ACEC would be added to the ACEC designation.
- **Livestock grazing**: Would be allowed if consistent with ACEC goals and in accordance with Standards for Rangeland Health and Guidelines for Grazing Management.
- **Minerals**: Mining of saleable minerals would be allowed providing restrictions or stipulations are designed to maintain or enhance special values in the ACEC. A plan of operations would be required prior to any authorization by BLM.
- **Rockhounding**: Would not be allowed.
- **Firearms**: The ACEC would be closed to firearm discharge unless hunting.

Guidelines
- **Recreation:** Dispersed, non-motorized and non-mechanical recreation would be emphasized.
- **Roads and rights-of-way:** After the permanent BLM road network is established and implemented, new roads would only be considered if they replace a similar mileage of existing road. New rights-of-way would only be considered within existing utility corridors or along county roads or BLM arterial roads.
- **Vegetation and wildlife habitat management:** Such projects would be an integral part of ACEC management and would be designed to maintain or enhance the ACEC values.
- **Restoration/improvement** of native plant communities, old-growth juniper woodlands, and habitat for raptors, neotropical birds and threatened, endangered or other special status plants and animals would be emphasized. Long-term vegetation maintenance would be designed to emulate natural processes.
- **Decommissioned roads** would be obliterated and rehabilitated unless a compatible use is identified such as converting a road to a trail or preserving a historic route.

Caves
Pictograph Cave would be closed seasonally (October 15 – May 1) for bat hibernacula and would be closed to the installation of bolted climbing routes. All existing bolts and climbing hardware would be removed and the cave would be managed under Leave No

Trace principles.

Land Uses

Livestock Grazing

Objective 5G - 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-31 shows just those areas available in this alternative.

Guidelines:
- In more urban areas (roughly those areas in north and west, and including La Pine), allow livestock grazing only in areas where demand is high (See explanation of demand in Chapter 2, Livestock Grazing section).
- In more rural areas (roughly the south/east section of the northern planning area), allow livestock grazing regardless of demand level.
- Modify livestock grazing as necessary so that conflicts with adjacent private landowners do not exceed "low."

Minerals

Objective 5M – 3b: Emphasize reduction of mining conflicts with recreation and wildlife habitat in urban areas and minimize mining conflicts with residents across the planning area. (See Map S-26 Minerals Alternative 5).

Rationale:
The conflict mitigation standards established by this alternative provide management tools for high level protection of habitat components adjacent to areas of high population density. In addition, these standards provide guidelines for mitigating mining conflicts with residents and recreation while meeting regional demand for mineral resources.

Allocations/Allowable Uses:
- 297,493 acres are available for mineral material sales.
- Mineral material sales may not occur within ½ mile of residentially zoned areas.
- Roads that feed from BLM-managed land into residentially zoned areas may not be used for mining-related traffic.
- In "urban" areas, mineral material sales may not occur within ½ mile of designated recreation sites.
- In "rural" areas, mineral material sites may not occur within 1/8 mile of designated recreation sites.
- Seasonal restrictions on all mineral operations would apply to 108,007 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 49,295 acres.

Guidelines:
- Allow no more than a low conflict level with residents.
- Allow no more than a low conflict level with recreation in "urban" zones and up to a high conflict level in "rural" zones.
- Allowable mining conflict levels with wildlife by geographic area as outlined in Table 2-12.

ACEC Guidelines: See ACEC Alternatives

Military Uses

Objective 5U - 5: Reduce disturbance by military operations to residents of adjacent private lands while providing a training area about the same size as presently available.

Rationale:
This alternative was developed to provide the military with acres enough to train, but remove them from the area south of Redmond to provide for its development, and to separate the military from the destination resort.

Allocations/Allowable Uses
Training Area Boundaries
Military use is permitted as shown in Map 36. The training area permitted in this alternative would be south of O'Neil Highway, crossing both Highway 126 and Powell Buttes Highway. It would also be south of Horner Road. From north to south, the permitted area would be east of the North Unit Canal, Roberts Field, again North Unit Canal, and Boonesborough Subdivision. It would be north of Bend Sewage Treatment Facility and BLM road 6589-B. The permitted area would be west of the private land ownership in the rural community of Powell Buttes. Training would no longer be permitted in that portion of Area A around Pronghorn Resort and in the area under consideration for access, frontage, or bypass routes east of Highway 97.

Buffers:
Use of heavy equipment and vehicles and firearms would not be permitted within a half mile of private lands. Military training activities such as compass courses or infantry routes inside the buffer are appropriate activities, while equipment transport training are not.

Recreation

Planning Area Wide

Objective 5R – 4: Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

Guidelines:
See Table A-12.

Geographic Areas

Table A-12 above displays how recreational opportunities are dispersed throughout the planning area in Alternative 5. The recreation management direction specific to geographic areas is described below.

Badlands
Under Alternative 5, the Badlands WSA would be managed with almost the same layout of motorized routes as the present policy (Alternative 1 which reflects the settlement agreement from the Millican Lawsuit.), with the exception of Route 4 from the Route 8 junction to Route 5 Junction (Route 4 would be managed as a non-motorized route year-round). The designated routes are open seasonally and closed to motorized use from July 15th to December 15th. The WSA remains open to mechanized use year-round.

Table A-12 Recreation Emphasis

Alternative 5	Multi-use separate facilities	Multi-use shared facilities	Non-motorized recreation emphasis	Non-motorized recreation exclusive	Non-recreation emphasis	Roads only emphasis
Cline Buttes		X	X	X		
Northwest			X	X		
La Pine		X	X	(minor)		
Bend-Redmond	X			(minor)		
Mayfield			X	X		
South Millican		X				
North Millican		X				
Millican Plateau		X	(minor)	X	(minor)	
Prineville Reservoir			X	X		
Steamboat Rock				X	(minor)	
Badlands		X				
Horse Ridge			X	X	(minor)	
Prineville		X		(minor)		X
Tumalo			X			

This alternative also places relatively high emphasis on designation and improvement of parking areas to support use during periods when vehicles are restricted.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
To maintain the area's suitability for wilderness designation by Congress, the area is managed under the provisions of the Interim Management Policy for Lands Under Wilderness Review (IMP). This policy directs BLM to limit vehicle travel to a system no greater than the existing, inventoried routes that were present when the area was inventoried for wilderness characteristics.

Allocations/Allowable Uses:
OHV travel in Badlands WSA would be Limited to designated roads from December 16 thru July 15. These routes include the following:
- Route 8
- Route 5
- Route 6
- Route 7

Guidelines:
Motorized use of these routes would be permitted for retrieval of big game (deer, elk etc.) obtained as a result of a legal hunt within the Badlands WSA.

Objective 5R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize

conflicts with neighboring landowners.

Guidelines:

- Improve parking areas as needed to accommodate the large number of vehicles that are now parking in numerous dispersed locations within the Badlands WSA boundary.
- Develop a designated parking area with defined boundaries at the Route 8 entrance off State Highway 20. Priority would be given to development of this area outside the WSA boundary (See also Highway section – developed recreation).
- Improve Milepost 16 trailhead to allow for additional vehicles and better turning radius.
- Develop an improved designated parking area at Reynolds Pond and provide a designated trail link outside the WSA from this parking area to the current Route 5 entrance area. Work with COID to provide canal crossings as needed. This parking area would be easier to access than the current Route 5 entry, and would allow for an increase in recreation opportunities while increasing the BLMs ability to patrol and manage the access point.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:

Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment. Non-motorized trail use is increasing in the Badlands, both from individual users and non-permitted commercial guides. The level of non-motorized use off designated, inventoried routes can impact resources and wilderness suitability.

Guidelines:

The WSA would be open year-round for non-motorized use on a designated network of the inventoried routes, which include, but are not necessarily limited to:

- Route 8
- Route 10 bypass
- Routes 4, 5, 6, 7
- Route 10 connection to eastern WSA boundary
- Routes connected to Obernolte Road trailhead

Bend/Redmond

This alternative would be similar to Alternatives 2 and 4, with an additional emphasis on OHV trail system and a non-motorized system in the same area. Development of separate trails for different uses would likely require a lower trail density for each type of use. This alternative places the greatest emphasis on trail signing, trail maps, separate motorized and non-motorized access points.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:

To meet expected increases in demand with seasonal closures of existing trail systems in Millican Valley and other areas, the large block of public lands in the Bend/Redmond area would be used to develop additional motorized trail systems. A designated trail system is needed due to the increased levels of development in the area and the likelihood that additional paved roads will fragment the area in the future.

Allocations/Allowable Uses:

Same as Alternatives 2 and 4.

Guidelines:
Same as Alternatives 2 and 4.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). User conflicts between trail users are occurring throughout the planning area and trail users are requesting separate trail facilities.

Guidelines:
- Develop a designated trail system for non-motorized use in the Bend/Redmond block. Emphasize connections to the Wagon Road ACEC, connections to the North Unit Canal if it is designated as a regional trail, and connections to existing subdivisions.
- Provide short loop trails near subdivisions as part of non-motorized trail system.

Cline Buttes
The area would be divided into different use areas to reduce user conflicts. The Maston Allotment east of Cline Falls Highway would be designated as Closed to motor vehicles. In addition, most of the area between Barr Road and Cline Falls Highway would be managed for motorized use on designated roads. Recreation use in both these areas would be managed for an emphasis on non-motorized use occurring on designated roads and trails. The entire historic canal system east of Barr Road would be managed for foot use. The canals west of Barr Road are managed to emphasize a greater variety of non-motorized use, including equestrians and mountain bikes. The dry canyon complex would be managed almost exclusively for non-motorized use; however, at least one motorized trail would be located in the canyons.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- The area west of Cline Falls Highway, east of Eagle Crest Phase III access road, and east of Barr Road would be designated as Limited to designated roads only.
- The Maston allotment east of Cline Falls Highway would be designated Closed to motor vehicles.
- The remainder of Cline Buttes would be designated as Limited to designated roads and trails year-round, with an emphasis on multi-use trail designation in the center and northern portions of the block.

Guidelines:
- Shared use trail goal of approximately 29 to 30 miles of shared trail system.
- Retain Barr road cinder pit as a designated OHV play area.
- Locate OHV staging area to minimize conflicts with adjacent landowners, (especially away from the south end of Barr Road).
- Road system in Cline Buttes would be revised to make useful loops, avoid dead-end roads, and reduce the number of motorized access points from adjacent roads or private property.
- New roads would be constructed to route traffic back to a smaller number of designated access points.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
User conflicts between trail users are occurring in the Cline Buttes area, as are conflicts between trail users and landowners. The increase in development in the area makes these conflicts more likely.

Guidelines:
- Manage equestrian use on a designated trail system. The Maston Allotment and the Canyon complex in the northwest portion of Cline Buttes would receive priority for establishing a designated trail system.
- Provide designated trail opportunities for mountain biking. Emphasis would be on providing designated trail opportunities in the higher elevation portions of Cline Buttes, provided legal access exists and trespass would be minimized.
- Designated roads and trails within the Maston allotment east of Cline Falls Highway closed to motorized travel would be maintained for non-motorized use.

Horse Ridge
Under this alternative, the Skeleton Fire area would be managed for motorized use on a few main roads, much like it is today. Designated trails would be developed for non-motorized use in the same area. Horse Ridge and the area between State Highway 20 and the old Highway would be managed for non-motorized trail use.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
In addition to those areas that would be Closed Common to 2-7 (area around Conestoga Hills, Rickard Road area, and the Horse Ridge RNA) the following travel designations would apply to the Horse Ridge area:
- The Skeleton Fire area would be designated as Limited to designated roads.
- Horse Ridge area would be designated as Closed to motorized vehicles. This closure extends northwest into the area between State Highway 20 and the old highway 20 alignment (T18S, R14E, Sec. 30, 31,32; T19S, R14E, Sec. 5, 4, 3, 10; T18S, R13E, Sec. 25).

Guidelines:
- Roads would be realigned or closed to create a trail network with designated parking and trailheads.
- Increase usefulness of trails by creating a variety of loops.

Objective 5R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Provide designated trailheads with user information. Provide bulletin boards and/or kiosks at each public road access point and parking area.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:

- Roads would be realigned or closed to create a trail network for non-motorized use that provides loops and connections to Horse Ridge and the Skeleton Fire area.
- Designate any roads in the Skeleton Fire area that will remain closed to motor vehicles as non-motorized trails if they meet the needs of the non-motorized trail system. The designated trail system would be designed and managed to differentiate it from roads, and to reduce redundant access points, avoid trespass, and be routed at least ¼ mile away from caves or other identified sensitive resources.
- Closed roads in the Horse Ridge area needed for a non motorized trail system would be converted into trails for non-motorized use.

La Pine

Alternative 5 retains a high degree of public access and motorized use throughout BLM administered lands in the La Pine area; however, this alternative does change the existing management from an Open designation to a designated system of roads and trails throughout the area.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:

Entire La Pine block, (except river parcels) would be designated as Limited to existing roads and trails, except the area north of Rosland OHV Play Area and adjacent to La Pine State Park would be designated as Limited to Designated Roads only.

Mayfield

Alternative 5 differs substantially from all other alternatives by managing the main Mayfield block for non-motorized trail use only. Under this alternative, motorized use would be allowed only on designated roads. The Airport allotment would continue to remain closed to motor vehicles. A separate designated trail system would be implemented that may use some of the existing roads in the area.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:

The size of the Mayfield Area and close proximity to residential development make it less suited for motorized trail systems than larger blocks of public land. There has been an increase in user conflicts due to conflicting uses and the lack of a well marked, designated and maintained road and trail system in the area.

Allocations/Allowable Uses:

Main block and area south of Alfalfa Market Road would be designated as limited to designated roads only.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:

Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). User conflicts between trail users are occurring throughout the planning area and trail users are requesting separate trail facilities.

Guidelines:
Manage non-motorized use by developing a designated, signed trail system in all areas. Trail system would be developed to differentiate it from the designated road system (e.g., all trails less than four feet in width).

Millican Plateau
The northern portion of the area would be managed for year-round use on designated roads and trails. In addition, the smaller, isolated parcels and BLM lands to the east of the Juniper Acres subdivision are either designated as Closed to motor vehicles or managed for use on designated roads only.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized travel in the area north of Kitchen Hill would be limited to designated roads and trails, except for:
- Isolated parcels located within and east of Juniper Acres subdivision are either closed to motorized use or limited to designated roads only (see Map 12).
- An area along the Crooked River Canyon (i.e., east of Road 6555-b) would be closed to motorized vehicles.
- An area along the Crooked River and east of Millican Road would be closed to motorized vehicle use year-round.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
Entire area would be open to mechanized use on designated trails year-round.

North Millican
Alternative 5 manages the majority of the area for motorized use on a seasonal basis, by limiting OHV use to May 1 thru November 30. This alternative places more emphasis on separating uses by designating the northwest portion of the area (Dry Canyon area) as Closed to motorized use year-round, and creating a designated, non-motorized trail system in this area. Mechanized use would be allowed year-round throughout the entire area.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- Area south of Kitchen Hill would be managed as Limited to designated roads and trails, and would be Closed to motorized use from January 1 to April 30, except for:

1. ODOT pit play area which would be open year-round.
2. Dry Canyon and the area north of Trail 41 which would be designated as Limited to designated roads only.

- The entire area would be open to non-motorized use on designated trails year-round.

Objective 5R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines
Develop trailhead and parking area at base of Dry Canyon.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
Non-motorized trail use is increasing in the Badlands, and in the Highway area, particularly in the Dry River Canyon and Smith Canyon areas (both from individual users and non-permitted commercial guides). The level of non-motorized use off designated, inventoried routes can impact resources and cause user conflicts.

Allocations/Allowable Uses:
Entire area would be open to non-mechanized use on designated trails year-round.

Guidelines:
- Dry Canyon and the area north of Trail 41 would provide designated, non-motorized trails. Trails would be maintained for hiking, equestrian use, and technical mountain bike use.
- Provide a trail link from this area to the Route 8 entry kiosk area at the Badlands WSA.

Objective 5R - 7: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
- Develop a group use and camping site near COSSA Shooting range, to be operated on a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities if such a development meets the objectives of this Alternative.
- Develop primitive camping area at base of Dry Canyon.

Northwest
The area would be managed with an emphasis on development of non-motorized, designated trails that provide connectivity to a regional trail system, links to Sisters Community trails, and links to non-motorized trail systems on CRNG to the north. Motorized use would be limited to designated roads only. A seasonal restriction on motorized use would be in place, consistent with adjacent policy on the CRNG; however, the area remains open year-round for non-motorized use. Non-motorized trails and additional trailheads to serve them are provided. The Sisters Bouldering area would be managed specifically for climbing use, and would be identifiable as BLM administered land.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- Motorized travel in main block limited to designated roads and motorized use would be limited to April 1 thru November 30.
- Isolated parcels west of Squaw Creek Closed to motorized travel, except for Sisters Bouldering Area (see Common to All Alternatives).

<u>Objective 5R - 5:</u> Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

<u>Guidelines:</u>
- Develop non-motorized, designated trails that provide connectivity to a regional trail system, links to Sisters Community trails, and links to non-motorized trail systems on CRNG to the north.
- Designate Cascade Mountain/Willamette Valley Wagon Road as a designated non-motorized trail. Construct new trail alignments as necessary to avoid private property in T 14 S, R 11 E, Section 15 and realign trail ¼ mile or more away from private lands to the maximum extent feasible. Construct new trail alignment to link CMWV trail to access road for Alder Springs Trailhead. Consider development of one or more loop trails off main CMWV trail.
- Designate a hiking only trail between Holmes Road and McKenzie Canyon (T14 S, R 11 E, Sec 11, 12, 14, 22, and 23 with a goal being a designated trail link to the Alder Springs Trail.
- Close or rehabilitate existing unimproved roads in the area to serve as designated trails.

Prineville
This alternative changes the management emphasis of the area, changing the management of the small, isolated tracts of BLM administered land north of Prineville to motorized use on designated roads only. The larger blocks of BLM land in this area would be managed as Limited to designated roads and trails year-round. The lands to the south of Prineville and north of Prineville Reservoir would be managed for use on designated roads only, or for use on designated roads and trails.

<u>Objective 5R - 1:</u> Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

<u>Rationale:</u>
Most of the blocks of BLM administered public lands are small and do not offer high quality OHV riding opportunities or can withstand high levels of use in an unmanaged setting.

<u>Allocations/Allowable Uses:</u>
- Small parcels located north and east of Prineville would be designated as Closed.
- Larger parcels located north of Prineville would be designated as Limited to designated roads.
- 640 acre Ochoco Reservoir parcel located north of State Highway 26 would be designated as Closed.

Prineville Reservoir
The area north of Prineville reservoir and immediately east of the Crooked River would be managed for exclusive non-motorized use. The area north of the upper end of Prineville Reservoir would be managed for motorized use on designated roads only. The area south of Prineville Reservoir and east of State Highway 27 would be managed primarily for non-motorized trail use, while retaining motorized access for hunting, rockhounding and other activities through a system of designated roads open year-round. Designated trail systems would connect to trailheads on either BLM or BOR/State Park managed lands.

<u>Objective 5R - 1:</u> Manage off highway vehicle use on BLM administered land to provide satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- OHV use would be designated roads and trails north of Prineville Reservoir and east of the Crooked River.
- Motorized use in the area north of Road 6590-B would be limited to May 1 thru November 30.
- Area south of Prineville Reservoir and east of State Highway 27 would be managed as Limited to designated roads (Taylor Butte travel is limited under Common to Alternatives 2-7).

Objective 5R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners

Guidelines:
Provide trailheads and parking areas near Prineville Reservoir. Designated non-motorized trails would utilize State Park/BOR trailhead facilities where feasible.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
The area currently has no managed or designated trail system. BOR and State Parks have identified trailheads in the area around Prineville Reservoir and non-motorized trail goals in their current planning process.

Guidelines:
- The area west of the Crooked River and east of Road 6555-B would be managed for non-motorized trail use only. A designated trail system would be developed in the area that links to a trailhead off State Highway 27 near Taylor Butte.
- Designated, non-motorized trails would be provided in the Taylor Butte/ Powderhouse Cove area. A separate non-motorized trailhead would be provided off State Highway 27 at Taylor Butte. Designated trails in this area would be coordinated with BOR and State Parks.
- Designated, non-motorized trails would be provided in the area, with an emphasis toward connections to BOR/State Park facilities, providing loops in the Powderhouse Cove area, and linking Roberts Bay to the Bear Creek site.

Smith Rock
Same as Alternative 2

South Millican

South Millican would remain as an OHV use area, and would be open for this use from September 15th to March 15th. No new trail connections would be provided between the motorized trail system in South Millican and trails in the adjacent Deschutes National Forest.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
OHV travel in South Millican would be limited to designated roads and trails between February 15 and July 31.

Objective 5R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Provide designated trailheads with user information. Provide bulletin boards and/or kiosks at each public road access point and parking area.

Primary staging area for casual use and events in the South Millican Area would be located approximately 1-½ miles west of Millican and one mile south of State Highway 20. Improvements would include bulletin board, loading ramp, and toilets as use levels warrant.

Steamboat Rock
Steamboat Rock block would be Closed to motorized use year-round. The Crooked River Ranch emergency exit at 81st Street would be kept open, but otherwise all roads are closed and administrative or access under permit only would be allowed. Area would be managed to emphasize designated, non-motorized trail use and regional trail connectivity.

Objective 5R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Main Steamboat Rock block would be Closed to motor vehicles.

Objective 5R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
Non-motorized use is occurring and growing in the area. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). User conflicts between trail users is occurring in the Steamboat Rock area, as are conflicts between trail users and landowners. The confusing, non-designated network of roads, trails and tracks makes recreational use difficult for all but adjacent residents who can visit the area regularly.

Guidelines:
- Non-motorized use (mountain bikes and equestrians) would be limited to designated roads and trails once a designated system is established.
- A designated road and trail system would be developed for non-motorized use. Trails along the Middle Deschutes River would emphasize hiking use, instead of equestrian or mountain bike use, which would be provided throughout the rest of the block.

Tumalo
Same as Alternative 4

Transportation and Utilities

Objective 5TU - 6: Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Allocations/Allowable Uses:

- Designate the road network and transportation/utility corridors as shown on Map 3 and Map S-5.
- Allocates a transportation/utility corridor adjacent to the BN-SF railroad right-of-way approximately ½ mile wide south of Redmond, extending to Deschutes Junction.
- Identifies 29 percent of the planning area in a primary wildlife emphasis designation and 34 percent in either a non-motorized emphasis or non-motorized exclusive designation.

Land Ownership

Objective 5LO – 1b: Retain public lands in the more urban areas to provide for moderate recreational uses. Retain lands in the more rural areas to provide for intensive recreational uses.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-1 (approximately 373,914 acres). Blocks of public lands identified as Z-1 include Tumalo, Cline Buttes, Bend/Redmond Core, Smith Rocks, Mayfield, Badlands, Horse Ridge, Reservoir East, Reservoir West, Southeast, Highway, and all public lands in La Pine except three parcels identified as Z-2. Other, smaller parcels of public land identified include Grizzly Mountain, Ochoco Reservoir, and Juniper Canyon.

Objective 5LO – 2b: Retain with an option to Exchange (Z-2). Identify parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values primarily for the purposes of connectivity, with a secondary emphasis on consolidation.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-2 (approximately 10,517 acres). Parcels include those adjacent to cities, towns, and communities that may be exchanged for lands with higher public values for community expansion and other public purposes. Isolated and fringe public parcels have been identified as Z-2 to provide connectivity between larger blocks and eliminate trail and road entries onto private lands in the rural areas. Parcels include Steamboat Rock, Redmond Caves, parcels around Alfalfa, parcels east of Juniper Acres, parcels east of Millican, and Skelton Cave. In La Pine, three parcels are identified east of Wickiup Junction.

Objective 5LO - 3: Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to administer or that would represent a greater public benefit in other ownership.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-3 (approximately 13,249 acres). This alternative identifies isolated parcels between Bend and Redmond, isolated parcels northwest of Redmond, isolated and fringe parcels around Prineville, and a fringe parcel on the Powell Buttes block. Identifies as Z-3 only lands (but not all) that were previously identified as Z-3 in Bothers/La Pine RMP.

Objective 5LO - 4: Provide land for community needs and uses consistent with public land management mandates.

Allocations/Allowable Uses:
Designate the lands in Map 33 for Community Expansion (approximately 5,727 acres). The public lands identified for community expansion near Redmond are located east of Redmond and west of North Unit Canal, and south of Redmond approximately ½ mile,

and east of Highway 97. Public lands were identified for a park at Barnes Butte northeast of Prineville. Public lands were identified for a park between Eagle Crest Phase II and Phase III and S of Hwy 126. The parcel south of Bend Airport was identified for a park and public facilities. Two 40-acre parcels in Juniper Acres Subdivision were identified for parks. No public lands are identified for community expansion in La Pine.

Objective 5LO – 5c: Acquire private parcels with access to public lands. Provide connectivity for wildlife between larger blocks of habitat in the rural areas.

Allocations/Allowable Uses:
Designate parcels, as shown on Map 33, for acquisition. Parcels of interest include those between Northwest and Cline Buttes, the National Grasslands and Ochoco National Forest, and Mayfield and the Badlands. A lesser emphasis would be to obtain lands to consolidate public lands in Zones 1 and 2 and to enhance public resource values, specifically in Southeast, Horse Ridge, and La Pine.

Guidelines:
Acquisition priority would be the rural areas for recreation purposes and then for wildlife and ecological purposes, and secondarily in the urban area for the same purposes.

Public Health and Safety

Objectives 5PHS - 11 The objectives are the same as those Common to Alternatives 2-7 with an emphasis on reducing conflicts among users and between users and residents within the urban wildland core.

Allocations/Allowable Uses:
The areas identified in Tables A-13 and A-14 would be closed to all firearm discharge and to firearm discharge unless legally hunting, respectively.

Table A – 13 Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes (Canal ACEC)	X	X	X	
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road)	X	X	X	X
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC)	X	X	X	X
Mayfield Block (Airport parcel)	X	X	X	X
Horse Ridge Block (North of Rickard Road, South of Hwy. 20)	X	X		X

Table A – 14 Closed to firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Steamboat Rock Block (All BLM land south of Lower Bridge Road outside of the WSR corridor)	X	X	X
Northwest Block (All BLM land not closed to all firearm discharge CT Alts 2-7)	X	X	
Cline Buttes Block (Entire Cline Buttes block except for closures to all firearm discharge CT Alts 2-6)	X	X	X
Mayfield Pond Block ((Main block – south of Alfalfa Market Road)	X	X	X
Prineville Reservoir Block (BLM lands contiguous and east of Lower Crooked WSR and contiguous and west of BOR/Prineville Reservoir)		X	X
Millican Plateau Block (BLM lands contiguous and west of the Lower Crooked WSR, and east of Road 6665)		X	X
La Pine Block (Entire block except for parcels closed to all firearm discharge CT Alts 2-6)	X	X	X

Alternative 6

Ecosystem Health and Diversity

Vegetation

Shrub-Steppe Communities

Objective 6V – 4c: Same as Alternative 3, except that vegetative treatments would incorporate landscape design features to provide some visual diversity while avoiding high contrast vegetative units in visually sensitive areas. Examples of visually sensitive areas include: urban/residential areas, main highways and county roads, campgrounds, dispersed recreation sites, and viewpoints. Background landscapes such as hills, buttes, and canyons as seen from populated areas and frequently visited sites may also be considered visually sensitive areas.

Guidelines:
Standard operating procedures for reducing visual effects from mechanical vegetative treatments and prescribed burning in high visibility areas would be implemented (see VRM section). Examples of mitigating measures for reducing visual effects could include: closing, scarifying and seeding roads, smoothing berms, chipping juniper thinning slash, concealing higher intensity juniper treatments with vegetative and topographic screening, leaving individual and groups of trees, designing irregularly shaped units, and unit edge feathering.

Old-Growth Juniper Woodlands

Objective 6V - 5c: **Protect and promote the health and integrity of old-growth juniper woodlands/savanna throughout its historic range with an emphasis on scenic values.**

Guidelines:
Same as Alternative 3 except for the following:

Maintenance/Restoration
- No specific ACEC for old-growth juniper woodlands would be designated. Instead, all old-growth woodlands within the planning area would be protected to the same extent as within ACECs except for the availability of certain parcels for land tenure actions. This alternative would protect all existing old-growth woodlands from further human impacts. In addition, there would be active restoration of woodlands throughout its current range and treatments intended to restore old woodlands in most of its historic range.
- There would be a management emphasis on visual quality in visually sensitive urban areas (i.e. residential subdivisions, urban arterial routes, urban recreation sites) and in visually sensitive recreation areas (i.e. viewpoints, campgrounds, heavily used dispersed recreation sites, and rural arterial routes).
- Treatment objectives in these areas would include enhancing foreground visual characteristics of the old-growth juniper woodlands/savanna and the overall scenic quality of the area. Juniper woodland characteristics that would be expected to generate high visual appeal would include:
  1. "Healthy" woodlands with large and old trees of various densities and structure
  2. Understories of diverse native shrub, grasses and forbs
  3. A low occurrence of noxious weeds and other non-native species
  4. Minimal visual evidence of human disturbances (i.e. stumps, roads, off-road motorized travel, dumping, buildings, powerlines, etc.)
  5. High visual diversity with regard to landscape vegetative and geologic features and proportions of foreground, middle ground and background.
- Where possible and appropriate, background and vista views would be enhanced by treatments such as thinning, pruning, or clearing corridors through foreground juniper woodlands; emphasizing removal of younger, smaller trees.
- All other standard operating procedures for reducing visual effects from mechanical vegetative treatments and prescribed burning in high visibility areas would be implemented. Examples of mitigating measures for reducing visual effects could include: closing, scarifying and seeding roads, smoothing berms, chipping juniper thinning slash instead of piling, low intensity prescribed burning to reduce scorch height, and concealing higher intensity juniper treatments with vegetative and topographic screening, leaving individual and groups of trees, and unit edge feathering.

Treatment Priorities
- Alternative 6 would emphasize treating the "best" old-growth juniper woodlands within major travel corridors, along backcountry by-ways, and near recreation and residential/urban areas. Primary objectives would be to maintain old woodland health and longevity and to improve or highlight scenic values. Other priorities would be similar to Alternative 3 but with more weight given to visual considerations for all areas with visual sensitivity.

Lodgepole and Ponderosa Pine Forest

Objective 6V - 6e: Same as Alternative 3 except that there would be a management emphasis on protecting and/or enhancing visual quality in visually sensitive areas.

Guidelines:
Maintenance/Restoration
- Treatment prescriptions in visually sensitive areas would include enhancing

foreground visual characteristics of the "urban" forest and the overall scenic quality of the area. Forest characteristics that are generally agreed to have high visual appeal include:

1. A "healthy" forest with trees that have large, dark green crowns, low occurrences of insects and disease, and relatively low quantities of dead standing and down trees.
2. 'Park-like" stands of ponderosa pine with large diameter, widely spaced trees
3. Minimal evidence of logging and other human disturbance (i.e. stumps, slash, skid trails, landings, roads, dumping, buildings, power lines, etc.)
4. High visual diversity across the landscape with regard to patch size, interspersed meadows and other openings, tree densities, and proportions of foreground, middle ground and background within a viewshed.

- Where possible and where appropriate, background and vista views would be enhanced by treatments such as thinning, pruning, or clearing corridors through foreground forest, emphasizing removal of small trees.
- All other standard operating procedures for reducing visual effects from logging, prescribed burning, and other mechanical vegetative treatments in high visibility areas would be implemented. Examples of mitigating measures for reducing visual effects could include: closing, scarifying and seeding roads, skid trails and landings, smoothing berms, chipping logging and fuels treatment slash instead of piling, low intensity, more frequent prescribed burning rather than fewer, hotter burn entries, and providing vegetative buffer screening.

Treatment Priorities

- A high priority for treatment under Alternative 6 would be to treat ponderosa pine stands with large, mature trees to maintain their health and longevity and to highlight their scenic value. Priority areas for treatment would include visually sensitive areas such as residential/urban areas, arterial roads, and in or near recreation areas. Other priorities would be similar to Alternative 3 but with more weight given to visual considerations for all areas with visual sensitivity.

Wildlife

Planning Area Wide

<u>Objective 6W – 6a:</u> Restore terrestrial source habitats to provide for species needs with a focus toward biological diversity. Increase the geographic extent of vegetation cover type-structural stages that have declined substantially from the historical to the current period within most Geographic Areas, and re-pattern the vegetation patches so they are consistent with disturbance regimes and with the landform, climate, and biological and physical characteristics of the ecosystem.

Geographic Areas

<u>Objective 6W – 2a:</u> Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform. Where consistent with habitat capabilities meet ODFW management objective numbers for deer and elk (Brothers/La Pine RMP, p. 12, modified).

In addition, this alternative would establish additional direction for the following areas:

Bend/Redmond
<u>Allocations/Allowable Uses:</u>
North: Secondary emphasis for year-round pronghorn habitats and connectivity; limit motorized use to designated roads only.

Guidelines:
Manage for year-round pronghorn and pronghorn connectivity habitats.

Cline Buttes
Allocations/Allowable Uses:
Dry Canyon, Maston, and Southeast: Minor wildlife emphasis; limit motorized use to designated roads and trails.

Guidelines:
Although wildlife is a minor management consideration, management would emphasize non-motorized recreation.

Horse Ridge
Allocations/Allowable Uses:
Skeleton Fire: Limited motorized travel to designated roads.
Main: Closed to motorized use.

Guidelines:
Emphasize non-motorized use and trails would be developed for use throughout the year.

La Pine
Allocations/Allowable Uses:
South: Primary emphasis for deer migration routes and elk; limit motorized travel to designated roads only seasonally with 12/1 – 4/30 closure.

Mayfield
Allocations/Allowable Uses:
Main: Minor emphasis for pronghorn year-round habitat and connectivity; limit motorized use to designated roads and trails.
South Alfalfa: Primary emphasis for deer and year-round pronghorn habitat and connectivity; limiting motorized travel to designated roads only.
(Same as Alternative 4).

Millican Plateau
Allocations/Allowable Uses:
Crooked River Rim: Primary emphasis for pronghorn and deer winter range, and raptor nesting and adjacent foraging habitats; closed to motorized travel.
South: Minor wildlife emphasis; limit motorized use to designated roads and trails.
Mayfield Link: Secondary for pronghorn connectivity routes; limit motorized use to designated roads only.

North Millican
Allocations/Allowable Uses:
Dry Canyon: Primary emphasis for deer, elk and sage grouse; closed to motorized use.
Main West: Secondary emphasis for wildlife including deer, elk and sage grouse, and year-round pronghorn habitat and connectivity; limit motorized use to designated roads and trails seasonally.
Main East: Primary emphasis for deer, elk, sage grouse and pronghorn year round habitat and connectivity; limit motorized use to designated roads and trails seasonally.

Guidelines:
Year-round non-motorized use would be allowed.
Manage for year-round and connectivity habitats for pronghorn.
Manage for sage grouse habitats by managing for non-motorized use and for motorized use with a seasonal closure (12/1 – 4/30).

Northwest
Allocations/Allowable Uses:
Main: Limit motorized use to designated roads seasonally.
West Block: Closed to motorized use.

Prineville
Allocations/Allowable Uses:
Grizzly/Scattered Northern parcels: Primary emphasis for deer and elk; most closed to motorized travel, with remaining isolated parcels secondary to deer and elk and limiting motorized travel to designated roads.
Combs Flat: Secondary emphasis for deer and pronghorn winter range and year round habitat; limit motorized use to designated roads.
Miscellaneous Scattered Parcels: Some primary and some secondary emphasis for deer and year-round pronghorn habitat; limit motorized use to designated roads, some seasonally.

Prineville Reservoir
Allocations/Allowable Uses:
Chimney Rock: Primary emphasis for deer and raptor habitat; closed to motorized use.
Eagle Rock West: Secondary wildlife emphasis for deer and year-round pronghorn habitat; limit motorized use to designated roads.
Main: Primary emphases for deer and elk connectivity as well as raptor habitat; closed to motorized travel.
Taylor Butte: Primary for deer and raptors; Closed to motorized use.
Reservoir North: Primary emphasis for deer, elk connectivity and raptors; Closed to motorized use.

South Millican
Allocations/Allowable Uses:
Mostly minor wildlife emphasis however, some secondary sage grouse breeding habitat; limit motorized use to designated roads and trails seasonally between 3/15 – 7/31.

Steamboat Rock
Allocations/Allowable Uses:
Main and River in Main Block: Minor wildlife emphasis; limit motorized use to designated roads and trails.

Tumalo
Allocations/Allowable Uses:
Closed to motorized use year-round.

Hydrology

Watershed/Hydrologic Function
Same as Alternative 3.

Special Management Areas

Peck's Milkvetch ACEC
See Alternative 5.

Tumalo Canals ACEC
See Alternative 5.

Smith Rock ACEC
See Alternative 5.

Caves
Pictograph Cave would be closed seasonally (October 15 – May 1) for bat hibernacula and would be closed to the installation of bolted climbing routes. All existing bolts and climbing hardware would be removed and the cave would be managed under Leave No Trace principles.

Land Uses

Livestock Grazing

Objective 6LG - 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-32 shows just those areas available in this alternative.

Guidelines:
- In more rural areas (roughly the south/east section of the northern planning area), allow livestock grazing only where demand is high.
- In more urban areas (roughly those areas in north and west, and including La Pine), allow livestock grazing regardless of demand level.
- Resolve conflicts between livestock grazing and adjacent private landowners, on a case-by-case basis, under existing law, regulation, and BLM policy, allowing up to "high conflicts."

Minerals

Objective 6MN – 3c: Reduce mining conflicts with recreation and wildlife habitat in "rural" areas. Manage conflicts with residents as in Alternative 2 (See Map S-27 Minerals Alternative 6).

Rationale:
The conflict mitigation standards established by this alternative provide management tools for protecting habitat components in rural areas. In addition, these standards provide guidelines for mitigating mining conflicts with residents and recreation while meeting regional demand for mineral resources.

Allocations/Allowable Uses:
- 332,774 acres are available for mineral material sales.
- Mineral material sales may not occur within 1/8 mile of residentially zoned areas.
- Roads that feed from BLM-managed land into residentially zoned areas may be used for mining-related traffic only if alternate routes are not available.
- In "urban" areas, mineral material sales may not occur within 1/8 mile of designated recreation sites.
- In "rural" areas, mineral material sales may not occur within ½ mile of designated recreation sites.
- Seasonal restrictions on all mineral operations would apply to 113,265 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 51,414 acres.

Guidelines:
- Allow up to a high conflict level with residents.
- Allow up to a high conflict level with recreation in "urban" zones and no more than a low conflict level in "rural" zones.
- Allowable mining conflict levels with wildlife by geographic area as outlined in Table 2-12.

ACEC Guidelines: See ACEC Alternatives

Military Uses

Objective 6MU - 6: Permit military training while reducing concentration of impacts on a single area and promoting restoration of areas heavily impacted by recreational activity and dumping.

Allocations/Allowable Uses:
Training Area Boundaries
- Military use is allowed as shown in Map 36 (approximately 19,268 acres). The training area permitted in this alternative would be south of O'Neil Highway, crossing both Highway 126 and Powell Buttes Highway. It would also be south of Roberts Field, Deschutes County Fairgrounds, and the new Redmond Golf Course. From north to south, the permitted area would remain approximately a mile east of the public land boundary, in the same alignment as currently provided. It would be north of the Bend Sewage Treatment Facility, Bend Airport, and BLM road 6589-B. The permitted area would be west of the private land ownership in the rural community of Powell Buttes.
- Designate three rotational training areas so that one training area would be available for training for a specific duration, estimated at three years per area.

Guidelines:
- The rotational training areas would be selected from those public lands that have been previously disturbed by non-military activities, are overused and in need of restoration. The military would adopt these lands and rehabilitate them. The rotational training areas would be made available during times of large-scale maneuvers on a rest rotation basis. The three areas currently under consideration are Steamboat Rock about 3,820 acres; five miles south of Prineville Airport to five miles north of the Millican Road/Reservoir Road Intersection (Four Corners), about 7,060 acres; and five miles north of the Millican Road/Reservoir Road Intersection to that intersection, about 9,388 acres.
- Only one of the three areas would be available at any one time, over a time sufficient to begin rehabilitation efforts, the estimate is about three years. The three areas would be selected based on considerations such as overuse by the general public, proximity to the main training area, potential for rehabilitation efforts to be effective, and assistance/participation of local agencies and adjacent landowners and other interested citizens.

Recreation

Alternative 6 would emphasize higher intensity uses adjacent to rural residential areas that would be built out in the next 10 years, and uses that have lower conflicts with wildlife in the areas away from population centers. Higher levels of conflicts with users and with residents would be permitted under this alternative.

Planning Area Wide

Objective 6R – 4: Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

Guidelines:
See Table A-15 .

Geographic Area

Table A-15 displays how recreational opportunities are dispersed throughout the planning area in Alternative 6. The recreation management direction specific to geographic areas is described below.

Badlands
Under Alternative 6, the Badlands WSA would be managed for primitive, non-motorized and non-mechanized recreation. The WSA would be closed to motor vehicle and mechanized use year-round. The WSA would be closed to mechanized use, (e.g., mountain bikes, horse drawn carts, etc.) except for the area immediately surrounding Reynolds Pond (define by map). Motorized use closures would encompass an additional 5,000 acres to the southeast of the WSA (See North Millican– Alternative 6). Due to the vehicle closures, a high priority would be given to providing designated parking areas and trailhead improvements at major entry points.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
To maintain the area's suitability for wilderness designation by Congress, the area is managed under the provisions of the Interim Management Policy for Lands Under Wilderness Review (IMP). This policy directs BLM to limit vehicle travel to a system no greater than the existing, inventoried routes that were present when the area was inventoried for wilderness characteristics.

Table A-15 Recreation Emphasis

Alternative 6	Multi-use separate facilities	Multi-use shared facilities	Non-motorized recreation emphasis	Non-motorized recreation exclusive	Non-recreation emphasis	Roads only emphasis
Cline Buttes	X			(minor)		(minor)
Northwest			X	(minor)		
La Pine		(minor)	X	(minor)		
Bend-Redmond		X	X	(minor)		
Mayfield		X	X	(minor)		
South Millican		X				
North Millican		X		X		
Millican Plateau		X		X	(minor)	(minor)
Prineville Reservoir			X	X		X
Steamboat Rock			X	X	(minor)	
Badlands				X		
Horse Ridge			X	X	(minor)	
Prineville			X			(minor)
Tumalo				X		

Allocations/Allowable Uses:
Entire WSA would be closed to motorized vehicle use.

Objective 6R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Same as Alternative 3.

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment. Non-motorized trail use is increasing in the Badlands, both from individual users and non-permitted commercial guides. The level of non-motorized use off designated, inventoried routes can impact resources and wilderness suitability.

Allocations/Allowable Uses:
WSA would be closed to motorized and mechanized use year-round, except for area around Reynolds Pond.

Bend/Redmond
Under Alternative 6, the Bend/Redmond area would be managed similar to Alternative 3; however, Alternative 6 does not include motorized trails north of State Highway 126. Under Alternative 6, this northern area would be designated as Limited to designated roads only, with year-round use.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
In order to compensate for seasonal closures of existing trail systems in Millican Valley and other areas, the large block of public lands in the Bend/Redmond area would be used to develop additional motorized trail systems. A designated trail system is needed due to the increased levels of development in the area and the likelihood that additional paved roads would fragment the area in the future.

Allocations/Allowable Uses:
- Area south of State Highway 126 would be designated as Limited to designated roads and trails.
- Area north of State Highway 126 would be designated as Limited to designated roads only.

Objective 6R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
Same as Alternatives 2 and 4.

Cline Buttes
Motorized use would be limited to designated roads and trails. The Cline Buttes block would be managed with an emphasis on multi-use trails in the center and north portions of the area. Designated trails would be provided for non-motorized use throughout the entire block. Like motorized users, Equestrians and mountain bikes would be limited to a designated trail system

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Entire Cline Buttes block designated as Limited to designated roads and trails.

Guidelines:
Multi-use trail system emphasis would be most heavily developed in center and north portions of the Cline Buttes block. In other areas, management of motorized use would emphasize motorized use on designated roads, with trails being used by non-motorized recreationists.

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
Non-motorized use is occurring and growing in the area. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). User conflicts between trail users is occurring in the Cline Buttes area, as are conflicts between trail users and landowners. The increase in development in the area makes these conflicts more likely.

Guidelines:
- Manage equestrian use on a designated trail system. Within the geographic subdivision, give priority to establishing a designated trail system first within the Maston Allotment and the Canyon complex in the northwest portion of Cline Buttes.
- Provide designated trail opportunities for mountain biking. Emphasis would be on providing designated trail opportunities in the higher elevation portions of Cline Buttes, provided legal access exists and trespass would be minimized.

Horse Ridge
Same as Alternative 5

La Pine

Objective 6R – 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Same as Alternative 3, except:
Isolated public land blocks within the La Pine area would be managed as Closed to motor vehicles; these blocks generally range from 40 acres to 500 acres in size

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
Isolated blocks would be managed for dispersed non-motorized use.

Mayfield
Same as Alternative 4

Millican Plateau
A smaller area is closed to motor vehicles adjacent to, and west of the Crooked River, and a buffer area around Powell Butte RNA would be limited to designated roads only.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Area north of Reservoir Road, east of Johnson Market Road, and west of Crooked River would be designated as Limited to designated roads and trails, except:

1. Buffer area 1/2-mile from Crooked River Canyon rim.
2. Area surrounding eastern portion of Powell Butte RNA limited to designated roads only (See Map 13).

Guidelines:

- Additional trails are designated in area between Millican Road and Johnson Market Road.
- Additional trails are designated in area east of Road 6555-b to allow for one or more trail loops.

North Millican
Alternative 6 separates recreational uses to a greater degree, and places greater restrictions on recreation use to benefit wildlife species than Alternative 5. Under Alternative 6, approximately 5,000 acres of the existing North Millican OHV area would be managed as a non-motorized use area, with designated, non-motorized trails. The remainder of the area would be managed for seasonal motorized use, with the area closed to motorized use from December 1 through April 30th, annually. As in all the other action alternatives, the trail system in the area would be revised to maintain a functional system on both sides of West Butte Road, if the road becomes a paved, truck route. The number of trail crossings of West Butte Road would be reduced, and a frontage trail may be needed to collect trail use and lead it to a smaller number of grade separated crossings.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Allocations/Allowable Uses:
Area would be managed as Limited to designated roads and trails, seasonally (closed December 1 through April 30), except for an approximately 5,000 acre area managed as Closed to motorized vehicles (see Map 13).

Objective 6R – 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:

- Develop trailhead and parking area at base of Dry Canyon.
- Develop trailhead, parking area and primitive camping area at base of Dry Canyon.

- Consider developed group use and camping site near COSSA Shooting range, to be operated on a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities.

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
- The 5,000 acre area in the northwest corner of the area would be managed for equestrian, hiking, and mountain bicycling use on designated trails.
- Some trails in the larger Highway area would be constructed, maintained or revised to accommodate needs of non-motorized recreational users who would be using the area during the winter/early spring motorized closure period (Dec. 1 through April 30).
- A designated trail link would be provided from Dry Canyon to the Route 8 entrance to the Badlands WSA.

Objective 6R - 6: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
Same as Alternative 5, and includes:
- Developing a group use and camping site near COSSA Shooting range, to be operated on a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities if such a development meets the objectives of this Alternative.
- Developing primitive camping area at base of Dry Canyon.

Northwest
The area would be managed with an emphasis on development of non-motorized, designated trails that provide connectivity to a regional trail system, links to Sisters Community trails, and links to non-motorized trail systems on Crooked River National Grasslands (CRNG) to the north. Motorized use would be limited to designated roads only in the main block, and would be prohibited in the isolated parcels west of Squaw Creek (except in a designated entry into the Sisters Bouldering area). A seasonal restriction on motorized use would be in place, consistent with adjacent policy on the CRNG; however, the area remains open year-round for non-motorized use. Non-motorized trails and additional trailheads to serve them are provided. The Sisters Bouldering area would be managed specifically for climbing use, and would be identifiable as BLM administered land.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized travel in main block would be limited to designated roads. All BLM roads in this area would be Closed to motorized use seasonally, from December 1 to March 31. Isolated parcels west of Squaw Creek would be Closed to motorized travel, except for Sisters Bouldering Area

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
Same as Alternative 3

Prineville
This alternative changes the management emphasis of the area, changing the management of the small, isolated tracts of BLM administered land north of Prineville to motorized use on designated roads only. The larger blocks of BLM land in this area would be managed as Limited to designated roads and trails year-round. The lands to the south of Prineville and north of Prineville Reservoir would be managed for use on designated roads only, or for use on designated roads and trails.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
Motorized access on designated roads would be retained in the Eagle Rock area – providing access to Rockhounding sites.

Objective 6R - 2: Provide designated access points (includes entry points, and parking areas/trailheads/staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring land owners.

Guideline:
Develop trailhead for the proposed trail system in the Eagle Rock area.

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
A designated, non-motorized trail system would be developed in the Eagle Rock area, with a trail link to Prineville Reservoir.

Prineville Reservoir
The area is managed for motorized vehicle use on designated roads seasonally, with lands around the north and south side of the upper portion of Prineville Reservoir Closed to motor vehicles from December 1 to April 30. The area immediately east of the Crooked River and north of the reservoir is Closed to motor vehicles year-round. Lands at the south end of this area, furthest away from Prineville Reservoir are Limited to motorized use on roads only.

Objective 6R - 1: Manage off highway vehicle use on BLM administered land to provide satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- The area north of Prineville Reservoir and immediately east of the Crooked River would be designated Closed to motor vehicles.
- The area north of the upper end of Prineville Reservoir would be designated as Limited to designated roads, seasonally (Closed from December 1 to April 30).
- The area east of State Highway 27 is Limited to designated roads year-round.

Objective 6R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Provide trailheads and parking areas near Prineville Reservoir. Designated non-motorized trails would utilize State Park/BOR trailhead facilities where feasible.

Objective 6R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Rationale:
The area currently has no managed or designated trail system. BOR and State Parks have identified trailheads in the area around Prineville Reservoir and non-motorized trail goals in their current planning process.

Guidelines:
The area approximately ½ mile west of the Crooked River would be managed for non-motorized trail use only. A designated trail system would be developed in the area that links to a trailhead off State Highway 27 near Taylor Butte.

- Designated, non-motorized trails would be provided in the Taylor Butte/ Powderhouse Cove area. A separate non-motorized trailhead would be provided off State Highway 27 at Taylor Butte. Designated trails in this area would be coordinated with BOR and State Parks.
- Designated, non-motorized trails would be provided in the area east of the Crooked River at Chimney Rock, with an emphasis toward connections to BOR/State Park facilities, particularly the Count boat ramp area.

Smith Rock
Same as Alternative 2

South Millican
Same as Alternative 5, except the area is Closed to motorized use from March 15 to September 15.

Steamboat Rock
Same as Alternative 3

Tumalo
This alternative would be the same as Alternative 3, except that it places an emphasis on connections to regional trails.

Objective 6R – 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and public land neighbors.

Guidelines:
Same as Alternative 3, except the development of regional trail linkages on BLM-managed land through the area would be considered.

Transportation and Utilities

Objective 6TU - 6 : Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Allocations/Allowable Uses:

- Designate the road network and transportation/utility corridors as shown on Map 3 and Map S-6.

- Identifies 54 percent of the planning area in a primary wildlife emphasis designation and 38 percent in either a non-motorized emphasis or non-motorized exclusive designation.

Land Ownership

Objective 6LO - 1c: Retain lands in the more urban areas to provide for intensive recreational uses. Retain lands in the more rural areas to provide for moderate recreational uses.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-1 (approximately 344,376 acres). Blocks of public lands identified as Z-1 include Tumalo, Cline Buttes, Steamboat Rock, Bend/Redmond Core, Smith Rocks, Mayfield, Badlands, Horse Ridge, Reservoir West, Reservoir East, Southeast, and Highway. In La Pine, Z-1 lands would be north and east of Wickiup Junction. Other, smaller parcels of public land include Grizzly Mountain and Juniper Canyon.

Objective 6LO – 2c: Retain with an option to Exchange (Z-2). Identify parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values primarily for the purposes of connectivity, with a secondary emphasis on consolidation. In La Pine, a large area remained Z-2 to provide the opportunity to change the public land pattern to provide for deer migration, specifically between east Deschutes National Forest and west Deschutes National Forest.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-2 (approximately 39,694 acres). Isolated and fringe public parcels have also be identified as Z-2 to provide connectivity between larger blocks and eliminate trail and road entries onto private lands in the rural areas. Parcels are located around Alfalfa, east of Juniper Acres, east of Millican, and Skelton Cave. The majority of the public lands in La Pine are Z-2, extending south from Wickiup junction to the boundary of the project area. Parcels were not specifically selected to correspond with private parcels desired for acquisition.

Guidelines:
Disposals involving exchange or the proceeds of a sale may occur only when the private parcels and public parcels are in the same general area.

Objective 6LO - 3: Disposal (Z-3) (see CTA section). Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to manage or that would represent a greater public benefit in other ownership.

Allocations/Allowable Uses:
Designate the lands in Map 33 as Z-3 (approximately 14,222 acres). Parcels suitable for disposal include isolated parcels between Bend and Redmond, isolated parcels in and northwest of Redmond including the Redmond Caves, isolated and fringe parcels around Prineville, and a fringe parcel on the Powell Buttes block. Four parcels designated as Z-3 in La Pine are located west of Wickiup Junction.

Objective 6LO - 4: Community Expansion (see CTA). Provide land for community needs and uses.

Allocations/Allowable Uses:
Designate the lands in Map 33 for Community Expansion (approximately 5,115 acres). The public lands identified for community expansion near Redmond are located east of Redmond and west of the North Unit Canal, south of Redmond Airport, and south of Redmond and east of Highway 97. Public lands identified for a park are between Eagle Crest Phase II and Phase III and south of Highway 126. Public lands identified for a park are east of Prineville, at Barnes Butte. Public lands identified for a park and public facilities are south of Bend Airport. Two 40-acre parcels in Juniper Acres Subdivision were identified for parks. Three parcels selected for parks and public facilities are in La Pine.

Objective 6LO – 5c: Provide connectivity for wildlife between larger blocks in the urban areas. Acquire private parcels with access to public lands.

Allocations/Allowable Uses:
Designate the lands in Map 33 as parcels of interest for acquisition. Parcels of interest include those between Smith Rock and Bend/Redmond, Tumalo and Cline Buttes, Northwest and Cline Buttes, Bend/Redmond and Cline Buttes, Mayfield, and the Badlands.

Guidelines:
- Acquisitions involving exchange or the proceeds of a sale may occur only when the private parcels and public parcels are in the same general area.
- Acquisition priority would generally be the urban areas for recreation purposes and then for wildlife and ecological purposes, and secondarily in the rural area for the same purposes.
- Less emphasized would be acquisition to consolidate public lands in Zones 1 and 2, which are Southeast, Horse Ridge, and La Pine.

Public Health and Safety

Objective 6PHS - 12: The objectives are the same as those common to Alternatives 2-7 with an emphasis placed on reducing conflicts between wildlife management and human activities in rural areas.

Rationale:
This alternative allows for more conflict between land uses, recreational users, and residents in the urban core. Local governments are left to provide highly managed recreation opportunities adjacent to the urban core. Natural and cultural resources receive some additional protection in the rural areas.

Allocations/Allowable Uses:
The areas in Tables A-16 and A-17 below would be closed to all firearm discharge and closed to firearm discharge unless legally hunting, respectively.

Table A – 16 Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes (Canal ACEC)	X	X	X	
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC)	X	X	X	X

Table A – 17 Closed to firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Northwest Block (All BLM land not closed to all firearm discharge CT Alts 2-7)	X	X	
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road, Main block north of Tumalo Reservoir)	X	X	X
Mayfield Block (Airport parcel)	X	X	X
Prineville Reservoir Block (BLM lands contiguous and east of Lower Crooked WSR and contiguous and west of BOR/Prineville Reservoir)		X	X
Horse Ridge Block (North of Rickard Road, South of Hwy. 20, BLM land between new and old Highway 20)	X	X	
Badlands Block (entire block except ¼ mile around Badland Rock from March 1 to August 31)	X	X	X
North Millican Block (Dry Canyon just north of Highway 20)	X	X	X

Alternative 7 (Preferred Alternative)

Ecosystem Health and Diversity

Vegetation

Shrub Steppe Communities

<u>Objectives 7V – 4b:</u> Maintain/restore large contiguous stands of healthy, productive and diverse native shrub/steppe plant communities throughout their historic range. See footnote 1 in Alternative 2. Restoration and expansion of key plant communities would approximate historic stand structure and geographic range as defined by conditions existing at pre-European settlement times. On most historic shrub-steppe sites, western juniper would be reduced to widely spaced old-growth trees or small patches on ridgetops or other focused locations where trees would contribute to biodiversity at the landscape level.

<u>Rationale:</u>
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to white European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems (see Affected Environment – Vegetation). Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term.

<u>Guidelines:</u>
Maintenance/Restoration
- Restoring historic fire regimes wherever possible outside the wildland-urban interface would be emphasized to improve/maintain the condition and expand the extent of shrub-steppe communities to historic ranges.
- Composition, density, and distribution of young western juniper would be reduced to historic levels. Juniper older than 150 years may be removed in some circumstances if specific restoration needs for wildlife habitat or other natural values exceed the need to maintain the tree component.
- A primary criterion for prescribing treatment is when juniper occurs at a density and/or distribution that is determined to be outside its historic range of variability.
- Within the next 15 years cutting and/or prescribed fire would occur on shrub-steppe currently occupied with young juniper.
- Where ecologically appropriate, restore or maintain stands of large contiguous sagebrush communities in patches of 400 acres and larger. Design of landscape patterns would include connectivity of large shrub-steppe patches.
- Vegetative habitat needs of non-game sagebrush-steppe obligate species would be emphasized in treatment design.

Treatment Priorities

- Project design would be based on a landscape level restoration of broad vegetative types. Priorities for treatment would focus on areas that would show the biggest ecological gain for a given level of treatment intensity or investment. Cost-benefit ratios would help determine project priority and scale. Priorities would include restoration of sage grouse and other special status species and non-game habitat. Areas that have transitioned beyond the threshold of restoration success with reasonable treatment effort and expense would receive lower priority.

Old-Growth Juniper Woodlands

Objectives 7V – 5b: Protect and promote the health and integrity of old-growth juniper woodlands/savanna (Refer to Footnote 2 in Alternative 2) throughout its historic range. In addition to protection and maintenance of existing old-growth, treatments would also be designed to restore old-growth, where possible, within its historic range.

Rationale:

Old-growth western juniper woodlands in the pumice sands of Central Oregon are unique in their age, size and extent. Of the five million acres of western juniper in the intermountain west, only an estimated three percent is considered to be old-growth.

Ideal conditions of soil, climate and topography converge in Central Oregon to allow juniper to attain its maximum potential for size and age of individual trees and density and range for contiguous old-growth stands. The oldest (1,600 years) western juniper tree found to date is located within the planning area. Continued human population growth and associated increases in development and public land use in Central Oregon is causing fragmentation and degradation of this important habitat type. Large healthy contiguous stands of old woodlands provide habitat for late-seral dependent species, scenic quality, and education/interpretation opportunities.

Guidelines:

Maintenance/Restoration

- Treatment objectives would be based on restoring historic condition and range of old-growth woodlands/savanna within the planning area. Prescriptions would allow for, or mimic, natural disturbances wherever practicable. Treatment intensity and acreage would be higher than under Alternative 2, subject to budget limitations.

Treatment Priorities

- Priority treatment areas would include many of the priorities indicated within Alternative 2 but would treat larger units and attempt to expand current range of old woodlands toward historic range. ACECs designated for old-growth woodland values would generally be high priority areas for treatment.
- Other priority areas would be sites that have relatively high densities of young juniper establishing in the interspace between the older trees. Treatments would be designed to both maintain the health and longevity of the old trees and to increase the amount and diversity of understory shrubs, grasses, and forbs. In addition, treatment priorities would also include key areas where evidence indicates old-growth woodland/savanna existed during pre-European settlement times and where there is potential to re-establish old-growth characteristics in the future. These areas could include old homesteads cleared for farming, crested wheatgrass seedings, firewood harvest areas, or other juniper site conversion project areas. Alternative 3 would put a greater emphasis on managing special status and non-game habitats, and a lesser emphasis on managing for big-game habitat.
- Field surveys and historical accounts would help estimate pre-settlement structure/composition of plant communities. This information would be used to develop restoration prescriptions and treatment priorities that would move plant communities

back toward historic range and conditions. Old woodland structural and composition components would include large old trees, multiple age classes, dead standing trees, dead down trees, shrub, grass, and forb densities and proportions similar to historic levels and distribution.

- Allow cutting/harvest of green trees up to 18 inches DBH east of State Route 27. Harvest of juniper west of State Route 27 would generally be allowed only in conjunction with restoration treatments, fuels reduction, or clearing for ROWs or other approved facilities or developments. Trees cut and removed during restoration or fuels management treatments would generally be limited to trees less than 150 years old and based on physical characteristics. Individual trees showing characteristics of old-growth, regardless of size, would generally not be cut. Cutting of snags and large down logs would not be allowed.

Lodgepole and Ponderosa Pine Forests

Objective 7V – 6a & c: Maintain and promote healthy and diverse lodgepole and ponderosa pine forest ecosystems (Refer to Footnote 3 in Alternative 2). Manage stand structure, density, species composition, patch size, pattern, and distribution to provide an environment in which fire intensity can be managed for human safety and fire effects are compatible with other management objective. Maintain or mimic natural disturbance regimes so that stands are resilient to periodic outbreaks of insects, disease and wildfire. Manage ponderosa pine to maintain a dominant status throughout its range Provide for a balance of biological, social and economic needs in an urban/wildland setting.

Rationale:
The Federal Land Policy and Management Act of October 21, 1976 (43 USC 1701) declares that it is the policy of the United States that the public land be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. Restoration of landscape succession/disturbance regimes is the foundation of the strategy to manage long-term risk to terrestrial, aquatic, and riparian ecosystems. This risk management strategy would conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term. Ponderosa pine is important from an ecological perspective because of its relative scarcity in the planning area and its inherent resiliency to disease and fire.

Guidelines:

- Treatments would be designed to transition to more stable self-sustaining ecosystems to prevent large-scale occurrences of insects, disease and fire. Promote stand structures and landscape patterns that would limit the risk and reduce extent of damage caused by large-scale natural disturbance processes.
- Ponderosa pine would be restored to its former dominance and structure within its historic range. Lodgepole pine and juniper would be aggressively thinned where it is encroaching into and competing with ponderosa pine stands. Most old-growth juniper found in these mixed stands would be left for diversity.
- Treatment units and habitat patch size would generally be larger than under

Alternative 2 and based on larger-scale treatments to mimic natural disturbance processes and to restore healthy ecosystems. In lodgepole pine sites, thinning would be more intensive with wider spacing, more acres treated, and/or more frequent treatment entries.

- Isolated groups and individual ponderosa pine trees, particularly in the La Pine and Cline Buttes areas, would be targeted for protection and enhancement to maintain biodiversity and aesthetic values associated with these trees. Large isolated pine trees are particularly valuable as nesting, perching, and roosting habitat for raptors. Treatments would include radius thinning for up to 30 feet around each tree to reduce competition from lodgepole pine and western juniper.
- Thinning treatments in sapling to pole sized stands would leave 109-134 trees per acre.

Objective 7V – 6d: Maintain existing late and old structure ponderosa pine and promote its redevelopment throughout its former range within the planning area.

Rationale:
Many plant communities throughout the interior west are in a condition, structure and composition that deviate from their "natural" state that existed prior to European settlement. Human management activities and other influences have contributed to the current imbalance in ecosystems. Restoring conditions that approximate historic conditions would help prevent large-scale occurrences of insect, disease, and wildfire and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances.

Guidelines:

- Treatments within ponderosa pine forests would promote long-term sustainability of representative stands of early, mid, and late seral ponderosa pine within its historic range and reduce future risk of occurrence and extent of damage caused by insects, disease, and stand-replacement wildfires, and meet wildlife habitat management objectives.
- Maintain and restore old and mature ponderosa pine forest structure and expand its range toward historic levels, including areas affected by past logging practices and species transition, to re-establish ponderosa pine dominance and mature structure over time.
- Field surveys and historical accounts would help estimate pre-settlement range, structure, and composition of old and mature forest stands. Old and mature forest structure components include size, age, and density of trees, down logs, canopy structure, and understory composition.

Treatment Priorities

- Priority treatment areas are those sites that are at high risk of unnaturally severe disturbance events and have a relatively high potential for response to treatments to alleviate those risks. Treatments would work toward restoring deficient habitats to approximate historic landscape patterns and proportions on a relatively large scale.

Wildlife

Geographic Areas

Objective 7W – 2a: Maintain or improve habitats to support healthy, productive and diverse populations and communities of native plants and animals (including species of local importance) appropriate to soil, climate and landform Where consistent with habitat capabilities, meet ODFW management objective numbers for deer and elk (Brothers/La Pine RMP, p. 12 - modified).

Allocations/Allowable Uses:
Designate areas for primary, secondary, or minor wildlife management emphases in winter range, breeding and rearing habitats, and connectivity areas.

Bend/Redmond
Allocations/Allowable Uses:
North: Secondary emphasis for pronghorn connectivity corridor; limit motorized use to designated roads and trails (except for OMD permitted activities).

Cline Buttes
Allocations/Allowable Uses:
Southeast: Minor wildlife emphasis; limit motorized use to designated roads and trails.
Canyon: Secondary wildlife emphasis.
Maston allotment (located in the southeast area): Primary emphasis for elk, raptors and riparian habitat; Closed to motorized use.

Guidelines:
The Canyon complexes and Maston Allotment areas would have a low density of motorized travel routes.

Horse Ridge
Allocations/Allowable Uses:
The Skeleton Fire: limit motorized travel to designated roads.
Horse Ridge: Closed to motorized vehicles.

Guidelines:
General management guidelines would include:
- Trail dependant special recreation events (trail rides, races, etc.) would be allowed on designated roads and trails.
- A maximum of 2 events (motorized or non-motorized) could be held per month, with events up to 2 days long allowed. Each permitted event would be separated by at least 12 days with no scheduled events.

La Pine
Allocations/Allowable Uses:
Southern area: Primary emphasis for deer and elk winter range and deer migration habitats; limit motorized use to designated roads seasonally.
Expanded Rosland Play area:[28] Minor emphasis; limit motorized use to designated roads and trails.

Mayfield
Allocations/Allowable Uses:
Main: Secondary emphasis for year-round pronghorn habitat and connectivity corridors; limit motorized use to designated roads.
South Alfalfa: Primary emphasis for deer and year-round pronghorn habitat and connectivity; Closed to motor vehicles.

Guidelines:
North of Alfalfa-Market Road:
Avoiding actions in pronghorn connectivity corridors that create barriers to pronghorn movements and relocating the existing access road to Mayfield Pond away from the pond to improve habitat condition and decrease disturbance to wildlife.

South of Alfalfa-Market Road and west of Dodds Road:
Maintaining no more than a moderate density of trails (approximately 1.0 to 2 miles of trails per square mile of habitat) and avoiding actions in pronghorn connectivity corridors that create barriers to pronghorn movements.

Millican Plateau
Allocations/Allowable Uses:
West Butte: Primary emphasis for elk and sage grouse winter range and breeding habitat; Closed to motorized use.
Northern Peninsula: Primary for pronghorn winter range; Closed to motorized use.
Crooked River Rim: Primary wildlife emphasis for deer and pronghorn winter range, and raptor nesting and foraging habitats; Closed to motorized travel except for a single OHV loop to provide a scenic view.
South: Minor wildlife emphasis; limit motorized use to designated roads and trails.
Mayfield Link: Secondary for pronghorn connectivity routes; limit motorized use to designated roads only.

North Millican
Allocations/Allowable Uses:
Dry Canyon: Primary emphasis for deer, elk and sage grouse; limit motorized use to designated roads only.
Main (east and west): Primary emphasis for deer and elk winter range and sage grouse habitat; also primary for year-round pronghorn habitat and connectivity routes; limit motorized use to designated roads and trails.

Guidelines:
When feasible, locate human activities close together geographically. Develop a prototype of potential trail system to meet 70% habitat effect guidelines.
Limit mechanized and horse travel to designated routes

Northwest
Allocations/Allowable Uses:
Main: Limit motorized travel to designated roads and seasonally close (12/01 to 03/31) all BLM roads in this area (except access roads to non-motorized trailheads or developed sites).
Close isolated parcels west of Squaw Creek to motorized travel (except for Sisters Bouldering Area).

Guidelines:
Seasonally (12/01 to 03/31) maintain low road and trail densities.

Prineville
Allocations/Allowable Uses:
Grizzly/Scattered Northern parcels: Primary emphasis for deer and elk; most Closed to motorized travel, with remaining isolated parcels secondary to deer and elk and limiting motorized travel to designated roads.
Combs Flat: Secondary emphasis for deer and pronghorn winter range and year round habitat; limit motorized use to designated roads.
Miscellaneous Scattered Parcels: Some primary and some secondary emphasis for deer and year-round pronghorn habitat; limit motorized use to designated roads, some seasonally.

Prineville Reservoir
Allocations/Allowable Uses:
Chimney Rock: Primary emphasis for deer and raptor habitat; Closed to motorized use.
West Eagle Rock: Secondary wildlife emphasis for deer and year-round pronghorn habitat; limit motorized use to designated roads.
Main: Primary emphasis for deer and elk connectivity routes and raptor habitat; Closed to motorized travel.
Taylor Butte: Primary for deer and raptors; Closed to motorized use.
Reservoir North: Primary emphasis for deer, elk connectivity routes and raptor habitat; Closed to motorized use.

South Millican
Allocations/Allowable Uses:
Primary emphasis on deer and elk habitat, sage grouse winter and breeding habitats, and year-round pronghorn habitat; limit motorized use to designated roads and trails seasonally from December 1st to July 31st.

Guidelines:
Management guidelines for sage grouse include increasing the size of habitat patches by permanently closing some trails and roads and rehabilitating them to natural vegetation.

Steamboat Rock
Allocations/Allowable Uses:
Main Block: Wildlife is a minor emphasis; limit motorized use to designated roads and trails.
River in Main Block: Primary emphasis for deer, elk, raptors and riparian habitat; Closed to motorized use.

Tumalo
Allocations/Allowable Uses:
Closed to motorized use.

Guidelines:
The road and trail density goal for the main block would be limited to a range of approximately 1.5 to 2.5 miles per square mile (including Sizemore Road, a paved public road through the area).

Hydrololgy

Riparian

Objective 7H – 7a: Riparian habitats support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations similar to historic conditions.

Rationale:
FLPMA, numerous laws, regulations, policies, Executive orders, MOUs and agreements direct BLM to manage its riparian/wetland areas for biological diversity, productivity, and sustainability for the benefit of the Nation and its economy.

The intent of this objective is to ensure that adequate amounts of riparian and wetland vegetation are sustained or increased in the long term. ICBEMP science identifies past alterations to vegetation on BLM-administered lands that have resulted in riparian habitat conditions that are less than optimal for aquatic and riparian–dependent species. Riparian ecosystem function, as determined by the amount and type of vegetation cover, has decreased as since historic times.

Guideline:
Late successional riparian vegetation is in amounts and distribution similar to historic conditions.

Watershed/Hydrologic Function

Objective 7H – 9a: Where the capability exists, restore, maintain and improve upland and hydrologic function through the reduction of overland flow, increased infiltration, and improved floodplain function similar to historic levels.

Rationale:
In addition to FLPMA and Fundamentals of Rangeland Health, ICBEMP directs management actions to sustain hydrologic processes characteristic of the geo-climatic setting by maintaining and promoting (a) healthy, productive, and diverse plant and animal communities as appropriate to soil type, climate, and landform; and (b) ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

Guideline:
Emphasize moving vegetation composition and densities to structural and physical historic ranges to promote infiltration and minimize overland flow.

Special Management Areas

Peck's Milkvetch ACEC
See Alternative 5

Tumalo Canals ACEC
See Alternative 2.

Caves
Pictograph Cave would be closed seasonally (October 15 – May 1) for bat hibernacula and would be closed to the installation of bolted climbing routes. All existing bolts and climbing hardware would be removed and the cave would be managed under Leave No Trace principles.

Land Uses

Livestock Grazing

Objective 7LG - 1: Provide for continued livestock grazing, while reducing conflicts with and meeting needs of other uses and resources.

Allocations/Allowable Uses:
Allotments shown on Map 30 are available for livestock grazing if they are identified as such for this alternative in Appendix G. Map S-33 shows just those areas available in this alternative.

Guidelines:
Livestock grazing would be allowed where there is not a combination of the following risks: high ecological conflict, low demand, and moderate or high social conflict (see definitions of these conflict levels and a diagram of where grazing would/would not continue in the Livestock Grazing section of Chapter 2). In the remaining allotments, livestock grazing would continue to be authorized, though in some cases the authorized officer could discontinue grazing or create a Reserve Forage Allotment, if certain criteria were met.

Minerals

Objective 7MN – 3c: Reduce mining conflicts with recreation and wildlife habitat in "rural" areas. Manage conflicts with residents as in Alternative 2. (See Map S-28 Minerals Alternative 7).

Rationale:
The conflict mitigation standards established by this alternative provide management tools for protecting habitat components in rural areas. In addition, these standards

provide guidelines for mitigating mining conflicts with residents and recreation while meeting regional demand for mineral resources.

Allocations/Allowable Uses:
- 332,774 acres are available for mineral material sales.
- Mineral material sales may not occur within 1/8 mile of residentially zoned areas.
- Roads that feed from BLM-managed land into residentially zoned areas may be used for mining-related traffic only if alternate routes are not available. In "urban" areas, mineral material sales may not occur within 1/8 mile of designated recreation sites.
- In "rural" areas, mineral material sales may not occur within ½ mile of designated recreation sites.
- Seasonal restrictions on all mineral operations would apply to 66,746 acres.
- Surface occupancy for fluid mineral leasing would not be allowed on 48,305 acres.

Guidelines:
- Allow up to a high conflict level with residents.
- Allow up to a high conflict level with recreation in "urban" zones and no more than a low conflict level in "rural" zones. Allowable mining conflict levels with wildlife by geographic area as outlined in Table 2-12.

ACEC Guidelines: See ACEC Alternatives

Military Uses

Objective 7MU - 6: Permit military training while reducing concentration of impacts on a single area and promoting restoration of areas heavily impacted by recreational activity and dumping.

Rationale:
Funding would be made available for rehabilitation in areas where it would otherwise not be. Rehabilitation could include seeding, road rehabilitation, route maintenance, garbage removal, and Juniper control. Further, the fourteen-day average of intense training would be over a larger area than is currently available. BLM and the Military speculate that training would occur about five to seven days per year in the rest rotation areas, which would reduce the training-time on the current locations to nine to seven days on average.

Allocations/Allowable Uses:
Training Area Boundaries
- Military use is allowed as shown in Map 36 (approximately 27,934 acres). The training area permitted in this alternative would be south of O'Neil Highway, crossing Highway 126 and Powell Buttes Highway. It would also be south of Roberts Field and Deschutes County. From north to south, the permitted area would remain east of the North Unit Canal, except for the area south of the Airport and north of Pronghorn resort. It would be north of BLM road 6589-B. The permitted area would be west of the private land ownership in the rural community of Powell Buttes.
- Designate three rotational training areas (approximately 20.054 acres) so that one training area would be available for training for a specific duration, estimated at three years per area. The three areas currently under consideration are Steamboat Rock about 3,820 acres; five miles south of Prineville Airport to five miles north of the Millican Road/Reservoir Road Intersection (Four Corners), about 7,060 acres; and five miles north of the Millican Road/Reservoir Road Intersection to that intersection, about 9,388 acres.

Guidelines:
- The rotational training areas would be selected from those public lands that have been previously disturbed by non-military activities, are overused and in need

of restoration. The areas selected are (1) Steamboat Rock, (2) south of Prineville Industrial Park and Airport to Crook County Millican Pit, and (3) south of Crook County Millican Pit to Prineville Reservoir County Road (see Map 36). The military would adopt these lands and rehabilitate them. The rotational training areas would be made available during times of large-scale maneuvers on a rest rotation basis.

- Only one rotation area would be available at any one time, over a time sufficient to begin rehabilitation efforts, the estimate is about three years. The rotation areas would be selected based on considerations such as overuse by the general public, proximity to the main training area, potential for rehabilitation efforts to be successful, and assistance/participation of local agencies and adjacent landowners and other interested citizens.
- Areas 2 and 3 would be seasonally closed from December 1 to April 30 for Pronghorn Winter Range.
- Steamboat Rock (area 1) would be closed to full size vehicles.

Recreation

The foundation of Alternative 7 for recreation is the guidance that is common to all action alternatives. Most of this guidance applies to the planning Area as a whole. Differences between The Preferred Alternative and the other alternatives are largely in how the Objectives are met across the planning area. Because these differences are "bunched" geographically, they are displayed by Special Recreation Management Areas (SRMA). SRMAs are distinct geographic areas identified by place name, such as Cline Buttes, or Millican Plateau. The SRMA designations and corresponding recreation use emphasis for each are listed in Table A-18.

Planning Area Wide

Objective 7R – 4: Provide and maintain a wide range of recreation opportunities that contribute to meeting projected recreation demand while meeting overlaying resource management objectives within the planning area and urban interface setting.

Guidelines:
See Table A-18.

Group Use/Special Recreation Permits

Objective 7R - 3: Provide for projects, programs, and permits that promote a diverse range of recreation opportunities. Provide for individual, group, and competitive event recreational use that could not be reasonably accommodated on private land.

Rationale:
FLPMA provides for recreational use of public land as an integral part of multiple use management. BLM Strategic Plan includes direction for serving both present and future publics. However, on an individual basis, visitors may lack the skills (technical ability, local knowledge) or gear, to achieve their recreational goals. Visitors may also wish to recreate on BLM lands in large groups, or engage in competitive events; activities which may include increased risks to natural or cultural resources, impacted social experiences, and degraded facilities. These types of recreational opportunities are not normally provided by the BLM. Demand for these types of recreational use is rapidly increasing now, and is expected to continue to increase in the future.

[28] BLM lands within the current city limits, the area around the Rosland OHV play area and land south of the play area (and east of highways 97 and 31) to Section 2 of Township 23 South, Range 10 E.

Guidelines:
Manage SRP authorizations to allow specified recreational use of public lands and related waters. These permits will be used as a mechanism to accommodate specific recreational uses, protect resources, and manage visitor use.

General Direction:
Activities outside of the following guidelines may be permitted based on additional NEPA analysis. That analysis would examine numerous factors including but not limited to:
- Impacts to natural and cultural resources,
- Impacts to the social experience,
- Impacts to facilities,
- Within WSAs, impairment of wilderness suitability.

Prior to the issuance of a Special Recreation Permit for recreational activities, the BLM would assess the proposed activity to determine if it is in the public interest and to assure adequate mitigation of impacts. This assessment would include but not necessarily be limited to:
- Need for service – what specific niche does this service provide that cannot otherwise be provided on private lands, or is already provided for on public lands through existing permits?
- Proposed project mitigations – what are the expected levels of impacts, and what prevention, mitigation, or rehabilitation would be needed to meet resource management objectives for the area.

Commercial Use:
Special Recreation Permits for trail dependent annual use (e.g. guided horseback rides, llama pack trips, guided hikes, mountain bike tours etc.) would only be issued for designated trails that are part of BLM's transportation system.

Organized Group Use:
If the BLM determines that use levels in an area are likely to exceed the capacity of facilities such as trailheads, staging areas, and other facilities, a reservations system may be developed to meet growing demands for group uses such as group camping, day use for special events, etc without exceeding the capacity of existing facilities.

SRPs will be required for all organized group activities involving greater than 20 participants.
Geographic areas with organized group use restrictions are as follows:

Badlands
Allocations/Allowable Uses:
Organized group use in the Badlands would have the following restrictions:
- 20 people/group maximum
- Group parking must occur outside the WSA boundary, and/or groups utilizing Milepost 16, County Line Road, or Obernolte Road trailheads must utilize a shuttle and park legally outside the trailhead parking areas.

Horse Ridge
Allocations/Allowable Uses:
Organized group use in the Horse Ridge area would have the following restrictions:
- SRPs will be required for all organized group activities involving greater than 12 participants.
- Trail dependant special recreation events (trail rides, races, etc.) would be allowed on designated roads and trails. A maximum of two events (motorized or non-motorized) could be held per month, with events up to two days long allowed. Each permitted event would be separated by at least 12 days with no scheduled events.

Steelhead Falls
Allocations/Allowable Uses:
Organized group use for the Steelhead Falls area would have the following restrictions:
- No organized group use on holiday weekends
- 1 group/day maximum
- 12 people/group maximum
- 6 cars/group maximum
- In the Steelhead Falls Area - only foot travel would be allowed.
- In the Foley Waters Area - only foot or equestrian travel would be allowed.

Geographic Areas

Table A-18 above displays how recreational opportunities are provided throughout the planning area in Alternative 7 (The Preferred Alternative). The recreation management direction specific to geographic areas is described below.

Badlands
Under The Preferred Alternative, the Badlands WSA would be managed for primitive, non-motorized recreation. The WSA would be Closed to motor vehicle use year-round. Due to the vehicle closures, a high priority would be given to providing designated parking areas and trailhead improvements at major entry points (this includes travel management and trailhead improvements outside the WSA, including in the Mayfield area and in the North Millican area at the base of Dry Canyon).

Road and Trail System Goals:
The existing inventoried system of routes that connect to the following trailheads (Obernolte, Route 5, Milepost 16, and Route 8) would be retained. A designated, signed trailhead at Milepost 12 would not be provided. A non-motorized trail entrance at the east boundary of the Badlands would be provided as a walk-over only. For direction on parking/trailhead improvements, see plan guidance for the Mayfield and North Millican areas.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
To maintain the area's suitability for wilderness designation by Congress, the area is managed under the provisions of the Interim Management Policy for Lands Under Wilderness Review (IMP). This policy directs BLM to limit vehicle travel to a system no greater than the existing, inventoried routes that were present when the area was inventoried for wilderness characteristics.

Allocations/Allowable Uses:
Entire WSA would be Closed to motorized vehicle use.

Objective 7R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Rationale: The Badlands WSA is located relatively close to Bend. Therefore, the area receives increased levels of use. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment. Non-motorized trail use is increasing in the Badlands, both from individual users and non-permitted commercial guides. The level of non-motorized use off designated, inventoried routes can impact resources and wilderness suitability.

Guidelines:
All mechanized travel and stock use would be limited to the designated system of inventoried routes (see Map 14)
The WSA would be open year-round for non-motorized use on a designated network of the inventoried routes, which include, but are not necessarily limited to:

- Route 8
- Route 10 bypass
- Routes 4, 5, 6, 7
- Route connection to eastern WSA boundary
- Routes connected to Obernolte Road trailhead

Bend/Redmond
Under The Preferred Alternative, the Bend/Redmond area would be managed for motorized use on designated roads and trails, both north and south of State Highway 126. Due to its small size, proximity to Redmond and repeated problems with dumping and resource damage, the area north of State Highway 126 and west of the North Unit Canal would be Closed to motorized use.

Road trail system goals:
A multi-use trail system would be developed in the Bend-Redmond block. The trail system would be developed to create a system that could function with portions closed if needed to minimize conflicts with OMD training exercises. The road system needed for OMD use and other administrative uses would be retained. The road and trail system goal for the main block would be limited to a range of approximately 3.0 to 5.0 miles per square mile.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
The large block of public lands in the Bend/Redmond area would be used to develop additional motorized trail systems. A designated trail system is needed due to the increased levels of development in the area and the likelihood that additional paved roads would fragment the area in the future.

Allocations/Allowable Uses:

- The entire area would be designated as Limited to designated roads and trails, open year-round, with the exception of:
- The 1,360 acre Historic Roads ACEC
- The area north of State Highway 126 and west of the North Unit Canal

Objective 7R – 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Guidelines:
Same as Alternatives 2 and 4.

Cline Buttes
The Cline Buttes area would be managed for multiple recreation use, with some areas being designated specifically for non-motorized trail development, while other areas would have multiple use trails.

The Cline Buttes block would be managed with an emphasis on multi-use trails in the center and north portions of the area. The dry canyon area along Fryrear Road and the area between Barr Road and Cline Falls Highway would be managed to emphasize

non-motorized trail use. The Maston Allotment area east of Cline Falls Highway would be managed exclusively for non-motorized use. Like motorized users, equestrians and mountain bikes would be limited to a designated trail system.

Road and trail system goals:
Roads would be retained or developed in the Cline Buttes block to the extent necessary to provide for needed administrative access and create a reasonable and identifiable loop system for public use, particularly in the area between Barr Road and Fryrear Road. Only the minimum number of roads needed for administrative access would be retained in the Maston Allotment. All other roads in this area would be either managed as designated non-motorized trails or closed and rehabilitated. Trail development in the higher elevation areas of Cline Buttes would be oriented toward providing non-motorized trails for hiking, mountain biking and equestrian use, with an emphasis on providing a loop system encircling the buttes. The central and northern portions of Cline Buttes would contain multi-use trails. Roads and trails open for year-round motorized use would be located to minimize conflicts with adjacent landowners to the maximum extent possible. The road and trail density goal for Cline Buttes (excluding the Maston Allotment) would be would be limited to a range of approximately 2.0 to 3.0 miles per square mile. The road and trail density goal for the Maston Allotment would be limited to a range of approximately 1.0 to 2.0 miles per square mile.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
The area has been a popular area for motorized use for well over a decade. Increasing development within and adjacent to BLM lands in Cline Buttes, as well as increased number of public land visitors, have contributed to an increase in user created trails, visitor conflicts and conflicts between public land visitors and adjacent landowners.

Allocations/Allowable Uses:
The following areas are designated as Limited to designated roads and trails, open year-round:
- The Cline Buttes block west of Cline Falls Highway, east of Fryrear Road, and north of State Highway 126
- The Cline Buttes block north of State Highway 126.

The following areas are designated as Closed to motor vehicles:
- The Cline Buttes block east of Cline Falls Highway (except for designated entry roads to parking areas and river access points)
- The Tumalo Canal ACEC.

Guidelines:
Multi-use trail system emphasis would be most heavily developed in center and north portions of the Cline Buttes block. In other areas, management of motorized use would emphasize motorized use on designated roads, with trails being used by non-motorized recreationists.

Objective 7R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Allocations/Allowable Uses:
Identify designated access points, parking areas and trailheads to support the non-motorized trail system. Limit the number of access points through trail layout and rehabilitation efforts.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
Non-motorized use is occurring and growing in the area. Additional non-motorized trail opportunities are identified as a regional need by the Oregon State Parks needs assessment (SCORP). User conflicts between trail users is occurring in the Cline Buttes area, as are conflicts between trail users and landowners. The increase in development in the area makes these conflicts more likely.

Allocations/Allowable Uses:
- Manage equestrian use on a designated trail system. Within the geographic subdivision, give priority to establishing a designated trail system first within the Maston Allotment and the Canyon complex in the northwest portion of Cline Buttes.
- Provide designated trail opportunities for mountain biking. Emphasis would be on providing designated trail opportunities in the higher elevation portions of Cline Buttes, provided legal access exists and trespass would be minimized.

Horse Ridge
Under the Preferred Alternative, the Skeleton Fire area would be managed for motorized use on a few main roads, much like it is today. One road segment closed after the Skeleton Fire would be reopened to provide a road loop accessible from both the Gosney Road and Old Highway 20 access points. A designated trails system would be provided for non-motorized use in the same area. Horse Ridge and the area between State Highway 20 and the old Highway would be managed for non-motorized trail use. The road and trail system goal for the Skeleton Fire area would be limited to a range of approximately 1.0 to 2.0 miles per square mile.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
In addition to those areas that would be closed Common to Alternatives 2-7 (area around Conestoga Hills, Rickard Road area, and Horse Ridge RNA) the following travel designations would apply to the Horse Ridge area:
- The Skeleton Fire area would be designated as Limited to designated roads.
- Horse Ridge area would be designated as Closed to motorized vehicles. This closure extends northwest into the area between State Highway 20 and the old highway 20 alignment (T18S, R14E, Sec. 30, 31,32; T19S, R14E, Sec. 5, 4, 3, 10; T18S, R13E, Sec. 25).

Guidelines:
Trail dependant special recreation events (trail rides, races, etc.) would be allowed on designated roads or trails. A maximum of 2 events (motorized or non-motorized) could be held per month, with events up to 2 days long allowed. Each permitted event would be separated by at least 12 days with no scheduled events.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Guidelines:
- Roads would be realigned or closed to create a trail network for non-motorized use that provides loops and connections to Horse Ridge and the Skeleton Fire area.
- Designate any roads in the Skeleton Fire area that will remain Closed to motor vehicles as non-motorized trails if they meet the needs of the non-motorized trail system. The

designated trail system would be designed and managed to differentiate it from roads, and to reduce redundant access points, avoid trespass, and avoid sensitive resource areas.

- Closed roads in the Horse Ridge area needed for a non motorized trail system would be converted into trails for non-motorized use.
- Trail dependant special recreation events (trail rides, races, etc.) would be allowed on designated roads or trails. A maximum of 2 events (motorized or non-motorized) could be held per month, with events up to 2 days long allowed. Each permitted event would be separated by at least 12 days with no scheduled events.

La Pine

The majority of the La Pine area would be managed for motorized use on designated roads only, with the southern third of the area Closed to motorized use seasonally. The middle portion of the La Pine area east of State Highway 97 would be managed for motorized use on designated roads and trails year-round. This area would encompass the Rosland OHV Play area, and provide more opportunities for designated trails and links to roads or potential future trails on the Deschutes National Forest. The northern portion of the La Pine area would be managed for motorized use on designated roads only, with additional non-motorized trails being designated if a need arises or if adjacent trail opportunities are available at La Pine State Park. The focus on providing developed recreation opportunities is to explore R&PP lease options.

Objective 7R – 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

Same as Alternative 6, except:

- An area south of the Rosland OHV Play Area would be retained for motorized trail use and designated as Limited to designated roads and trails, open year-round.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:

- Isolated blocks would be managed for dispersed non-motorized use.
- If opportunities for non-motorized trail connections exist, consider development of non-motorized trails in the northern portion of the La Pine area.

Mayfield

The Mayfield area would be managed to provide separate geographic areas for motorized and non-motorized use, with most of the area south of Alfalfa Market Road being managed exclusively for non-motorized trail use, and the area to the north of Alfalfa Market Road being managed for motorized use on a designated road system. Under this alternative, nearby motorized trail use opportunities would be available in the Millican Valley area and in the Bend/Redmond block.

Road and Trail system goals:

Reroute existing roads in the 19,399 acre area north of Alfalfa Market Road to provide multiple loops in the area that can be used by both motorized and non-motorized recreationists, as well as provide workable access for permittees. The road system will be designed to provide several different length loops from the two designated road access points (one at Alfalfa Market Road and another at Powell Butte Highway). Rerouting of the existing road away from the edge of Mayfield Pond would be a priority. No other motorized access points will be available into the block. Designated roads will be located

approximately 1/4 to 1/2 mile from bordering subdivisions, including Cascade View Estates and Cimarron City. Road densities for the area would be limited to a range of approximately 1 to 2 miles per square mile. The travel management concept for the area will be a road loop system that emphasizes interior roads and more road mileage in the northern portion of the block. A large non-motorized trail loop will be provided in the periphery of the block, with connecting trails to provide loops on the interior area. Non-motorized trail connections will be considered at the surrounding subdivisions. Roads not designated will be rehabilitated.

The area south of Alfalfa Market Road, north and west of Dodds Road would be Closed to motor vehicles, and the existing roads would be reconfigured into a non-motorized trail system. Access points would be created off Alfalfa Market Road and another off Dodds Road. The major trailhead parking area would be located off Alfalfa Market Road. Trail system goals would be to provide several different length loops for hiking, running, equestrian and mountain bike use.

The travel management emphasis for the area east of Dodds Road and west of the Badlands WSA would be to provide public access to Reynolds Pond, Alfalfa Pond, and the Route 5 entrance of the Badlands WSA. Roads would be retained to meet these access needs, while minimizing conflicts with adjacent landowners. A designated parking/ trailhead area would be developed at Reynolds Pond, with a trail link provided to the Badlands Route 5 trailhead. An entry road and parking area would be located further away from Alfalfa Pond, to minimize conflicts with adjacent residents.

Other roads in the area not needed for administrative access would be closed and rehabilitated. The road link to Badlands Route 5 entrance would be retained, and signed as a trail link from the Reynolds Pond parking area.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- Main block between Alfalfa Market Road and Powell Butte Highway would be designated as Limited to Designated Roads only.
- The area south of Alfalfa Market Road and west of Dodds Road would be designated as Closed to motor vehicles.
- The area east of Dodds Road would be limited to designated roads only, in order to allow continued access to Reynolds Pond, improved access to the Badlands WSA Route 5 trailhead, and access to Alfalfa Pond.

Guidelines:
Roads in the area east of Dodds Road would be limited to canal access roads and one access road to Reynolds Pond, one access road to the Route 5 trailhead, and one access road to Alfalfa Pond.

Objective 7R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Allocations/Allowable Uses:
- General public use, motorized access points into the area north of Alfalfa Market Road would be limited to allow better management of the area and a reduction in conflicts with adjacent landowners (e.g., one access point from Powell Butte Highway and one access point from Alfalfa Market Road).
- Access controls would be made to support the motorized vehicle closure south of Alfalfa Market Road (e.g., fences, signs, barriers, etc.).

- A parking area/trailhead would be provided for the closed area south of Alfalfa Market Road, to allow for parking. Day use improvements such as picnic tables, group use areas, etc. may be considered. Other access points would be provided to serve surrounding residential access, but would be minor access gates, without improved parking.
- Vehicle parking would be moved farther away from Alfalfa Pond, but still be available off Dodds Road. The road would be retained for administrative access and may be improved to provide a well marked vehicle access to the Route 5 trailhead for the Badlands WSA.
- Relocate the existing access road to Mayfield Pond farther away from the pond to improve recreation and resource conditions at the pond site.
- Provide parking and trailhead facilities at the Route 5 entrance to the Badlands WSA. Consider the use of the access road from Dodds Road that also links to Alfalfa Pond. The trailhead/parking area would be provided to accommodate horse trailers and be designed to minimize the spread or expansion of user created parking areas.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:

- Non-motorized use south of Alfalfa Market Road and west of Dodds Road (except hiking) would be limited to designated roads and trails when a designated system is implemented.
- Manage non-motorized use by developing a designated, signed, non-motorized trail system in the following areas:
  1. The main block (north of Alfalfa Market Road);
  2. The Alfalfa ACEC and the area between the ACEC boundary and west of Dodds Road;
  3. The Airport Allotment.
- The trail system in the main block north of Alfalfa Market road would be designed to provide a loop around the periphery of the public land block, as well as a connection to the Mayfield Pond site. Designated and signed non-motorized access to this trail system would be provided from adjacent subdivisions.
- Create a designated, non-motorized trail link between the Reynolds Pond parking area and the Badlands WSA Route 5 trailhead.

Millican Plateau

This alternative would manage the Millican Plateau area for year-round OHV use on a designated trail system. This alternative is similar to Alternative 3, except a buffer area around Powell Butte RNA that would be limited to designated roads only. The majority of the area would be managed for year-round use on designated roads and trails. However, the small, isolated parcels and BLM lands to the east and immediately south of the Juniper Acres subdivision are either designated as Closed to motor vehicles or managed for use on designated roads only. The northern tip of the Millican Plateau area is Closed to motor vehicles, in response to chronic dumping and vandalism problems between the BLM boundary and the powerline crossing at Millican Road (see Map 14). The area west of and adjacent to the Crooked River Canyon would be Closed to motorized use, with the exception of a single trail loop that would access a river canyon viewpoint.

Road and trail system goals:

There would be an increase in the number of trail miles available by expanding the OHV trail system to incorporate areas to the west, east and north of the existing designated trail system. The goal of this expansion would be to improve management of areas currently limited to existing road and trails by designating specific trail systems, and to respond to reductions in trail miles and riding opportunities in the North Millican and

South Millican areas (from reduced densities or seasonal closures). The road and trail system densities for the area would be limited to a range of approximately 2.5 miles to 4.0 miles per square mile.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area currently receives a high level of OHV use, and already has a designated trail system. The area's growing population and use as a recreation destination would likely increase the levels of use the area currently receives. In addition, the likely paving of West Butte and Millican Roads would lead to increased safety issues for the OHV trail system that crosses the newly paved road in numerous places. Realignment of trails, closing of other trails, and new trail construction is needed to ensure the trail system connects to safe crossing points.

Allocations/Allowable Uses:
Same as alternative 2 except:
- The area east of Road 6555-b and west of the Crooked River would be designated as Closed to motor vehicles
- The area immediately surrounding the Powell Butte RNA would be limited to designated roads, in order to maintain a separation between OHV use and the RNA.
- The northern tip of Millican Plateau would be Closed to motor vehicles (see Map 14) except for providing some trail access to a viewpoint.
- Isolated parcels located within and east of Juniper Acres subdivision are either Closed to motorized use or limited to designated roads only (see map 14).

Guidelines:
- Current northern half of Millican Plateau area would be expanded, so OHV area encompasses the area north of Reservoir Road, east of Johnson Market Road and west of the Crooked River Canyon.
- Additional trails are designated in area between Millican Road and Johnson Market Road.
- Additional trails are designated in area east of Road 6555-b to allow for one or more trail loops.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:
- If legal access is obtained, designate a non-motorized trail system in Powell Buttes and manage all non-motorized (except foot traffic) use as limited to this system. Close and rehabilitate other user created trails.
- Entire area would be open to non-mechanized use on designated trails year-round.

North Millican
The Preferred Alternative would manage most of the area for shared use on a designated trail system. Certain areas, such as the Dry Canyon area along State Highway 20 and the area west of, and adjacent to State Highway 27, would not have any motorized trails designated in them. The designated trail system would be reduced in mileage and density to allow for year-round use. To reach a relatively low trail density, the travel management priority for the area would be given to trails, and all roads not needed for administrative access may be closed and rehabilitated. To reduce habitat fragmentation, the trail system layout would be designed to place trails in existing road or ROW corridors to the maximum extent possible. The trail system layout would also

emphasize retention of large, un-fragmented habitat blocks (in a range of 1,000 to 2,500 acres or greater) throughout the area. As in all the other action alternatives, the trail system in the area would be revised to maintain a functional system on both sides of West Butte Road, when the road becomes a paved road. The number of trail crossings of West Butte Road would be reduced, and frontage trails may be provided to collect trail use and lead it to a smaller number of grade separated crossings.

The road and trail system densities for the area would be limited to a range of approximately 1.5 miles per square mile. Trails located within existing road or ROW corridors (i.e., parallel to, and within ¼ mile or less from existing roads or ROWs) would not be calculated as separate trail or road miles in reaching density goals for the area. The interim road and trail system in North Millican would be the existing road and trail system implemented under the Millican Valley OHV Area Plan, with revisions made to the extent necessary to provide safe trail crossing locations of the upgraded Millican/ West Butte Road. The interim road and trail system will be subject to the existing seasonal closures that currently apply (Area closed from December 1 through April 30).

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among various users and neighbors, and provide integrated opportunities with adjacent land management agencies.

Rationale:
Multiple wildlife management concerns for sage grouse and for deer and elk winter range require management of recreation use to maintain habitat suitability.

Allocations/Allowable Uses:
Area would be managed as Limited to designated roads and trails, open year-round, except for:
- An area along State Highway 27 managed as Limited to designated roads only (see Map 14).

Guidelines:
- Motorized use Road and trail density would be limited to approximately 1.5 miles per square mile
- Road and trail dependent special recreation events (e.g., races, trail rides) would not be allowed between December 1 and April 30. During the remainder of the year, events could be permitted up to 2 events per month, with a minimum of 12 days between events.

Objective 7R – 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Rationale:
The reduction in trail and road density, along with multiple wildlife management concerns, require more highly managed access points, with signs, maps, and the potential for visitor contacts and public information on the area's management.

Guidelines:
- Develop trailhead and parking area at base of Dry Canyon to serve the Badlands WSA and Dry Canyon use areas.
- Consider providing a primitive camping area at base of Dry Canyon if needed and if this development would reduce impacts to wilderness suitability in the Badlands WSA.

- Consider developed group use and camping site near COSSA Shooting range, to be operated on a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities.
- Provide a non-motorized trailhead/access point to North Millican trail system at State Highway 27 if there is a demonstrated need or if user conflicts cannot be managed at trailheads off West Butte Road.
- Access goals for staging areas to serve the larger trail system in North Millican are provided in the Common to Alternatives 2-7 section.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
- The Dry Canyon area in the northwest corner of North Millican area would be managed for equestrian, hiking, and mountain bicycling use on designated trails. Additional non-motorized trails may be considered to provide a loop trail incorporating Dry Canyon and the area to the north of Dry Canyon.
- A designated trail link would be provided from Dry Canyon to the Route 8 entrance to the Badlands WSA.

Objective 7R - 6: Provide developed or urban based recreation opportunities while minimizing duplication of services among agencies. Provide improvements that allow for easier pedestrian access and encourage day use and interpretive activities while minimizing conflicts with adjacent landowners where practicable.

Guidelines:
Same as Alternative 5:
- Develop a group use and camping site near COSSA Shooting range, to be operated on a reservation system to support a range of activities, including shooting events, trail use events, and other group use activities if such a development meets the objectives of this Alternative.
- Develop primitive camping area at base of Dry Canyon.

Northwest
The area would be managed with an emphasis on development of non-motorized, designated trails that provide connectivity to a regional trail system, links to Sisters Community trails, and links to non-motorized trail systems on Crooked River National Grasslands (CRNG) to the north. Motorized use would be limited to designated roads only in the main block (i.e., between Squaw Creek and McKenzie Canyon). Motorized use would be prohibited in the isolated parcels west of Squaw Creek (except on a designated entry road into the Sisters Bouldering area). A seasonal restriction on motorized use would be in place in the main block, consistent with adjacent policy on the CRNG; however, this area remains open year-round for non-motorized use. Non-motorized trails and designated trailheads to serve them are provided. The Sisters Bouldering area would be managed specifically for climbing use, and would be identifiable as BLM administered land.

Road and trail system goals:
The existing road on BLM land that connects Holmes Road to Forest Road 6360 would be retained as a BLM system road. Other roads would be retained or developed in the main block only to the extent necessary to create or access parking areas, trailheads or developed sites, or to serve existing administrative use. Designated trails would be developed to serve as a trail link between the southwest end of the main block and Forest Road 6360. One or two additional trail loops would be provided in the area, particularly

if a separate trailhead is developed off Holmes Road. The road and trail density goal for the main block would be would be limited to a range of approximately 1.5 to 2.5 miles per square mile (including Holmes Road, a paved public road through the area).

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among public land visitors and adjacent landowners.

Allocations/Allowable Uses:
- Motorized travel in main block would be limited to designated roads. All BLM roads in this area (except access roads to non-motorized trailheads or developed sites) would be Closed to motorized use seasonally, from December 1 to March 31.
- Isolated parcels west of Squaw Creek would be Closed to motorized travel, except for Sisters Bouldering Area, which would be limited to designated roads only, year-round.

Objective 7R -2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
- Identify designated access points, parking areas and trailheads to support the non-motorized trail system. Limit the number of access points through trail layout and rehabilitation efforts.
- Provide trailhead(s) at appropriate locations to serve the local area community of Sisters.
- Where feasible, provide trailheads in locations that connect to area or regional trails as identified by the Sisters CAT, or by adjacent land management agencies.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
Non-motorized trail use is one of the recreation needs identified specifically for the region by the State Outdoor Recreation Needs Assessment (Oregon State Parks). The Sisters Community Action Team has developed conceptual trail goals and identified trail links and corridors. The potential for connections between Sisters area trails and longer trail networks on BLM and adjacent Crooked River National Grasslands helps meet the demand for non-motorized, regional trails.

Guidelines:
Provide a trail link from the Sisters area through BLM lands to access the road leading to Alder Springs trailhead on the Crooked River National Grasslands (e.g., a portion of the Cascade Mountain/Willamette Valley Wagon Road could be identified and managed as a non-motorized trail). Construct new trail alignments as necessary to avoid private property in T 14 S, R 11 E, Section 15, realigning trail approximately ¼ mile away from private lands to the maximum extent feasible. Consider development of one or more loop trails off the main trail.

Prineville
Same as Alternative 6

Prineville Reservoir
Same as Alternative 3

The northeastern portion of the area (the Sanford Creek drainage) would be managed for relatively low motorized access, with designated roads only being open seasonally. The

remainder of the area including lands on either side of the Bear Creek arm of Prineville Reservoir would be limited to designated roads only year-round. These BLM lands would have designated, non-motorized trails that link to BOR/State Park managed sites at Prineville Reservoir.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Rationale:
The area currently has no managed or designated trail system, and recreation use conflicts have occurred due to the different management goals of BLM, BOR, State Parks and ODF&W. BOR and State Parks have identified trailheads and non-motorized trail goals in their current planning process.

Allocations/Allowable Uses:
Designated roads and OHV use would be Same as Alternative 2, except motorized travel would be Limited to designated roads south of Prineville Reservoir (Taylor Butte travel is limited under Common to Alternatives 2-7), except:

- Within the Sanford Creek area motorized travel would be Limited to May 1 thru November 30.
- Area north of upper Portion of Prineville Reservoir is designated limited to designated roads and trails and motorized travel would be limited to May 1 through November 30.
- Area between County Boat Ramp and Chimney Rock Trail (i.e. the area north of Prineville Reservoir and immediately east of the Crooked River) would be Closed to motor vehicles.

Objective 7R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:

- Designated non-motorized trails would utilize State Park/BOR trailhead facilities where feasible.
- A trailhead for non-motorized users would be provided off State Highway 27 at Taylor Butte.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among various users and neighbors.

Guidelines:

- The area north of Prineville Reservoir and immediately east of the Crooked River would be managed for non-motorized trail use on designated trails only a. If roads Closed to motorized travel are suitable for a non motorized trail system they may be converted to non-motorized trails. Roads not needed would be obliterated
- The existing Chimney Rock trail would be extended into a trail system with several loops that ultimately connects to BOR and State Parks managed trailhead near the County Boat Ramp.
- A non-motorized trailhead and parking area would be developed on the north side of this area; other access points would be the Chimney Rock Trailhead, and a trailhead near the County Boat Ramp.
- Develop designated, non-motorized trails in the Taylor Butte/Powderhouse Cove area that would connect to BOR/State Park facilities, provide loops in the Powderhouse Cove area, and link Roberts Bay to the Bear Creek site.
- Designated trails in the Taylor Butte area would be coordinated with BOR and State Parks.

Smith Rock
Same as Alternative 2

The entire block would be Closed to motorized vehicles. Additional non-motorized trails may be created, both to solve resource issues at climbers' trails and to meet demand for hiking, mountain biking, and equestrian trail opportunities.

The road and trail system goal for the area would be limited to a range of approximately 1.0 to 2.0 miles per square mile.

Objective 7R - 5: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Allocations/Allowable Uses:
- Allow development of additional trails to reduce impacts at climbing areas and to provide additional mountain bike, hiking, and equestrian use opportunities.
- Coordinate trail development with SRSP and CRNG.
- Trails would be designed and located to protect resources and scenic values.

South Millican
South Millican would remain as an OHV use area, but would retain the existing seasonal closure (area closed to motorized use from December 1 through July 31). The existing trail system would be retained. No new trail connections would be provided between the motorized trail system in South Millican and trails in the adjacent Deschutes National Forest.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among various users and neighbors.

Allocations/Allowable Uses:
OHV travel in South Millican would be limited to designated roads and trails from September 15th through March 15th. The area would be Closed to motorized use the remainder of the year.
Trail dependent special recreation events (i.e., trail rides, races, etc.) would generally not be allowed in the South Millican area, except for the minimum use necessary to complete loops on the non-motorized trail system in or around Horse Ridge.

Steamboat Rock
The majority of the main block of public land in the Steamboat Rock area would be managed for both motorized and non-motorized use on a shared trail system. While this area would be open to OHV (Class I and III, i.e., motorcycles and quads), it would be closed to full size vehicles in an effort to reduce conflicts between adjacent landowners and public land visitors and to reduce illegal dumping prevalent in the area. The number of access points would be reduced, and new roads would be created to link existing roads back to common access points or trailheads. A separate trail system for non-motorized use would be developed along the Deschutes River. A high level of signage and public information would be put in place to maximize user compliance on trail system regulations. The river parcels adjacent to Crooked River Ranch would continue to be managed to emphasize non-motorized use. Isolated parcels northwest of Redmond are managed exclusively for non-motorized use, with access improvements to allow access to the middle Deschutes River while minimizing conflicts with landowners.

Road and trail system goals:
The existing high density (approximately 8 miles of roads per square mile) of roads in the main Steamboat Rock block would be reduced, with many roads being closed and

rehabilitated while others would be managed as trails. The existing number of access points would be reduced, leaving only approximately two or three access points from Lower Bridge Road, as opposed to the twenty or more currently existing along this four mile stretch of public road. The minimum number of roads necessary for administrative access would be retained, and any access points needed solely for administrative access (e.g., at powerline corridors) may be gated and not available as public access points. The area adjacent to the Deschutes River would be Closed to motorized use, and managed for non-motorized use on a designated trail system. The road and trail system goal for the main block would be limited to a range of approximately 2.0 to 3.0 miles per square mile.

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
The Steamboat Rock area has been designated as Open to OHV use since the BLP RMP; however the proliferation of user created roads and trails, along with massive and widespread garbage dumping, has led to resource impacts, user conflicts, and dissatisfaction among most visitors to the area.

Allocations/Allowable Uses:
- Main block managed as Limited to designated roads and trails only, and limited to Class I and III OHVs only (no full size vehicles).
- The Deschutes River corridor in the main block is designated as Closed to motor vehicles. The boundaries of the closure area are Lower Bridge Road to the north, the main unimproved road that parallels the river to the east, and the BLM boundary with private land to the south and west.
- With the exception of the BPA powerline parcel, all isolated BLM parcels northwest of Redmond are designated as Closed to motor vehicles (See Common to 2-6 direction)
- The Deschutes and Crooked River corridors adjacent to Crooked River Ranch are limited to designated roads only.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Guidelines:
A separate trail system for non-motorized use would be designated along the Deschutes River in the main Steamboat Rock block. Non-motorized recreationists may also use the other designated roads and trails in the area.

Tumalo
The Tumalo Block would be Closed to motorized use year-round, and the recreation management emphasis would be to provide non-motorized opportunities (hiking, mountain biking, and equestrian use) on designated trails year-round. Designated and managed parking areas/trailheads would be provided to serve the trail system. A designated, non-motorized trail system would be developed and signed in both larger parcels north and south of Tumalo Reservoir. In order to control motor vehicle access into these areas, the boundaries may be fenced.

Road and trail system goals:
Roads would be retained or developed in the Tumalo block only to the extent necessary to create or access parking areas, trailheads or developed sites, or to serve existing administrative use. Roads not needed for administrative access may be closed and rehabilitated or modified to serve as trails. Designated trails would be developed to serve as links to Deschutes National Forest lands to the west, as well as to provide several smaller loops within BLM lands. The road and trail density goal for the main block

would be would be limited to a range of approximately 1.5 to 2.5 miles per square mile (including Sizemore Road, a paved public road through the area).

Objective 7R - 1: Manage off highway vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, and minimize conflicts among public land visitors and adjacent landowners.

Allocations/Allowable Uses:
The Tumalo area would be Closed to motorized use.

Objective 7R - 2: Provide designated access points (includes parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with neighboring landowners.

Guidelines:
Identify designated access points, parking areas and trailheads to support the non-motorized trail system. Limit the number of access points through trail layout and rehabilitation efforts.

Primary staging area for casual use and events in the South Millican Area would be located approximately 1-½ miles west of Millican and one mile south of State Highway 20. Improvements would include bulletin board, loading ramp, and toilets as use levels warrant.

Objective 7R - 5: Provide identifiable, non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent landowners.

Rationale:
Non-motorized trail use is one of the recreation needs identified specifically for the region by the State Outdoor Recreation Needs Assessment (Oregon State Parks). The area has been used consistently for equestrian use by individuals and permittees, and contains a user created trail system that links to adjacent Deschutes National Forest land.

Guidelines:
- Designate a system of non-motorized trails in both the main Tumalo Block and the area south of Tumalo Reservoir.
- Close or rehabilitate existing unimproved roads in the area to serve as designated trails as needed.
- Work with Deschutes National Forest, Deschutes County and others to provide regional trail link opportunities between Bend and Sisters, and between Tumalo and Cline Buttes.

Transportation and Utilities

Objective 7TU - 6(same as Alt. 3): Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Allocations/Allowable Uses:
- Designate the road network and transportation/utility corridors as shown on Maps 3 and S-7.
- Identifies 61 percent of the planning area in a primary wildlife emphasis designation and 43 percent in either a non-motorized emphasis or non-motorized exclusive designation.

Land Ownership

Objective 7LO – 1d: Retain lands in the more urban areas to provide for wildlife and more intensive recreational uses. Retain lands in the more rural areas to provide for wildlife and moderate recreational uses.

Rationale:
Emphasizes retention of large blocks for wildlife and recreational purposes for open space needs between communities and large continuous blocks to the east.

Allocations/Allowable Uses:
Designate the lands in Map 34 as Z-1 (approximately 327,626 acres). Blocks of public lands identified as Z-1 include Tumalo, Cline Buttes, Northwest, Steamboat Rock, Bend/Redmond Core, Smith Rocks, Mayfield, Badlands, Horse Ridge, Reservoir West, Reservoir East, Southeast, and Highway. In La Pine, Z-1 lands would be north and east of Wickiup Junction. Other, smaller parcels of public land include Grizzly Mountain, Ochoco Reservoir, and Juniper Canyon.

Objective 7LO – 2c: Identify parcels that are generally to retain, but may be disposed of through exchange for lands with higher public values primarily for the purposes of connectivity, with a secondary emphasis on consolidation (blocking up). In La Pine, a large area remained Z-2 to provide the opportunity to change the public land pattern to provide for deer migration, specifically between east Deschutes National Forest and west Deschutes National Forest.

Rationale:
Emphasizes exchanging isolated blocks to block up or connect larger blocks. Identifies fringe blocks between large blocks that may be exchanged to reconfigure the land pattern to provide for connectivity between large blocks.

Allocations/Allowable Uses:
Designate the lands in Map 34 as Z-2 (approximately 69,579 acres). Isolated and fringe public parcels have also be identified as Z-2 to provide connectivity between larger blocks and eliminate trail and road entries onto private lands in the rural areas. Parcels are located between Tumalo and Cline Buttes, Northwest to Cline Buttes, Steamboat to Cline Buttes, Mayfield to Badlands and Reservoir West and Reservoir East to the Maury Mountains. Areas to block up include east and south of Juniper Acres, Horse Ridge, Cline Buttes, Bend/Redmond, Mayfield, and Reservoir West. The isolated parcels generally around Prineville would be used for blocking or connecting and of the locations above. The majority of the public lands in La Pine are Z-2, extending south from Wickiup junction to the boundary of the project area. Parcels were not specifically selected to correspond with private parcels desired for acquisition.

Guidelines:
Disposals involving exchange when the private parcels and public parcels are in the same general area is preferred; but other areas in the planning area may be acceptable if the exchange accomplishes important overall management objectives. The public parcels around Prineville would be available for exchange for parcels throughout the planning area.

Objective 7LO - 3: Disposal (Z-3) Identify lands for disposal that generally do not provide substantial resource, public, or tribal benefits that may not be cost effective for the BLM to manage or that would represent a greater public benefit in other ownership.

Rationale:
Several small parcels with encumbrances no longer serve the general public.

Allocations/Allowable Uses:
Designate the lands in Map 34 as Z-3 (approximately 552 acres). Parcels suitable for disposal include three isolated parcels between Bend and five parcels designated as Z-3 in La Pine are located west of Wickiup Junction.

Guidelines:
- Lands would be for sale or exchange if the encumbrances are resolved and the public would be better served.
- The lands in La Pine would have a first priority for community use, and then open to the general public.
- No exchanges would occur until satisfactory resolution of encumbrances.

Objective 7LO – 4: Provide land for community needs and uses consistent with public land management mandates.

Rationale:
Local land use planning and other community planning groups have identified public lands for potential community expansion needs**.**

Allocations/Allowable Uses:
Designate the lands in Map 34 for Community Expansion (approximately 4,816 acres). The public lands identified for community expansion near Redmond are located west of the North Unit Canal, south of Redmond Airport, and south of Redmond and east of Highway 97. Public lands identified for a park are between Eagle Crest Phase II and Phase III and south of Highway 126. Public lands identified for a park are east of Prineville, at Barnes Butte. Public lands identified for a park and public facilities are south of Bend Airport. Parcels selected public facilities and parks are in La Pine.

Guidelines:
- To protect the proposed Canal Trail, the parcel east of Redmond would have a 250-foot buffer west of the west boundary of the North Unit Canal right-of-way.
- The lands outside of Redmond and south of the north boundary line of Township 16, called the sawtooth lands, will be available only for parks and other open space purposes. This does not preclude transportation uses.
- The lands in La Pine will provide trails/connectors from Rosland Pit to public lands to the south.

Objective 7LO – 5d: Provide connectivity for wildlife and recreation between larger blocks in the urban areas. Acquire isolated private parcels in large blocks of public lands. Acquire private parcels with access to public lands.

Rationale:
Emphasizes selection of areas or specific parcels which will provide connectivity between, access to, or block up public lands.

Allocations/Allowable Uses:
Designate the lands in Map 34 as parcels of interest for acquisition. Parcels of interest include those between Deschutes National Forest and Clines Buttes, Tumalo and Cline Buttes, Mayfield and Badlands and Reservoir West, and Reservoir East and Maury Mountains.

Guidelines:
- Acquisitions would occur only with willing lands owners.
- Acquisition priority would be the urban areas for wildlife and ecological purposes

then for recreation purposes, and secondarily in the rural area for the same purposes.
- Less emphasized would be acquisition to consolidate public lands in Zones 1 and 2, which are Southeast, Horse Ridge, and La Pine.

Public Health and Safety

Objective 7PHS – 13: The Preferred Alternative combines the various features of the previous alternatives, and is based on the objectives Common to Alternatives 2 – 7. This alternative would allow for increased conflict between recreational users, and between recreational users and adjacent landowners. It emphasizes managing for lower conflicts with wildlife in the areas away from population centers.

Allocations/Allowable Uses:
The following areas, listed in Tables A-19 and A-20, are closed to all firearm discharge or closed to all firearm discharge unless legally hunting, respectively.

Table A-19 Closed to all firearm discharge

Location	Object. 1	Object. 2	Object. 3	Object. 4
Cline Buttes (Canal ACEC)	X	X	X	
Bend Redmond Block (BLM land southwest of McGrath Road including Historic Roads ACEC, BLM land north of 126, west of N. Unit Canal)	X	X	X	X
Tumalo Block (700-acre parcel south of Tumalo Reservoir Road)	X	X	X	X
Mayfield Pond Block (Airport parcel)	X	X	X	X
North Millican Block (Dry canyon just north of Hwy. 20)	X	X	X	
Cline Buttes Block (3 canyons west of Barr Road, South of Hwy. 126)	X	X	X	
Horse Ridge Block (North of Rickard Road, South of Hwy. 20)	X	X		X

Table A-20 Closed to firearm discharge unless legally hunting

Location	Object. 1	Object. 2	Object. 3
Northwest Block (All BLM land not closed to all firearm discharge CT Alts 2-7)	X	X	X
Millican Plateau Block (BLM lands contiguous and west of the Lower Crooked WSR, and east of Road 6665, East of County Road 6520 for 2 miles from northernmost point of peninsula)		X	X
Prineville Reservoir Block (BLM lands contiguous and east of Lower Crooked WSR and contiguous and west of BOR/Prineville Reservoir)		X	X
Tumalo Block (All land north of Tumalo Reservoir)	X	X	X
Cline Buttes Block (Main block – All BLM land south of Hwy. 126, and east of Barr Road)	X	X	X
Mayfield Block (Main block – south of Alfalfa Market Road)	X	X	X
Badlands Block (Entire Badlands Block except 1/4 mile around Badlands Rock from March 1 to August 31)	X	X	X
Steamboat Rock Block (All BLM land south of Lower Bridge Road outside of the WSR corridor)	X	X	X
Horse Ridge Block (BLM land between new and old Highway 20)	X	X	X

Appendix B Planning Criteria/ Legislative Constraints

The following is a list of major legal authorities relevant to BLM land use planning.

1. The Federal Land Policy and Management Act (FLPMA), as amended, 43U.S.C. 1701 et seq., provides the authority for BLM land use planning.

a. Sec. 102 (a) (7) and (8) and 103(c) sets the policy of the United States concerning the management of BLM lands.

b. Sec. 201 requires the Secretary of the Interior (the Secretary) to prepare and maintain an inventory of all BLM lands and their resource and other values; and, as funding and workforce are available, to determine the boundaries of the public lands, provide signs and maps to the public, and provide inventory data to State and local governments.

c. Sec. 202 (a) requires the Secretary, with public involvement, to develop, maintain, and when appropriate, revise land use plans that provide by tracts or areas for the use of the BLM lands.

d. Sec. 202 (c) (9) requires that land use plans for BLM lands be consistent with tribal plans and, to the maximum extent consistent with applicable Federal laws, with State and local plans.

e. Sec. 202 (d) provides that all public lands, regardless of classification, are subject to inclusion in land use plans, and that the Secretary may modify or terminate classifications consistent with land use plans.

f. Sec. 202 (f) and Sec. 309 (e) provide that Federal agencies, State and local governments, and the public be given adequate notice and an opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of the public lands.

g. Sec. 302 (a) requires the Secretary to manage 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 of undue degradation of the public lands.

i. Sec. 505(a) requires that "...each right-of-way shall contain terms and conditions which will ... minimize damage to the scenic and esthetic values..."

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

7. The Endangered Species Act (ESA), as amended, 16 U.S.C. 1531 et seq.:

a. Provides a means whereby the ecosystems upon which endangered and threatened

species depend may be conserved and to provide a program for the conservation of such endangered and threatened species (Sec. 1531 (b), Purposes).
b. Requires all Federal agencies to seek the conservation of endangered and threatened species and utilize applicable authorities in furtherance of the purposes of the Endangered Species Act (Sec. 1531 (c) (1), Policy).
c. Requires all Federal agencies to avoid jeopardizing the continued existence of any species that is listed or proposed for listing as threatened or endangered or destroying or adversely modifying its designated or proposed critical habitat (Sec. 1536(a), Interagency Cooperation).
d. Requires all Federal agencies to consult (or confer) in accordance with Sec. 7 of the 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).

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

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

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

11. The National Historic Preservation Act (NHPA), as amended, 16 U.S.C. 470, expands protection of historic and archaeological properties to include those of national, State, and local significance and directs Federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register of Historic Places.

The Middle Oregon Treaty signed June 25, 1855, ratified march 8, 1859 (12 STAT 963), reserved rights for the Warm Springs to continue off-reservation subsistence activities on public lands, involving fishing, hunting, gathering, and grazing.

12. The American Indian Religious Freedom Act, 42 U.S.C. 1996, establishes a national policy to protect and preserve the right of American Indians to exercise traditional Indian religious beliefs or practices.

13. Federally Recognized Tribes and Tribal Reserved Rights - Federally recognized tribes are sovereign nations that maintain a unique government to government and trust relationship with the United States (American Indian Resources Institute 1988:26). The trust relationship is essentially one in which Indian tribes trust the federal government to honor the reserved rights made in treaties or other agreements in exchange for Indian lands (Pevar 1992:26).

In the past, this relationship has been acknowledged in one of three ways; by treaty ratification, Congressional Act, or executive order (Zucker et. al. 1983:131). The various treaties, congressional acts, and Executive Orders that have been crafted during the past 150 years have established a unique legal relationship with the three federally recognized tribes and the United States government. Part of that legal relationship may be found in the Tribes' reserved rights and privileges to harvest and utilize traditional resources, to visit and maintain sacred sites and participate in ceremonies that preserve the essential elements of their culture. Those resources and sacred sites, located on ancestral lands and ceded to the federal government, now constitute a large part of the public domain.

14. The Recreation and Public Purposes Act, 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 Mineral Leasing Act, as amended, 30 U.S.C. 181 et seq., authorizes the development and conservation of oil and gas resources.

16. The Onshore Oil and Gas Leasing Reform Act, 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.

17. The General Mining Law, 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.

18. The Mining and Mineral Policy Act, 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.

19. The Taylor Grazing Act, 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.

20. The Public Rangelands Improvement Act, 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.

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

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

23. 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.

24. 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.

25. 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.

26. Secretarial Order 3206 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act) 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.

Appendix C Management Guidance Continued in this Document

Appendix C

Management Guidance Continued in this Document

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	**BLM policy, law, regulation**
Vegetation Noxious Weeds	Prineville District Integrated Weed Management EA (1994)	Vegetation Treatment on BLM Lands EIS (1991)
Wildlife Special Status Species	Vegetative habitats could be maintained or improved using a variety of techniques, such as mowing shrubs, prescribed burning, livestock grazing and commercial and non-commercial tree cutting. Vegetation management actions that occur within habitats of federally listed or proposed species would maintain or improve the conditions that support those species and/or be consistent with landform, climate, and biological and physical characteristics of the ecosystem (B/LP RMP, p.121) In situations where data are insufficient to make an assessment of proposed actions, surveys of potential habitats would be made before a decision is made to take any action that could affect special status species (B/LP RMP p. 122). Prior to any action that may negatively affect important habitats of special status species develop a conservation strategy for that species. Until such a strategy could be developed, inventory key features and close (seasonally or permanently) areas (caves, cliffs, adjacent roads) where necessary to manage for bats or other special status species (B/LP RMP modified, p. 97). Management activities in the habitat of listed, candidate threatened, or endangered and sensitive species would maintain or improve habitat conditions and/or not prevent or retard attainment of future desirable habitat conditions (B/LP RMP modified, p. 121). Conduct periodic surveys of potential raptor habitats and monitor active and historic sites to determine occupancy and management consistency (B/LP RMP, modified, p. 97).	Conservation and protection of habitats for designated special status species, and other state or federally protected species, is directed by Bureau policy in BLM Manual 6840 Maintain existing sagebrush-steppe habitats in the existing sage grouse range in order to sustain sage grouse populations and protect options for the future (Information Bulletin (IB) No. OR-200-334). As directed in BLM Manual 6840 - Special Status Species Management, the BLM would take actions that progress towards the conditions indicating attainment of the Fundamentals of Rangeland Health (described in 43 CFR 4180.1) and associated Standards (43 CFR 4180.2). The Bald Eagle protection Act: Protection of Bald and Golden Eagles provides for the protection of bald and golden eagles.
Non-Special Status Species	Vegetative habitats would be maintained or improved using a variety of techniques, such as mowing shrubs, prescribed burning, livestock grazing and/or commercial timber harvest and non-commercial tree cutting. All new fences for the control of livestock would be built to standard Bureau wildlife specifications to allow wildlife passage and existing fences would be modified as appropriate	

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	BLM policy, law, regulation
	(BLP RMP, p. 97), with the exception of fences built specifically to keep ungulates out of an area. Fish and wildlife habitat management impacts would continue to be evaluated on a case-by-case basis as part of project-level planning (i.e., grazing, recreation and timber management plans, right-of-way applications, etc.) (BLP RMP, p. 97). Evaluations would consider the significance of the proposed projects and the sensitivity of fish and wildlife habitats in the affected areas. Stipulations would be attached as appropriate to assure compatibility of projects with management objectives for fish and wildlife habitat (BLP RMP, p. 97). Permitted activities would be restricted in all areas where vegetation manipulation (human or naturally caused) occurs and results in sensitive soil and plant conditions, or the site already has sensitive soils and/or plant conditions. These permitted activities include, but are not limited to, livestock grazing, off-road vehicle travel, recreational events, construction of new roads and trails, and timber harvests. Range developments would be designed to achieve both wildlife and livestock grazing management objectives. Where natural springs exist and are developed, the development would provide a more dependable water source for wildlife as well as livestock. Water troughs would accommodate use by wildlife and livestock, and would be constructed with wildlife escape devices. The spring area and the overflow would be fenced to exclude livestock trampling (B/LP RMP, 87-88). Where pipelines are developed to deliver water more than two miles from an existing water source, the water system would be designed to provide water for wildlife between July and October (B/LP RMP, p. 97). Manage important wildlife habitats to minimize human disturbance by maintaining seasonal closures throughout the sensitive period (B/LP RMP, p. 97). In seasonally important wildlife habitats (winter range, nest sites, roosts, etc.), major construction and maintenance work would be scheduled to avoid or minimize disturbance to wildlife (B/LP RMP, p. 97). Timber sales would be designed to provide sufficient cover to maintain the existing deer and elk migration corridor through the La Pine area (B/LP RMP, p. 97).	
Special habitat		The Federal Cave Resources Protection Act of 1988

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	BLM policy, law, regulation
components		provides for the protection of cave resources including the free movement of any animal or plant life into or out of any significant cave located on Federal lands. The Interim Cave Management Policy (Instruction Memorandum No. OR-95-021) provides guidelines for the protection of cave resources
Special and Non-special Status Species		As directed under the Federal Land Policy and Management Act (FLPMA) of 1976 public lands would be managed in a manner that protects ecological values, maintains their natural condition and provides food and habitat for wildlife. The Bureau is directed under Executive Order No. 13186 directs the bureau to protect, restore, enhance and manage habitat of migratory birds and prevent the loss or degradation of remaining habitats on BLM and to evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern." Requirements for documenting individuals, populations, and distributions of both special and non-special status species as well as their habitat are found in the following direction: FLPMA [Section 201 (43 U.S.C. 1711) a] directs BLM to prepare and maintain on a continuing basis an inventory of all public lands and their resource values (BLM manual 6600 Authority). The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321-17: 83 Stat.852: p.1, 91-190) directs federal agencies to use ecological information in the planning and development of resources-oriented projects. BLM Manual 6840 – Special Status Species Management, directs the Field Office Manager to conduct and maintain current inventories for special

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	**BLM policy, law, regulation**
		status species on public lands. BLM Fish and Wildlife 2000 directs field offices to identify and monitor key wildlife habitats.
Hydrology Riparian conditions, Watershed/ Hydrologic Function, and Water Quality Soils		The Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health). These standards provide for modifying grazing where the standard for riparian-wetland function is not being achieved, or where measurable progress is not made toward achieving the standard. The BLM will comply with the Federal Clean Water Act (CWA) and the State DEQ's program by employing the joint USFS and BLM protocol for addressing CWA section 303(d) listed waters. One goal of the strategy is to address all waters on BLM-administered lands generally within the timeline established by the State of Oregon DEQ. The BLM will take actions relative to 303(d) listed waterbodies in accordance with the protocol as outlined in Appendix E (Protocol for 303(d) listed Streams). FLPMA requires that corrective actions take place, where practicable, to resolve erosive conditions and that surface disturbance at all project sites be minimized. FLIPMA also provides guidance for soil rehabilitation after disturbances
Special Management Areas Areas of Critical Environmental Concern	Area designated Pecks milkvetch ACEC under Brothers La Pine RAMP would remain an ACEC or become part of a larger ACEC. Livestock grazing is allowed providing restrictions or stipulations are designed to maintain or	FLPMA provides Criteria for Selecting ACECs

[1] The BLM managed land containing these caves was claimed by the State of Oregon under State in-lieu selection process (1997) and is no longer under Federal management.

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	**BLM policy, law, regulation**
(ACECs)	enhance special values. A portion of the Wagon road ACEC will remain an ACEC (see Common to 2-6 for changes in configuration) Horse Ridge and Powell Butte RNA/ACECs would retain status. Badlands would remain an ACEC and WSA (unless congress designates Badlands as Wilderness).	
Wilderness Study Areas		Continuation of management in Badlands and Steelhead Falls Wilderness Study Areas under interim rules, BLM policy (H-8550-1) until Congress either designates these lands as wilderness or releases them for other purposes.
Caves	The following nominated caves within the planning area have been determined to be Significant under the FCRPA (with the year of determination): Horse Butte Indian Cave (1995), Pictograph (Stout) Cave (1995), Redmond Cave (1995), Garbage Cave #1* (1997) [1], Garbage Cave #2*(1997), Three Vulture Cave*(1997), Williams Cave*(1997), Stevens Road Cave*(1997), Unnamed Car Cave*(1997).	Make determinations of Significance for those caves nominated for significance within the planning area, according to FCRPA criteria (43 CFR Part 37.11(c)).
Land Use Commercial Forestland	Manage approximately 41,111 acres of commercial forestland in the La Pine block and approximately 977 acres of commercial forestland in the northern area in a sustainable manner to ensure the availability of forest products in perpetuity for social/economic needs. Allow harvest of up to 2,000 cords of firewood and other wood products from the approximately 170,000 acres of juniper woodlands within the planning area. Harvest can be accomplished by a variety of manual and mechanized techniques including chainsaw, pick-up trucks, feller-bunchers, skidders, portable chippers, and other wheeled or tracked equipment. Forest product outputs for the next 30-40 years in the La Pine area would be limited to relatively minor quantities in accordance with current direction in the Brothers/La Pine RMP. Cutting areas would be designed to blend with the natural landscape and topography. Manage the BLM-owned vegetative resource, including timber harvest and fuels reduction, in La Pine State Park considering direction provided in the Oregon Parks and Recreation	

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	BLM policy, law, regulation
	Department - La Pine State Park Master Plan. Because the vegetative resource is federally owned, vegetative treatments proposed on BLM patent lands within the State Park would also be managed in accordance with the guidelines in the Upper Deschutes RMP and the appropriate level of analysis required by the National Environmental Policy Act.	
Livestock Grazing	All areas currently closed to livestock grazing would stay closed. Restrict or prohibit livestock grazing and rangeland projects in ACECs, WSAs, and Wild and Scenic Rivers, if the use is not compatible with the values for which the areas are designated. Prevent BLM-permitted livestock from straying onto private land in closed range, where requested by private landowner.	FLPMA, Public Rangeland Improvement Act (PRIA), Taylor Grazing Act, and other acts, direct the management of public land for multiple use and sustained yield. Desired outcomes may take social and economic values into consideration (p. III-5, BLM H-1601-1 Land Use Planning Handbook). FLPMA directs the BLM to improve forage conditions, with resulting benefits to wildlife, watershed protection, and livestock production. The Standards for Rangeland Health (1997 BLM) direct the BLM to modify or discontinue livestock grazing prior to the start of the next grazing year if livestock are found to be a significant contributing factor to failure to attain a Standard. The Standards address watershed function (upland and riparian), ecological processes, water quality, and habitat for native, T&E and locally important species.
Mining	396,185 acres are available for locatable mineral entry under the 1872 mining laws. 366,640 acres are available for mineral leasing. 301,078 acres available for saleable materials Surface occupancy for fluid mineral leasing is not allowed on 16,480 acres surrounding Prineville Reservoir. Reserved Federal mineral estate (Federally owned minerals in non-Federally owned lands) may be explored and developed for mineral resources.	• The Mining Law of 1872 as amended provides guidance for exploring for, discovering, and purchasing locatable mineral deposits on federal lands open to those activities. • The Mineral Leasing Act of 1920 as amended authorizes the BLM to grant leases for development of deposits of coal, phosphate, potash, sodium, sulfur and other leasable minerals on federal public domain lands open for this purpose and on lands having federal reserved minerals. • The Materials Act of 1947 as amended authorizes the BLM to administer mineral materials.

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	BLM policy, law, regulation
		• The Geothermal Steam Act of 1970 as amended authorizes the BLM to grant leases for geothermal exploration and development on federal public lands open for this purpose. • FLPMA (1976) directs the management of public land to prevent unnecessary or undue degradation of the land. • 43 CFR Parts 3100, 3200, 3600, and 3800 regulate onshore oil and gas leasing, geothermal leasing, mineral materials disposal, and mining claims under the general mining laws respectively.
Rockhounding	Develop a rockhounding management plan for North Ochoco Reservoir. Monitor rockhounding sites through visitor use surveys, photographs, and periodic soil and vegetative condition inventories to determine disturbance attributable to recreation. Use baseline data to determine limits of acceptable change.	43 CFR Subpart 3622 provides for the non-commercial collection of petrified wood from public lands for personal use. 43 CFR Subpart 8365.1-5 provides for the non-commercial collection of rocks, mineral specimens, and common invertebrate fossils, and semi -precious gemstones from public lands for non-commercial use.
Military	Military will be permitted to Train on BLM lands	Military use would be under permit or lease as authorized by FLPMA and reaffirmed in the CFR and BLM Manual and handbook. OMD would compliance with the standard terms and conditions as specified or authorized in 43 CFR Part 2920.7 Terms and Conditions.
Recreation	The following areas are designated as Closed to motorized vehicles: • Airport Allotment • Horse Ridge and Powell Butte RNAs • Smith Rock block • Southern portion of the Wagon Road ACEC The following river sections are designated Closed to motorized vehicles: • Little Deschutes Parcel • Middle Deschutes consistent with Wild and Scenic River Plan • Lower Crooked River consistent with Wild and Scenic River Plan	

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	**BLM policy, law, regulation**
	An area management plan would be prepared for the Cline Buttes area	
Transportation and Utilities	All transportation/utility corridors identified by the Western Regional Corridor Study would be designated as transportation/utility corridors. Potential wind energy development sites and existing communications sites in the planning area have been identified. Areas of critical environmental concern, wilderness study areas, and Wild and Scenic Rivers would be designated as right-of-way exclusion areas. All areas identified as having special status plant or animal species would be designated as avoidance areas.	Federal regulations contained in 43 CFR 2806.1, provide guidance for the designation of right-of-way corridors.
Land Ownership	About 191,038 acres identified as Z-1 in B/LP RMP would continue to be Z-1 under all alternatives. These lands include Wild and Scenic River areas About 1,700 acres identified as Z-2 in B/LP RMP that would continue to be Z-2 under all alternatives. About 1,706 acres of public lands identified as Z-3 in B/LP RMP would continue as Z-3, including isolated parcels between Bend and Redmond, around Prineville, and northwest of La Pine. About 1,605 acres of land identified for community expansion in Brothers/La Pine are identified as suitable for community expansion in all alternatives. There are 28,580 acres of land identified as suitable for acquisition in B/LP RMP that have also been identified as suitable for acquisition under Alternatives 2-7. **Note:** All parcels and areas selected for acquisition would remain the same throughout the alternatives, although the emphasis on the order or timing of the acquisition may vary according to each alternative. Private parcels to acquire should (1) facilitate access to public land and resources, (2) or maintain or enhance important public values and uses, or (3) maintain or enhance local social and economic values in public ownership by: • Reducing the number of developed inholdings that may cause resource or social conflicts • Improving wildlife values • Improving or increasing habitat of special status species • Improving or increasing riparian or wetland habitats • Improving wildlife travel corridors • Improving recreation opportunities • Providing new or improved trail links • Providing access to public lands that currently have no legal access	Any process for obtaining private parcels (sale or exchange, donation, or easement) would involve willing participants. Retain in federal ownership all habitat essential for the survival and recovery of any federally listed or proposed species or BLM sensitive species, including historic habitat that has retained it's potential to sustain listed species and is deemed to be essential for species survival (BLM Manual 6840- Special Status Species Management). However, trading of land to acquire habitats of equal or better in value would be considered.

Issue Category	Source	
	Brothers/La Pine RMP plus subsequent decisions Brothers/La Pine RMP	**BLM policy, law, regulation**
	• Providing new or expanding existing recreation opportunities that are limited or in high demand • Providing for better management of special management areas/sites such as ACECs, WSAs, etc.	
Public Health and Safety	Pursuant to 43 CFR 9212.2 (a) "To prevent wildfire or facilitate its suppression, an authorized officer may issue fire prevention orders that close entry to, or restrict uses of, designated public land," the following sections of river are closed to campfires seasonally, from June 1 to October 15th: 1. Within ½ mile of the River's edge along the Lower Crooked River from the Highway 97 bridge to Lake Billy Chinook, 2. Within ½ mile of the River's edge along the Middle Deschutes River from Highway 20 bridge to Lake Billy Chinook. If determined necessary, the fire closures could be extended based on existing conditions.	
Archaeology	As described under special management areas a portion of the Wagon Road ACEC will remain an ACEC. At a minimum, survey 50 acres annually in areas considered to be of high probability the location and discoverability of significant archaeological sites.	Executive Order 11593 directs Federal agencies to inventory public lands and to nominate eligible properties to the NRHP. BLM 8100 provides management policy and use allocations for the disposition and utilization of agency-managed heritage resources. Follow the guidance provided in the National Cultural Programmatic Agreement (1997) and the Protocol for Managing Cultural Resources on Lands Administered by the BLM in Oregon (1998).

Appendix D Disposal, Withdrawal, and Acquisition Lands

Common to All Alternatives

All acreage was determined from the Master Title Plats or estimates from the Central Oregon Public Lands map, 1998, and may differ from the acreage determined with GIS. Totals are to the nearest 10 acres.

Public Lands Currently Withdrawn

A withdrawal is a formal action that accomplishes one or more of the following actions:

- Transfers total or partial jurisdiction of Federal land between Federal agencies.
- Segregates (closes) Federal land to some or all of the public land laws and/or mineral laws. Segregation may be withdrawn from operation of the general land laws and closed to non-metalliferous mining (cement quality limestone, diatomite etc.), but open to metal mining (gold, silver, mercury etc.); or withdrawn from operation of the general land laws and the mining laws; or withdrawn from the general land laws..
- Dedicates land for a specific public purpose.

Three major categories of formal withdrawals exist: (1) Congressional Withdrawals, (2) Administrative Withdrawals, and (3) Federal Power Act or Federal Energy Commission Withdrawals (FERC).

1. Congressional Withdrawals are legislative withdrawals made by Congress in the form of public laws (Acts of Congress).
2. Administrative Withdrawals are made by the President (E.O. - Executive Order), Secretary of the Interior (S.O. - Secretarial Order or P.L.O - Public Land Order), or other authorized officers of the executive branch of the Federal government.
3. Federal Power Act or FERC withdrawals are power project withdrawals established under the authority of the Federal Power Act of 1920. Such withdrawals are automatically created upon filing of an application for a hydroelectric power development project with FERC.

The Upper Deschutes Planning Area has existing withdrawals for public water reserves and 1 for military uses pending withdrawal application, see Table D-1.

Recreation and Public Purposes Act

Recognizing the strong public need for a nationwide system of parks and other recreational and public purposes areas, the Congress enacted the Recreation and Public Purposes Act (R&PP). The act authorizes the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified nonprofit organizations. Examples of typical uses under the act are historic monument sites, campgrounds, schools, fire houses, law enforcement facilities, municipal facilities, landfills, hospitals, parks, and fairgrounds. The act applies to all Public Lands, except

Table D-1. Current public lands withdrawals

Agency	LocationT. R. S.	Acres	Purpose	Serial Number
Bureau of Land Management	T.19 S., R.14 E., Sec. 15 & 22	600	Western Juniper Natural Area	OR-012701 03/04/1963, PLO 2956
Bureau of Reclamation	T.17 S., R. 16 E., Sec. 1	1,120	Irrigation Ochoco Project	OR-19325 04/14/43, Secretarial Order
Bureau of Reclamation	T.17 S., R.16 E., Sec. 12	40	Irrigation Crooked River Project	OR-19327 09/16/1953, BLM Order
Bureau of Reclamation	T.17 S., R.16 E., Sec. 10, 11, & 24	320	Irrigation Crooked River Project	OR-5771 04/10/58, BLM Order
Bureau of Reclamation	T. 17 S., R.17 E., Sec. 3 & 4	840	Irrigation Ochoco Project	OR-19325 04/14/43, Secretarial Order
Bureau of Reclamation	T. 17 S., R.17 E., Sec. 4	80	IrrigationPrineville Reservoir	OR-19326 05/23/1946, Secretarial Order
Bureau of Reclamation	T. 17 S., R.17 E., Sec. 9, 10, & 19	320	Irrigation Crooked River Project	OR-19327 09/16/1953, BLM Order
Bureau of Reclamation	T.17 S., R.17 E., Sec. 9	40	Irrigation Crooked River Project	OR-5771 04/10/58,BLM Order
Bureau of Reclamation	T.17 S., R.17 E., Sec. 9	40	Irrigation Crooked River Project	OR-010313 12/03/1962, PLO 2829
Bureau of Reclamation	T.16 S., R.17 E., Sec. 31, 32, & 33	360	Irrigation Ochoco Project	OR-19325 04/14/43, Secretarial Order
Bureau of Reclamation	T.16 S., R.17 E., Sec. 24, 23, 26, 27, 28, 31, & 32	520	Irrigation Crooked River Project	OR-19327 09/16/1953, Secretarial Order
Bureau of Reclamation	T.16S., R.17E., Sec. 24, 31, & 34	200	Irrigation Crooked River Project	OR-5771 04/10/58, BLM Order
Bureau of Reclamation	T.16S., R.17E., Sec. 34	80	Irrigation Crooked RiverProject	OR-010313 12/03/1962, PLO 2829
Bonneville Power Administration	T.15S., R.13E., Sec. 18	40	Electric Substation Site	OR-01989 04/28/1952, PLO 821
Federal Aviation Administration	T.15 S., R.13 E., Sec. 21	120	Communication Site	OR-09947 06/30/1960, PLO2141
Bureau of Land Management	T.13 S, R.12 E., Sec. 3, 4, 9, 10, 11, 13, & 14	440	Power Site Reserve 425	OR-19071 03/09/1914, Executive Order
Bureau of Land Management	T.13 S., R.12 E., Sec. 28 & 33	100	Power Site Reserve 480	OR-19077 02-17-1915, Secretarial Order
Bureau of Land Management	T.13 S., R.12 E, Sec. 27	40	Power Site Reserve 25	OR-19132 03/10/1922, Secretarial Order
Bureau of Land Management	T.13 S., R.12 E., Sec. 5-8, 17, 20, 21, 27, 28, 33, & 34	1685	Power Site Reserve 26	OR-19025 07/02/1910, Executive Order
Bureau of Land Management	T.12 S., R.12 E., Sec. 32	280	Power Site Reserve 26	OR-19025 07/02/1910, Executive Order
Bureau of Land Management	T.12 S., R.12 E., Sec. 33	120	Power Site Reserve 63	OR-19029 07/02/1910, Executive Order

Agency	LocationT. R. S.	Acres	Purpose	Serial Number
Bureau of Land Management	T.15 S., R.12 E., Sec. 1 & 12	320	Power Site Reserve 26	OR-19025 07-02-1910 Executive Order
Bureau of Land Management	T.14 S., R.12 E., Sec. 9, 10, 11, 14, 26, & 35	560	Power Site Reserve 26	OR-19025 07-02-1910, Executive Order
Bureau of Land Management	T.19 S., R.17 E., Sec. 12	120	Power Site Reserve 64	OR-19030 07-02-1910, Executive Order
Army Corps of Engineers	T.18 S., R.13 E., Sec. 11	160	Military Training	OR 39055 12/10/1986, PLO-6634
Army Corps of Engineers	T.15 S., R.14 E., Sec. 31	76	Military Training	OR 39055 12/10/1986, PLO-6634
Oregon State Parks	T.14 S., R.17 E., Sec. 32	40	Public Recreation Area: Fishing	OR 03888 04/12/1956, PLO-1286
	Total Acres	**8,346**		

lands with national forests, national parks and monuments, national wildlife refuges, Indian lands, and acquired lands. BLM may sale or lease only the amount of land required for efficient operation of the projects described in an applicant's development plan.

In the Upper Deschutes planning area R&PP has been used for sewage treatment facilities in Bend, Redmond, and La Pine; golf courses; libraries; parks, and shooting ranges. Current and pending R&PP leases and transfers are listed in Table D-2. In the future, it is anticipated that R&PP will be used for sewage treatment facility expansions, municipal parks, and expansion of state parks.

Lands Identified for Disposal

This includes Z-3 or Community Expansion not revised from Brothers La Pine RMP. The acreage figures are shown below in Table D-3.

Table D-2. R&PP Leases and Pending Transfers

Agency or Organization	Location T. R. S.	Acreage	Purpose	Serial Number
City of Redmond	T.14 S., R.12 E., Sec. 24	160	R&PP: Water Facility	OR-054445
COSSA	T.19 S., R.15 E., Sec. 28, 29, & 33	500	R&PP: Shooting Range	OR-48823
Oregon State Parks	T.14S., R.17E., Sec. 32	40	R&PP Public Recreation Area: Fishing	OR 6091 OR 03888, PLO 1286
Local Park	T.14 S., R.16 E., Sec. 28	160	R&PP: Local Park	OR 11369
	Total Acres	**860**		

Table D-3. Public Lands Available for Disposal in all Alternatives

Crook County		
Parcels	**Legal Description**	**Acreage**
O'Neil	T.14S., R.14E. W.M., Oregon Section 9: E1/2SE1/4; 10: SE1/4NE1/4; 24: N1/2N1/2, SW1/4NW1/4.	 80 40 200
Northwest of Prineville	T.14S., R.15E. W.M., Oregon Section 18: N1/2SE1/4, S1/2NE1/4; 30: N1/2NE1/4, S1/2SE1/4.	 160 160
North Ochoco Reservoir	T.14S., R.17E., W.M., Oregon Section 26: NW1/4SE1/4; 34: NW1/4NW1/4.	 40 40
Southeast of Prineville	T.15S., R.16E., W.M., Oregon Section 2: SE1/4SW1/4, SE1/2; 10: NE1/4NE1/4.	 200 40
South Ochoco Reservoir	T.15S., R.17E., W.M., Oregon Section 2: Lot 2; 12: SE1/4SW1/4, SW1/4SE1/4; 14: N1/2SW1/4, SW1/4SW1/4; 24: NE1/4NE1/4.	 41.89 80 120 40
East of Ochoco Reservoir	T.15S., R.18E., W.M., Oregon Section 6: S1/2SE1/4; 8: N1/2NE1/4, W1/2NW1/4; 18: NE1/4SW1/4.	 80 160 40
	Crook County Total	1,520
Deschutes County		
Parcels	**Legal Description**	**Acreage**
Redmond	T.15S., R.13E., W.M., Oregon Section 18: SE1/4NE1/4: * 32: NW1/4NE1/4 (that portion lying west of the railroad track), SE1/4NW1/4 (that portion lying west of the railroad track and south of the golf course), NE1/4SW1/4, S1/2SW1/4, SE1/4.	 40 306
Deschutes Junction	T.16S., R.12E., W.M., Oregon Section 11: SW1/4SE1/4; * 12: SE1/4SE1/4; 34: NW1/4SE1/4.	 40 40 40
South of Redmond Airport	T.16S., R.13E., W.M., Oregon * Section 6: Lot 1, Lot 2 (that portion within one quarter-mile east of the railroad track), SE1/4SW1/4, SE1/4 (that portion within one quarter-mile of the railroad track) * 7: Lot 2, Lot 3, Lot 4 (that portion within one-quarter mile of the railroad track), W1/2NE1/4 (that portion within one-quarter mile east of the railroad track); E1/2NW1/4 (that portion within one-quarter mile of the railroad track); E1/2SW1/4 (that portion within one-quarter mile east of the railroad track).	 155.17 225.5
	Deschutes County Total	850
	Total Deschutes and Crook Counties	2,370

Alternative 1

Lands Identified for Disposal

Land exchanges and sales were evaluated for plan conformance and viability on a case-by-case basis. The primary means of disposal was through exchange with emphasis on acquiring state and private land. If the parcels were found suitable for disposal, a land classification was issued that states this information. Refer to the criteria governing land tenure adjustments found in Appendix A.

Brothers/La Pine RMP identified approximately 21,802.67 acres of public land for disposal that are also within the current planning boundary. Refer to Table D-4 for the legal descriptions of those public lands remaining available for disposal under Brothers/La Pine.

Table D-4. Public lands available for disposal In Alternative 1, formerly available in Brothers/La Pine RMP

Crook County		
Parcels	**Legal Description**	**Acreage**
Grizzly Mountain	T.13S., R.15E. W.M., Oregon Section 3: NW1/4SW1/4; 15: NW1/4NW1/4, N1/2SW1/4; 24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4; 25: W1/2NE1/4, NE1/4NW1/4, W1/2SW1/4; 26: SE1/4NE1/4, E1/2SW1/4, SE1/4; 27: NW1/4NE1/4; 28: SE1/4SW1/4, SE1/4; 32: NW1/4NE1/4.	 40 120 240 200 280 40 200 40
Allen Creek	T.13S., R.16E. W.M., Oregon Section 19: Lot 3, NE1/4SW1/4; 20: S1/2S1/2, NW1/4SW1/4; 21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4; 29: NW1/4NE1/4, NE1/4NW1/4, SW1/4; 30: SE1/4; 32: W1/2.	 81.34 200 160 240 160 320
O'Neil	T.14S., R.14E. W.M., Oregon Section 5: SW/14NW1/4, NW1/4 SW1/4;	 80
Northeast of Prineville	T.14S., R.16E. W.M., Oregon Section 1: Lots 1-3, S1/2NE1/4, SE1/4; 12: E1/2, SW1/4NW1/4, SW1/4; 14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, SE1/4SE1/4; 22: NE1/4NE1/4; * 28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4.	322.46 520 320 40 160
Southwest of Prineville	T.15S., R.15E., W.M., Oregon Section 31: Lot 4, SE1/4SW1/4.	 79.9
Southeast of Prineville	T.15S., R.16E., W.M., Oregon Section 22: E1/2; 30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4; 32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4.	 320 200 320

South Ochoco Reservoir	T.15S., R.17E., W.M.., Oregon Section 28: All; 32: All; 34: W1/2NW1/4, S1/2.	 640 640 400
Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon Section 2: Lot 1; 4: Lots 1-3, SE1/4NE1/4; 6: Lot 5, NW1/4SE1/4, SE1/4SE1/4; 12: SE1/4NE1/4; 13: S1/2SE1/2; 21: NE1/4, E1/2NW1/4, NE1/4SW1/4, NE1/4SE1/4; 22: SW1/4SW1/4; 23: SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4; 24: S1/2SE1/4; 26: NE1/4, E1/2NW1/4, NE1/4SW1/4, N1/2SE1/4, SE1/4SE1/4; 27: SE1/4SW1/4, E1/2NE1/4. 28: E1/2NW1/4, E1/2SW1/4, NW1/4SE1/4, S1/2SE1/4	 37.28 161.86 119.04 40 80 320 40 160 80 400 120 280
North Prineville Reservoir	T.16S., R.17E., W.M., Oregon Section 4: Lot 4; 6: Lot 1, Lot 2, Lot 5, Lot 8, S1/2NE1/4, SE1/4; 7: Lot 2, Lots 4-11, E1/2SW1/4, N1/2SE1/4; 8: N1/2, N1/2S1/2; 9: All; 15: N1/2, NW1/4SW1/4, SE1/4SE1/4; 16: NE1/4, S1/2NW1/4; 17: W1/2SW1/4; 18: Lot 1, Lot 2, E1/2NW1/4, SE1/4SW1/4, NE1/4SE1/4, S1/2SE1/4.	 38.94 396.29 501.18 480 640 400 240 80 330.8
	Crook County Total	11,310
Deschutes County		
Parcels	**Legal Description**	**Acreage**
Steamboat Rock	T.14S., R.12E., W.M., Oregon Section 22: NE1/4NE1/4, SW1/4NE1/4,W1/2 W1/2, SE1/4SW1/4, W1/2SE1/4; 27: N1/2NW1/4, SW1/4NW1/4; 34: N1/2SW1/4, SW1/4SW1/4, E1/2 SE1/4; 35: SE1/4SW1/4, SE1/2.	 360 120 200 200
Terrebonne	T.14S., R.13E., W.M., Oregon Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4; 30: Lot 6, SW1/4NE1/4NW1/4, W1/2SE1/4NW1/4, W1/2NE1/4SW1/4, SE1/4SW1/4; 31: E1/2 W1/2.	 205 110.69 160
Cline Buttes	T.15S., R.12E., W.M., Oregon Section 1: SE1/4NW1/4; 2: SW1/4NE1/4, N1/2SW1/4, SW1/4SW1/4; 3: SE1/4NW1/4, N1/2SE1/4; 10: SW1/4SW1/4; 11: NW1/4NW1/4.	 40 160 120 40 40
Redmond	T.15S., R.13E., W.M., Oregon * Section 21: E1/2SE1/4SW1/4, W1/2SW1/4SE1/4; * 23: E1/2SE1/4; * 26: NE1/4NE1/4, SW1/4NW1/4NE1/4, S1/2NE1/4, S1/2; * 33: All; * 34: All; * 35: All.	 40 80 450 640 640 640

Deschutes Junction	T.16S., R.12E., W.M., Oregon Section 13: SW1/4NE1/4, SE1/4SW1/4, SE1/4.	240
South of Redmond Airport	T.16S., R.13E., W.M., Oregon Section 4: All; 5: All; 6: SE1/4 (that portion east of one quarter-mile east of the railroad track); 7: Lot 4 (that portion east of one quarter-mile east of the railroad track), NE1/4 (that portion east of one quarter-mile east of the railroad track), E1/2NW1/4(that portion east of one quarter-mile east of the railroad track), E1/2SW1/4 (that portion east of one quarter-mile east of the railroad track), SE1/4; 8: All.	 364.97 366.35 65.31 358.4 640
La Pine	T.21S., R.10E., W.M., Oregon Section 33: W1/2SE1/4; 34: E1/2SE1/4, SW1/4SE1/4.	 80 120
La Pine	T.21S., R.11E., W.M., Oregon Section 29: SW1/4SW1/4.	 40
La Pine	T.22S., R.10E., W.M., Oregon Section 3: Lot 1, Lot 2; 5: N1/2SE1/4; 12: the portion of the W1/2SW1/2 lying east of the Burlington Northern rail road.	 80.83 80 40
	Deschutes County Total	6,720
	Total All	18,030

Common to Alternatives 2-7

Lands Identified for Disposal

There are no parcels identified for disposal Common to Alternatives 2-7 that were not already identified for disposal Common to All Alternatives.

Lands Identified for Acquisition

The private lands listed in Table D-6 have been proposed for acquisition in Alternatives 2-7. Lands would only be acquired from willing landowners. After the table, general areas and lineal features where acquisitions would be considered are described.

In addition to the specific sites above, acquisitions would be desirable in certain general areas and along lineal features. These general areas and lineal features follow:

Crook County:
- Southeast of Smith Rocks State Park for wildlife and recreation connectivity; parcels not identified though based on canal and river proposed trail system.
- Powell Buttes for access with several options under consideration.
- Five miles southeast of Prineville Reservoir, to block up and provide a corridor for wildlife and recreation between Alfalfa Flat and the Maury Mountains.

Table D-5. Private Lands Considered for Acquisition

Crook County		
Parcels	**Legal Description**	**Acreage**
East of the McKay Creek intersection with Allen Creek, for wildlife	T. 13 S., R. 15 E., Sec. 25, ENE, WNW, SENW, ESW, SE; Sec. 26, NENE. T. 13 S., R. 16 E., Sec. 19, N, SSW, SE; Sec. 29, ENE, SWNE, WNW, SENW, SE; Sec. 30, N, SW.	 440 40 560 400 480
Smith Rocks	T. 14 S., R. 14 E., Sec 6, NNE.	 40
West of Old Dry Creek, for wildlife	T. 14 S., R. 16 E., Sec. 1, WNW, SENW, SW; Sec. 11, all; Sec. 12, NNW, SENW; Sec. 14, SNE, SENW, ESW, NSE, SWSE	 280 640 120 280
Barnes Butte	T. 14 S., R. 16 E., Sec. 28, WSW, NESE.	 160
Powell Buttes for visuals, recreation, and wildlife	T. 16 S., R. 14 E., Sec. 1, SWSW; Sec. 12, NENE, WW, NSE, SWSE. T. 16 S., R. 15 E., Sec. 6, NWSE; Sec. 7, SWNW, NWSW.	 40 280 40 80
Four miles north of Alfalfa, for recreation purposes	T. 16 S., R. 14 E., Sec. 35, SW.	 160
1 mile south of Swartz Canyon, for wildlife, recreation, and to block up	T. 16 S., R. 15 E., Sec. 26, SESW, SWSE; Sec. 35, NWNE, NENW.	 80 80
Prineville Reservoir, for wildlife, recreation, and to block up	T. 16 S., R. 16 E., Sec. 36, N, SW, ESE. T. 16 S., R. 17 E., Sec. 13, SWNE, SNW, NSW; Sec. 29, WNE, ENW, SWNW, WSW, WSE; Sec. 32, WNE, SENE, NW, NSE; Sec. 33, ENW, NESW; Sec. 34, ESW, WSE, SESE; Sec. 35, WNW, ESW, WSE. T. 17 S., R. 17 E., Sec. 3, NNE; Sec. 8, NE, ESW, SWSW.	 600 200 360 400 120 200 160 80 280
4 miles NE of Alfalfa, for wildlife, recreation, and to block up	T. 17 S., R. 15 E., Sec. 16, all.	 640
Horse Butte, for wildlife, recreation, and to block up	T. 17 S., R. 15 E., Sec. 36, all.	 640
One mile south of Williamson Creek, to block up	T. 18 S., R. 16 E., Sec. 18, WNE, SNW, NSW.	 240
	Subtotal	8,120

Deschutes County		
Parcels	**Legal Description**	**Acreage**
Fremont, Squaw, McKenzie, Deep, and Buckhorn canyons to block up and provide a corridor for wildlife and recreation	T. 14 S., R. 11 E., Sec. 3, NWNE, ENW; Sec. 4, N; Sec. 5, ENE, SWNW, NESE; Sec. 6, ENE, SE; Sec. 7, E, EW; Sec. 8, WNE, NNW, SENW, NSE; Sec. 9, NE, SENW, ESW, SE; Sec. 10, NWNW; Sec. 13, WNE, NW, NSW, NWSE; Sec. 16, NW, NWSW; Sec. 17,ENE, ESE, SWSE; Sec. 20, NNE, ENW, NSW, NWSE; Sec. 21, NWNW; Sec. 22, SSE; Sec. 24,SNE, SNW, NENW, SW, SE; Sec. 25, all; Sec. 29, N; Sec. 33, NESE; Sec. 34, NSW; Sec. 35,NE; Sec. 36, N.	 120 320 160 240 480 280 440 40 360 200 200 280 40 80 560 640 320 40 80 160 320
Adjoining the Grasslands to block up for management and for wildlife corridor	T. 14 S., R. 11 E., Sec. 2, NWNE, NW.	 200
One mile north of Big Falls, to block up and provide a corridor for wildlife and recreation	T. 14 S., R. 12 E., Sec. 3, SWSW; Sec. 4, SSE.	 40 80
One mile southeast of Odin Falls for Deschutes River recreation access	T. 14 S., R. 12 E., Sec. 36, NESW, NWSE.	 80
Within a mile of Buckhorn Road for recreation trails	T. 14 S., R. 12 E., Sec. 29, the private lands within the S half; Sec. 32, NNW, NESW; Sec. 33, SWNE, SENW, ESW.	 40 120 160
Area north of Smith Rocks State Parks for recreation trails	T. 14S., R. 13 E., Sec. 1, NW; Sec. 2, SENE, WSW, SESW, NSE, SWSE.	 160 280
Two miles southwest of O=Neil, for proposed recreation canal trail	T. 14S., R. 13 E., Sec. 25, ESE, that portion East of the North Unit Canal; Sec. 36, E, that portion East of the North Unit Canal.	 80 160
In close proximity to Hwy 126 for recreation trails	T. 15 S., R. 11 E., Sec. 1, SNE, SWSW; Sec. 2, NWNW; Sec. 3, SENE, NESE, SESW; Sec. 5, ENW, NESW.	 120 40 120 120

Cline Buttes to block-up core	T. 15 S., R. 11 E., Sec. 11, SESE; Sec. 12, SWSW; Sec. 13, NWNW; Sec. 14, NENE; Sec. 24, SSW; Sec. 25, NNW. T. 15 S., R. 12 E., Sec. 8, SESW; Sec. 17, WNE, ENW, SSW, WSE; Sec. 20, NE, NW, NSW, SWSW; Sec. 21 WNW.	 40 40 40 40 80 80 40 320 440 80
South of Cline Buttes for recreation trails	T. 15 S., R. 12 E., Sec. 20, ESE, SWSE; Sec. 21, SWSW; Sec. 28, N, NS; Sec. 29, NE, SNW, NSW, NSE, SESE; Sec. 30, WNE, SENE, ENW, NESE; Sec. 32, NNE.	 120 80 480 440 240 80
East of Cline Buttes on the Deschutes River for river access	T. 15 S., R. 12 E., Sec. 25, NW, that portion west of the river; Sec. 36, NW, that portion west of the river; Sec. 35, SSE, that portion west of the river.	 80 80 40
One mile SE of Roberts Field	T. 15 S., R. 13 E., Sec. 36, WNE, NNW, SWNW, WSW, SESW.	 280
1 mile north of Tumalo Dam, for wildlife, recreation, and to block up	T. 16 S., R. 11 E., Sec. 4, SWSW; Sec. 16, NWNE, NNW, SENW, NESW; Sec. 17, NWNE.	 40 200 40
East of Cline Buttes on the Deschutes River for river access	T. 16 S., R. 12 E., Sec. 9, SESW, SWSE, that portion west of the river.	 20
Northeast of Bend, adjacent to North Unit Canal, for recreation trail	T. 17 S., R. 12 E., Sec. 11, SENE, ESE; Sec. 12, WNW, SENW; Sec. 14, ENE.	 120 120 80
Mayfield pond area to block up and for recreation	T. 17 S., R. 13 E., Sec. 10, NW; Sec. 23, WNE, NENW, NESW, NWSE; Sec. 29, NWNE.	 160 200 40
Four miles north of Alfalfa, for recreation purposes	T. 17 S., R. 14 E., Sec. 2, WNW; Sec. 3, NENE.	 80 40
Two miles south of Dodds Road and adjacent to Hwy 20 as addition to proposed wilderness and travel links	T. 18 S., R. 13 E., Sec. 24, W, that portion East of Hwy 20; T. 18 S., R. 14 E., Sec. 16, N; Sec. 36, ENE, SWNE, WSW, WSE.	 160 320 280

Millican area, for travel route linkages and connectivity	T. 19 S., R. 13 E., Sec. 13, SNE, SE; T. 19 S., R. 14 E., Sec. 3, SSW, SWSE; Sec. 18, WSW; Sec. 19, WNE, SENE, S; Sec. 20, SWNW, NESW, NSE, SESE; Sec. 21, SSW; Sec. 22, SS, NESE; Sec. 24, SESE; Sec. 25, WNE, SENE, WSW, SESW, NSE, SWSE; Sec. 26, ESESE; Sec. 27, NWNE; Sec. 28, NW, NSW; Sec. 29, NE; Sec. 33, ENE, SWNE, SWNW, SE; Sec. 35, all; Sec. 36, WNW, SWSENW, SW, ESE. T. 19 S., R. 15 E., Sec. 12, SE; Sec. 13, NNE; Sec. 14, all; Sec. 17, S; Sec. 18, NESE; Sec. 20, NNE; Sec. 30, SNW, S; Sec. 31, WW; Sec. 34, NSE, that portion north of Hwy 20; Sec. 35, S, that portion north of Hwy 20. T. 20 S., R. 14 E., Sec. 2, SN; Sec. 3, SNE, WSE; Sec. 10, W. T. 20 S., R. 15 E., Sec. 16, all; Sec. 17, S.	 240 120 80 440 200 80 200 40 360 20 40 240 160 320 640 330 160 80 640 320 40 80 400 160 30 140 160 160 320 640 320
	Subtotal	19,340

Jefferson County

Parcels	**Legal Description**	**Acreage**
East of Squaw Creek	T. 13 S., R. 11 E., Sec. 34, ENE, SE; Sec. 35, SNE, ESW, SWSW, WSE.	 240 280
One mile SW of Steelhead Falls, to block up and provide a corridor for wildlife and recreation (Wild and Scenic River trail linkage)	T. 13 S., R. 12 E., Sec. 33, NWNE.	 40
Adjacent to Crooked River National Wild and Scenic River for recreation access and river management	T. 13 S., R. 12 E., Sec. 10, SWNE, NWNW, ESE; Sec. 13, SWSW; Sec. 24, NWNE, NENW, ESE; Sec. 25, ENE, NESE. T. 13 S., R. 13 E., Sec. 30, WNW.	 160 40 160 120 80
	Subtotal	1,120
	Total	28,580

Deschutes County:

- Southeast of Smith Rocks State Park, between Smith Rocks and O'Neil to block up and provide a corridor for wildlife and recreation. Parcels not identified, though based on canal and river proposed trail system.
- Three miles north of Old Tumalo Dam adjacent to Highway 30, to block up and provide a corridor for wildlife and recreation between Tumalo and Cline Buttes.
- In the area around Fremont and McKenzie Canyons, to block up and provide a corridor for wildlife and recreation between the Grasslands and Cline Buttes.
- Four miles north and 3 miles southwest of Alfalfa to block up and provide a corridor for wildlife and recreation.
- La Pine, for the purpose of developing and east-west wildlife migration corridor and squaring up corners.

Jefferson County: None

Klamath County: La Pine, for the purpose of developing and east-west wildlife migration corridor and squaring up corners.

Alternative 2

Lands Identified for Disposal

Table D-6. Public Lands Available for Disposal in Alternative 2

Crook County		
Parcels	**Legal Description**	**Acreage**
Grizzly Mountain	T.13S., R.15E., W.M., Oregon	
	Section 3: NW1/4SW1/4;	40
	15: NW1/4NW1/4, N1/2SW1/4;	120
	24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4;	240
	25: W1/2NE1/4, NE1/4NW1/4, W1/2SW1/4;	200
	26: SE1/4NE1/4, E1/2SW1/4, SE1/4;	280
	27: NW1/4NE1/4;	40
	28: SE1/4SW1/4, SE1/4;	200
	32: NW1/4NE1/4.	40
Allen Creek	T.13S., R.16E., W.M., Oregon	
	Section 19: Lot 3, NE1/4SW1/4;	81.34
	20: S1/2S1/2, NW1/4SW1/4;	200
	21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4;	160
	29: NW1/4NE1/4, NE1/4NW1/4, SW1/4;	240
	30: SE1/4;	160
	32: W1/2.	320
Northeast of Prineville	T.14S., R.16E., W.M., Oregon	
	Section 1: Lots 1-3, S1/2NE1/4, SE1/4;	322.46
	12: E1/2, SW1/4NW1/4, SW1/4;	520
	14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, SE1/4SE1/4;	320
	22: NE1/4NE1/4.	40
Southeast of Prineville	T.15S., R.16E., W.M., Oregon	
	Section 22: E1/2;	320
	30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4;	200
	32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4.	320

South Ochoco Reservoir	T.15S., R.17E., W.M., Oregon Section 28: All; 32: All; 34: W1/2NW1/4, S1/2.	 640 640 400
Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon Section 2: Lot 1; 4: Lots 1-3, SE1/4NE1/4; 6: NW1/4SE1/4, SE1/4SE1/4; 12: SE1/4NE1/4; 13: S1/2SE1/2; 23: SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4; 24: S1/2SE1/4; 26: NE1/4, E1/2NW1/4, NE1/4SW1/4, N1/2SE1/4, SE1/4SE1/4; 27: E1/2NE1/4.	 37.28 161.86 80 40 80 160 80 400 80
North Prineville Reservoir	T.16S., R.17E., W.M., Oregon Section 4: Lot 4; 6: Lot 1, Lot 2, Lot 5, Lot 8, S1/2NE1/4, SE1/4; 7: Lot 2, Lots 4-11, E1/2SW1/4, N1/2SE1/4; 8: N1/2, N1/2S1/2; 9: All; 15: N1/2, NW1/4SW1/4, SE1/4SE1/4; 16: NE1/4, S1/2NW1/4; 17: W1/2SW1/4; 18: Lot 1, Lot 2, E1/2NW1/4, SE1/4SW1/4, NE1/4SE1/4, S1/2SE1/4; 21: NW1/4NE1/4, N1/2NW1/4.	 38.94 396.29 501.18 480 640 400 240 80 330.8 120
	Total	10,390

Deschutes County

Parcels	Legal Description	Acreage
Terrebonne	T.14S., R.13E., W.M., Oregon * Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4; * 30: Lot 6, SW1/4NE1/4NW1/4, W1/2SE1/4NW1/4, W1/2NE1/4SW1/4, SE1/4SW1/4; * 31: E1/2 W1/2.	 205 110.69 160
Redmond	T.15S., R.13E., W.M., Oregon * Section 21: E1/2SE1/4SW1/4, W1/2SW1/4SE1/4; * 33: All; * 34: W1/2W1/2.	 40 640 160
Deschutes Junction	T.16S., R.12E., W.M., Oregon * Section 13: SW1/4NE1/4, SE1/4SW1/4, SE1/2 (that portion within one-quarter mile of the railroad track); * 24: NW1/4NE1/4 (that portion within one-quarter mile east of the railroad track), E1/2NW1/4 (that portion within one-quarter mile of the railroad track), NE1/4SW1/4 (that portion within one-quarter mile east of the railroad track).	 160 128.7

South of Redmond Airport	T.16S., R.13E., W.M., Oregon * Section 4: All; * 5: All; * 6: SE/14 (that portion east of one quarter-mile east of the railroad track); * 7 Lot 4 (that portion east of one quarter-mile east of the railroad track), NE1/4 (that portion east of one quarter-mile east of the railroad track), E/2NW1/4 (that portion east of one quarter-mile east of the railroad track), E1/2SW1/4 (that portion east of one quarter-mile east of the railroad track), SE; * 8: All; * 9: All; *18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track).	 364.97 366.35 65.31 358.4 640 640 11.2
La Pine	T.21S., R.10E., W.M., Oregon Section 33: W1/2SE1/4; 34: SW1/4SE1/4, E1/2SE1/4; 35: E1/2SE1/4.	 80 120 80
La Pine	T.22S., R.10E., W.M., Oregon * Section 1: all east of Hwy 97; 2: Lot 6; 3: Lot 1, Lot 2; 5: N1/2SE1/4; * 11: that portion of the NE1/4 lying east of Hwy 97; * 12: N1/2, the portion of the S1/2 lying east of the Burlington Northern rail road; * 13: E1/2NW1/4, E1/2SW1/4.	 477.32 9.21 80.83 80 40 610 160
La Pine	T.22S., R.11E., W.M., Oregon * Section 6: All; * 7: Lots 1-4, E1/2W1/2.	 620.68 296.4
	Subtotal	6,710
	Total All	17,100

Alternative 3

Lands Identified for Disposal

Table D-7 Public Lands Available for Disposal in Alternative 3

Crook County		
Parcels	**Legal Description**	**Acreage**
Grizzly Mountain	T.13S., R.15E. W.M., Oregon	
	Section 3: NW1/4SW1/4;	40
	15: NW1/4NW1/4, N1/2SW1/4;	120
	24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4;	240
	25: W1/2NE1/4, NE1/4NW1/4, W1/2SW1/4;	200
	26: SE1/4NE1/4, E1/2SW1/4, SE1/4;	280
	27: NW1/4NE1/4;	40
	28: SE1/4SW1/4, SE1/4;	200
	32: NW1/4NE1/4.	40
Allen Creek	T.13S., R.16E. W.M., Oregon	
	Section 19: Lot 3, NE1/4SW1/4;	81.34
	20: S1/2S1/2, NW1/4SW1/4;	200
	21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4;	160
	29: NW1/4NE1/4, NE1/4NW1/4, SW1/4;	240
	30: SE1/4;	160
	32: W1/2.	320
Northeast of Prineville	T.14S., R.16E. W.M., Oregon	
	Section 1: Lots 1-3, S1/2NE1/4, SE1/4;	322.46
	12: E1/2, SW1/4NW1/4, SW1/4;	520
	14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, SE1/4SE1/4;	320
	22: NE1/4NE1/4;	40
	* 28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4.	160
Southeast of Prineville	T.15S., R.16E., W.M., Oregon	
	Section 22: E1/2;	320
	30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4;	200
	32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4;	320
	34: All.	640
Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon	
	Section 2: Lot 1;	37.28
	4: Lots 1-3, SE1/4NE1/4;	161.86
	6: NW1/4SE1/4, SE1/4SE1/4;	80
	27: E1/2NE1/4.	80
North Prineville Reservoir	T.16S., R.17E., W.M., Oregon	
	Section 6: Lot 5, Lot 8.	87
	Total	5,610
Deschutes County		
Parcels	**Legal Description**	**Acreage**
Terrebonne	T.14S., R.13E., W.M., Oregon	
	Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4.	205

La Pine	T.22S., R.10E., W.M., Oregon * Section 1: W1/2NE1/4, NW1/4 (that portion lying east of the railroad track), SW1/4 (that portion lying east of the railroad track), W1/2SE1/4; * 2: Lot 6; * 11: the portion of the NE1/4 lying east of Hwy 97; * 12: W1/2NE1/4, NW1/4, the portion of the SW1/4 lying east of the Burlington Northern rail road, W1/2SE1/4; 13: E1/2W1/2; 23: N1/2N1/2, SW1/4NW1/4; 24: N1/2NW1/4.	317.32 9.21 160 460 160 200 80
	Subtotal	1,590
	Total All	7,200

Alternative 4

Lands Identified for Disposal

Table D-8. Public Lands Available for Disposal in Alternative 4

Crook County		
Parcels	**Legal Description**	**Acreage**
Northeast of Prineville	T.14S., R.16E. W.M., Oregon Section 28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4.	160
North Ochoco Reservoir	T.14S., R.17E., W.M., Oregon Section 32: All.	640
Southwest of Prineville	T.15S., R.15E., W.M., Oregon Section 31: Lot 4, SE1/4SW1/4.	79.9
Southeast of Prineville	T.15S., R.16E., W.M., Oregon Section 22: E1/2; 30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4; 32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4; 34: All.	320 200 320 640
South Ochoco Reservoir	T.15S., R.17E., W.M., Oregon Section 28: All; 32: All; 34: W1/2NW1/4, S1/2.	640 640 400
Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon Section 2: Lot 1; 4: Lots 1-3, SE1/4NE1/4; 6: NW1/4SE1/4, SE1/4SE1/4; 12: SE1/4NE1/4; 13: S1/2SE1/2; 22: SW1/4SW1/4; 23: SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4; 24: S1/2SE1/4; 26: NE1/4, E1/2NW1/4, NE1/4SW1/4, N1/2SE1/4, SE1/4SE1/4; 27: SE1/4SW1/4, E1/2NE1/4.	37.28 161.86 80 40 80 40 160 80 400 120

North Prineville Reservoir	T.16S., R.17E., W.M., Oregon Section 4: Lot 4; 6: Lot 1, Lot 2, Lot 5, Lot 8, S1/2NE1/4, SE1/4; 7: Lot 2, Lots 4-11, N1/2SE1/4, E1/2SW1/4; 8: N1/2, N1/2S1/2; 9: All; 16: NE1/4, S1/2NW1/4; 17: W1/2SW1/4; 18: Lot 1, Lot 2, E1/2NW1/4, SE1/4SW1/4, NE1/4SE1/4, S1/2SE1/4	 38.94 396.29 501.18 480 640 240 80 330.8
	Total	7,950
Deschutes County		
Parcels	**Legal Description**	**Acreage**
Terrebonne	T.14S., R.13E., W.M., Oregon Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4.	 205
Redmond	T.15S., R.13E., W.M., Oregon * Section 33: All; * 34: W1/2W1/2.	 640 160
Deschutes Junction	T.16S., R.12E., W.M., Oregon *Section 13:SW1/4NE1/4, SE1/4SW1/4, SE1/2 (that portion within one-quarter mile of the railroad track); *Section 24: NW1/4NE1/4 (that portion within one-quarter mile east of the railroad track), E1/2NW1/4 (that portion within one-quarter mile of the railroad track), NE1/4SW1/4 (that portion within one-quarter mile east of the railroad track).	 160 128.7
South of Redmond Airport	T.16S., R.13E., W.M., Oregon * Section 4: All; * 5: All; * 6: SE1/4 (that portion east of one quarter-mile east of the railroad track); * 7: Lot 4 (that portion east of one quarter-mile east of the railroad track), NE1/4 (that portion east of one quarter-mile east of the railroad track), E1/2NW1/4 (that portion east of one quarter-mile east of the railroad track), E1/2SW1/4 (that portion east of one quarter-mile east of the railroad track), SE1/4; * 8: All; * 9: All; *18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track).	 364.97 366.35 65.31 358.4 640 640 11.2
La Pine	T.22S., R.10E., W.M., Oregon * Section 1: Tract 37; * 2: Lot 6; *11: NE1/4 (that portion lying east of Hwy 97); *12: N1/2, S1/2 (that portion lying east of the railroad track); * 15: W1/2.	 477.32 9.21 89.99 603.8 320
La Pine	T.22S., R.11E., W.M., Oregon * Section 6: All; * 7: Lots 1-4, E1/2W1/2.	 620.68 296.4
	Total	6,160
	Total All	14,110

Alternative 5

Lands Identified for Disposal

Table D-9. Public Lands Available for Disposal in Alternative 5

Crook County		
Parcels	**Legal Description**	**Acreage**
Grizzly Mountain	T.13S., R.15E. W.M., Oregon Section 3: NW1/4SW1/4; 15: NW1/4NW1/4, N1/2SW1/4; 24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4; 25: W1/2NE1/4, NE1/4NW1/4, W1/2SW1/4; 26: SE1/4NE1/4, E1/2SW1/4, SE1/4; 27: NW1/4NE1/4; 28: SE1/4SW1/4, SE1/4; 32: NW1/4NE1/4.	 40 120 240 200 280 40 200 40
Allen Creek	T.13S., R.16E. W.M., Oregon Section 19: Lot 3, NE1/4SW1/4; 20: S1/2S1/2, NW1/4SW1/4; 21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4; 29: NW1/4NE1/4, NE1/4NW1/4, SW1/4; 30: SE1/4; 32: W1/2.	 81.34 200 160 240 160 320
Northeast of Prineville	T.14S., R.16E. W.M., Oregon Section 1: Lots 1-3, S1/2NE1/4, SE1/4; 12: E1/2, SW1/4NW1/4, SW1/4; 14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, E1/4SE1/4; 22: NE1/4NE1/4; * 28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4.	 322.46 520 320 40 160
Southwest of Prineville	T.15S., R.15E., W.M., Oregon Section 31: Lot 4, SE1/4SW1/4.	 79.9
Southeast of Prineville	T.15S., R.16E., W.M., Oregon Section 22: E1/2; 30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4; 32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4.	 320 200 320
Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon Section 2: Lot 1; 4: Lots 1-3, SE1/4NE1/4; 6: Lot 5, NW1/4SE1/4, SE1/4SE1/4; 21: NE1/4, NE1/4SE1/4; 22: SW1/4SW1/4; 23: E1/2SW1/4, SW1/4NE1/4, NE1/4NW1/4; 26: SE1/4SE1/4, N1/2SE1/4, NE1/4SW1/4, E1/2NW1/4, NE1/4; 27: SE1/4SW1/4, E1/2NE1/4; 28: NW1/4SE1/4, S1/2SE1/4.	 37.28 161.86 119.04 200 40 160 400 120 120
	Total	5,960

Deschutes County		
Parcels	**Legal Description**	**Acreage**
Terrebonne	T.14S., R.13E., W.M., Oregon Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4; 30: Lot 6, SW1/4NE1/4NW1/4, W1/2SE1/4NW1/4, W1/2NE1/4SW1/4, SE1/4SW1/4; 31: E1/2 W1/2.	 205 110.69 160
Cline Buttes	T.15S., R.12E., W.M., Oregon * Section 9: SW1/4, S1/2SE1/4; * 10: SW1/4SW1/4; * 15: W1/2.	 240 40 320
Redmond	T.15S., R.13E., W.M., Oregon Section 1: the portion west of North Unit main canal; 12: the portion west of North Unit main canal; 13: the portion west of North Unit main canal; 23: the portion of E1/2SE1/4 west of North Unit main canal; 24: the portion west of North Unit main canal; 26: E1/2NE1/4NW1/4NE1/4 (that portion west of North Unit main canal), SE1/4NW1/4NE1/4 (that portion west of North Unit main canal), S1/2SW1/4NW1/4NE1/4, SW1/4NE1/4 (that portion west of North Unit main canal), S1/2 (that portion west of North Unit main canal); 33: N1/2, N1/2S1/2; 34: N1/2, N1/2S1/2.	 520 480 300 60 160 300 480 480
Deschutes Junction	T.16S., R.12E., W.M., Oregon Section 13: SW1/4NE1/4, SE1/4SW1/4, SE1/2 (that portion within one-quarter mile of the railroad track); 24: NW1/4NE1/4 (that portion within one-quarter mile east of the railroad track), E1/2NW1/4 (that portion within one-quarter mile of the railroad track), NE1/4SW1/4 (that portion within one-quarter mile east of the railroad track).	 160 128.7
South of Redmond Airport	T.16S., R.13E., W.M., Oregon * Section 18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track).	 11.2
	Total	4,160
	Total All	10,120

Alternative 6

Lands Identified for Disposal

Table D-10. Public Lands Available for Disposal in Alternative 6

Crook County		
Parcels	**Legal Description**	**Acreage**
Grizzly Mountain	T.13S., R.15E. W.M., Oregon	
	Section 3: NW1/4SW1/4;	40
	15: NW1/4NW1/4, N1/2SW1/4;	120
	24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4;	240
	25: W1/2NE1/4, NE1/4NW1/4, W1/2SW1/4,;	200
	26: SE1/4NE1/4, E1/2SW1/4, SE1/4;	280
	27: NW1/4NE1/4;	40
	28: SE1/4SW1/4, SE1/4;	200
	32: NW1/4NE1/4.	40
Allen Creek	T.13S., R.16E. W.M., Oregon	
	Section 19: Lot 3, NE1/4SW1/4;	81.34
	20: S1/2S1/2, NW1/4SW1/4;	200
	21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4;	160
	29: NW1/4NE1/4, NE1/4NW1/4, SW1/4;	240
	30: SE1/4;	160
	32: W1/2.	320
Northeast of Prineville	T.14S., R.16E. W.M., Oregon	
	Section 1: Lots 1-3, S1/2NE1/4, SE1/4;	322.46
	12: E1/2, SW1/4NW1/4, SW1/4;	520
	14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, SE1/4SE1/4;	320
	22: NE1/4NE1/4;	40
	28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4	160
North Ochoco Reservoir	T.14S., R.17E., W.M., Oregon	
	Section 32: All.	640
Southwest of Prineville	T.15S., R.15E., W.M., Oregon	
	Section 31: Lot 4, SE1/4SW1/4.	79.9
Southeast of Prineville	T.15S., R.16E., W.M., Oregon	
	Section 22: E1/2;	320
	30: SW1/4NE1/4; SE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4;	200
	32: NW1/4NE1/4, NW1/4, N1/2SW1/4, SW1/4SW1/4.	320
South Ochoco Reservoir	T.15S., R.17E., W.M., Oregon	
	Section 28: All;	640
	32: All;	640
	34: W1/2NW1/4, S1/2.	400

Davis Road Subdivisions	T.16S., R.16E., W.M., Oregon Section 2: Lot 1; 4: Lots 1-3, SE1/4NE1/4; 6: NW1/4SE1/4, SE1/4SE1/4; 12: SE1/4NE1/4; 13: S1/2SE1/2; 21: NE1/4, NE1/4SE1/4; 22: SW1/4SW1/4; 23: SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4; 24: S1/2SE1/4; 26: NE1/4, E1/2NW1/4, NE1/4SW1/4, N1/2SE1/4, SE1/4SE1/4; 27: SE1/4SW1/4, E1/2NE1/4; 28: NW1/4SE1/4, S1/2SE1/4.	 37.28 161.86 80 40 80 200 40 160 80 400 120 120
North Prineville Reservoir	T.16S., R.17E., W.M., Oregon Section 4: Lot 4; 6: Lot 1, Lot 2, Lot 5, Lot 8, S1/2NE1/4, SE1/4; 7: Lot 2, Lots 4-11, E1/2SW1/4, N1/2SE1/4; 8: N1/2, N1/2S1/2; 9: All; 15: N1/2, NW1/4SW1/4, SE1/4SE1/4; 16: NE1/4, S1/2NW1/4; 17: W1/2SW1/4; 18: Lot 1, Lot 2, E1/2NW1/4, SE1/4SW1/4, NE1/4SE1/4, S1/2SE1/4.	 38.94 396.29 501.18 480 640 400 240 80 330.8
	Total	11,550

Deschutes County

Parcels	**Legal Description**	**Acreage**
Terrebonne	T.14S., R.13E., W.M., Oregon Section 29: Lot 1, Lot 4, SW1/4NE1/4, NE1/4NW1/4, E1/2SE1/4.	 205
Cline Buttes	T.15S., R.12E., W.M., Oregon * Section 9: SW1/4, S1/2SE1/4; * 10: SW1/4SW1/4; * 15: W1/2.	 120 40 320
Redmond	T.15S., R.13E., W.M., Oregon * Section 1: the portion west of North Unit main canal; * 12: the portion west of North Unit main canal; * 13: the portion west of North Unit main canal; * 23: the portion of E1/2SE1/4 west of North Unit main canal; * 24: the portion west of North Unit main canal; * 26: E1/2NE1/4NW1/4NE1/4 (that portion west of North Unit main canal), SE1/4NW1/4NE1/4 (that portion west of North Unit main canal), S1/2SW1/4NW1/4NE1/4, SW1/4NE1/4 (that portion west of North Unit main canal), S1/2 (that portion west of North Unit main canal); * 35: NW1/4NE1/4, N1/2NW1/4.	 520 480 300 60 160 300 120

Deschutes Junction	T.16S., R.12E., W.M., Oregon * Section 13: SW1/4NE1/4, SE1/4SW1/4, SE1/2 (that portion within one-quarter mile of the railroad track); * 24: NW1/4NE1/4 (that portion within one-quarter mile east of the railroad track), E1/2NW1/4 (that portion within one-quarter mile of the railroad track), NE1/4SW1/4 (that portion within one-quarter mile east of the railroad track).	160 128.7
South of Redmond Airport	T.16S., R.13E., W.M., Oregon Section 18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track).	11.2
Bend Airport	T. 17S., R.13E., W.M., Oregon Section 20: SW1/4SE1/4; 21: W1/2SW1/2; 28: N1/2NW1/4, SW1/4NW1/4, NW1/4SW1/4; 29: E1/2NE1/4, SW1/4NE1/4, E1/2NW1/4, SW1/4NW1/4, E1/2SW1/4, SE1/4.	40 80 160 480
La Pine	T.21S., R.10E., W.M., Oregon Section 33: W1/2SE1/4; 34: E1/2SE1/4, SW1/4SE1/4.	80 120
La Pine	T.22S., R.10E., W.M., Oregon * Section 2: Lot 5; 3: Lot 1, Lot 2; 5: N1/2SE1/4; 10: SE1/4NE1/4, NE1/4SW1/4, NW1/4SE1/4; 11: the portion of the NE1/4NW1/4 lying west of Huntington Rd, the portion of the SW1/4NW1/4 lying west of Huntington Rd;	30.81 80.83 80 120 60
	Total	4,260
	Total All	15,810

Alternative 7

Lands Identified for Disposal

Table D-11. Public Lands Available for Disposal in Alternative 7

Parcels	Legal Description	Acreage
Crook County		
Grizzly Mountain	T.13S., R.15E. W.M., Oregon Section 3: NW1/4SW1/4; 15: NW1/4NW1/4, N1/2SW1/4; 24: E1/2E1/2, SE1/4SW1/4, SW1/4SE1/4; 25: W1/2NE1/4, NE1/4NW1/4; 27: NW1/4NE1/4; 28: SE1/4SW1/4, SE1/4; 32: NW1/4NE1/4.	 40 120 240 120 40 200 40
Allen Creek	T.13S., R.16E. W.M., Oregon Section 19: Lot 3, NE1/4SW1/4; 20: NW1/4SW1/4, S1/2S1/2; 21: N1/2NE1/4, SE1/4NE1/4, NE1/4SE1/4; 29: NW1/4NE1/4, NE1/4NW1/4, SW1/4; 30: SE1/4; 32: W1/2.	 81.34 200 160 240 160 320
Northeast of Prineville	T.14S., R.16E. W.M., Oregon Section 1: Lots 1-3, S1/2NE1/4, SE1/4; 12: E1/2, SW1/4NW1/4, SW1/4; 14: N1/2N1/2, SW1/4NW1/4, W1/2SW1/4, SE1/4SE1/4; 22: NE1/4NE1/4; 28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4.	 322.46 520 320 40 160
	Total	3,320
Deschutes County		
Parcels	**Legal Description**	**Acreage**
Redmond	T.15S., R.13E., W.M., Oregon * Section 1: the portion west of North Unit main canal; * 12: the portion west of North Unit main canal; * 13: the portion west of North Unit main canal; * 33: all.	 520 480 300 640
Deschutes Junction	.16S., R.12E., W.M., Oregon * Section 13: SW1/4NE1/4, SE1/4SW1/4, SE1/2 (that portion within one-quarter mile of the railroad track); * 24: NW1/4NE1/4 (that portion within one-quarter mile east of the railroad track), E1/2NW1/4 (that portion within one-quarter mile of the railroad track), NE1/4SW1/4 (that portion within one-quarter mile east of the railroad track).	 160 128.7
South of Redmond Airport	T.16S., R.13E., W.M., Oregon * Section 18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track)	 11.2

La Pine	T.21S., R.10E., W.M., Oregon Section 33: W1/2SE1/4; 34: SW1/4SE1/4, E1/2SE1/4: 35: E1/2SE1/4.	 80 120 80
La Pine	T.22S., R.10E., W.M., Oregon * Section 1: Tract 37; * 2: Lot 6; 3: Lot 1, Lot 2; 5: N1/2SE1/4; *11: that portion of the NE1/2 lying east of Hwy 97; *12: N1/2, the portion of the S1/2 lying east of the Burlington Northern rail road; 22: Lot 1 (that portion E of Hwy 97), E1/2NW1/4 (that portion E of Hwy 97), E1/2NE1/4SW1/4, NW1/4NE1/4SW1/4 (that portion E of Hwy 97), E1/2NW1/4SW1/4 (that portion E of Hwy 97), W1/2NE1/4SW1/4SW1/4 (that portion E of Hwy 97), W1/2SW1/4SW1/4 (that portion E of Hwy 97), SE1/4SW1/4SW1/4, E1/2SE1/4SW1/4, E1/2W1/2SE1/4SW1/4.	 477.32 9.21 80.83 80 89.99 603.8 100
La Pine	T.22S., R.11E., W.M., Oregon * Section 7: Lots 1-4, E1/2W1/2.	 296.4
	Total	4,260
	Total All	7,580

Appendix E 303(d) Listed Streams by Sub-basin

Stream Name	River Mile	Approximate Location	Listed Parameter
Little Deschutes Sub-basin			
Crescent Creek	0-26.1	Mouth to Crescent Lake	Temperature
Little Deschutes River	54-78		Temperature
	0-54		Dissolved Oxygen
Paulina Cr.	0-13.2	Mouth to Paulina Lake	Temperature
Upper Deschutes Sub-basin			
Deschutes River	126.4-162.6	Upstream of Squaw to upstream of Tumalo	Temperature, pH
	189.4-222.4	Sunriver to Upstream of Bull Bend	Sediment, turbidity, dissolved oxygen
Squaw Creek	0-21		temperature
Lower Crooked Sub-basin			
Crooked River	0-51	Mouth to Baldwin Dam	Bacteria (fecal coliform), pH, temperature
	51-70	Baldwin Dam to Prineville Reservoir	Total Dissolved Gas
McKay Creek	0-14.7	Mouth to Little McKay Cr.	Temperature
Marks Creek	0-17.1		Temperature
Mill Creek	0-11.5	Mouth to E./W. Forks	Temperature
Ochoco Cr.	0-36.4	Mouth to Camp Branch	Temperature
Upper Crooked Sub-basin			
Crooked River	82.6-109.2	Upstream of Deer Cr. to N.Fk. Crooked River	Temperature, pH
Bear Creek	0-34.3	Mouth to Headwaters	Temperature

Appendix F: Best Management Practices

Introduction

The following Best Management Practices, considered to be the most applicable to the planning area, were derived from a number of sources including: BLM OR/WA Manuals and Handbooks, Oregon Forest Practice Rules (Oregon Department of Forestry, 1980), Moll (1999), and internal and RMP scoping comments.

Road Construction and Maintenance Guidelines

Additional, more detailed specifications, concerning all aspects of road design, construction and maintenance are located in BLM Manuals 9113 - Roads, and 5420 - Preparation For Sale (Timber).

New BLM system road construction would focus on redesigning existing road systems for better access efficiency, recreation use, reduction in conflicts with adjacent landowners, and resource protection. Road system management would include maintaining existing roads, seasonal closures, permanent closures and rehabilitation of roads.. Existing system roads would be maintained for proper water drainage and long-term service.

Any new roads would be designed to minimum standards consistent with the proposed use and traffic safety. Surfaced roads would include some county roads, roads receiving heavy use by the public, and some approved road rights-of-way. When designing long-term road networks, existing roads would be incorporated to the maximum extent possible unless new roads offer better long term conditions for resource conservation, visual resources, recreation or reductions in conflicts with adjacent landowners.

Road location would be designed to follow the terrain to minimize excavation to the essential amount needed to meet necessary road standards. Whenever possible, roads would be located away from streams, meadows, and riparian areas. Appropriate drainage structures would be incorporated into construction or reconstruction design.

Cut and fill slopes would be revegetated, preferably with native vegetation, to stabilize the slopes and reduce erosion. Seeding or planting would be done the first fall season following construction of long-term roads.

A local road with a design speed of 20 mph or less should be outsloped for sections where the grade does not exceed 6%. Outsloping roads is not recommended unless the subgrade materials are resistant to erosion and traffic volume is extremely low. All other roads should be crowned to ensure proper drainage.

Side ditches should be constructed adjacent to, and parallel with, the roadway shoulder. The ditch collects runoff from the roadway and from adjacent upslope areas. The shape and dimensions of the ditch are selected to carry adequately the anticipated runoff from a major storm without saturation of subgrade or surfacing material.

Where overtopping of the road could occur, a dip or grade roll should be designed to ensure that the overtopping flow crosses the road at a point that minimizes erosion (erodible-resistant surfacing is often added), and so that flow is not diverted along the road or away from its natural flow path.

For low-volume roads, surface cross drains provide an economical alternative to using ditches and culverts. Surface cross drains can be designed into any shape road surface template to divert water collecting on and running down the traveled surface. Surface dips are not recommended for grades over ten percent because of the steepness of the dip approach grade that would be required. They may also be used to relieve ditches and the inside edge of insloped roadways without ditches. Ditch dams are used to direct ditch water into the cross drain. Surface cross drains should be located at intervals close enough to prevent volume concentration that causes surface erosion or unstable slopes. Cross drains should be constructed with an outslope grade of 3 to 5 percent or equal to the existing out-slope grade. In colder climates where snow and ice create driving hazards, the outslope grade should be reduced. For drivable dips, the minimum freeboard should be 150 millimeters with a roll-out length of at least 6 meters. If the dip is unarmored, freeboard should be increased to allow for the tendency of the dip to lose its shape due to traffic. Drain dips and drivable water bars negotiable by high-clearance vehicles have steeper rollout grades. The above values should be adjusted according to local climate. Locate cross drains far enough above stream crossings to avoid releasing drainage water directly into stream channels. Surface and ditch water should be diverted and dispersed before it enters streams using lead-out ditches, settlement ponds, ditch dams, surface shaping, or other measures. Cross drains and outlets should be armored where soils are highly erodible or provide poor traffic support during wet weather use.

Dip orientation (skewed or perpendicular to the road centerline) depends on the type of traffic expected, length of the dip, and road grade. If dips are shorter and the traffic will include larger trucks with longer frames, then the dips should be oriented perpendicular to the direction of traffic. Dips skewed from perpendicular to centerline more effectively drain steep road grades, are more comfortable for vehicle occupants, and, if long enough, will not cause severe twisting of truck frames.

Culverts would be designed for all streams to pass a 100-year flood. Culverts would be designed for minimum impact on aquatic life. Open bottom shapes should be used if it is necessary to maintain the character of the streambed and would be the preferred option for fish-bearing streams. If a closed bottom shape is used in a fish-bearing stream, the type, size and gradient of the culvert should be assessed using the most current method of design for fish passage. Open-topped culverts, and slotted culvert pipes may be oriented from 60 to 90 degrees to the direction of travel. Rock or other appropriate lining would be provided for culvert outlet basins.

Waterbars would be installed on skid trails and temporary roads where there is potential for erosion due to soil type, terrain features, or future human uses. Waterbars are typically used in closed-off areas with little traffic, and should be oriented to lead the flow from the surface. One rule of thumb is to add five to the percent road grade and orient the waterbar at that many degrees off perpendicular.

All roads would be maintained during logging, mining, or other activities involving heavy vehicles or multiple trips. Roads would be maintained during and immediately after use periods as needed to control erosion and road degradation. Maintenance activities could include reconstruction, snow plowing, grading, cleaning ditches and culverts, installing new drainage structures, and replacing surfacing. Maintenance frequency would depend on traffic, weather, road condition, and soil type. During heavy industrial use, roads would be monitored during wet conditions and temporarily closed, if necessary, to prevent excessive damage.

All necessary road permits and road use agreements would be obtained before beginning industrial operations. Individual road use permits, agreements, contracts, and right-of-way grants would provide detailed stipulations for road use and maintenance for specific roads.

Temporary access roads would be closed and stabilized by a combination of the following methods: signing, blocking, disguising, scarifying, waterbarring, seeding, and mulching.

Design drainage ditches, waterbars, drain dips, culvert placement, etc. in a manner that will disperse run-off and minimize cut and fill erosion. Design of drainage ditches, waterbars, etc. will be done in a manner to ensure safety for road users.

Blocking and disguising would utilize large logs, branches, stumps, and/or boulders found in the local vicinity. Tees cut from adjacent areas may also be imported to facilitate road closures and rehabilitation.

Closed and obliterated road beds would be recontoured to match the adjacent natural slope.

Background of Road Influences on Hydrology

Proper drainage, from a watershed standpoint, is minimizing the cumulative volume-distance quantity of displacement by appropriate road and drainage feature location and design, coupled with appropriate routine maintenance. Three main components of proper drainage provision are: road location and design; drainage feature type, location, and design; and appropriate routine maintenance. Proper drainage provision is accomplished on each unique road segment by ensuring location and design of road alignments and drainage features minimize changes to natural disposition of precipitation and groundwater. Road location must consider alignments, template geometry, aspect, location on hillside, geology, climate, vegetation, operational requirements, season of use, and management activities on surrounding terrain. Drainage feature considerations include type, spacing and shaping, applicability of drainage schemes to site conditions, including investigation of opportunities on the ground for minimizing water concentrations and their effects on areas adjacent to the road segment.

Appropriate routine maintenance ensures such drainage provision remains functional. Drainage features are tailored to site specific characteristics on each unique segment, within limitations dictated by access needs and safety requirements. Every opportunity is considered for minimizing water concentrations and related effects on surroundings by treatments that isolate contributing areas, whether on adjoining road segments or different parts of the cross section template on the same segment.

The simplest, most economical, and most effective technique for minimizing water displacement due to the typical segment involves addition of surface cross drainage. Here, the total water volume displaced may not be reduced much, but it is broken into smaller increments, travels a shorter distance during displacement, and is more quickly and easily absorbed into down slope locations, potentially lowering cumulative volume distance displacement. Surface cross drains consist of surface shaping and devices designed to capture water that collects on, and drains down, the road and release it in a manner that minimizes effects to adjacent areas and the watershed. Surface shaping includes broad-based (drivable) dips, waterbars, and rolls in profile (twist of crown or inslope templates to outslope and back again). Devices include open top or slotted culverts, metal waterbars, and rubber water diverters.

Machine Operations (i.e. logging, mining, utility and facility installations)

Machine operations would be timed to minimize adverse impacts to other resources. Timing of operations on a daily and seasonal basis would include such concerns as sensitive soils, proximity to residences and recreational sites/designated trails, cultural resources, and special status plant and animal species.

Operations would be designed and implemented to minimize the loss of site productivity caused by soil compaction, displacement, or erosion.

Areas with sensitive soils or ground resources of special concern would be protected by logging with low-impact harvest techniques such as: designated skid trails; directional felling; boom mounted shears; harvester/forwarders; smaller, more maneuverable or low ground pressure equipment; logging during the dry season (between June 1 and October 31); and logging over a protective cover of snow and/or frozen ground.

Tractor skidding would normally be limited to slopes of less than 35%. Soil moisture conditions would be monitored and operations would be suspended before excessive compaction or displacement occurs.

Landings would be the minimum size commensurate with safety and equipment requirements. Landing locations would be selected outside specified buffer areas for streams, riparian areas, raptor nests, residential areas, and other sensitive sites. Landings would be located to avoid creating excessive excavation and sidecast or slope stability problems.

Previously disturbed areas and existing openings would be used where practicable to establish landing sites.

Some key landing sites may be retained and dedicated for future timber harvest operations.

Machine slash piling, other than on landings, would be avoided if there are other feasible options available such as whole tree or leave-tops-attached yarding, lop and scatter, or prescribed fire. Where machine piling is necessary, it would be accomplished with a crawler tractor or skidder equipped with a brush rake type blade to minimize soil displacement and provide soil-free piles.

Perennial stream crossings would be avoided during operations involving heavy equipment for logging, road construction or related activities.

Designated trails would be avoided during operations involving heavy equipment for logging, road construction or related activities to the maximum extent feasible. If avoidance is not possible, provisions for designating crossings, rerouting or temporary closure of designated trails will be made to ensure safety and reduce conflicts. Trails damaged during operations would be restored following operations.

Provide variable width no-cut or modified prescription management zones for perennial streams, springs, seeps, wet meadows, and other areas which could substantially affect water quality in perennial waters.

Where forest productivity is emphasized, landings, temporary roads and primary skid trails would be scarified following use. Scarification would be to a depth of at least 12 inches. Mounds and berms would be smoothed to the original contour.

Appendix G Livestock Grazing Management Summary

Allot #	Allotment Name	Acres	AUMs	Alternative 1	2	3	4	5	6	7	Management Category C1	C2	C3	C4	C5	C6	C7	Tot	Grazing System	Vacant (Y or N)
0072	Miltenberger (Alfalfa)	1,670	82	G	G	G	-	-	G	G	M	I	M	I	C	I	M	M	E	N
5001	Whitaker	114	7	G	G	G	-	-	G	-/R	M	I	M	M	C	C	C	C	SD	N
5002	Sanowski	71	10	G	G	G	-	-	G	-/R	M	I	M	M	C	I	C	M	SD	N
5003	Broaddus-Carder	15	2	G	G	G	-	-	G	-/R	M	M	C	I	M	C	C	C	SD	Y
5004	Lamb	44	6	G	G	G	G	-	G	G	M	M	C	M	C	C	M	C	SD	N
5006	Emmrich	211	20	G	G	G	-	-	G	-	M	M	M	I	M	C	C	C	SD	Y
5007	Harsch	1,310	19	G	G	G	-	-	G	-	M	I	M	M	I	M	C	M	SD	N
5011	Alkali	467	12	G	G	G	G	G	G	G	M	M	C	C	M	C	I	C	SS	N
5012	Lynch	2,911	83	G	G	G	-	-	G	-/R	M	I	M	I	C	M	C	M	DR	N
5018	Wierleske	757	49	G	G	G	89%	-	G	G	M	I	M	I	M	M	M	M	SF	N
5019	Dunham North	3,136	191	G	G	G	G	G	G	G	M	I	I	M	M	M	I	I	DR	N
5022	Airport	760	62	G	G	G	-	-	G	R	M	I	M	I	C	I	M	M	E	N
5023	Riverside South	80	5	G	G	G	G	G	G	G	M	I	C	C	I	M	I	M	SS	N
5024	Keystone	353	10	G	G	G	G	G	G	G	M	I	C	C	M	M	I	M	SD	N
5026	Couch	734	30	G	G	G	-	-	G	G	M	I	C	M	I	C	M	M	SD	Y
5031	Mayfield-Harris	1,010	68	G	G	G	-	-	-	G	I	M	M	M	M	I	M	M	DR	N
5032	Barrett	200	24	G	G	G	G	-	G	G	M	M	C	M	M	C	M	C	SD	N
5050	Gray Butte	807	28	G	G	G	G	-	G	-/R	M	I	I	C	M	M	C	M	SS	N
5051	Sherwood Canyon	1,125	51	G	G	G	G	-	G	G	M	I	I	M	I	C	M	M	SD	N
5052	Smith Rock	164	9	G	G	G	G	-	G	-/R	M	I	I	C	I	C	C	M	SD	N
5061	McWeizz	5,027	348	G	G	G	-	-	G	-/R	M	I	I	I	M	C	C	M	SD	Y
5064	Williams (Desch. Co.)	841	44	G	G	G	G	G	G	G	M	M	C	M	M	M	M	C	DR	N
5065	Lower Bridge	6,010	310	G	G	G	G	-	G	G	M	I	M	I	I	M	M	I	DR	N
5066	Pine Ridge	392	34	G	G	G	-	-	G	G	M	I	C	M	M	C	M	C	SD	N
5067	Fisher	254	14	G	G	G	-	-	G	-/R	M	I	M	C	I	C	C	C	SD	Y
5068	Stevens Freemont	675	46	G	G	G	-	-	G	-/R	M	M	M	C	M	C	C	C	SD	Y
5069	Squaw Creek	120	17	G	G	G	-	-	G	-/R	M	I	M	M	I	C	C	M	SD	Y
5070	Lafollette Butte	3,664	190	G	G	G	-	-	G	-/R	M	I	M	M	I	C	C	M	DR	Y
5071	Odin Falls	3,795	252	G	G	G	-	-	G	-/R	M	I	M	I	I	M	C	M	SD	Y
5072	Struss	1,726	143	G	G	G	-	-	G	-/R	M	M	I	M	M	C	C	C	DR	Y
5073	Cline Butte	10,671	700	G	G	G	G	-	G	-/R	M	M	I	M	M	I	M	M	R	N
5075	Desert Springs	2,227	112	G	G	G	G	-	G	-	M	M	I	M	M	M	M	M	WS	N
5076	Buckhorn Canyon	664	68	G	G	G	G	-	G	G	M	I	C	C	M	I	M	M	DR	N
5078	Home Ranch	3,773	193	G	G	G	96%	-	G	-	I	I	I	I	M	I	C	I	E	N

Allot #	Allotment Name	Acres	AUMs	Alternative 1	2	3	4	5	6	7	Management Category C1	C2	C3	C4	C5	C6	C7	Tot	Grazing System	Vacant (Y or N)
5079	Whiskey Still	1,415	100	G	31%	31%	-	-	31%	- /R31%	I	I	I	I	M	I	M	I	E	N
5080	Maston	3,624	209	G	G	G	-	-	G	G	M	I	M	I	M	M	M	M	DR	N
5081	Paulus	164	14	G	G	G	G	-	G	G	M	I	C	C	M	C	M	C	SD	N
5082	Bull Flat	199	7	G	G	G	-	-	G	G	M	M	C	C	M	C	M	C	SD	Y
5084	Blackrock	187	24	G	G	G	-	-	G	-/R	M	M	M	M	C	C	C	C	DR	Y
5086	Lone Pine Canyon	119	5	G	G	G	G	G	G	G	M	I	C	C	C	C	M	C	SD	N
5088	Montgomery	157	17	G	G	G	G	-	G	G	M	I	C	M	M	C	M	C	SD	N
5089	Knoche	160	6	G	G	G	-	-	G	G	M	I	M	M	C	M	M	M	SD	N
5092	Red Cloud	578	33	G	G	G	G	-	G	G	M	I	I	M	M	M	M	M	DR	N
5093	Cronin	346	19	G	G	G	-	-	G	G	M	I	C	M	M	I	M	M	SS	N
5094	Brown (Powell Butte)	191	15	G	G	G	G	-	G	G	M	I	C	C	M	C	M	C	SD	N
5096	Foster	319	24	G	G	G	G	G	G	G	M	I	C	C	M	C	M	C	SD	N
5107	Cain Fields	37	36	G	G	G	-	-	G	G	M	M	C	M	C	C	I	C	SD	N
5108	Zell Pond	1,215	75	G	G	G	93%	74%	-	G	M	I	I	I	M	C	M	M	SD	N
5109	Hohnstein-Tatti	4,744	262	G	G	G	G	G	-	G	M	I	M	M	C	M	M	M	SD	N
5110	Bruckert	119	35	G	G	G	-	G	-	G	M	I	C	C	C	C	I	C	SD	N
5111	Cook	1,929	49	G	G	G	-	-	G	-/R	I	I	M	I	C	C	C	M	SD	N
5112	Driveway	3,258	240	G	G	G	G	-	G	G	M	I	M	M	C	M	M	M	R;W	N
5113	Hacker-Hassing	4,220	99	G	G	G	99%	-	G	G	M	I	I	I	C	M	M	M	DR	N
5114	Weigand	3,084	177	G	G	G	G	-	G	G	M	I	I	M	C	M	M	M	DR	N
5115	Allen	3,565	110	G	G	G	G	-	G	G	M	I	I	M	C	I	I	I	DR	N
5116	Crenshaw	12,528	635	G	G	G	G	G	G	R	M	M	I	M	C	M	M	M	DR	N
5117	Pipeline	8,280	513	G	G	G	G	-	G	G	M	I	I	M	C	M	I	M	DR	N
5119	McDonald	40	50	G	G	G	G	-	G	G	M	M	C	C	C	C	I	C	SD	N
5120	Hutton	4,062	231	G	G	G	G	-	G	G	M	I	I	M	C	M	I	M	W	N
5121	Oertle	2,318	120	G	G	G	G	-	G	G	M	I	M	M	C	M	I	M	DR	N
5122	Howard	669	68	G	G	G	G	-	G	R	M	I	M	M	C	M	M	M	DR	N
5123	West Salt Creek	517	51	G	G	G	G	G	G	G	M	I	C	C	M	M	I	M	DR	N
5125	Mayfield Pond	5,615	305	G	G	G	G	-	G	G	I	I	I	M	C	M	I	I	DR	N
5127	Powell Butte	14,630	680	G	G	G	G	-	G	G	M	I	I	M	M	M	M	M	DR	N
5130	Pilot Butte	323	104	G	G	G	G	G	G	G	M	I	C	C	M	M	I	M	SD	N
5132	North Stearns	8,535	403	G	G	G	G	81%	-	G	M	I	I	I	M	M	M	I	DR	N
5133	Long Hollow	364	17	G	G	G	G	G	G	G	M	I	C	C	M	C	I	C	SD	N
5134	South Stearns	10,021	583	G	G	G	G	G	G	G	M	I	I	M	M	M	I	I	DR	N
5135	Dry Creek	6,134	334	G	G	G	99%	51%	G	R	M	I	I	I	M	M	M	I	DR	N

Allot #	Allotment Name	Acres	AUMs	Alternative 1	2	3	4	5	6	7	Management Category C1	C2	C3	C4	C5	C6	C7	Tot	Grazing System	Vacant (Y or N)
5136	Davis	4,661	352	G	G	G	99%	-	G	R	M	M	I	I	I	M	M	I	WS	N
5138	Plateau	5,255	252	G	G	G	G	G	-	G	M	I	M	M	M	M	M	M	DR	N
5140	Salt Creek	12,534	1,364	G	G	G	G	G	G	G	M	I	M	M	I	M	I	I	DR;W	N
5141	Sanford Creek	4,850	375	G	G	G	G	G	G	G	M	I	C	C	I	M	I	M	DR	N
5142	Carey	1,740	46	G	G	G	G	35%	G	R	M	I	M	I	I	M	M	I	DR	N
5143	Deer Creek	2,728	171	G	G	G	G	G	G	G	M	I	M	C	I	M	I	M	WS	N
5145	Eagle Rock	2,291	162	G	G	G	G	93%	G	G	M	I	I	C	I	M	I	I	DR;W	N
5176	McCabe	230	10	G	G	G	-	-	G	G	C	C	C	C	M	C	M	C	E	Y
5177	Reynolds	1,751	101	G	G	G	G	G	G	G	M	I	C	C	M	C	M	C	SD	N
5178	Grizzly Mountain	521	69	G	G	G	-	-	G	G	C	M	C	C	I	C	M	C	SD	Y
5179	Lytle Creek	119	8	G	G	G	-	-	G	G	M	I	C	C	M	C	M	C	SD	N
5180	Golden Horseshoe	198	14	G	G	G	-	-	G	G	M	I	C	C	M	C	M	C	SD	N
5182	F. Jones	777	77	G	G	G	-	-	G	G	M	I	C	C	M	C	M	C	SD	Y
5198	Laire-gove	490	15	G	G	G	-	-	G	G	M	C	C	C	C	C	M	C	SD	Y
5201	Alfalfa Market Road	2,468	141	G	G	G	G	-	G	R	M	M	I	M	C	M	M	M	SS	N
5204	Sinclair	574	28	G	G	G	G	G	G	-/R	M	I	M	M	M	C	C	C	SD	N
5205	Dodds Road	2,256	75	G	G	G	-	86%	-	-/R	M	M	M	M	M	M	M	M	DR	N
5206	Arnold Canal	603	18	G	G	G	-	G	-	-/R	M	I	M	M	C	C	C	C	DR	Y
5207	Michaels	1,315	38	G	G	G	G	G	-	-	M	I	M	M	M	M	M	M	DR	N
5208	Barlow Cave	11,118	600	G	G	G	G	G	G	G	M	I	M	M	I	M	M	M	DR	N
5209	Lava Beds	16,249	508	G	G	G	G	G	-	-	I	I	M	M	M	I	M	I	SS	N
5210	Horse Ridge	22,226	1,624	G	G	G	G	G	G	G	M	I	M	M	I	M	I	I	DR	N
5211	Pine Mountain	5,401	320	G	G	G	G	G	G	G	M	I	I	M	I	M	M	I	DR	N
5212	Millican	29,472	2,887	G	G	G	G	G	G	G	M	I	I	M	I	M	I	I	DR	N
5213	Rambo	15,765	670	G	G	G	G	G	G	R	M	I	I	M	I	M	M	I	DR	N
5214	Williamson Creek	12,946	754	G	G	G	G	G	G	G	M	I	I	M	I	M	I	I	DR	N
5216	Grieve	80	4	G	G	G	G	-	G	G	M	M	M	M	C	C	M	C	SD	N
5224	Coffelt North	483	15	G	G	G	G	G	G	G	M	M	C	C	M	M	I	C	SS	N
5228	Dunham South	2,804	163	G	G	G	G	G	G	G	M	I	C	C	I	M	I	M	DR	N
5231	West Butte	17,136	1,781	G	G	G	G	G	G	G	M	I	M	M	I	M	I	I	DR	N
5233	Scott	4,825	536	G	G	G	G	G	G	G	M	I	C	C	I	M	I	M	DR;W	N
5234	Haughton	2,491	193	G	G	G	G	G	G	G	M	I	C	C	M	M	I	M	DR;W	N
5252	Meisner	64	34	G	G	G	-	-	G	G	M	M	M	M	C	M	M	C	SD	Y
5257	South Alkali	84	5	G	G	G	G	G	G	G	M	M	C	C	M	C	I	C	SS	N
5261	Hudson	656	44	G	G	G	G	G	G	G	M	I	C	C	M	M	I	M	SD	N

Allot #	Allotment Name	Acres	AUMs	Alternative 1	2	3	4	5	6	7	Management Category C1	C2	C3	C4	C5	C6	C7	Tot	Grazing System	Vacant (Y or N)
7502	A&L Sheep	6,027	1,012	G	G	G	G	-	G	G	M	M	C	M	M	M	M	C	E;D;DR;RR	Y
7504	Brown (La Pine)	552	93	G	G	G	G	-	G	G	M	M	C	M	C	M	I	C	E;D;DR;RR	N
7509	Cliff	1,885	88	G	G	G	95%	61%	G	R	M	M	M	I	M	M	M	M	E;D;DR;RR	N
7514	Cooper	313	27	G	G	G	G	-	G	-/R	M	M	C	M	M	C	C	C	A	N
7515	Helliwell	361	60	G	G	G	G	G	G	G	M	M	M	C	M	C	M	C	A	N
7530	Griffith	28	32	G	G	G	G	G	G	G	M	M	C	C	C	C	M	C	A	N
7538	Hogan	172	26	G	G	G	-	-	G	-/R	M	I	M	M	I	C	C	M	A	Y
7552	Miltenberger (La Pine)	4,612	656	G	G	G	G	84%	G	G	M	M	C	M	C	M	M	C	E;D;DR;RR	N
7554	Morgart	79	11	G	G	G	G	G	G	G	M	I	C	C	M	I	M	M	A	N
7559	Poole	1,373	180	G	G	G	G	G	G	G	M	M	M	M	M	M	M	M	E;D;DR;RR	N
7571	Smith, E.V.	153	26	G	G	G	G	-	G	G	M	M	C	M	C	C	M	C	A	Y
7572	Smith, W.C.	41	7	G	G	G	G	-	G	G	M	M	C	M	C	C	M	C	A	N
7574	Kellems	196	34	G	G	G	G	-	G	G	M	M	C	M	M	C	M	C	E;D;DR;RR	Y
7575	Stearns	425	73	G	G	G	58%	35%	G	G	M	M	C	I	M	M	M	M	E;D;DR;RR	N
7582	Williams (Jeff. Co.)	99	7	G	G	G	G	G	G	G	M	I	C	M	M	C	M	C	A	N
7586	Yager	344	33	G	G	G	-	-	G	R	M	M	M	I	C	M	M	M	E;D;DR;RR	N
7594	LeBeau	26	6	G	G	G	G	-	G	G	M	M	C	C	M	C	M	C	A	N
7595	Finley	1,304	72	G	G	G	G	-	G	G	M	M	C	M	M	M	M	C	E;D;DR;RR	N
7597	Long Prairie	719	240	G	G	G	G	G	G	G	M	M	M	C	M	M	M	C	E;D;DR;RR	N
9999	Unallotted (La Pine)	23,509	6,800	G	G	G	94%	-	G	G	M	M	M	I	C	C	M	C	A	Y

AUMs
These figures represent livestock active preference forage allocation, expressed in animal unit months (AUMs)

Alternatives

G	Open for livestock grazing (entire allotment) under direction in this alternative
-	Livestock grazing discontinued
R	Reserve forage allotment (RFA)
-/R	Livestock grazing discontinued or RFA
XX%	Percent of acres remaining open (or RFA) for livestock grazing (discontinued in remainder of allotment)

Management Category
The scores C, M, and I generally mean Custodial, Maintain, and Improve. See further descriptions, below, and in Affected Environment, Livestock Grazing.

Criteria 1-7 definitions
C1 Standards for rangeland health. C = meeting all standards, M = unknown, or not meeting one or more standards but livestock are not a factor, and I = not meeting one or more standards and livestock are known or expected to be a factor
C2 Forage production present and potential. C = potential is low, and present is near potential, M = potential is moderate to high, present is near potential, and I = potential is moderate to high and present is low to moderate
C3 Potential conflicts with recreation, other uses. C = low, M = moderate, I = high.
C4 Potential conflicts with adjacent land use or busy roads. C = low, M = mod, I = high
C5 Threatened, endangered, or sensitive species, high priority watersheds, or other important resources. C = no or not known at this time, M = some present or expected, and I = numerous present
C6 Present management. C = satisfactory or is only logical practice, M = satisfactory, I = Unsatisfactory.
C7 Prudent investor's willingness to invest. C = no, M = maybe, I = yes

Grazing System
These are the systems proposed to be implemented under Brothers/La Pine RMP direction, and subsequent direction contained in District Rangeland Program Summaries. This direction has been implemented as funding and priorities allow, during allotment evaluation, permit renewal, or rangeland health assessment.

A	Any system which maintains existing trends in ecological condition	SD	Short duration
DR	Deferred rotation	SF	Summer/fall
E	Early	SS	Spring/summer
EX	Exclusion	W	Winter
R	Rotation	WS	Winter/spring

Vacant This refers to whether or not a grazing operator currently holds the permit. If not, the allotment is considered vacant and there is a "Y" in this column

Appendix H Visual Resource Inventory Process Upper Deschutes RMP

Introduction

The visual resource analysis consists of a scenic quality evaluation, sensitivity level analysis, and a consideration of distance zones. Based on these factors, BLM administered lands are placed into one of four visual resource classes. These inventory classes represent the relative value of visual resources, with Class I and II being the most valued, Class III representing a moderate value, and Class IV being of least value. In addition, areas can be identified through the RMP process as Class V – areas where the natural character of the landscape have been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications. This classification also applies to areas where there is potential to increase an area's visual quality; Class V is often used as an interim classification until objectives of another VRM Class can be reached.

The establishment of VRM classes on public land is based on an evaluation of the landscape's scenic qualities, public sensitivity toward certain areas, and the location of affected land from major travel corridors (distance zoning).
Desired Future Condition

Landscapes seen from high use travel routes, recreation destinations, and special management areas will be managed to maintain or enhance their appearance. Landforms that provide a visual backdrop to communities will also be managed to maintain or enhance their appearance. To the casual observer, results of management activities in these areas either will not be evident or will be visually subordinate to the existing landscape.

Landscapes will be enhanced by opening views to distant peaks, unique landforms, or other features of interest. Variety will be introduced to uniform landscapes by creating openings and edges between juniper woodland and sagebrush grassland. Landscapes containing negative visual elements, including braided or extremely dense road networks, garbage piles, unstable cut or fill slopes, open pits, or a preponderance of damaged trees or stumps, etc. will be rehabilitated.

Management activities on highly visible landforms that form a community backdrop will not be evident. In these areas, vegetation management will only be approved if it protects and improves visual quality.

Rationale

Section 102(8) of FLPMA declares that public land will be managed to protect the quality of scenic values and, where appropriate, to preserve and protect certain public land in its natural condition. NEPA, Section 101(b), requires Federal agencies to "assure for all

Americans…esthetically pleasing surroundings." Section 102 of NEPA requires agencies to "utilize a systematic, interdisciplinary approach which would ensure the integrated use of…environmental design in the planning and decision making process." Guidelines for the identification of VRM Classes on public lands are contained in BLM Manual Handbook 8410-1, Visual Resource Inventory.

Characteristics of the Planning Area

The planning area is located within the Columbia Plateau Physiographic Province (Illustration 5 – Physiographic Province Map, Manual 8410 – Visual Resource Inventory). This physiographic province is characterized by incised rivers, extensive plateaus, and anticlinal ridges. The planning area itself consists of gently sloping to flat lands covered in Sagebrush - grassland and Juniper. This general visual character is punctuated by the Deschutes River Canyon and the Crooked River Canyon; and by numerous buttes (e.g., Cline Buttes, West Butte, Grey Butte, and others). Other visual features of the planning area include smaller canyons such as Squaw Creek, several dry canyons, and several large water bodies, including Prineville Reservoir and Ochoco Reservoir. The BLM lands are generally seen against a longer distance backdrop of high peaks and forest lands to the west (Cascade Range – Deschutes National Forest), to the north and east (Gray Butte – Crooked River National Grasslands, Ochoco Mountains – Ochoco National Forest), and to the south (Pine Mountain – Deschutes National Forest). Other key visual elements of the planning area include the rock cliffs and upland spires along the Crooked River at Smith Rock State Park and adjacent BLM lands. Pronounced cliffs and river views are also apparent along the Chimney Rock Segment of the Crooked River south of Prineville.

Portions of the major river canyons in the planning area are designated as Federal Wild and Scenic Rivers. The Lower Crooked (Chimney Rock Segment) Wild and Scenic River is classified as a Recreational River. This stretch of river is located below Prineville Reservoir in Crook County. The Middle Deschutes Wild and Scenic River between Lake Billy Chinook and Odin Falls is classified as a Scenic River. The Crooked River between Lake Billy Chinook and Ogden Wayside is classified as a Recreational River. These two stretches of river are located adjacent to Crooked River Ranch in Deschutes and Jefferson Counties. While the Upper Deschutes Wild and Scenic River does not flow through BLM lands in La Pine, a small portion of BLM lands between Forest Road 4360 and La Pine State Park are located within the Wild and Scenic River corridor.

The visual resource management guidelines for the Chimney Rock segment of the Crooked River are defined as a Retention Visual Quality Objective (VQO) or Partial Retention VQO. These correspond roughly to BLM's Visual Resource Management Class II and Class III. The Middle Deschutes and Crooked Wild and Scenic River stretches adjacent to Crooked River Ranch are designated as VRM Class I within the canyon, and Class II for the surrounding upland above the rim. The VRM Classes for a portion of the Middle Deschutes Wild and Scenic River were superceded by BLM Instruction Memorandum 2000-096, which applied a VRM Class I to the Steelhead Falls WSA. The Upper Deschutes Wild and Scenic River/State Scenic Waterway Plan (1996) applied a Partial Retention VQO to the 79 acres of BLM lands within the Upper Deschutes W&S River – this corresponds roughly to BLM's VRM Class III designation.

Other features that play a role in the area's visual quality and diversity include large tracts of rural ranch and farmland that generally preserve open views and provide a pastoral setting. The area still retains a large number of older buildings and vestiges of earlier ranching, agricultural, and land settlement activities that are valued for their historic and visual interest. Many irrigation canals are located on BLM lands, and these also provide some visual interest, particularly during the summer, when they are at full flow. Isolated geologic features such as lava tubes, lava blisters, and individual large juniper trees, etc. also have high visual interest.

When compared to the visual character of the cascade peaks and slopes or the Deschutes and Crooked River canyons, the majority of BLM lands have much less pronounced visual quality – these are not lands that are going to appear on many travel postcards. However, given the rapid development of central Oregon, these lands are highly valued for their visual quality in that they are not developed and provide a natural backdrop for local communities and a buffer between rapidly developing areas.

The presence of large stands of juniper is seen by some people to be a visual benefit, particularly for residents whose homes are screened and somewhat isolated by existing juniper stands. Others view junipers as a weed species with relatively little benefit. The planning area contains many large stands of old growth juniper, which when viewed individually, have great visual interest, character and diversity; however, at a regional scale, these old growth stands are not highly distinguishable.

Visual Resource Management (VRM) Mapping Process

Existing Visual Quality

Based on the characteristics of the physiographic province and the local area, the elements in the following table (Table H-1) were used to develop a scenic quality overlay (map) for the planning area:

Sensitivity Level Analysis

Each viewer of BLM managed public lands in the planning area has different perceptions formed by individual influences. To some, the BLM lands are a desert wasteland, to others a place to recreate, to others a source of income, and to still others, a defense against unchecked growth and urbanization. The high growth rates and development in the area has led to many public concerns over visual quality and the role of the landscape in providing community identity and in maintaining a quality of life standard in central Oregon. Many land use issues have recently become publicized as visual resource and quality of life issues, including: the placement of cell phone towers; the recent construction of a highly visible golf driving range north of Bend; and the proposed piping of water formerly transported in surface canals. The common element of these issues is the public concern for visual quality and a desire to retain the special, intrinsic and appreciated qualities of the natural backdrop surrounding local communities.

Given the urban nature of the planning area, and the fragmented public land pattern of the BLM parcels, these BLM lands are highly visible on a daily basis to a large number of residents and visitors. While these viewers may not have expectations for pristine views as seen in a national park or other highly managed area; these views are common, continuous, and experienced by large numbers of viewers who have a high degree of ownership and concern about the visual character of landforms that come to define their community (e.g., Cline Buttes, Powell Buttes, etc.). As the area continues to grow and develop, the use volume, or number of viewers will increase (thus increasing the visual sensitivity), and the relative scarcity of undeveloped, natural landscapes will increase (again increasing the visual sensitivity).

Most of the higher elevation or moderate to high slopes category BLM managed land in the planning area are regularly seen by a multitude of public viewpoints, including State Highways, County Roads, State or local parks, and community areas. These lands are often highly recognized landscape features that give identity to local communities such as Powell Butte and Cline Buttes. While these areas may not be of extreme visual quality when viewed in the context of the physiographic region, their prominence as a community backdrop in a rapidly growing and developing area makes them of high sensitivity – i.e., the public generally has a high degree of concern for scenic quality in these highly visible and prominent areas.

Table H-1. Characteristics of the physiographic province and the local area.

	Landform	Water	Cultural Modifications	Adjacent Scenery
Class A – combines the most outstanding characteristics of each rating factor.	High vertical relief such as prominent cliffs, spires, or large rock outcrops or a concentration of surface variation such as ridges, canyons, or lava tubes	Clear and clean appearing still, or cascading white water, any of which are a dominant factor in the landscape	Landscape free from esthetically undesirable or discordant sights and influences or modifications add favorably to visual character	Adjacent scenery greatly enhances visual quality
Class B – Area in which there is a combination of some outstanding features and some that are fairly common to the physiographic region.	Mesas, buttes, or interesting size or shaped landforms, though not dominant or exceptional	Flowing or still water, but not dominant in the landscape	Cultural modifications distinctive, though somewhat similar to others in the region	Adjacent scenery moderately enhances visual quality
Class C – Area in which the features are fairly common to the physiographic region.	Low hills or gently sloping to flat lands with few interesting or detailed landscape features.	Water is absent or not noticeable	Modifications are so extensive that scenic qualities are mostly nullified or substantially reduced.	Adjacent scenery has little or no influence on overall visual quality

In other cases, areas of BLM managed land have specific values and identity for a variety of recreationists. These areas include the Steelhead Falls area along the Deschutes River, the Horse Ridge area, Dry River Canyon, the Deep Canyon area, and the Badlands WSA. In these areas, visitors generally are seeking a natural setting and some degree of solitude and generally have a relatively high degree of concern for visual quality.

The factors referenced in BLM Manual 8410-1 relating to Sensitivity Levels include type of user (e.g., recreational vs. commuter), amount of use, public interest (local, statewide, national), adjacent land uses, and special areas.

In general the following criteria were used to establish Sensitivity Levels for the Upper Deschutes Planning Area:

High Sensitivity

1. Landforms that form community backdrops or are prominent at a regional scale
2. Areas with congressional or state designations, or areas that could be perceived by the public as having the same type of designations and protections…i.e., Wild and Scenic River corridors and the remaining public land river parcels that are outside these designated corridors. WSAs also fall into this category.
3. Areas that serve as recreation destinations for a variety of user groups and are used by out of area visitors on a regular basis. These would include river corridors, BLM lands adjacent to State Park units, dry canyons with defined and well used trail systems, etc.

Moderate Sensitivity

The Sensitivity Level is Moderate for most of the remainder of the planning area. These areas would be those that receive moderate to low levels of recreational use, or high

levels of use that are primarily higher speed, motorized trail use, or are used nearly exclusively by local residents.

Low Sensitivity
This includes lands that receive little if any recreation use, and are mostly used only by adjacent residents. Areas of low sensitivity also include BLM lands that are isolated small parcels that have no legal public access, or are not recognizable by the majority of the public as being public land. Areas of BLM managed land that are so fragmented by inholdings or convoluted ownership boundaries that the public land is not recognizable may also be designated as Low sensitivity.

Known Observation Points

Due to the relatively high development density throughout the planning area, when compared to the other resource areas in the BLM Prineville District, nearly all BLM lands are visible from residences, use areas or public roads. Known observation points (KOPs) are identified in the RMP process to establish distance zones, which in turn lead to differentiating areas of different visual sensitivity (i.e., areas that are seen in the distance can typically absorb greater degrees of alteration and visual contrast). Since the planning area is so heavily developed, these key observation points may overlap to the extent that little, if any differentiation is made based on distance zones.

Key Observation Points were mapped and viewsheds generated using Arcinfo for most of these points (redundant points located close together were not all used). The list of KOPs is as follows:

Roads

1. State Highway 20
2. State Highway 97
3. State Highway 126
4. State Highway 27 (includes National Back Country Byway)
5. State Highway 31 (Outback State Scenic Byway)
6. State Highway 26
7. Paulina Lake Highway (Forest Road 21)
8. South Century Drive
9. Finley Butte Road (Forest Road 22)
10. The Millican Road was added during the RMP alternative development process when the decision to pave the road was made through legislative action.

Parks

1. Smith Rocks State Park
2. Prineville Reservoir State Park
3. Cline Falls State Park
4. Tumalo State Park
5. Pilot Butte State Park
6. Ochoco Wayside/Ochoco Lake State Park
7. Peter Skene Ogden Wayside State Park
8. La Pine State Park
9. Rosland Campground

Note: The scattered State Parks parcels along State Highway 97 between Bend and Redmond (approximately 600 acres in about 8 parcels) were not identified as Key Observation Points. Based on discussions with State Parks officials, these parcels have no current development plans, and are not signed or identified as State Park parcels to the public. In general, these parcels receive custodial management and serve only as open space buffers along the highway corridor to maintain a more natural or rural appearance between Bend and Redmond.

Water Bodies

1. Deschutes River
2. Crooked River
3. Squaw Creek
4. Mayfield Pond
5. Reynolds Pond
6. Ochoco Reservoir
7. Prineville Reservoir
8. Little Deschutes River

Special Management Areas

1. Tumalo Canal ACEC
2. Huntington Wagon Road ACEC

Distance Zones

Based on BLM Manual Handbook 8410-1, Visual Resource Inventory, distance zones are defined as follows:

Foreground/Middleground = 0 to 5 miles

Background = 6 to 15 miles

Seldom Seen = area beyond 15 miles or areas within F/M that cannot be seen

Distance zones and seen areas were generated from Key Observation Points. However, given the multitude of key observation points, there were few areas that fall outside the foreground view of at least some KOPs.

Visual Resource Management (VRM) Classes

Class 1 – Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to wilderness areas, wild and scenic rivers (primarily those classified as scenic), and other similar situations. In the UDRMP area, two areas receive VRM Class 1 designations:

Steelhead Falls WSA
Badlands WSA

Class 2 – Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. Contrasts are seen, but must not attract attention.

Class 3 – Contrasts to the basic elements caused by a management activity are evident, but should remain subordinate to the existing landscape.

Class 4 – Any contrast attracts attention and is a dominant feature of the landscape in terms of scale, but it should repeat the form, line, color, and texture of the characteristic landscape.

Class 5 – The classification is applied to areas where the natural character of the landscape has been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications. The classification also applies to areas where there is potential to increase the landscape's visual quality. It would, for example, be applied to areas where unacceptable cultural modification has lowered scenic quality; it is often used as an interim classification until objectives of another class can be reached.

Appendix I Minerals

Historic Mineral Activity and Mineral Potential

Historic Mineral Activity in the Upper Deschutes Planning Area

Locatable Minerals

Locatable minerals are those minerals for which mining claims can be located, such as precious and base metals, and some nonmetallic minerals that possess unique properties (uncommon variety minerals). Exploration for locatable minerals in the Upper Deschutes planning area has been sporadic. Presently, there are 26 mining claims and 7 millsite claims within the planning area and two notices have been filed under the BLM Surface Management Regulations (43 CFR 3809).

Bear Creek Butte: Minor amounts of mercury have been produced from the Clarno Formation in the southeastern part of the planning area. Prospecting began in the late 1920s and by the late 1950s, the US Bureau of Mines had recorded a total of 30 flasks of mercury from the Platner and Oronogo mines, though the actual output was probably larger (Brooks, 1963).

Terrebonne: Diatomite was mined on private land a few miles west of Terrebonne in the 1950s and continued until the reserves were depleted (Orr and others, 1992). There are 20 diatomite claims on adjoining public lands but no notice or plan level operations are occurring.

Leasable Minerals

Leasable minerals are those minerals for which a person must obtain a lease from the Federal government in order to produce the mineral. Generally, leasable minerals include deposits that occur over large areas, such as the energy minerals—oil and gas, coal, and geothermal resources. Lake bed evaporite minerals such as sodium and potassium are also leasable. Owing to the prevalence of volcanic and volcaniclastic sedimentary rocks in the planning area, coal, coal bed methane, oil shale and tar sands and considered to be absent from the planning area and will not be addressed. Currently, no areas within the planning area are leased and no exploration is occurring. This situation could change as technology improves or if energy prices rise dramatically.

Oil and Gas: Minimal oil and gas exploration has occurred historically in the planning area.

Geothermal: There is a geothermal anomaly within the planning area in the vicinity of Powell Buttes that was investigated by Brown and others, (1980). Their work indicates a potential for boiling-temperature fluids at a depth of about 1000 meters. More geophysical exploration and deep drilling are required to prove the existence of an economically viable geothermal system.

Salable Minerals

Salable minerals are common variety minerals such as sand, gravel, rock, and cinders that generally are purchased from the Federal government. Over the past 10 years, nearly 1,000,000 cubic yards of sand, gravel, and rock have been produced from quarries and pits for construction and maintenance of county roads and state highways. Sales of sand and gravel to individuals have averaged about 2,500 cubic yards per year. During the same period of time, cinder production has varied from about 200 to1,000 cubic yards per year (mostly for use on county roads). Theft of slab lava (a decorative stone) has been a problem in the Cline Buttes area for many years. Over the past 5–8 years, the demand for decorative stone has gone from a few to several hundred tons per a year.

Mineral Potential

Classification

The mineral potential classification system, as described in BLM Manual 3031, Illustration 3, is used to evaluate the potential for locatable, leasable, and salable minerals in the resource area. Potential refers to the potential for occurrence of specific mineral resources rather than their economic viability.

Level of Potential

O. ~ The geologic environment, the inferred geologic processes, and the lack of mineral occurrences do not indicate potential for accumulation of mineral resources.

L. ~ The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.

M. ~ The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate potential for accumulation of mineral resources.

H. ~ The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The “known mines and deposits” do not have to be within the area that is being classified but have to be within the same type of geologic environment.

ND. ~ Mineral(s) potential not determined due to lack of useful data. This notation does not require a level-of-certainty qualifier.
Level of Certainty
A. ~ The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.

B. ~ The available data provide indirect evidence to support or refute the possible existence of mineral resources.

C. ~ The available data provide direct evidence but are quantitatively minimal to support or refute the possible existence of mineral resources.

D. ~ The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

Mineral Potential in the Planning Area

No areas of critical mineral potential exist in the planning area. The potential for energy derived from the burning of biomass generated by juniper treatments is covered in the Vegetation sections.

Locatable Minerals

Map S-20 displays the areas of varying potential for locatable minerals. The mineral potential areas were developed from known geologic settings, inferred geologic processes, current and historical mining activity, and extrapolation of known mineral deposits or mineralization into areas of similar geologic setting.

Base and Precious Metals

There is a high potential (H-C) for the occurrence mercury in the southeast part of the planning area near Bear Creek Butte based on historical production and the proven existence of cinnabar mineralization (Brooks, 1963). However, the deposits tend to be localized and small and there is no direct evidence to suggest the presence of large scale cinnabar deposits. The northeastern part of the planning area has a moderate potential (M-B) for some base and precious metals due to the occurrence of such materials elsewhere in the John Day and Clarno Formations.

Diatomite

Diatomite is an accumulation of microscopic siliceous skeletons of aquatic plants (diatoms) that proliferate in shallow, silica-rich lake water. In the resource area, diatomite occurs about 5 miles east of Terrebonne in a late Miocene or early Pliocene lake bed (Orr and others, 1992). Based on the known occurrence of diatomite on private lands, a high potential (H-C) for the existence of diatomite is inferred for adjoining BLM-administered lands.

Leasable Minerals

Oil and Gas

No oil or gas has been discovered within the planning area and exploration has been minimal. The central and western parts of the planning area have a low potential for oil and gas (L-B) because of the predominantly young volcanic geology (Map S-18, Oil and Gas Potential). The eastern part of the planning area where the John Day and Clarno formations crop out, there is a moderate potential (M-B). Oil and gas have been discovered in or below these formations northeast of the planning area near the John Day River.

Geothermal Energy

The central and western parts of the planning area are considered to have a moderate (M-B) geothermal potential owing to the young volcanic geology and the area's proximity to the Cascade Volcanoes and Newberry Caldera (Map S-19, Geothermal Potential). There is a geothermal anomaly within the planning area in the vicinity of Powell Buttes that was investigated by Brown and others, (1980). Their work indicates a potential for boiling-temperature fluids at a depth of about 1000 meters and more work is required to prove the existence of an economically viable geothermal system. Based on this information, the Powell Buttes area is considered to have a high (H-C) potential for geothermal development.

Salable Minerals

Common variety mineral materials such as sand, gravel, rock, and cinders may be purchased or acquired by free use permits from the BLM. Most of the planning area has a moderate potential for the occurrence of mineral materials (Map S-21, Mineral Material Potential). The high potential areas are in and around existing mineral material sites. Most of the high potential areas occur in areas with cinder cones, alluvial deposits of sand and gravel (La Pine area) and volcanic rock outcrops known to have a sufficient quality for utilization in asphalt. The Badlands basalt flow also has a high potential for mineral materials in the form of ropy slab lava. However, the collection of slab lava in the Badlands ACEC/WSA would not be allowed in any alternative.

Mineral Development Scenarios

Introduction

This appendix describes the reasonable foreseeable development scenarios for development of leasable, locatable, and salable mineral commodities. The purpose of the reasonably foreseeable development scenario is to provide a model that predicts the level and type of future mineral activity in the planning area, and will serve as a basis for cumulative impact analysis. The reasonably foreseeable development first describes the steps involved in developing a mineral deposit, with presentation of hypothetical exploration and mining operations. The current activity levels are discussed in Chapter 2 of this document. Future trends and assumptions affecting mineral activity are discussed here, followed by the prediction and identification of anticipated mineral exploration and development.

Scope

The development scenarios are limited in scope to BLM-administered lands within the planning area. The reasonable foreseeable development is based on the known or inferred mineral resource capabilities of the lands involved, and applies the conditions and assumptions discussed under Future Trends and Assumptions. Changes in available geologic data and/or economic conditions would alter the reasonable foreseeable development, and some deviation is to be expected over time.

Leasable Mineral Resources

Reasonably Foreseeable Development of Oil and Gas

Future Trends and Assumptions

Based on the history of past drilling and foreseeable development potential in the planning area, activity over the next 15–20 years would continue to be sporadic. It is anticipated that oil and gas activity would consist of the issuance of a few leases, a few geophysical surveys, and perhaps the drilling of one or two exploratory holes. This could occur almost anywhere in the district, but more likely would occur in the eastern part of the planning area.

Because of the low potential for development of hydrocarbons, (even though the potential for occurrence is moderate in some areas), the discovery of a producible oil and gas field during this planning cycle is not expected. However, to comply with

the Supplemental Program Guidance for Fluid Minerals (Manual Section 1624.2), the potential surface impacts associated with the discovery and development of a small oil/gas field are given in the following sections.

Geophysical Exploration

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

Gravity and magnetic field surveys involve small portable measuring units which are easily transported via light off-road vehicles, such as four-wheel drive pickups and jeeps, or aircraft. Both off-road and on-road travel may be necessary in these two types of surveys. Usually a three man crew transported by one or two vehicles is required. Sometimes small holes (approximately 1 inch by 2 inches by 2 inches) are hand dug for instrument placement at the survey measurement points. These two survey methods can make measurements along defined lines, but it is more common to have a grid of discrete measurement stations.

Seismic reflection surveys are the most common of the geophysical methods, and they produce the most detailed subsurface information. Seismic surveys are conducted by sending shock waves, generated by a small explosion or through mechanically beating the ground surface with a thumping or vibrating platform, through the earth's surface. The thumper and vibrator methods pound or vibrate the ground surface to create a shock wave. Usually four large trucks are used, each equipped with pads about 4-foot square. The pads are lowered to the ground, and the vibrators are electronically triggered from the recording truck. Once information is recorded, the trucks move forward a short distance and the process is repeated. Less than 50 square feet of surface area is required to operate the equipment at each recording site.

The small explosive method requires that charges be detonated on the surface or in a drill hole. Holes for the charges are drilled utilizing truck-mounted or portable air drills to drill small-diameter (2–6 inches) holes to depths of 100–200 feet. Generally 4–12 holes are drilled per mile of line and a 5–50-pound charge of explosives is placed in the hole, covered, and detonated. The resulting shock wave is recorded by geophones placed in a linear fashion on the surface. In rugged terrain, a portable drill carried by helicopter can sometimes be used. A typical drilling seismic operation may utilize 10–15 men operating 5–7 trucks. Under normal conditions, 3–5 miles of line can be surveyed daily using this method. The vehicles used for a drilling program may include heavy truck mounted drill rigs, track-mounted air rigs, water trucks, a computer recording truck, and several light pickups for the surveyors, shot hole crew, geophone crew, permit man, and party chief.

Public and private roads and trails are used where possible. However, off-road cross-country travel is also necessary in some cases. Graders and dozers may be required to provide access to remote areas. Several trips a day are made along a seismograph line, usually resulting in a well defined 2-track trail. Drilling water, when needed, is usually obtained from private landowners.

The surface charge method utilizes 1–5-pound charges attached to wooden laths 3–8 feet above the ground. Placing the charges lower than 6 feet usually results in the destruction of vegetation, while placing the charges higher, or on the surface of deep snow, results in little visible surface disturbance.

It is anticipated that 2 notices of intent involving seismic reflection and gravity/magnetic field surveys would be filed under all alternatives.

Drilling Phase

Once the application for a permit to drill is approved, the operator may begin construction activities in accordance with stipulations and conditions. When a site is chosen that necessitates the construction of an access road, the length of road may vary, but usually the shortest feasible route is selected to reduce the haul distance and construction costs. Environmental factors or a landowner's wishes may dictate a longer route in some cases. Drilling activity in the planning area is predicted to be done using existing roads and constructing short (approximately 0.25 mile) roads to access drill site locations.

Based on the history of past drilling and the low to moderate potential for oil and gas, exploration will probably continue to be sporadic. During the life of this plan, 1-2 exploratory wells for oil and gas are expected to be drilled in the eastern part of the planning area where the potential is moderate. The success rate of finding oil or gas is predicted to be no greater than 10% based on the average exploratory well success rate in the U.S.

During the first phase of drilling, the operator would move construction equipment over existing maintained roads to the point where the access road begins. No more than 0.25 mile of moderate duty access road with a cinder or gravel surface 18 to 20 feet wide is anticipated to be constructed. The total surface disturbance width would average 40 feet with ditches, cuts, and fill. The second part of the drilling phase is the construction of the drilling pad or platform. The likely duration of well development, testing, and abandonment is predicted to be less than 12 months per drill site. The total disturbance for each exploratory well and any new road constructed to the drill site is expected to be up to 6 acres. Thus, the total surface disturbance caused by exploratory drilling over the life of the plan is expected to be up to12 acres.

Field Development and Production

No field development is expected to occur during the life of the plan. However, the following scenario describes operations and impacts associated with field development and production.

Small deposits of oil or gas discovered in the planning area would probably not be economic to develop. The minimum size that would be economic would be a field containing reserves of 50–60 billion cubic feet (BCF) of gas with a productive lifespan of 10 years. The total area of such a field would be 200 acres with the array of development wells spanning 160 acres. The field would require four development wells in addition to the discovery well. Each development would require 0.25 miles of road. Development well access roads would be cinder or gravel surfaced and would have a width of about 20 feet. The width of the surface disturbance associated with roads would average 40 feet. Produced gas would be carried by pipelines over a distance of 30 to 60 miles. The width of surface disturbance for pipelines would average 30 feet. Any produced oil would be trucked to refineries outside of Oregon.

For development of a single 50-60 BCF field, the total surface disturbance would be 8 acres for well pads, 5 acres for roads, 13 acres for field development and up to 600 acres for pipelines. The total surface disturbance caused by 1-2 exploration wells and the development of one oil/gas field over the life of the plan would be up to 650 acres.

Plugging and Abandonment

Wells that are completed as dry holes are plugged according to a plan designed specifically for the down hole conditions of each well. Plugging is accomplished by the placing of cement plugs at strategic locations downhole and up to the surface. Drilling

mud is used as a spacer between plugs to prevent communication between fluid bearing zones. The casing is cut off at least 3 feet below ground level and capped by welding a steel plate on the casing stub. After plugging, all equipment and debris would be removed and the site would be restored as near as reasonably possible to its original condition. It predicted that the 1-2 exploratory wells drilled would be plugged and abandoned.

Reasonably Foreseeable Exploration and Development of Geothermal Resources

Future Trends and Assumptions

With environmental protection and enhancement being a major consideration in the Pacific Northwest, clean, low-impacting energy sources are becoming more important. The abundant geothermal resources thought to be present in the Northwest are essentially undeveloped. As the demand for environmentally-friendly energy sources increases, the known geothermal resource in the Powell Buttes area would likely attract renewed attention.

Geophysical/Geochemical Exploration

As with oil and gas, geothermal geophysical operations can take place on leased or unleased public land. Depending upon the status of the land (leased/unleased), the status of the applicant (lessee/nonlessee), and the type of geophysical operation proposed, (drilling/nondrilling), several types of authorizations can be used if the proposed exploration exceeds "casual use," as defined in 43 CFR 3200.1. In all cases, the authorizations require compliance with NEPA and approval by the authorized officer. As with oil and gas, the operator is required to comply with all terms and conditions of the permits, regulations, and other requirements, including reclamation, prescribed by the authorized officer. Monitoring for compliance with these requirements would be done during the execution of the operations and upon completion.

In addition to the geophysical methods discussed in the Oil and Gas section, the following exploration techniques are often employed in geothermal prospecting:

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

Resistivity: Induced polarization techniques are used to measure the resistance of subsurface rocks to the passage of an electric current. A vehicle-mounted transmitter sends pulses of electrical current into the ground through two widely spaced electrodes (usually about two miles apart). The behavior of these electrical pulses as they travel through underlying rocks is recorded by "pots" (potential electrodes), small ceramic devices that receive the current at different locations. The electrodes are either short (2–3 feet) rods driven into the ground, or aluminum foil shallowly buried over an area of several square feet. Two or three small trucks transport the crew of 3–5 people to transmitting and receiving sites.

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

Radiometric: Radioactive emissions (generally radon gas) associated with geothermal resources are usually measured using a hand-held scintillometer, often at hot spring

locations. Another method used involves placing plastic cups containing small detector strips sensitive to alpha radiation either on the surface or in shallow hand-dug holes. If holes are dug, they are covered, and the cups left in place for 3–4 weeks. At the end of the sampling period, the cups are retrieved and all holes are backfilled. These surveys can be conducted on-foot or with the aid of light vehicles.

Geochemical Surveys: Geochemical surveys are usually conducted at hot springs by taking water samples directly from the spring. Sampling for mercury associated with geothermal resources is often done by taking soil samples using hand tools. These surveys can be conducted on-foot or with the aid of light vehicles.

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

Other equipment that would be utilized includes large flatbed trucks to haul drill rod, casing, and other drilling supplies, and in some cases, special cementing and bulk cement trucks. Two or three small vehicles would be used for transporting workers. In most cases, existing roads would be used. It is estimated that short spur trails (usually less than a few hundred yards long) would be bladed for less than 10 percent of these holes. All holes would be plugged and abandoned to protect both surface and subsurface resources, including aquifers, and reclamation of disturbed areas would be required, unless some benefit to the public could be gained—for example, a water well or camping area. Depending upon the location and proposed depth of the drill hole, detailed plans of operation that cover drilling methods, casing and cementing programs, well control, and plugging and abandonment may be required.

Based the needed exploratory work identified by Brown and others (1980) to determine economic viability in the Powell Buttes area, it is anticipated that notice(s) of intent will be filed to drill up to 20 temperature gradient holes in that area.

Drilling and Testing

Drilling to determine the presence of, test, develop, produce, or inject geothermal resources can be done only on land covered by a geothermal resources lease.

A typical geothermal well drilling operation would require 2–4 acres for a well pad, including reserve pit, and 0.5 mile of moderate duty access road with a surface 18–20 feet wide, totaling up to 40 feet wide with ditches, cuts, and fills. Existing roads would be used whenever possible. Total surface disturbance for each well, and any new road is expected to be no more than 6 acres. In some cases, more than one production well could be drilled from one pad. Well spacing would be determined by the authorized officer after considering topography, reservoir characteristics, optimum number of wells for proposed use, protection of correlative rights, potential for well interference, interference with multiple use of lands, and protection of the surface and subsurface environment. Close coordination with the State would take place. It is anticipated that the duration of well development, testing, and if dry, abandonment, would be 4 months. Prior to abandonment, the operator would be required to plug the hole to prevent contamination of aquifers and any impacts to subsurface and surface resources. Plugging

is accomplished by the placing of cement plugs at strategic locations downhole and up to the surface. Depending upon the formations encountered, drilling mud could be used as a spacer between plugs to prevent communication between fluid bearing zones. The casing is cut off at least 6 feet below ground level and capped by welding a steel plate on the casing stub. After plugging, all equipment and debris would be removed, and the site would be restored as near as reasonably possible to its original condition. A dry hole marker is often placed at the surface to identify the well location. If the surface owner prefers, the marker may be buried. Any new roads not needed for other purposes would be reclaimed.

It is estimated that 4–6 exploratory wells would be drilled under all alternatives.

Geothermal Power Plant Development

Although not expected, a 24-megawatt power plant could be constructed within the Powell Buttes area under all alternatives during the life of this plan. It is anticipated that the developed geothermal resource would be water dominated and that the geothermal power conversion system would be either single or double flash, or binary cycle. Before geothermal development could occur, site-specific baseline studies and environmental analyses, with public involvement, would be done. The scenario below describes the level of disturbance that would likely occur from the development of a 24 megawatt power plant: Five to seven production wells and one or two injection wells would be drilled. It is anticipated that access would be provided by existing roads, and the construction of short (0.5 to 1-mile long) roads with a surface of 18 to 20 feet wide, totaling up to 40 feet wide with ditches, cuts, and fills. Surface disturbance from well pad and road construction would probably range from 2 to 6 acres per well. The power plant facility, including separators, energy converters, turbines, generators, condensers, cooling towers, and switchyard, would involve an estimated 5 to 10 acres. Pipelines and powerlines would disturb an additional 3 to 6 acres. If a water cooling system is employed, one to three water wells, requiring about 0.25 acre per well, would be drilled, unless the cooling water was obtained from the geothermal steam condensate. Depending upon location, terrain, geothermal reservoir characteristics, and type of generating facility, total surface disturbance for a 24 megawatt (gross) geothermal power plant, and ancillary structures, would probably range from about 25 to 75 acres, or about 1 to 3 acres per megawatt. After construction, approximately one-third to one-half of the disturbed area would be revegetated. Prior to abandonment, 30–50 years later, the remaining disturbed area would be reclaimed.

Direct Use of Geothermal Energy

Low- and moderate-temperature (50–300 degrees F) geothermal resources have many direct use applications. Direct applications and potential development scenarios include space heating and cooling of residences and businesses, applications in agriculture, aquaculture, and industry, and recreational and therapeutical bathing. Depending upon the type of use and magnitude of the operation, surface disturbance could range from a few acres for a well and greenhouses or food processing facilities to tens of acres for larger agricultural or aquacultural developments. It is anticipated that two wells would be drilled to heat one greenhouse operation or some of the residential areas near Powell Buttes under all alternatives during the life of this plan.

Locatable Mineral Resources

Reasonably Foreseeable Exploration and Development Scenarios

Future Trends and Assumptions

Reclamation science would continue to advance due to experience and research. More detailed design effort would be placed on the reclamation of mined lands in the future. This would result in an overall increase in reclamation costs but those costs would pay dividends in the long-term with increased reclamation success.

The economics of mining in the planning area would be driven by the relationship between production costs and the market price of the commodity. While production costs can be controlled or anticipated through management and technology, the price of mineral commodities (especially of gold) could vary widely. The overall profitability of an operation (and hence the level of activity at the prospecting, exploration, and mining phases for development of ore bodies) would be closely related to the price of the mineral commodity.

No chemical heap-leaching operations are forecasted during the plan period. If such an operation is proposed during the life of the plan, it would be subjected to environmental review under a plan of operations pursuant to regulations found in 43 CFR 3809.

Casual Use, Notices, Plans of Operations, Use and Occupancy

There are 3 levels of use defined by the 43 CFR 3809 regulations—casual, notice, and plan of operations. Generally, casual use means activities resulting in negligible, if any, disturbance of public lands or resources. Mechanized earth-moving equipment or truck-mounted drills are not allowed under casual use. Notice-level operations involve surface-disturbing exploration operations of 5 acres or less. Casual use and notice-level operations do not involve Federal actions that require compliance with NEPA. A plan of operations is required for all non-exploration mining activity that is not casual use, regardless of the number of acres disturbed. A plan is also required for all exploration activities that disturb over 5 acres, bulk sampling which will remove 1,000 tons or more of presumed ore for testing, or for any surface-disturbing operations greater than casual use in certain SMAs and lands/waters that contain federally-proposed or listed T&E species or their proposed or designated critical habitat. The approval of plans of operation is a Federal action that requires NEPA compliance. Mining claim occupancy associated with notice- or plan-level operations, also requires compliance with NEPA.

Details of plan of operations filing and processing requirements can be found in 43 CFR 3809.400. Generally, plans must include a detailed description of all operations, including a map showing all areas to be disturbed by mining, processing, and access, all equipment that would be used, periods of use, and any necessary buildings or structures. A detailed reclamation plan to meet the standards found in 43 CFR 3809.420, and a monitoring plan to monitor the effect of operations are also required. An interim management plan showing how the project area would be managed during periods of temporary closure to prevent unnecessary and undue degradation must also be submitted. The operator also must submit a reclamation cost estimate. The BLM may require operational and baseline environmental information, and any other information, needed to ensure that operations will not cause unnecessary and undue degradation.

When a plan of operations is received, BLM would review it to make sure that it is complete. Where necessary, the BLM would consult with the State to ensure operations would be consistent with State water quality requirements. In addition, the BLM would conduct any consultation required under the “National Historic Preservation Act” or

"Endangered Species Act." Onsite visits would be scheduled when necessary. BLM could require changes to the plan of operations to ensure that the performance standards found in 43 CFR 3809.420 would be met, and that no unnecessary or undue degradation of lands or resources would occur. In addition, site specific mitigating measures would be imposed when necessary. A financial guarantee covering the estimated cost of reclamation, as if BLM were to contract with a third-party, would have to be provided before operations could begin. The financial guarantee would have to be sufficient not only to cover costs of reclamation, but also costs associated with interim stabilization and compliance with Federal, state, and local environmental requirements while third-party contracts would be developed and executed.

BLM approval is necessary to occupy public land for more than 14 calendar days in any 90-day period within a 25-mile radius of the initially occupied site. Details for the submittal and approval of use and occupancy are contained in 43 CFR 3710. As defined in these regulations, occupancy means full or part-time residence on the public lands. It also means activities that involve residence; the construction, presence, or maintenance of temporary or permanent structures that may be used for such purposes; or the use of a watchman or caretaker for the purpose of monitoring activities. Residence or structures include, but are not limited to, tents, motor homes, trailers, campers, cabins, houses, buildings, and storage of equipment or supplies. Also included are fences, gates, and signs intended to restrict public access.

Permanent structure means a structure fixed to the ground by any of the various types of foundations, slabs, piers, or poles, or other means allowed by building codes. The term also includes a structure placed on the ground that lacks foundations, slabs, piers, or poles, and that can only be moved through disassembly into its component parts or by techniques commonly used in house moving. The term does not apply to tents or lean-tos.

The disposal of sewage and gray-water would be subject to the rules and regulations of the ODEQ. The disposal of garbage and other debris would be subject to all appropriate local, state, and Federal rules and regulations. Likewise, the drilling of any water wells would be subject to all ODWR requirements. Permanent structures would be subject to all state and county permitting. Copies of all required local and state approvals and permits would be filed with the BLM prior to allowing any occupancy.

Background on the Development of a Locatable Minerals Mine

The development of a mine from exploration to production can be divided into four stages. Each stage requires the application of more discriminating (and more expensive) techniques over a successively smaller land area to identify, develop, and produce an economic mineral deposit. A full sequence of developing a mineral project involves reconnaissance, prospecting, exploration, and mine development.

Reconnaissance: Reconnaissance-level activity is the first stage in exploring for a mineral deposit. This activity involves initial literature search of an area of interest, using available references such as publications, reports, maps, aerial photos, etc. The area of study can vary from hundreds to thousands of square miles. Activity that would normally take place includes large scale mapping, regional geochemical and geophysical studies, and remote sensing with aerial photography or satellite imagery. These studies are usually undertaken by academic or government entities, or major corporations. The type of surface-disturbing activity associated with reconnaissance-level mineral inventory is usually no more than occasional stream sediment, soil, and rock sampling. Minor off-road vehicle use could be required.

Prospecting: A prospecting area is identified when reconnaissance reveals anomalous geochemical or geophysical readings, a unique geologic structure or feature, or the

occurrence of typical mineral bearing formations. Historical references to mineralization can also lead to the identification of a prospecting area. This area could range from a single square mile to an entire mountain range of several hundred square miles.

Activity that would take place in an effort to locate a mineral prospect includes more detailed mapping, sampling, geochemical and geophysical study programs. Also, this is the time when property acquisition efforts usually begin and most mining claims are located in order to secure ground while trying to make a mineral discovery. Prospecting on an annual basis is considered a minimum requirement under the mining laws to secure a claim.

Types of surface disturbing activity associated with prospecting would involve more intense soil and rock chip sampling using mostly hand tools, frequent off-road vehicle use, and placement and maintenance of mining claim monuments. This activity is normally considered "casual use" (43 CFR 3809.5) and does not require BLM notification or approval.

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

Typical exploration projects in the planning area could include: in-stream dredging with portable suction dredges, exploratory drilling which could include construction of new roads, use of explosives to sample rock outcroppings, and excavation of test pits. If the exploration project disturbs 5 acres or less, it is conducted under a notice (43 CFR 3809.301) which requires the operator to notify BLM 15 days before beginning the activity. A copy of each notice received is sent to the Oregon Department of Geology and Mineral Industries (DOGAMI) for their review. If the project disturbs more than 5 acres, it is conducted under a plan of operations (43 CFR 3809.401) and requires NEPA compliance before approval.

Mine Development: If exploration results show that an economically viable mineral deposit is present, activity would intensify to obtain detailed knowledge regarding reserves, possible mining methods, and mineral processing requirements. This would involve applying all the previously utilized exploration tools in a more intense effort. Once enough information is acquired, a feasibility study would be made to decide whether to proceed with mine development and what mining and ore processing methods would be utilized.

Once the decision to develop the property is made, the mine permitting process begins. Upon approval, work begins on development of the mine infrastructure. This includes construction of the mill, offices, and laboratory; driving of development workings if the property is to be underground mined, or prestripping if it is to be open pit mined; and building of access roads or haulage routes, and placement of utility services. During this time additional refinement of ore reserves is made.

Once enough facilities are in place, actual mine production begins. Concurrent with production there often are "satellite" exploration efforts to expand the mine's reserve base and extend the project life. Reclamation of the property is conducted concurrently

with, or upon completion of, the mining operation. Often subeconomic resources remain unmined and the property is dormant, waiting for changes in commodity price or production technology that would make these resources economic.

Activities that occur on these lands include: actual mining, ore processing, tailings disposal, waste rock placement, solution processing, metal refining, and placement of support facilities such as repair shops, labs, and offices. Such activities involve the use of heavy earthmoving equipment and explosives for mining and materials handling, exploration equipment for refinement of the ore reserve base, hazardous or dangerous reagents for processing requirements, and general construction activities.

The size of mines varies greatly and not all mines would require all the previously mentioned facilities and equipment. Acreage involved can range from less than 5 acres to several hundred. Any mining that involves greater than casual use, regardless of the number of acres, requires the submittal of a plan of operations, and appropriate NEPA analysis, under 43 CFR 3809.401 and .411.

Diatomite

Diatomite was mined by the open pit method a few miles west of Terrebonne in the 1950s and continued until the reserves were depleted (Orr and others, 1992). Currently, there are 20 mining claims for diatomite on adjoining lands administered by the BLM. No notices or plans of operation have been filed for these claims. If diatomite is produced from adjacent BLM-administered lands, up to several hundred acres of ground disturbance could result. However, such large scale developments of diatomite are not expected during the life of this plan. Any development for production would require a plan of operations and compliance with NEPA.

Mercury

Minor amounts of mercury have been produced from the Clarno Formation in the southeastern part of the planning area. Prospecting began in the late 1920s and by the late 1950s, the US Bureau of Mines had recorded 30 flasks of total mercury production from the Platner and Oronogo mines, though the actual output was probably larger (Brooks, 1963). No claims presently exist for mercury within the planning area. Any development for production would require a plan of operations and compliance with NEPA.

Salable Mineral Resources

Reasonably Foreseeable Exploration and Development Scenarios

Future Trends and Assumptions

It is assumed that the demand for mineral materials will continue to increase in conjunction with the population growth in central Oregon. The mineral material supply from existing private and public sources in the planning area appears to exceed the foreseeable demand over the next 20 years. However, based on the distribution of public and private ownership, ODOT is not able to consistently offer a public mineral material source for its construction projects in order to increase bidder competition (ODOT, 1998). Owing to the existing supply and the distribution of ODOT's prospective mineral material sites across the planning area, it is assumed that 3-4 new mineral material sites will be developed in the next 20 years.

The development and reclamation of mineral material sites would be subject to the Guidelines for Development of Salable Mineral Materials section (in this Appendix).

Rock Quarry, Sand/Gravel/Cinder Pit Development

Existing material sites disturb approximately 15–20 acres of land each. This acreage is necessary for the mine itself, rock crushing operations, truck-turn around areas, access trails for bulldozers and drills, overburden stockpile sites, and aggregate stockpile areas. For access to a new quarry site, approximately 0.5 acre of land would be disturbed by new road construction.

It is expected that the existing mineral materials sites in this area would be utilized intermittently throughout the planning period and that 3-4 new sites would be developed. Any development of a new site or expansion of an existing pit that causes surface disturbance beyond previously inventoried limits would require resource inventories, site-specific NEPA compliance, and development and reclamation plans.

After all useable material is removed from existing and future mineral material sites, reclamation work would be conducted according to an approved interdisciplinary plan. Upon depletion, reclamation work would be conducted on the material sites as well as on all unneeded access roads and trails. Oversized rock would be put back into the quarries or pits and where possible, cutslopes would be graded to conform to the existing topography. Stockpiled topsoil would be spread over sideslopes and floors, and seeded as directed by BLM. Access roads and trails would be graded for proper drainage, scarified and seeded.

Decorative Stone

It is anticipated that the Prineville District Office would receive 10-20 sale requests per year for decorative stone, such as slab lava and ropy lava. At this time, there are no designated areas for which sales contracts or free use permits are issued for decorative stone; sales contracts and free use permits are only available for cinder and pit run gravel. However, one or more areas may be designated for decorative rock gathering during the life of this plan. Prior to designation and prior to any road or trail construction, appropriate inventories and NEPA compliance would be conducted to prevent unnecessary and undue degradation. Reclamation plans would be developed for any designated collecting areas and their access roads and trails. In most cases, existing roads would provide access to areas where the stone is scattered on the surface. In these areas, the rock would be hand-picked and loaded directly onto pick-ups or flatbed trucks, or onto pallets and then loaded onto trucks. There would be both on and off-road vehicle travel. There is a possibility that temporary road or trail construction could be necessary to gain access in some areas.

Stipulations and Guidelines for Mineral Operations

The following are mineral leasing stipulations, and guidelines for locatable and salable mineral operations. The special stipulations may be used on a site-specific basis. Their use and details such as dates and buffer sizes may vary through the alternatives. The locatable mineral surface management guidelines and the salable mineral guidelines would apply throughout the alternatives.

Leasing Stipulations

Standard Leasing Terms

Standard leasing terms for oil and gas are listed in Section 6 of Offer to Lease and Lease for Oil and Gas Form 3100-11. They are:

> Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air and water, to cultural, biological, visual and other resources, and to other land uses or users. Lessee shall take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to citing or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.
>
> Prior to disturbing the surface of the leased lands, lessee shall contact BLM to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short-term special studies under guidelines provided by lessor. If in the conduct of operations, T&E species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee shall immediately contact lessor. Lessee shall cease any operations that would result in the destruction of such species or objects until appropriate steps have been taken to protect the site or recover the resources as determined by BLM in consultation with other appropriate agencies.

Standard terms for geothermal leasing can be found on Offer to Lease and Lease for Geothermal Resources (Form 3200-24), Section 6, and are very similar to those described above for oil and gas leasing.

Powersite Stipulation (Form No. 3730-1) is to be used on all lands within powersite reservations.

Special Leasing Stipulations

The following special stipulations are to be utilized on specifically designated tracts of land as described under the various alternatives.

Recreation, Motorized Travel, and Visual Resources

A 30-day public notice period may be required prior to exception, modification, or waiver of recreation, motorized travel, and visual resource stipulations.

> **Resource:** Designated recreation sites including, but not limited to campgrounds, OHV staging areas, and OHV play areas (CTA 2-7)
>
> *Stipulation:* Surface occupancy and use is prohibited within developed recreation sites.
>
> *Objective:* To protect developed recreation sites.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be mitigated adequately.

Modification: The boundaries of the stipulated area may be modified by the authorized officer if the recreation site boundaries are changed.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains designated recreation areas.

Resource—Motorized Travel (varies by alternative)

Stipulation: Access, travel, and drill site construction will be limited in areas where motorized use is restricted. Areas classified as limited to existing roads and trails or designated roads and trails will limit access for mining activities to just those roads that are open under the designation. Access will not be allowed in areas closed to motorized vehicle use.

Objective: To protect important scenic and wildlife resources, and to enhance primitive recreational opportunities.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be mitigated adequately.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the resource values.

Waiver: This stipulation may be waived if the motorized vehicle closure is lifted. A 30-day public notice period will be required prior to exception, modification, or waiver of this stipulation.

Resource—VRM Class I (Common to Alternatives 2-7)

Stipulation: Surface occupancy is prohibited in VRM Class I areas.

Objective: To preserve the existing character of the landscape.

Exception: None

Modification: None

Waiver: None

No exceptions, modifications, or waivers may occur because all VRM Class I lands within the planning area are in WSAs, which are already closed to mineral leasing (43 CFR Subparts 3800.0-3 and 3201.11).

Resource—VRM Class II (Common to Alternatives 2-7)

Stipulation: All surface-disturbing activities, semi-permanent and permanent facilities in VRM Class II areas may require special design including location, painting and camouflage to blend with the natural surroundings and meet the visual quality objectives for the area.

Objective: To control the visual impacts of activities and facilities within acceptable levels.

Exception: None.

Modification: None.

Waiver: This stipulation may be waived if the authorized officer determines that there are no longer VRM Class II areas in the leasehold.

Wildlife

Resource—Raptor nest sites including but not limited to Bald Eagle, Golden Eagle, Northern Goshawk, Coopers Hawk, and Great Grey Owl nests (Common to Alternatives 2-7, see Table 2A).

Stipulation: Surface occupancy and use is prohibited in the spatial buffers during the dates shown for each raptor species in Table 2A.

Objective: To protect raptor nest sites.

Exception: An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not adversely affect the bird or its nest site.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that a portion of the area can be occupied without adversely affecting the species or its nest site.

Waiver: This stipulation may be waived if the authorized officer determines that there is no longer raptor nesting habitat on the leasehold. Consultation with the ODFW will be required prior to exception, modification, or waiver of this stipulation.

Resource—Deer, elk, and pronghorn winter range (emphasis on winter range varies by alternative).

Stipulation: Surface use is prohibited during the times listed in Table 2A within crucial deer, elk, and pronghorn winter range. This stipulation does not apply to the operation or maintenance of production facilities.

Objective: To protect deer, elk, and pronghorn winter range from disturbance during the winter use season and to facilitate long-term maintenance of deer/elk/pronghorn populations.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable of can be mitigated adequately.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain crucial winter range. This stipulation can be expanded to cover additional portions of the lease if additional crucial habitat areas are identified, or if habitat use areas change. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates in Table 2A are not valid for the leasehold.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains crucial winter range. Consultation with the ODFW will be required prior to exception, modification, or waiver of this stipulation.

Resource—Sage-grouse lek sites (Common to Alternatives 2-7)

Stipulation: Surface occupancy and use is prohibited within 0.6 miles of known sage-grouse lek sites.

Objective: To protect sage-grouse lek sites.

Exception: An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the sage-grouse or its lek site.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that a portion of the area can be occupied without adversely affecting the sage grouse or its lek site.

Waiver: This stipulation may be waived if the authorized officer determines that there is no longer a lek site on the leasehold.

Note: There are no standardized closures to surface occupancy and use in sage grouse nesting, brooding/rearing, or winter habitat areas. However, restrictions (including seasonal closures to surface use) could apply and would be determined by site-specific analyses.

Areas of Critical Environmental Concern/Special Management Areas

Resource—ACECs (varies by alternative).

Stipulation: Surface occupancy is prohibited within all ACECs.

Objective: To protect natural processes and historic, cultural, scenic, fisheries, and wildlife resources.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be mitigated adequately.

Modification: The boundaries of the stipulated area may be modified if the ACEC boundaries are modified.

Waiver: This stipulation may be waived if the ACEC designation is lifted.

A 30-day public notice period will be required prior to exception, modification, or waiver of this stipulation.

Guidelines for Locatable Minerals Surface Management

43 CFR 3809—Standards for Exploration, Mining, and Reclamation

The following operational guidelines for mining activities have been compiled to assist the miner in complying with the 43 CFR 3809 regulations, which apply to all mining operations on BLM-administered lands. The manner in which the necessary work is to be done will be site specific and all of the following standards may not apply to each mining operation. It is the mining claimant's and operator's responsibility to avoid "unnecessary or undue degradation" and they must perform all necessary reclamation work. Refer to 43 CFR 3809 regulations for general requirements and performance standards. The BLM will provide site-specific guidelines for some mining proposals.

Operations in WSAs are regulated under 43 CFR 3802 and the wilderness IMP. WSAs are technically open to mineral location, but are severely restricted by the wilderness IMPs "no reclamation" standard.

Construction and Mining

Vegetation removal: Remove only that vegetation which is in the way of mining activities. Merchantable timber must be marked by BLM prior to cutting, and may not be used for firewood. It is recommended that small trees (less than 6 inches diameter at breast height [dbh]) and shrubs are to be lopped and scattered, or shredded for use as mulch. Trees over 12 inches dbh should be bucked and stacked in an accessible location unless they are needed for the mining operation.

Firewood: Firewood may not be cut and sold, or used off of the mining claims.

Topsoil: All excavations should have all productive topsoil (usually the top 6 to 18 inches) first stripped, stockpiled, and protected from erosion for use in future reclamation. This also includes removal of topsoil before the establishment of mining waste dumps and tailings ponds if the waste material will be left in place during reclamation.

Roads: Existing roads and trails should be used as much as possible. Temporary roads are to be constructed to a minimum width and with minimum cuts and fills. All roads shall be constructed so as not to negatively impact slope stability. Access may be limited in some areas by off-highway vehicle restrictions.

Water quality: When mining will be in or near bodies of water, or sediment will be discharged, contact the ODEQ and U.S. Army Corps of Engineers. It is the operator's responsibility to obtain any needed suction dredging, streambed alteration, or water discharge permits required by Federal or state agencies. Copies of such permits shall be provided to the resource area manager if a notice or plan of operations is filed.

Claim monuments: Due to the history of small wildlife deaths, plastic pipe is no longer allowed for claim staking pursuant to state law. It is recommended that existing plastic pipe monuments have all openings permanently closed. Upon loss or abandonment of the claim, all plastic pipe must be removed from the public lands, and when old markers are replaced during normal claim maintenance, they are to be either wood posts or stone or earth mounds, consistent with state law.

Drill sites: Exploratory drill sites should be located near or adjacent to existing roads when possible without blocking public access. When drill sites must be constructed, the size of the disturbance shall be as small as possible in order to conduct drilling operations.

Dust and erosion control: While in operation, and during periods of temporary shutdown, exposed ground surfaces susceptible to erosion will need to be protected. This can be accomplished with seeding, mulching, installation of water diversions, and routine watering of dust producing surfaces.

Fire safety: All State fire regulations must be followed, including obtaining a campfire permit or blasting permit if needed. All internal combustion engines must be equipped with approved spark arresters.

Safety and public exclusion: The general public may not be excluded from the mining claim. In the interest of safety, the general public can be restricted only from specific dangerous areas (underground mines, open pits, or heavy equipment) by erecting fences, gates and warning signs. It is the operator's responsibility to protect the public from mining hazards. Gates or road blocks may be installed on existing or proposed roads only with the approval of the resource area manager.

Occupancy: All structures/trailers on mining claims must be used for mining purposes (must be reasonably incident to mining) and should be covered by a notice or plan of operation. Use of such a structure for residential purposes not related to mining or for recreation is not authorized.

Suction dredging: Filing either notice or plan of operations is required on all suction dredge operations. The operator must have the applicable ODEQ suction dredge permit prior to starting work, and a copy should be submitted to the resource area manager.

Tailings ponds: Settling ponds must be used to contain fines and any discharge into creeks must meet the ODEQ standards.

Trash and garbage: Trash, garbage, used oil, etc. must be removed from public land and disposed of properly. Do not bury any trash, garbage, or hazardous wastes on public lands. Accumulations of trash, debris, or inoperable equipment on public lands are viewed as unnecessary degradation and will not be tolerated.

Cultural and paleontological resources: Operators shall not knowingly alter, injure, or destroy any scientifically important paleontological (fossil) remains or any historical or archaeological site, structure, or object on Federal lands. The operator shall immediately bring to the attention of the resource area manager, any paleontological (fossil) remains or any historical or archaeological site, structure, or object that might be altered or destroyed by exploration or mining operations, and shall leave such discovery intact until told to proceed by the resource area manager. The resource area manager shall evaluate the discovery, take action to protect or remove the resource, and allow operations to proceed within 10 working days.

Threatened and endangered species of plants/ animals: Operators shall take such action as may be needed to prevent adverse impacts to T&E species of plants and animals and their habitat which may be affected by operations. Special status species (Federal candidate/Bureau sensitive) of plants and animals, and their habitat, will be identified by the resource area manager, and shall be avoided wherever possible.

Areas of Critical Environmental Concern: Operators are required to prepare and have the BLM approve a plan of operations prior to conducting mining activities within ACECs. The plan of operations would specifically need to address methods to mitigate

impacts to those relevant and important resource values for which the ACEC was designated.

Suitable Wild and Scenic Rivers: Areas within 0.25 mile of rivers recommended suitable as a wild river under the "Wild and Scenic Rivers Act," are closed to new mineral location. Mining activity occurring at the time of congressional designation would be allowed to continue, but must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impacts. Areas recommended as either scenic or recreational under the "Wild and Scenic Rivers Act" would allow new and existing mineral location to occur, but it must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impacts.

Reclamation

Reclamation of all disturbed areas must be performed concurrently with mining, or as soon as possible after mining permanently ceases. Reclamation shall include, but shall not be limited to: (1) saving of topsoil for final application after reshaping of disturbed areas has been completed; (2) measures to control erosion, landslides, and water runoff; (3) measures to isolate, remove, or control toxic materials; (4) reshaping the area disturbed, application of topsoil, and revegetation of disturbed areas, where reasonably practicable; and (5) rehabilitation of fisheries and wildlife habitat. When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the resource area manager must be notified so that inspection of the area can be made.

Equipment and debris: All mining equipment, vehicles, structures, debris, and trash must be removed from the public lands during periods of non-operation and/or at the conclusion of mining, unless authorization from the resource area manager is given to the operator or claimant in writing.

Backfilling & recontouring: The first steps in reclaiming a disturbed site are backfilling excavations and reducing high walls. Coarse rock material should be replaced first, followed by medium sized material, with fine materials to be placed on top. Recontouring means shaping the disturbed area so that it will blend in with the surrounding lands and minimize the possibility of erosion.

Seedbed preparation: Recontouring should include preparation of an adequate seedbed. This is accomplished by ripping or disking compacted soils to a depth of at least 6 inches in rocky areas and at least 12 inches in less rocky areas. This should be done following the contour of the land to limit erosion. All stockpiled settling pond fines, and then topsoil, are spread evenly over the disturbed areas.

Fertilizer: The resource area manager must be contacted to determine if fertilization will be necessary, and if so, the type and rate of application.

Revegetation: A resource area manager-approved revegetation prescription must be used to provide adequate revegetation for erosion control, wildlife habitat, and productive secondary uses of public lands.

Mulch: As directed by the resource area manager, during review of the notice or plan of operations, the disturbed area may require mulching during interim or final reclamation procedures. Depending on site conditions, the mulch may need to be punched, netted, or blown on with a tackifier to hold it in place. In some cases, erosion control blankets may be cost effective for use.

Roads: After mining is completed, all new roads shall be reclaimed, unless otherwise specified by the resource area manager. High wall and cutbanks are to be knocked down

or backfilled to blend with the surrounding landscape. Remove all culverts from drainage crossings and cut back the fill to the original channel. The roadbed should be ripped to a minimum depth of 12 inches to reduce compaction and provide a good seedbed. The road must then be fertilized and seeded if necessary. When necessary, waterbars are to be used to block access and provide drainage.

Tailings ponds: The ponds should be allowed to dry out and the fines removed and spread with the topsoil, unless the fines contain toxic materials. If the ponds contain toxic materials, a plan will be developed to identify, dispose, and mitigate effects of the toxic materials. If necessary, a monitoring plan will also be implemented. The ponds should then be backfilled and reclaimed.

Guidelines for Development of Salable Mineral Materials

Proposed Operations

All proposed pits and quarries, and any exploration that involves surface disturbance, are required to have operating and reclamation plans that must be approved by the resource area manager. All proposals will undergo the appropriate level of review and compliance with NEPA.

Operating Procedures

Where practicable, the following requirements should be made a part of every contract or permit providing for the use of mineral material sites in the planning area:

- Oversized boulders shall not be wasted but shall be broken and utilized concurrently with the excavated material.
- The operator shall comply with local and state safety codes covering quarry operations, warning signs, and traffic control. All necessary permits must be obtained from state and county agencies.
- Use of the site for equipment storage and stockpiling rock material is allowed for the duration of the contract or permit. Use of the site beyond that time would be authorized under a special use permit.
- All topsoil shall be stockpiled or windrowed, as appropriate, for use in reclamation.
- Prior to abandonment, all material sites will be graded to conform with the surrounding topography. Oversize material that is not usable will be placed in the bottom of the pit and the pit would be filled, graded covered with topsoil. Reseeding, if necessary, will be done as prescribed by the resource area manager. Access roads no longer needed by the BLM will be abandoned and reclaimed as directed by the resource area manager.

Quarry Design

Where in steep terrain in the operating area, quarry developments will require a series of benches to effectively maximize the amount of mineral materials to be removed in a safe manner. In most cases, bench height should not exceed 40 feet, and if the bench will be used by bulldozers to access other parts of the quarry, the width of the bench should be at least 25 feet. If the bench is not used by equipment, then this width can be reduced to approximately 10 feet.

Clearing of timber and brush should be planned at least 10 feet beyond the edge of the excavation limit. Most often the brush will be piled and burned at the site, or scattered nearby.

If at all possible, all topsoil and overburden should be stockpiled and saved for eventual quarry site reclamation. These piles may need to be stabilized by seeding in order to minimize erosion during the winter months. As a standard procedure, the excavation of the quarry floor should be designed with an outslope of approximately 3 percent in order to provide for adequate drainage of the floor. Compliance with this design should be made a requirement of all operators at the site.

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