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Deschutes Record of Decision and Resource Management Plan

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Prineville District Office

September 2005



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Upper Deschutes Record of Decision and Resource Management Plan



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BUREAU OF LAND MANAGEMENT
Prineville District Office
3050 N.E. 3rd Street
Prineville, Oregon 97754

IN REPLY REFER TO:
1610 (OR056)

Dear Interested Party:

I am pleased to announce that, after several years of collaborative effort, the Upper Deschutes Resource Management Plan (RMP) is complete. This document will provide guidance for the management of over 400,000 acres of lands administered by the Bureau of Land Management (BLM) in Central Oregon. This plan covers the western portion of the area previously managed under the Brothers/La Pine RMP published in July 1989. Since that time the population in the region has grown dramatically and demands on public lands have grown along with the population. This new plan will guide management of lands facing a level of demands not anticipated by the earlier plan.

The staff of the Deschutes Resource Area of the Prineville District of the BLM has prepared the attached Record of Decision (ROD) and RMP in accordance with the Federal Land Policy and Management Act and the National Environmental Policy Act. The ROD links final land use plan decisions to the analysis presented in the Proposed RMP/Final Environmental Impact Statement (FEIS). Minor changes or points of clarification, incorporated into the RMP in response to staff review and issues raised in the protest process, are also briefly described in the ROD. Note: A land exchange was completed in the La Pine Area after the ROD/RMP went to the printer. All necessary changes in the text have been implemented. RMP Maps 6 and 15 have been modified. All other maps that display land ownership in the La Pine Area do not reflect this change. Consequently Maps 6 and 15 are the authoritative maps concerning land ownership and travel management in the La Pine area.

The ROD serves as the final decision for **Land Use Planning Decisions** described in the attached RMP. Land Use Planning Decisions provide management direction and guide future actions. Land Use Planning Decisions were protestable after the publication of the Proposed Upper Deschutes RMP/FEIS. Sixteen protest letters were received. After careful consideration of all points raised in these protests, the BLM Director concluded the responsible planning team and decision makers followed all applicable laws, regulations, policies, and pertinent resource considerations in developing the proposed plan. The ROD provides more detail about Land Use Planning Decisions, protests and, protest resolution.

The ROD also describes a single **Implementation Level Decision**. This decision will authorize the issuance of a long term (non-exclusive) lease to the Oregon Military Department that will make available almost 44,000 acres of land for Oregon National Guard training. In the past this training has been authorized through a series of short term permits.

An appeal opportunity for this decision is being provided at this time. The process is described in the ROD and the appeal period will close **30 days** from the date the Notice of Availability of the ROD/RMP appears in the *Federal Register*. This date will also be announced via local news releases, Prineville District website (if operational), and/or individual newsletter mailings. Please review the ROD carefully for a more detailed discussion of the appeal process.

Additional hard copies and CD-ROM versions of the RMP/ROD may be obtained at the address above. The document will be available on the internet at http://www.or.blm.gov/Prineville/Deschutes_RMP/Home.htm in the future.

We appreciate your help in this planning effort and look forward to your continued participation as the plan is implemented. For additional information or clarification regarding the attached document or the planning process, please contact Teal Purrington at 541/416-6700 or by e-mail at tpurring@or.blm.gov.

Sincerely,

Robert B. Towne
Field Manager, Deschutes Resource Area

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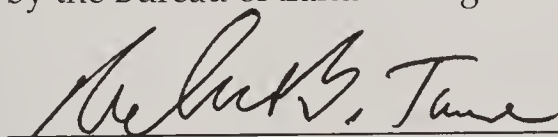
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Record of Decision — Upper Deschutes Resource Management Plan

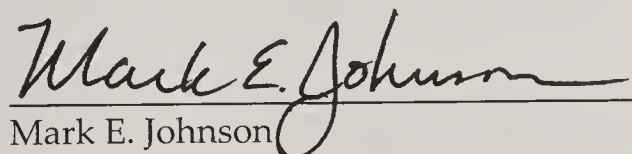
September 2005

Managers' Recommendations

Having considered a full range of alternatives, associated effects, and public input, I recommend adoption and implementation of the attached Upper Deschutes Resource Management Plan, as described in this Record of Decision. This plan will replace the 1989 Brothers/La Pine Resource Management Plan for the western half of that plan's area. This plan also revises a portion of the Two Rivers Resource Management Plan by changing the boundaries of the planning areas in order to address issues common to the two planning areas. The approved plan addresses all issues raised that are relevant for resolution by the Bureau of Land Management.



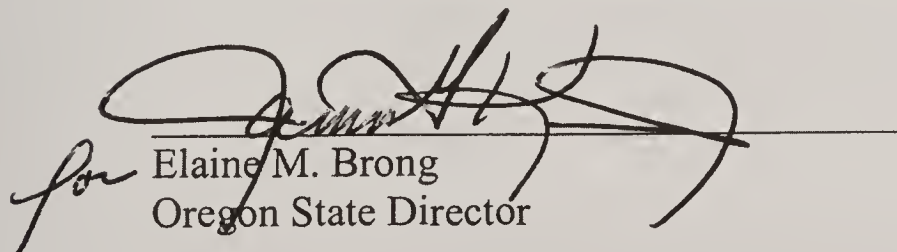
Robert B. Towne
Deschutes Resource Area Field Manager



Mark E. Johnson
Acting Prineville District Manager

State Director Approval

I approve the attached Upper Deschutes Resource Management Plan and approve the change in the boundary between the Upper Deschutes and Two Rivers planning areas, as described in this Record of Decision. This document meets the requirement for a Record of Decision, as provided in 40 CFR Part 1505.2 and for a Resource Management Plan, as described in 43 CFR Part 1610.0-5(k).



for Elaine M. Brong
Oregon State Director

Record of Decision — Upper Deschutes Resource Management Plan

Introduction

The planning area contains about 400,000 acres of BLM-administered lands in Klamath, Deschutes, Crook, and Jefferson Counties, Oregon (see Map 1A). The planning area is within the Upper Deschutes portion of the Deschutes Resource Area and land management is currently directed by the 1989 *Brothers/La Pine Resource Management Plan*.

This Record of Decision (ROD) approves the attached *Upper Deschutes Resource Management Plan* (RMP), and the modification of the boundary between the area covered by the RMP and the area covered by the *Two Rivers RMP* (USDI-BLM, 1986). The RMP will provide management direction for all resources on BLM-administered land in the planning area.

An environmental impact statement was prepared for this RMP in compliance with the National Environmental Policy Act (NEPA) of 1969. The RMP is the same as the preferred Alternative 7 described in the *Proposed Upper Deschutes Resource Management Plan and Final Environmental Impact Statement* (PRMP/FEIS) published in January 2005 except for one substantive change and several non-substantive changes involving formatting and the consolidation of continued and new direction (see below). Specific management decisions for public lands under the jurisdiction of the Deschutes Resource Area are described in the attached "Resource Management Plan."

The RMP includes two levels of decisions in accordance with the National Environmental Policy Act and BLM regulations. These are land use planning and implementation decisions. Land use planning decisions were protestable during the January 14 2005 – February 14, 2005 protest period in accordance with BLM regulations 43 CFR 1610.5-2. Sixteen protest letters were received. There is a single implementation decision made in the RMP (see below). This decision may be appealed in accordance with the Department of Interior regulations at 43 CFR 4 and 43 CFR 2450.

Changes between the Proposed and Final Management Plans

There have been some changes between the Proposed and Final Resource Management Plans in response to protests and comments received on the Proposed RMP. In addition to one substantive change, format and text were edited to improve the usability of the RMP.

The substantive change involves the proposed closure of Wilderness Study Areas (WSAs) to geocaching. After consideration of relevant protests, it was determined that geocaching could be managed under the Interim Management Policy for WSAs without adversely impacting the wilderness suitability of each WSA. This decision was based in part on the consideration that current levels of geocaching use have not been determined to affect wilderness suitability. This decision is fully described in the RMP. It contains a set of mitigation measures for geocaching that would protect wilderness values within the two WSAs (Badlands and Steelhead Falls). This decision does not restrict the ability of the BLM to institute closures in the future if use levels and impacts increase or if Congress designates either WSA as Wilderness.

Land Use Plan Decisions

Land use plan decisions are identified in the attached RMP and include:

1) Goals, objectives, standards, and guidelines that define desired outcomes or future conditions.

2) Land use Allocations/Allowable Uses and restrictions including:

- Right-of-way avoidance/exclusion areas;
- Land tenure zoning classifications;
- Designations of Special Recreation Management Areas;
- Visual Resource Management classifications;
- Travel Management Designations of Open, Closed, or Limited;
- Designation of Areas of Critical Environmental Concern;
- Criteria for establishing future areas available for livestock grazing;
- Primary transportation system classifications and road management objectives;
- Wildlandfire management; and
- Lands available for military training.

Protest Opportunity

A 30-day protest period was provided on the land use plan decisions contained in the "PRMP/FEIS" in accordance with 43 CFR Part 1610.5-2. Sixteen protest letters were received. This ROD serves as the final decision for the land use plan decisions described above and becomes effective on the date this ROD is signed. No further administrative remedies are available at this time for these land use plan decisions.

Implementation Decisions

It is the BLM's intent to implement, over time, a number of specific project level decisions described in the attached RMP, as funding and staff are available. These are called "implementation decisions" (as opposed to the land use planning decisions described above).

Some decisions in the RMP will require the preparation of detailed, project-level NEPA analyses prior to implementation. Public involvement opportunities, including further protest or appeal opportunities, may be provided at that time. Other decisions have been addressed to a sufficient level of detail in the RMP/EIS process to be implemented over time without further NEPA analysis. An appeal opportunity for these decisions is being provided at this time as described in the following section.

The following Implementation Decision may be appealed by affected parties:

- Decision to provide a long-term non-exclusive lease to the Oregon Military Department for use of 43,985 acres of BLM administered lands for training.

Appeal Procedures for Implementation Decisions

Any party adversely affected by the decision to grant the lease to the Oregon Military Department may appeal within 30 days of receipt of this decision in accordance with the provisions of 43 CFR Parts 4.4. The appeal must include a statement of reasons or file a separate statement of reasons within 30 days of filing the appeal. The appeal must state if

a stay of the decision is being requested in accordance with 43 CFR 4.21 and must be filed with the Field Manager, at the following address:

Deschutes Resource Area
Bureau of Land Management
3050 NE 3rd Street
Prineville, Oregon 97754

A copy of the appeal, statement of reasons, and all other supporting documents should be sent to the Regional Solicitor, Pacific Northwest Region, U.S. Department of the Interior, Lloyd 500 Building, Suite 607, 500 N.E. Multnomah Street, Portland, OR 97232. If the statement of reasons is filed separately it must be sent to the Interior Board of Land Appeals, Office of Hearings and Appeals, 4015 Wilson Boulevard, Arlington, VA 22203. It is suggested that any appeal be sent certified mail, return receipt requested.

Request for Stay

Should you wish to file a motion for stay pending the outcome of an appeal of these implementation decisions, you must show sufficient justification based on the following standards under 43 CFR 4.21:

- 1) The relative harm to the parties if the stay is granted or denied.
- 2) The likelihood of the appellant's success on the merits.
- 3) The likelihood of immediate and irreparable harm if the stay is not granted.
- 4) Whether the public interest favors granting the stay.

As noted above, the motion for stay must be filed in the office of the authorized officer.

Continuity of Previous Decisions

Within the attached RMP are a number of valid, existing decisions that were previously made in other land use plans, plan amendments, and project or activity level plans which will remain in effect and continue to be implemented (see Appendix A). They do not represent new decisions that are subject to protest or appeal. Administrative relief opportunities were provided when those decisions were made.

Overview of the Alternatives

Alternatives Considered but Eliminated from Detailed Analysis

During the early stages of the planning process a number of alternatives were considered, but dropped from detailed analysis for a variety of reasons. These alternatives included:

- 1) Alternatives that would eliminate from the entire planning area certain activities such as livestock grazing, mineral sales, military use, and off highway vehicle use;
- 2) Certain proposed restrictions on rockhounding;
- 3) An area wide restriction on shooting within ¼ mile of private land;
- 4) Developing BLM managed shooting ranges on BLM administered lands.
- 5) Restricting types of weapons that may be fired on certain areas of BLM administered lands.

A brief description of each alternative and the reason for dropping it from further analysis is contained in Chapter 3 of the "Proposed RMP/Final EIS" (USDI-BLM 2005).

Alternatives Analyzed in Detail

Seven alternatives were analyzed in detail in the Proposed RMP/FEIS (USDI-BLM 2005). The overall theme determined the types of management actions that would be applied. Most of the alternatives, with the exception of Alternative 1, were designed to meet the RMP management goals. Public input received throughout the planning process was considered in the development of alternatives. The alternatives varied in their ability to meet the management goals over the life of the plan (up to 20 years). Funding and staffing levels would affect rates of implementation, and projected implementation rates could vary by alternative, depending on the costs.

All alternatives included maintenance of existing facilities; however, the level of maintenance could vary by alternative and the amount of annual funding. All alternatives incorporated or complied with the management direction provided by the "Standards for Land Health for Lands Administered by the Bureau of Land Management in the States of Oregon and Washington" (USDI-BLM 1998); and the "Interim Management Policy for Lands Under Wilderness Review" (Wilderness IMP, USDI-BLM 1995). Most alternatives incorporated the "Greater Sage-Grouse and Sagebrush-Steppe Ecosystems Management Guidelines" (USDI-BLM, USDI-FWS, USDA Forest Service, ODFW, and ODSL, 2000).

General Management Themes of the Alternatives

This section provides a brief overview of each of the alternatives considered in detail. Alternatives considered in detail include one "No Action/No Change" Alternative (Alternative 1), and six "action" alternatives (Alternatives 2-7) that would reflect various levels of change from the existing Brothers/La Pine Resource Management Plan direction. All alternatives contain Continuing Management Direction that is not being revised (see PRMP/FEIS Chapter 1 and Appendix C, USDI-BLM, 2005).

Some of the issues identified early in this planning process were resolved using one approach for all of the "action alternatives". These are identified under the category "Management Direction Common to Alternatives 2 - 7" in the Alternatives Considered in Detail section. This management guidance represents areas where there was little controversy over the best way to resolve the issue. One example of this approach is the common management direction for the "action" alternatives for Archeological resources considered "at risk." The common approach categorizes "at risk" resources, prioritizes those resources for future actions, and limits uses that have a high likelihood of significantly impacting the integrity of those resources. These components are not included in this overview.

All of the "action" alternatives strive to develop a balance of uses, and so it is difficult to briefly characterize them. Generally, none of the alternatives eliminates any one type of use entirely. In many cases, if a use is more limited in one geographic area in a particular alternative, there may be an increase in that use elsewhere in the planning area in the same alternative. Each "action" alternative, then, is designed to achieve a different mix of uses within the planning area.

Alternative 1 (No Action/No Change)

Alternative 1 continued present management and was considered the "no action" alternative. This alternative continued management under the existing Brothers/La

Pine RMP and various existing activity plans. It included the management direction and protections provided by all currently approved activity plans such as allotment management plans or habitat management plans. Resource values or sensitive habitats received management emphasis at present levels. This alternative included existing direction for the Millican OHV area from the Millican OHV Environmental Assessment and Millican litigation settlement agreement (Findings and Recommendations of November 5, 1998, as modified by the Order of February 26, 1999).

Alternative 2

This alternative involved the least amount of overall change from current management. In general, this alternative continued a mix of uses throughout the planning area, resolved conflicts on a case-by-case basis rather than by separating uses, or applied specific conflict and demand thresholds. Alternative 2 emphasized shared trail use (motorized and non-motorized) throughout most of the planning area.

Alternative 3

This alternative increased emphasis on reducing conflicts between human uses and wildlife habitat management objectives while separating recreational uses. It relied on the use of Areas of Critical Environmental Concern (ACECs) as a management strategy to meet wildlife and other management objectives. This alternative placed a greater focus on managing for primary or secondary wildlife habitats with a primary or secondary emphasis across the planning area than does Alternative 2.

Alternative 4

Alternative 4 combined the approaches used in Alternatives 2 and 3, and included more emphasis on providing for recreation opportunities (more than Alternative 3, but less than 2) in areas and during seasons when the demand is greatest. This alternative also placed a greater emphasis than Alternative 2 on reducing conflict between land uses and other users or adjacent residents. Recreation uses were more separated than Alternative 2, but less than Alternative 3, and there was an emphasis on certain types of recreation over others within geographic subdivisions. ACECs were provided special management objectives that emphasized ecosystem and wildlife habitat management, but there were fewer and smaller areas than in Alternative 3.

Alternative 5

The emphasis in Alternative 5 was to focus lower conflict activities and higher quality wildlife habitat within the "urban" areas (generally includes most of Deschutes and Jefferson counties). There would be limited use of ACEC direction to protect resources, and more reliance on broad-scale conservation approaches across the planning area.

Alternative 6

In contrast to Alternative 5, Alternative 6 emphasized the future of effective wildlife habitats outside of the areas most likely to be affected by residential and urban development. This alternative put less emphasis on reducing conflicts between land uses, recreational users, and residents in the "urban" areas adjacent to residential areas than did Alternative 5. More emphasis was placed on reducing conflicts between wildlife management objectives and human activities away from residential development areas in the "rural" areas (generally includes most of Crook County).

Alternative 7 (Preferred Alternative)

Alternative 7 is based in part on areas of consensus developed with our Issue Team and includes changes made in response to comments made on Alternative 7 of the Draft Environmental Impact Statement. Although specific direction changed in response to those comments, the overall emphasis of the Alternative 7 remains as described in the PRMP/FEIS. Alternative 7 takes an approach that combines various features of the previous alternatives. It places more emphasis on primary and secondary wildlife habitat emphasis areas in the southeast or "rural" portion of the planning area, the portion with the greatest potential concentrations of species needs, but also allows for increased amounts of year-round motorized use in much of that area. However, for the North Millican area, Alternative 7 modifies habitat effectiveness goals and place limitations on winter motorized use in order to balance wildlife habitat and recreation use needs. It emphasizes more separation of recreational uses than shared uses. Alternative 7 would modify the "conflict and demand" threshold criteria used in "Common to Alternatives 2 - 7" to determine areas available for continued livestock grazing use during the life of the plan.

Environmentally Preferred Alternative

The National Environmental Policy Act (NEPA) requires that the Record of Decision identify the Environmentally Preferred Alternative analyzed in the Environmental Impact Statement. This is judged using the criteria in the NEPA and subsequent guidance by the Council on Environmental Quality (CEQ, 1981). The CEQ has defined the environmentally preferable alternative as the alternative that will best promote the national environmental policy as expressed in Section 101 of the NEPA. This section lists six broad policy goals for all Federal plans, programs, and policies:

- 1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- 3) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- 4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
- 5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- 6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Each alternative analyzed in the PRMP/FEIS contains a different mix of elements that provide for a range of uses and other elements that protect natural and cultural resources. All alternatives would meet the BLM legal mandates and directions to provide for public health and safety, to preserve important heritage components, to balance - in different ways - between population and resource uses, and to enhance the quality of our renewable resources. Many of these requirements are baseline requirements that do not change by alternative. The primary differences between the alternatives involve how that balance between population and resource use is addressed. Consequently there is no alternative that stands out clearly as the "Environmentally Preferred Alternative." Alternatives 3, 5, and 7 all include significant resource protection measures as well as a mix and balance of uses across the planning area.

Of all alternatives, Alternative 3 would have the least potential to disrupt hydrologic function, particularly within the Bear Creek drainage and in the Cline Buttes area adjacent to the Deschutes River. In addition, Alternative 3 would have more closed areas to motorized use in the south-central portion of the planning area, in the vicinity

of Horse Ridge, Smith Canyon, the Badlands, and in the Tumalo area. Motorized use on designated roads only in the area south of Prineville Reservoir and Bear Creek Buttes would be least with Alternative 3 and would reduce the effects of sedimentation to intermittent and perennial stream channels such as Bear Creek, Sanford Creek, and Deer Creek. Infiltration and compaction effects from livestock grazing would likely be less with Alternative 5 compared to other alternatives as more area would be closed to livestock grazing. Consequently Alternative 5 would have the least potential for transport of sediment and water to the ephemeral channels in the Horse Ridge area.

In terms of wildlife habitat Alternative 3 allocates the greatest amount of the planning area for primary wildlife emphasis while allocating the least area to general wildlife emphasis. However, Alternative 7 provides more favorable conditions than all other alternatives by limiting motorized travel to a greater extent.

Alternative 7 provides the widest range of beneficial uses of the environment and balance of population and resource use, because it provides for a mix of uses across the planning area in a manner that will mitigate adverse impacts of those uses.

Alternative 3 provides the greatest amount of area managed with an emphasis on non-motorized uses and Primary wildlife habitat, thus significantly reducing the potential for unintended resource impacts because of the types of uses allowed. After reviewing the entire management mix of all alternatives Alternative 3 is deemed to be the Environmentally Preferred Alternative because it has the strongest emphasis on resource protection over resource uses of all alternatives considered.

Rationale for the Decision

The RMP builds on areas of consensus identified during the planning effort and reflects a balance of uses that meet the needs of local communities as well as national mandates for management of public lands. It provides direction to maintain and restore healthy and diverse ecosystems. It provides a mix of management emphases that recognizes the individual identities and social and economic values of the local communities. It will meet long term military training needs and provide a flexible framework for managing livestock grazing that responds to changing conflicts and demands.

Resolution of Issues

The RMP provides guidance to maintain and restore a healthy and diverse ecosystem within the planning area by preventing future impairments and restoring existing impairments to hydrologic function in high priority watersheds, and by limiting OHV travel to designated roads and/or trails within the planning area. The RMP emphasizes restoration of shrub-steppe habitats – recognizing the limitations and challenges that restoration of these and other “historic conditions” present throughout the fast growing and developing planning area. Restoration of high quality source habitats for a variety of species – including sage grouse - is a keystone to long-term conservation strategies.

Lands within the planning area provide serious challenges for integrating winter range protection and motorized recreation use. The RMP emphasizes winter range over motorized recreation use more than some of the alternatives, but allows an increase in the amount of winter riding opportunities over what is available currently.

The RMP establishes a Special Recreation Management Area in recognition of the importance of recreational activity on BLM administered lands. It addresses some recreational conflicts by providing a better balance of separated and mixed motorized and non-motorized uses than other alternatives. Over 60 percent of the planning area is

available for designated motorized use opportunities, and this includes some increase in the amount of trails available during the winter. Trail systems for OHVs that can provide longer riding opportunities, like the Millican Valley OHV area, are located farther away from urban centers, while mixed use emphasis was maintained in some of the most popular "close in" areas such as Cline Buttes. The RMP reduces the total area available for motorized users compared to the current situation. However it increases the area available to motorized users during the winter.

The demand for non-motorized recreational opportunities is increasing rapidly and the mixture of motorized and non-motorized recreational activities becomes less and less compatible as the number of each type of user increases within the planning area. Consequently, the RMP provides larger blocks of land farther from the urban centers that are designated non-motorized exclusive, such as the Badlands, or non-motorized emphasis for future trail development such as Horse Ridge. In the long-term, separation of motorized and non-motorized use will support a quality experience for a wider variety of users. The size and configuration of the separate use areas in the RMP provides a reasonable balance that capitalizes on existing infrastructure and considers other factors such as wildlife and residential growth activity, but will not completely mitigate all conflicts between wildlife and recreationists, between different types of recreationists, or between recreationists and adjacent landowners.

The RMP resolves the issues associated with land uses such as livestock grazing, mineral materials extraction, and military training. A grazing decision matrix allows the most flexibility of any of the alternatives to integrate economic and administrative considerations of ranchers with the social and ecological components of the fast growing urban interface. The identification of a mineral materials site within the Cline Buttes area, a highly desirable source because of its quality, quantity and proximity to future anticipated road projects, will also provide the opportunity for substantial taxpayer benefit. Guidelines for development of mineral materials sites protect important resources and private property interests, while making it possible to meet the needs for high quality aggregate in Central Oregon. The RMP allocates more land than has been available in the past for military training and under terms and conditions of a long term lease that will provide training opportunities requested by the Oregon Military Department while protecting resources and interests of adjacent landowners.

The need to update land tenure classifications was also identified as an issue. It was the consensus of the planning partners that most of the BLM administered lands be classified Z-1 because of the value of the lands for the ecosystem. Exceptions include isolated parcels of BLM administered lands scattered throughout the planning area that would be classified Z-3 (suitable for disposal) and other parcels located near areas where the planning team determined there would be benefits in acquiring lands in order to create a contiguous block of public lands. These lands are identified as Z-2, suitable for retention but may be exchanged for land of higher value (See RMP Map 6).

The designation of the expanded Peck's Milkvetch ACEC, the Tumalo Canals ACEC, and the decision to manage old growth juniper with a broad-scale conservation approach also represents a key integration of ecological, social, and economic concerns that are uniquely present in the RMP. A broad scale conservation approach for managing old growth juniper provides more flexibility to consider the important facets of this unique ecosystem throughout its limited range rather than focusing on discrete pieces of that ecosystem as represented in alternatives that encompass portions of the old growth juniper in ACECs. Designation of the Peck's Milkvetch ACEC in the heart of the range of juniper old growth will also indirectly provide protection for the juniper ecosystem as well as the rare plant and limit uses likely to conflict with adjacent residents.

The RMP supports scientific approaches to ecosystem management and management of hazardous fuels in the urban interface, provides for multiple uses while protecting

resources and the interests of adjacent landowners, establishes and expands special management areas, manages motorized and non-motorized recreation, integrates recreation and wildlife management objectives throughout the planning area, manages firearm use to protect public health and safety, establishes an interim road system and guidelines for rights-of-way designed to provide necessary access and protect resources, establishes visual resource management classifications appropriate to the location and conditions of the land, establishes land tenure classifications, and establishes a proactive framework for managing at-risk significant archeological resources.

Mitigation Measures

In order to minimize impacts from implementation of the decisions contained in the RMP, the best management practices (BMPs) identified in Appendix F and stipulations and guidelines for mineral operations identified in the RMP and Appendix B would be utilized where appropriate.

Plan Monitoring

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring of resource management plans on a continual basis with a formal evaluation done at periodic intervals. Implementation of the Upper Deschutes RMP will be monitored over time. Plan evaluations will occur on about 5-year intervals. Management actions arising from activity plan decisions will be evaluated to ensure consistency with RMP objectives. This is described in more detail in the monitoring section of the attached RMP.

Public Involvement in the Planning Process

Scoping

The planning process has followed the direction of The National Environmental Policy Act, The Federal Land Policy and Management Act (FLPMA), as amended, 43 U.S.C. 1701 *et seq.*, and the more detailed BLM Land Use Planning Handbook (Handbook 1601-1). The emphasis of the process has been to provide an open, inclusive forum for the discovery and discussion of the important issues within the planning area. Scoping for this plan revision covered a period of 10 years and culminated in the publication of the Analysis of the Management Situation (AMS) in October 2001. The AMS, coupled with subsequent public meetings, served as another scoping period as over 100 new comment letters were received by the BLM in response to these events. Over this period, new information that is relevant to the planning process was generated both locally and throughout the northwest.

Collaboration

The final formulation of the issues and alternatives benefited from the advice of a group that was chartered under the Federal Advisory Committee Act through the Deschutes Provincial Advisory Committee. This group, called the "Issue Team," consisted of tribal, local, state, and federal governmental representatives as well as private stakeholders, including representatives of a diverse range of interest groups.

Chapter 5 of the PRMP/FEIS (USDI-BLM 2005) details the membership of the Issue Team, as well as describing how our collaboration with tribal, local, state and federal representatives implements the direction of the legal mandates for collaboration and consultation as described under Planning Criteria/Legislative Constraints.

Analysis of the Management Situation

In October 2001, the Analysis of the Management Situation (AMS) was published. The document identified preliminary issues based on internal meetings of BLM specialists and managers, meetings with tribal and local government representatives, calls and letters from the general public received over the previous ten years, and public scoping meetings conducted during earlier attempts to amend the existing RMP. Comments on the AMS served as a resource for members of the Issue Team during the collaborative process. The AMS also included an Issue Team Application and an invitation to participate in the collaborative planning process.

Draft Resource Management Plan/Environmental Impact Statement

The Draft Upper Deschutes RMP/EIS was published in October 2003. The comment period extended from October 17, 2003 to January 15, 2004. The BLM received 1,360 responses in the form of letters, emails, faxes, telephone conversation transcripts and organized letter campaigns. These responses were analyzed and responded to in Vol. 2 of the PRMP/FEIS (USDI-BLM, 2005).

Public Meetings & Field Tours

During the scoping/comment period for the AMS, public meetings were held in Redmond on October 16, 2001, in Prineville on October 17, 2001, and in La Pine on October 18, 2001. These meetings were advertised in local newspapers, and in the cover letter on the AMS (mailed to about 1,200 people in October 2001). The BLM also held public field tours to various sites of interest within the planning area as part of the scoping process. These field trips took place on October 20, 2001 in the area west of the Powell Butte Highway; on October 21, 2001 in the La Pine area; and on October 27, 2001 in the area east of the Powell Butte Highway.

Another round of meetings was held in November 2003 after publication of the Draft RMP/EIS to provide information to the public, answer questions, and facilitate public comments. These meetings were held November 12 in La Pine, November 18 in Prineville, November 19 in Redmond, and November 20 in Bend. There were also two meetings specifically to answer questions for the grazing permittees, in the morning and in the evening on November 13.

There were numerous other meetings open to the public, including Provincial Advisory Committee and Issue Team meetings (see further discussion of these meetings in the PRMP/FEIS (USDI-BLM, 2005) under Collaborative Planning, BLM Process).

Proposed RMP/Final EIS

A 30-day protest period, beginning January 14, 2005, was provided for the "Proposed RMP/Final EIS" in accordance with 43 CFR Part 1610.5-2. A total of 16 letters were received by the Washington Office of the BLM. These protests were resolved by the BLM Director. All those who provided protests or comment letters to the Washington Office received a response from the BLM Washington Office.

Consultation with U.S. Fish and Wildlife Service

In August 2004, the BLM requested informal consultation with the U.S. Fish and Wildlife Service (USFWS) regarding potential impacts of actions proposed in the Upper Deschutes RMP to federally listed species or species proposed for listing. Accompanying this request was a Biological Assessment evaluating the effects to federally listed species from

the Proposed Resource Management Plan. This is in conformance with the memorandum of agreement between the BLM and the USFWS dated August 30, 2000. In May of 2003 the USFWS sent the BLM a list of species either federally-listed or proposed for listing that may occur in the planning area. Species that are known to occur in the planning area were addressed in the planning process. On September 9, 2004 the USFWS concurred with the Biological Assessment that the RMP "may affect but is not likely to adversely affect, and may beneficially affect bald eagles."

Tribal Participation

Under Federal law and regulations, consultation with Native American Tribes who have an interest in the planning area is required. To accomplish this, district staff have met with or phoned Tribal groups regularly, BLM managers have made repeated updates at Tribal Council meetings, and Representatives of the Confederated Tribes of the Warm Springs Reservation actively participated in the Issue Team Meetings and as a member of the Deschutes Provincial Advisory Committee that advised the BLM on its decision. Copies of the scoping packet, Summary of the Analysis of the Management Situation" (USDI-BLM 2001), "Draft RMP/EIS" (USDI-BLM 2003), and "Proposed RMP/Final EIS" (USDI-BLM 2005) were sent to each of the Tribal groups for review and comment. Tribal consultation is documented further in Chapter 5 of the proposed plan.





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Bureau of Land Management
Prineville District Office
3050 N.E. 3rd Street
Prineville, Oregon 97754

Upper Deschutes Resource Management Plan



Upper Deschutes
Record of Decision
and Resource Management Plan

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APPENDIX 1.1.1.1

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Acronyms

ACEC ~ Area of Critical Environmental Concern
 AMP ~ Allotment Management Plan
 ARPA ~ Archaeological Resources Protection Act
 AUM ~ animal unit month
 BIA ~ Bureau of Indian Affairs
 BLM ~ Bureau of Land Management
 BMP ~ best management practices
 BOR ~ Bureau of Reclamation
 CAA ~ Clean Air Act
 CFR ~ Code of Federal Regulations
 CRNG ~ Crooked River National Grassland
 CWA ~ Clean Water Act
 DBH ~ diameter at breast height
 DOD ~ Department of Defense
 DOE ~ Department of Energy
 DOI ~ Department of the Interior
 DSL ~ Oregon Department of State Lands
 EA ~ environmental assessment
 EIS ~ environmental impact statement
 EPA ~ Environmental Protection Agency
 ESA ~ Endangered Species Act
 ESI ~ ecological site inventory
 FAA ~ Federal Aviation Administration
 FERC ~ Federal Energy Regulatory Commission
 FLPMA ~ Federal Land Policy and Management Act
 ICBEMP ~ Interior Columbia Basin Ecosystem Management Project
 IMP (wilderness) ~ Interim Management Policy for Lands under Wilderness Review
 ISA ~ Instant Study Area
 NEPA ~ National Environmental Policy Act
 NHPA ~ National Historic Preservation Act
 NRHP ~ National Register of Historic Places
 NOAA ~ National Oceanographic and Atmospheric Administration
 ODA ~ Oregon Department of Agriculture
 ODEQ ~ Oregon Department of Environmental Quality
 ODF ~ Oregon Department of Forestry
 ODFW ~ Oregon Department of Fish and Wildlife
 ODOT ~ Oregon Department of Transportation
 OHV ~ off-highway vehicle
 OMD ~ Oregon Military Department
 ONHP ~ Oregon Natural Heritage Program
 OWRD ~ Oregon Water Resources Department
 PFC ~ proper functioning condition
 PRIA ~ Public Rangelands Improvement Act
 RMP ~ Resource Management Plan
 RNA ~ Research Natural Area
 ROW ~ right-of-way
 R&PP ~ Recreation & Public Purposes Act
 SCORP ~ State Comprehensive Outdoor Recreation Plan
 SMA ~ Special Management Area
 SRP ~ Special Recreation Permit
 TGA ~ Taylor Grazing Act
 TNC ~ The Nature Conservancy
 USDA ~ U.S. Department of Agriculture
 USDI ~ U.S. Department of the Interior

USFS ~ U.S. Forest Service
USFWS ~ U.S. Fish and Wildlife Service
USGS ~ U.S. Geological Survey
VRM ~ Visual Resource Management
WSA ~ Wilderness Study Area
WSR ~ Wild and Scenic River

Introduction

This Resource Management Plan provides management direction for over 400,000 acres of BLM administered lands within the Upper Deschutes portion of the Deschutes Resource Area. Prior to this plan, management direction was provided by the Brothers/La Pine Resource Management Plan ("B/LP RMP", USDI-BLM 1989). A significant amount of the direction provided in this RMP is not new, but includes continued management direction from unrevised portions of the B/LP RMP, as well as legal mandates and policy. Management direction from the B/LP RMP has been merged with new management to provide as integrated management direction as possible. Continued management direction for the planning area was described separately in the Proposed Resource Management Plan (USDI-BLM, 2005, pp. 125-158). Legal mandates and policy are summarized in Appendix A.

Mid-level plans or strategies such as the Central Oregon Fire Management Plan (USDA-FS, 2003), the Horse Ridge RNA Management Plan (USDI-BLM, 1996), and the Middle Deschutes and Lower Crooked River Wild and Scenic River Plans (USDI, USDA & Oregon State Parks & Recreation Dept., 1992), are incorporated by reference. These plans generally provide more specific site management guidance than a RMP.

Projects implementing this plan will generally require site-specific analyses, usually an environmental assessment.

This RMP describes the overall vision and goals for managing the planning area, and provides area-specific land use allocations and allowable uses as well as management objectives and guidelines for the conditions under which future uses might be authorized. These elements are presented in the RMP in the following sections:

Goals and Vision

- **Goals** - broad, overarching purposes the BLM is mandated to achieve on public lands. These generally describe the legal basis and management direction provided to the agency by the laws, BLM policy and program direction.
- **Vision** - how lands within the resource management plan area would look or function into the future. These visions were developed with community members during the plan preparation process.

Management Direction

- **Objectives** - resource or area specific outcomes against which future actions must be measured for consistency with overall plan purposes. All management direction included here applies across the planning area unless supplemented by area-specific management direction.
- **Allocations/Allowable Uses** - specific management direction for how certain resources will be emphasized, uses that may or will 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 sight of the ultimate objective of the action. Guidelines are a toolbox from which one or more elements may be selected as needed to meet the overall management objective. All guidelines will be considered during site-specific use authorizations, and will be applied as needed, or may be supplemented or modified with other management techniques if they are demonstrated to better meet management objectives for the area. Guidelines also often indicate that emphasis will be given to development of certain facilities or certain actions. This guidance is provided to help direct future considerations and is not intended to represent a decision in principal about future actions.

- **Rationale** - the reasoning behind the development of specific objectives, allowable uses, or guidelines.

Management direction is also provided by the RMP maps published (or support maps available as pdf files on CD or on the Prineville District webpage: http://www.or.blm.gov/Prineville/Deschutes_RMP/Home.htm). The maps display the Allocations/Allowable Uses presented in the RMP. The boundaries of the geographical areas displayed are based on natural features such as rivers and streams, roads, property lines between BLM administered lands and lands managed by other government entities and private land owners, and section lines. These boundaries may be modified without plan amendment, provided such adjustments do not integrally change the purpose of the land allocation.

A description of implementation and monitoring follows the section on management direction.

Goals and Vision

Ecosystem Health and Diversity

Goal

Maintain, restore and support healthy upland, riparian, and aquatic ecosystems while sustaining economic values associated with public lands. Management actions will emphasize ecosystem sustainability and health throughout the planning area, while managing for expected increases in human population and use levels.

Recognize the role of fire in the ecosystem and use prescribed fire to maintain the disturbance cycle where practicable outside the wildland-urban interface (WUI). Provide guidance for fire suppression and fuels treatments based on resource values at risk such as homes, facilities, and important habitats. WUI areas, in particular, will be prioritized and scheduled for fuels treatments early in the implementation phase.

Vision

Vegetation - The planning area contains large, un-fragmented blocks of healthy shrub-steppe plant communities, intermixed with old-growth juniper woodlands and large and small openings containing grasslands, meadow, and savanna. Shrub-steppe and savanna communities have a vigorous and diverse composition of native shrubs, grasses, and forbs spatially arranged in a mosaic of seral stages in large and small patch sizes appropriate to conditions of climate, landform and soils. Ponderosa and lodgepole pine forests are present in a diverse mix of seral stage, structure, stand size, and species composition. Ponderosa pine is dominant on suitable sites. The proportion of old forests and old woodlands is maintained at current levels with options for expansion in the future. Special status plant species are maintained or increased in their distribution and abundance. Noxious weeds and other invasive or non-native species are decreased in their distribution and abundance. Forest, woodland, savanna, treeless shrub-steppe, meadow, and riparian communities are healthy and properly functioning ecosystems sufficient to support quality wildlife habitat, hydrologic processes, and social and economic needs.

Riparian and Aquatic - In riparian areas, floodplains and wetlands, abundant and diverse vegetation controls erosion, stabilizes stream banks, heals incised channels, provides regulation of air and water temperature, filters sediment, aids in floodplain

development, dissipates energy, and mitigates floodwater impacts. As a result, these areas are resilient and provide water storage, groundwater recharge, water quality, and fish and wildlife habitat.

The biologically diverse habitats ensure the presence of organisms and processes necessary to sustain native aquatic communities over the long term. Adequate spatial distribution of these communities maintains habitat continuity that is necessary to re-colonize 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.

Watershed/Hydrologic Function and Water Quality - As in riparian areas, upland soil and plant conditions provide for soil infiltration and permeability rates, soil moisture storage, and the release of water that are appropriate to soil, climate, and landform. Precipitation infiltrates into the soil and does not run off, limiting the amount of surface erosion and subsequent sedimentation, and improves water quality and quantity. Surface water and groundwater quality, influenced by agency actions, meets state water quality standards. Water quality is maintained equal to or above legal water quality standards, consistent with beneficial uses of water. Water quality supports stable and productive riparian and aquatic ecosystems.

Wildlife - Ecosystem processes are functioning properly, benefitting a variety of wildlife species by increasing the quality, quantity, and variety of habitat. Habitats support healthy, productive and diverse populations and communities of native plants and animals, including special status species and species of local importance, appropriate to soil, climate and landform. Habitats occur in large contiguous blocks, are adequately arranged spatially, and contain a natural diversity of animal and plant communities. Animal populations are present and move freely across the landscape. The amount and diversity of wildlife habitats are maintained or improved through time. Native plant communities exist in blocks of various sizes distributed in patterns across the landscape appropriate to site potential. Maintenance and restoration of healthy ecosystems throughout key areas and management of specific habitat components such as vegetation cover, forage, and roads, contribute to maintaining habitat conditions within the site potential of the area.

Fire/Fuels Management - Fuels in the planning area are managed to provide for protection of Communities at Risk (see glossary) from the undesired effects of wildland fire, while assisting in the attainment of other management goals. Safety of the public and fire fighters is the first priority in planning fuels management activities, while recognizing the role of wildland fire as an essential ecological process and natural change event.

Air Quality - Air quality is generally good. Public health is protected by holding the amount of smoke entering populated areas to a minimum. The National Ambient Air Quality Standards (NAAQS) are being met, with no significant deterioration of air quality. There are no human-caused visibility impacts to Class I areas.

Special Management Areas (SMAs) - The resources that led to the designation of special management areas such as caves, Areas of Critical Environmental Concern (ACECs), and Wilderness Study Areas (WSAs) are protected. Guidelines for the amount and type of public uses in SMAs are established. Opportunities and partnerships for public education, enjoyment and interpretation for these resources are fostered.

- *Areas of Critical Environmental Concern* - The special resources for which ACECs were designated are protected. Guidelines for the amount and type of public uses are

established. In addition, opportunities for public education and interpretation are fostered, along with partnerships to help protect and interpret these resources.

- *Wilderness Study Areas* - Wilderness Study Areas are managed to maintain wilderness suitability, consistent with the "Interim Management Policy for Lands under Wilderness Review" (USDI-BLM, 1995).
- *Research Natural Areas* - Research Natural Areas are protected from human influences. Natural ecological and physical processes are allowed to occur. These representative natural plant communities are generally reserved for education and scientific study but are also available for some types of low-impact non-motorized recreation.
- *Caves* - Significant caves or caves nominated for significance under the Federal Caves Resource protection Act (FCRPA) remain in a natural condition, with cave resources monitored and managed. Graffiti and litter are absent and caves appear natural and provide a sense of discovery for visitors. Recreational and interpretive opportunities are created, consistent with the management of cave resources.

Land Uses

Goal

Manage the land in a manner that recognizes the nation's need for domestic sources of minerals, food, timber, and fiber from the public lands, while protecting the quality of scientific, scenic, historical, environmental, and archeological values. Preserve and protect public lands in their natural condition, and assure they provide, where appropriate, food and habitat for fish, wildlife and domestic animals, and land for outdoor recreation and other uses.

Promote healthy sustainable rangeland ecosystems; accelerate restoration and improvement of public rangelands to properly functioning conditions; promote the orderly use, improvement and development of the public lands; establish efficient and effective administration of grazing of public rangelands; and provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands (43 CFR 4100). Accomplish these goals consistent with multiple use, sustained yield, environmental values, economic and other objectives. Provide the military with a reliable long-term land base for training operations.

Vision

Land uses, including but not limited to livestock grazing, mineral and commercial forest uses, occur in a pattern across the planning area, where economically feasible, socially compatible, and environmentally responsible, that support community and national demands and contribute to the local economy and quality of life.

The National Guard and Oregon Military Department (OMD) continue a long-term partnership with the BLM. The partnership demonstrates land stewardship that integrates resource objectives and goals of public lands with military training objectives.

Visual Resources

Goal

Identify and protect visual values on public lands, assuring the integration of environmental design arts in planning and decision-making.

Vision

The scenic qualities of the planning area are maintained and improved over time. Visual Resource Management (VRM) classifications identify the scenic importance of landscape characteristics and guide the design and development of future projects. Vegetation management emphasizes long-term over short-term visual objectives and seeks to create more naturally appearing landscapes over time.

Recreation

Goal

Provide a broad spectrum of outdoor recreation opportunities to meet the needs and demands of public land visitors. More intensive visitor management, resource protection, and facility investments are provided where the public has demonstrated a desire to use public lands for outdoor recreation, and outdoor recreation is a high priority.

Vision

The planning area provides a wide variety of recreational opportunities for a growing demand. Local and out-of-area visitors enjoy activities on public lands that are close to urban and residential areas, such as hiking, running, mountain biking, and off-highway vehicle use. Commercial recreation opportunities provide a public service while protecting resource values and minimizing conflicts with other recreationists and adjacent landowners.

Local communities are integrally involved in developing and implementing management strategies for individual geographic areas within the planning area. Increases or improvements in facilities such as picnic areas, group use sites, interpretive sites or trails are developed through an integrated effort with other recreational providers and local communities. The number and types of facilities change over time to reflect demographic changes and the changing popularity of different types of recreation.

Public lands in the planning area are distinct from private lands and have a unique identity that fosters desired recreation opportunities for that area. Information on recreation opportunities, travel management, interpretation, and management goals and policies is readily available to visitors.

Areas within highly developed surroundings are managed for an emphasis on safety and compatibility with surrounding land uses. Designated access points and roads/trails are designed to minimize conflicts with neighbors as much as possible. Designated recreation trails, facilities, restored and maintained recreation sites and access points, and intensive recreation management help to meet increased demand. Public lands provide opportunities for regional trails that link communities. Local roads and trails provide a pleasing experience for users within a specific area that matches the recreation emphasis for that area.

Transportation and Utility Rights-of-way

Goal

Provide transportation and utilities facilities that protect public safety, protect the environment, conserve and protect resources, and enhance the productivity and use of public lands. Identify facilities as part of an approved transportation plan to allow for

allocation of construction and maintenance funds; and minimize damage to scenic and esthetic values, fish and wildlife habitat and otherwise protect the environment.

Collaborate with local communities to plan reasonable, safe access to or across public land in a manner that serves to protect and conserve sensitive resources and the environment.

Vision

Residents and visitors travel freely and safely across local, regional, and national transportation corridors. Local, regional, and national needs for utility transmission are met. At the same time transportation and utility corridors are located in a manner that allows large portions of the planning area to appear natural and provide opportunities for outdoor recreation as well as habitat that supports plants and animals that have historically occupied the landscape.

Land Ownership

Goal

Retain public lands in federal ownership, unless disposal or acquisition of a particular parcel would better serve the national interest and the needs of state and local people, including needs for lands for the economy, community expansion, recreation areas, food, fiber, minerals, and fish and wildlife. Changes in public land ownership are considered where consistent with public land management policy and where these changes would result in improved management efficiency. Withdrawals are used to dedicate public lands to specific uses by protecting specific resource values over the development of lesser values.

Vision

Large blocks of BLM administered land provide contiguous native ecosystems that support healthy plant and animal populations, contain special natural features, provide natural resources that meet community, regional, or national needs, and provide opportunities for a range of recreational activities. Lands identified as suitable for acquisition would serve to link or fill in spaces between larger blocks of BLM lands or to meet resource management objectives. Public lands are located in a pattern that can be efficiently and effectively managed. Public lands are available for federal and state projects, community growth, and projects for non-profit groups.

Public Health and Safety

Goal

Provide the public with recreation areas and facilities that are free from recognized hazards insofar as practical, and meet the requirements of BLM Manual H-2111 – 1: Safety and Health Management.

Vision

BLM administered lands are available for activities that do not compromise the health or safety of land users or adjacent landowners, or diminish natural resource protection. Public lands are managed to discourage illegal activities such as dumping

and vandalism. Firearm-related property damage and garbage related to shooting is experienced infrequently. Natural and cultural resources are not damaged by firearm discharge or illegal activities. Firearm discharge and other recreational uses are managed concurrently to improve recreational opportunities and reduce user conflict.

Archaeology

Goal

Locate, protect, preserve, enhance, and interpret cultural resources in accordance with existing legal authorities.

Vision

Cultural resources and "At-Risk," significant archaeological resources are managed in a pro-active manner for their various use categories (as defined in BLM Manual 8100). Information about the archaeology of the planning area is current. Residents of, and visitors to, the area have an opportunity to learn about the local prehistory and history of the region. Interpretation, education, inventories, monitoring, and law enforcement enhances protection and preservation of "At-Risk", significant archaeological resources.

Management Direction

The management direction contained in this section includes new direction from the Upper Deschutes planning process, as well as existing direction from regulations, manuals and handbooks, and unrevised portions of the Brothers/La Pine RMP.

Ecosystem Health and Diversity

Vegetation

Ecosystem Maintenance and Restoration

Objective V – 1 applies to all plant communities. Objectives V – 1a through V – 1g apply only to the plant community specified.

All Plant Communities

Objective V - 1: 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 following periodic outbreaks of insects, disease and wildland fire. Identify opportunities to actively re-pattern vegetation on the landscape to conditions more consistent with landform, climate, biological, and physical components of the ecosystem, and considering social expectations and changes to the landscape driven by human influences.

Rationale:

The Federal Land Policy and Management Act of October 21, 1976 ("FLPMA", 43 USC 1701) declares that the public land be managed in a manner that would: a) protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric,

water, and archaeological values; b) preserve and protect certain public lands in their natural condition; c) provide food and habitat for fish and wildlife and domestic animals; and d) 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 wildland fire 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 will conserve scarce habitats in the short-term while expanding these habitats through restoration in the long-term.

Allocations/Allowable Uses:

1. Vegetative restoration treatments may be accomplished by a variety of methods including, but not limited to, mechanical, prescribed fire, and grazing. Specific project prescriptions will be appropriate to site conditions, plant community types, and resource objectives, and will be detailed in project-level plans and National Environmental Policy Act (NEPA) analyses.
2. Apply Best Management Practices (see Appendix F) where appropriate during vegetative treatments.

Guidelines:

Priorities

1. Where ecosystems are healthy and functioning, 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.
2. Potential project areas will 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.
3. Rehabilitation will 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 will also be integral to most rehabilitation efforts.
4. Emphasize managing special status species habitats.
5. Consult with Redmond Airport officials in T15S R13E sections 1, 13, 24, 25, and 26 to ensure that restoration projects do not conflict with the safe operation or development of the airport.

Structure

6. Seed or plant grasses, forbs, shrubs and trees where appropriate to achieve a variety of objectives such as: stabilizing soils, restoring native communities, converting to targeted plant communities, improving wildlife habitat, and influencing potential fire behavior in the wildland urban interface.
7. Use native species for a majority of restoration/rehabilitation treatments. Examples of when use of non-natives may be appropriate include:
 - a. When advantageous for quick soil stabilization
 - b. When aggressive competition with invasive weeds is needed
 - c. When non-natives are significantly more cost-effective and result in a much greater area treated
 - d. When natives are not capable of achieving objectives
 - e. When non-natives can contribute to overall restoration success

8. 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.
9. Utilize wildland/urban interface fire zone treatments to maintain or contribute early seral (low shrub, perennial grass, forbs) structure and composition to targeted landscape vegetative communities.
10. Promote native herbaceous cover with restoration treatments to reduce the amount of bare, exposed soil for erosion control and displacement of weeds.
11. 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.
12. 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 may include: suspension of grazing, fencing, tubing, netting, and animal repellents.
13. Maintain/create snags and down logs at levels that consider historic conditions, wildlife habitat needs, and objectives for fuels treatments in wildland urban interface areas.
14. 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 include aspen, alder, willow, currant, chokecherry, oceanspray, and mock-orange. Due to the different plant communities and site conditions involved, site-specific prescriptions will be developed for riparian treatments. Additional protection from damage by domestic livestock, deer and elk should be considered.
15. Mimic natural processes with vegetation management efforts in the Badlands WSA so as not to impair the area's suitability for wilderness designation.

Fire

16. Guidelines for restoration/maintenance of ecosystems utilizing prescribed fire are discussed in more detail in the Fire/Fuels Guidelines.
17. Guidelines for rehabilitation of burned areas are discussed in more detail in Fire/Fuels Guidelines.

Soil

18. Incorporate measures to protect microbiotic crusts where practicable during vegetative treatments and other authorized activities. Promote conditions favorable for retention and development of biological crusts.
19. Retain non-commercial vegetative and woody residues from mechanical vegetative treatments scattered on-site wherever possible to:
 - a. Maintain soil nutrients and long-term site productivity
 - b. Maintain soil organic matter
 - c. Provide site protection from wind and water erosion
 - d. Facilitate native plant re-colonization by providing micro-site amelioration of extremes of heat and cold

Recreation

20. Vegetative and woody residues from mechanical treatments will be placed in a manner that does not block designated trails or create safety hazards.
21. Integrate vegetation management with recreation management whenever possible in areas with the following recreational characteristics:
 - a. High density of trail systems.
 - b. Trail systems important to regional trail demand.
 - c. Need for separation of different trail user groups.
 - d. Integration is defined as simultaneous site-specific vegetation and recreation planning or a single interdisciplinary analysis.

22. Integrate vegetation/fuels treatments and trail design within Special Recreation Management subunits including Millican Plateau, North Millican and Cline Buttes. Old-growth juniper, degraded ecosystem conditions, weeds, soil erosion, traveler and recreationist's safety, and increasing trail demand in these areas are factors that contribute to the high priority for integrated natural resource and recreation plans.
23. In North Millican concurrent vegetation and trail design planning will be required to ensure that habitat variables other than road densities such as vegetative structure and condition, protecting soils and vegetation from erosion and disturbance, and enhancing the recreation experience are considered.
24. For areas outside of North Millican, if final trail designs for high trail density or multi-user group areas cannot be done in conjunction with vegetation treatments, a conceptual trail layout will be done that provides input into vegetation management strategies.
25. Vegetation management will provide for the following design features/mitigation measures in areas with existing or planned trail systems:
 - a. Pile and burn, chip, or lop and spread slash (rather than pile without burning) along trail corridors, except where barriers or erosion control measures are specifically needed. Other methods may be used to accomplish goal of not having visual effect of piled woody debris.
 - b. Provide a clear area from trail edge to slash piles, logs, and other scattered woody debris sufficient to allow for the safety of trail users.
 - c. Orient cuts on stumps and logs left along the trail such that cut ends do not present a sharp hazard to riders and so as to be minimally intrusive visually.
 - d. Retain higher densities of trees in areas that have mixed uses on separate trails in order to screen different types of trail systems from each other.
 - e. Retain patches, buffer strips, or higher tree/shrub densities along trail sections in order to limit cross-country travel and screen views of roads, houses, fences, other developments, and other trail users.
 - f. Retain trees and/or promote the growth and spread of tall shrubs (such as basin big sagebrush and bitterbrush) to maintain the curvilinear nature of the trail and minimize the cutting of curves and straightening of trails by users.

Shrub Steppe Communities

Objective V – 1a: Maintain/restore large contiguous stands of healthy, productive and diverse native shrub/steppe plant communities throughout their historic range¹ where appropriate considering current conditions and potential for success.

Rationale:

Restoration and expansion of key plant communities will approximate historic stand structure and geographic range using conditions existing at pre-European settlement times as a reference condition. On most historic shrub-steppe sites, western juniper will be reduced to widely spaced old trees or small patches on ridge tops or other focused locations where trees would contribute to biodiversity at the landscape level. Social and economic factors will be considered in formulating project design, location, and priorities.

Guidelines:

1. Minimize disturbance to shrub-steppe communities by limiting motorized travel to designated roads and trails.

¹The term "historic range" as used in the context of this RMP refers to the distribution of the following major vegetative types mapped within the planning area: shrub-steppe, old-growth juniper, ponderosa pine, and riparian (see Map S-8: Vegetation Types). 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.

2. Restoring historic fire regimes wherever practicable outside the wildland-urban interface will be emphasized to improve/maintain the condition and expand the extent of shrub-steppe communities to historic ranges.
3. Composition, density, and distribution of young western juniper will be reduced to historic levels. Juniper older than 150 years or displaying old-growth characteristics may be removed in some circumstances if specific restoration needs for wildlife habitat or other natural values exceed the need to maintain the large or old tree component.
4. A primary criterion for prescribing treatment is when juniper occurs at a density and/or distribution that are determined to be outside its historic range of variability.
5. Where ecologically appropriate, restore or maintain stands of large contiguous sagebrush communities in patches of 400 acres and larger. Design of landscape patterns will include connectivity of large shrub-steppe patches.
6. Vegetative habitat needs of sagebrush-steppe obligate species will be emphasized in treatment design.
7. Vegetation treatments to maintain or restore shrub-steppe communities will be based on a landscape level restoration of broad vegetative types. Priorities for treatment will focus on areas that will show the biggest ecological gain for a given level of treatment intensity or investment. Cost-benefit ratios will help determine project priority and scale. Priorities will include restoration of sage grouse and other special status species habitat. Areas that have transitioned beyond the threshold of restoration success with reasonable treatment effort and expense will normally receive lower priority.

Old-Growth Juniper Woodlands

Objectives V – 1b: Maintain, promote, and restore the health and integrity of old-growth juniper woodlands/savanna throughout its historic range where practicable. Decisions authorizing social/economic land uses and activities within mapped old-growth woodlands (see Map S-8, available on CD) will be evaluated against land use criteria in Guidelines below. Where possible, provide reasonable mitigation for impacts to old growth juniper woodlands ecosystems when authorizing land uses or activities.

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 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 scenic quality, education/interpretation opportunities, and habitat for late-seral dependent species.

Allocations/Allowable Uses:

1. Allow cutting/harvest of green trees up to 18 inches in diameter at breast height (DBH) east of State Route 27.
2. Allow harvest of juniper west of State Route 27 generally only in conjunction with restoration treatments, fuels reduction, or clearing for rights-of-way (ROWS) or other approved facilities or developments.
3. Generally limit cutting and harvest during restoration or fuels management treatments to trees less than 150 years old, based on physical characteristics. Individual trees showing characteristics of old-growth, regardless of size, will generally not be cut.

4. Generally do not allow cutting of old growth tree snags and large down logs except where they pose a risk to structures, facilities, or human health and safety.

Guidelines:

Maintenance/Restoration

1. Emphasize maintenance/restoration of historic condition/range of old-growth woodlands/savanna while considering social and economic factors such as:
2. Authorization and design of land uses and activities such as new or expanded rights-of-way, roads, special-use permits, and any ground-disturbing activities will consider the following factors:
 - a. Quality and importance of affected old-growth woodland values.
 - b. Relative importance of the proposed use or activity.
 - c. A full range of site location or route options, including non-BLM administered land.
 - d. Considering the above factors, incorporate reasonable mitigation measures and special requirements into land use authorizations to protect or enhance old-growth woodland values.
3. Treatments will be designed to both maintain the health and longevity of the old trees, snags and down logs and to increase the amount and diversity of understory shrubs, grasses, and forbs.
4. Prescriptions will allow for, or mimic, natural disturbances wherever practicable.
5. Prescriptions will maintain an uneven-age structure (consistent with natural old-growth woodland succession and structural development).
6. Field surveys and historical accounts will help estimate pre-settlement structure/composition of plant communities. This information will be used to develop restoration prescriptions and treatment priorities that would move plant communities toward historic range and conditions, where practicable. Old woodland structural and composition components will 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.

Treatment Priorities

6. Selected old-growth stands with high ecological values will receive high priority for treatment. These areas would achieve relatively rapid response for a given level of rehabilitation effort/expense. Specific areas and boundaries of old-growth woodland priority treatment areas are subject to change based on updated inventory information.
7. Sites with substantial erosion or weed infestations will receive consideration for treatment. These sites will be evaluated for relative ecological values and potential for response given reasonable rehabilitation efforts/expense.
8. Other priority areas will be sites that have high densities of young juniper establishing in the interspace between the older trees.
9. In addition, treatment priorities will include selected 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 may include old homesteads cleared for farming, crested wheatgrass seedings, firewood harvest areas, or other juniper site conversion project areas.

Lodgepole and Ponderosa Pine Forests

Objective V – 1c: Maintain and promote healthy and diverse lodgepole and ponderosa pine forest ecosystems.² Manage stand structure, density, species composition, patch

²The 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 will also be considered within management guidelines for lodgepole and ponderosa pine forest types.

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 following periodic outbreaks of insect infestation, disease, or wildland fire. Manage ponderosa pine health and dominance status throughout its historic range. Provide for a balance of biological, social and economic needs in an urban/wildland setting.

Rationale:

See Rationale for Objective V-1. 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. Large isolated pine trees are particularly valuable as nesting, perching, and roosting habitat for raptors.

Allocations/Allowable Uses:

Manage lodgepole and ponderosa pine stands using thinning, harvesting, prescribed fire, and other techniques.

Guidelines:

1. Promote long-term sustainability by managing for a representative mix of stands of early, mid, and late seral ponderosa pine.
2. Create stands with stocking levels and fuel loads that are more resilient after insect and disease outbreaks and stand-replacement wildland fires, and that meet wildlife habitat management objectives.
3. Place priority on treating sites that are at high risk of uncharacteristically severe disturbance events and have a relatively high potential for response to treatments to alleviate those risks.
4. Restore deficient habitats to approximate historic landscape patterns and proportions on a relatively large scale.
5. Use habitat patch size and larger-scale treatments to achieve stand structure, condition, composition, density, down log/snag levels, fuel loading, fuel arrangement, and litter and duff depth that match the desired fire regime.
6. Apply a series of periodic, non-commercial thinning, commercial thinning, and prescribed fire treatments to achieve and maintain the desired species composition and stand structure.
7. Aggressively thin lodgepole pine and juniper where they are encroaching into and competing with ponderosa pine stands. Leave most old-growth juniper and some old lodgepole pine trees found in these mixed stands for diversity. On ponderosa/lodgepole pine mixed sites, thin lodgepole pine more intensively with wider spacing, more acres treated, and/or more frequent treatment entries. Generally leave trees in the density range of 48-134 trees per acre, as appropriate to treatment/restoration objectives.
8. Target isolated groups and individual ponderosa pine trees, particularly in the La Pine and Cline Buttes areas, for protection and enhancement to maintain biodiversity and aesthetic values associated with these trees. Thin around each tree to reduce competition from lodgepole pine and western juniper, to a radius of generally 50 feet, unless a larger radius is necessary to reduce competition and accomplish the objective.
9. Leave the healthiest available ponderosa pine trees as seed trees and in shelter wood and fire salvage treatments. Favor retention of large trees.
10. Favor ponderosa over other tree species in prescriptions involving planting or natural regeneration on sites that can support ponderosa pine.

Objective V – 1d: Maintain, promote, and restore the health and integrity of old forest structure and conditions in key habitat areas and in conjunction with WUI management objectives. Reduce potential for physical and biological threats to late seral and old growth forests, including uncharacteristic or severe natural disturbances.

Promote the restoration of old ponderosa pine forests throughout most of its historic range. Develop and maintain stand structures that are relatively complex with variable tree, snag and down log densities, and healthy and diverse understory composition.

Rationale:

Due to past logging practices, human developments, livestock grazing, and wildland fire exclusion, 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. These influences have created an imbalance in ecosystem composition and structure.

Restoring conditions that approximate historic conditions will help prevent large-scale occurrences of insect, disease, and wildland fire, and the resulting undesirable ecological, social, and economic effects of these large-scale disturbances. 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.

Allocations/Allowable Uses:

Maintain and promote mature and old structure lodgepole and ponderosa pine stands using thinning, harvesting, prescribed fire, and other techniques.

Guidelines:

1. Maintain and restore old and mature ponderosa pine forest structure and expand its range toward historic levels, including areas affected by past logging and species transition, to re-establish ponderosa pine dominance and mature structure over time. In selected juniper or lodgepole dominated sites, individual remnant old and/or large ponderosa pine trees will be targeted for maintenance.
2. Approximately ninety percent (12,800 acres) of the currently remaining mature lodgepole pine stands in the La Pine area will be maintained in mature/old structure in key habitat areas during the life of this plan.
3. Field surveys and historical accounts will help estimate pre-settlement range, structure, and composition of old and mature ponderosa pine forest stands. Old and mature forest structure components include size, age, and density of trees, down logs, canopy structure, and understory composition.

Riparian and Aquatic

Objective V – 1e: Maintain, conserve (protect), and restore aquatic and riparian dependent resources, including riparian vegetation and habitat diversity, to achieve healthy and productive riparian areas and wetlands. Maintain or improve current good to excellent stream bank stability and riparian vegetative condition. Manage for riparian habitats that support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations similar to historic conditions.

Rationale:

The intent of this objective is to ensure that adequate amounts of functioning riparian and wetland vegetation are sustained or increased in the long term. 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 on BLM administered lands have resulted in riparian habitat conditions that are less than optimal for aquatic and riparian-dependent species (USDA-FS and USDI-BLM, 1996 and 1997). Riparian ecosystem function, as determined by the amount and type of vegetation cover, has decreased since historic times. 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.

Riparian Conservation Areas (see guidelines, below, for further explanation of 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. The application of RCAs, including first and second tier analysis, is described in detail on pp. 54-55 of the Interior Columbia Basin Final EIS/Proposed Decision (USDA-FS and USDI-BLM, 2000b).

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, memorandums of understandings (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. The Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington (USDI-BLM, 1997) meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health).

Allocations/Allowable Uses:

1. Within designated Riparian Conservation Areas, consider the degree to which that activity will:
 - a. Maintain and restore riparian structures and functions;
 - b. Benefit fish and riparian-dependent resources;
 - c. Enhance conservation of organisms that depend on the transition zone between upslope and stream, and
 - d. Improve the connectivity of travel and dispersal corridors for terrestrial animals and plants and aquatic organisms.
2. Activities within Riparian Conservation Areas may be adjusted or excluded from the area if the activity does not support maintenance or measurable progress toward achieving Properly Functioning Condition (PFC, see glossary) streams within the watershed, or attainment of water quality standards.

Guidelines:

1. Riparian Conservation Areas:
 - a. Designate RCAs using interim criteria consisting of the stream channel and the area on each side of the stream extending from the edges of the active channel to the extent of the flood prone width (Rosgen, 1996). This interim designation of RCAs is called "first tier" analysis. Where proposed activities may adversely affect riparian processes and functions, the BLM will develop more site-specific RCAs using second tier criteria (e.g., identify the dominant physical and biological features that influence the riparian network, and address important biophysical functions and processes).
 - b. Management options will focus on uses and activities that allow for the protection, maintenance, and restoration of RCAs and upland watersheds and measurable progress toward the attainment of water quality standards and PFC, within the stream and/or RCAs. Interim RCA widths will be applied for planning purposes where activities will not adversely affect riparian processes and functions.
 - c. Possible activities that may require second tier delineation of RCAs include, but are not limited to, juniper retention (where more trees are proposed to be left within the RCA than historic conditions indicate), livestock grazing, roads, trails, new rights-of-way (ROWs), and rockhounding. Activities that promote

- watershed function such as the removal of excessive juniper will generally not require second tier.
- d. Areas not in PFC will 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 may not affect progress toward attainment of state water quality standards, PFC, and Riparian Management Objectives (RMOs, see glossary). Uses and activities in these riparian/wetland areas will be adjusted or excluded from the RCA if current management does not allow for the maintenance or measurable progress toward the attainment of PFC. Exclusion will be in the form of buffered exclusion areas or the use of temporary and/or permanent fencing. Management options for uses and activities will allow for measurable progress toward the attainment of water quality, PFC, and RMOs within RCAs at a positive annual rate.
2. Livestock grazing will be modified where the standard for riparian-wetland function is not being achieved, or where measurable progress is not made toward achieving the standard.
 3. Riparian habitat needs will be considered in developing livestock grazing systems and pasture designs and will be evaluated according to the Fundamentals of Rangeland Health.
 4. Focus management on entire watersheds using an ecosystem approach and involving all interested landowners and affected parties.
 5. Achieve riparian/wetland area improvement and maintenance objectives through the management of existing and future uses.
 6. Prescribe riparian/wetland management based on site-specific physical, biological, and chemical condition and potential.
 7. Use interdisciplinary teams to inventory, monitor, and evaluate management of riparian/wetland areas and to revise management where objectives are not being met.
 8. Restoration
 - a. Emphasize diversity in plant species and structure, such as shrubs and large trees, which occurred in the area historically.
 - b. 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.
 - c. Promote late successional riparian vegetation in amounts and distribution similar to historic conditions.
 - d. Promote complex in stream structure formed from woody debris, aquatic plants, roots, undercut banks, or boulders that serve as cover for all life cycle stages.

Objective V – 1f: Secure existing 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 could prevent achievement of subwatershed objectives.

Rationale:

Subwatersheds identified on DEIS Map S-14 (available on CD) represent areas that support the strongest fish populations and highest native diversity and integrity (Aquatic Strongholds). 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 will enhance the short-term persistence of aquatic species and diversity. This action is necessary to ensure a source of aquatic species to colonize available habitats following natural recovery or restoration.

Guidelines:

1. Validate and, as necessary, refine the subwatershed locations using existing finer scale information.

2. 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).
3. Focus aquatic/riparian restoration where minimal investment can improve or secure the largest amount of productive habitat and diverse riparian-dependent species communities.
4. Integrate prioritization and restoration of aquatic strongholds with other subbasin efforts including but not limited to the settlement agreement for the re-licensing of the Pelton-Round Butte hydroelectric dam; subbasin assessments drafted for the Northwest Power & Conservation Council; in stream flow studies currently being conducted in the Middle Deschutes and recently completed in the Lower Crooked River, in stream flow restoration efforts; Water Quality Restoration Plans; and non-profit organizational efforts to conserve lands within the salmon restoration area.

Noxious Weeds

Objective V – 2: Maintain noxious weed-free plant communities or restore plant communities with noxious weed infestations through the use of broad-scale integrated weed management strategies. During planning for vegetation management and other ground disturbing activities, consider opportunities to manage undesirable non-native or invasive species.

Rationale:

The rapid expansion of noxious and other invasive species 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.

Guidelines:

1. All land management activities and projects will assess the risk of introducing or spreading weeds. Integrated weed management strategies will be incorporated into the planning, design, implementation, monitoring, and follow-up actions of all ground-disturbing projects and activity plans.
2. Integrated weed management strategies will 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.
3. A balanced ecosystem approach for management of undesirable vegetation may include one or more of the following techniques: cultural, manual, mechanical, prescribed fire, competitive seeding, biological, and chemical.
4. When possible, grazing management practices will be designed to help control noxious weeds and other undesirable plants (such as cheatgrass, medusahead and thistles).
5. Opportunities will be sought to form partnerships with other public agencies and adjacent landowners to develop regionally effective and cost-efficient weed management strategies.
6. All treatments will be in accordance with policy and guidelines in the following current or subsequent programmatic vegetation management plans: (1) "Vegetation treatment on BLM administered lands in thirteen western States" (USDI-BLM, 1991) and (2) "Prineville District Integrated Weed Management Environmental Assessment (USDI-BLM 1994)."
7. Where possible, weed management within the planning area will be prioritized as follows:
 - a. Prevent new infestations by limiting weed seed dispersal, minimizing soil disturbance, and properly managing desirable vegetation.
 - b. Detect and eradicate new invaders.
 - c. Target roadways, watercourses, campgrounds, utility corridors and other high disturbance areas for a prevention and containment program.

- d. Emphasize control of large-scale infestations (limiting the spread of noxious weeds and reducing the infestation level).
 - e. Focus initial efforts on small, manageable units with a component of desirable native plants (or desirable non-native plants), and then focus on the remaining infestation. Start from the outside and work toward the center of the infestation.
8. In high risk areas, prevention measures will 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. Precautions will include ensuring use of weed-free hay/feed for livestock and weed-free seed in seeding projects.
 9. 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.
 10. Consider potential for spread of cheatgrass and other undesirable plants that could occur with disturbance by land uses or vegetation treatments, particularly within the lower elevation pumice sand community types.

Special Status Plants

Objective V - 3: Manage special status plant species such that BLM actions do not contribute to the need to federally list as threatened or endangered.

Rationale:

Under the Endangered Species Act (ESA) of 1973 the BLM has legal responsibilities and policy requirements to protect and provide habitat for species listed or proposed to be listed as threatened or endangered.

Guidelines:

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

Traditional Cultural Plants

Objective V - 4: Through consultation and coordination with local tribal governments, identify plants of traditional cultural significance to contemporary Indian communities and the important places those plants occur. In collaboration with Tribal Officials, develop strategies to manage those cultural plant use areas in a proactive manner.

Rationale:

FLPMA obligates the BLM to coordinate all aspects of planning with Indian tribes to ensure consistency between BLM and tribal land use plans. NEPA requires the BLM to consult with Indian tribes to identify potential conflicts and develop alternatives that would resolve those conflicts. The NHPA requires the BLM to consult with Indian tribes that attach cultural significance to traditional properties that may be eligible to the National Register of Historic Places. Executive Order 13175 was issued, in part, to "establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications".

Guidelines:

1. Continue to consult with Tribal Officials to identify specific areas that may possess traditional cultural plants.

2. To the maximum extent allowable by law and the principles of a multiple use policy, protect cultural plants during BLM authorized, funded, or approved activities at specific locations identified by the Tribes.
3. Inform Tribal Natural Resources Departments about areas observed by BLM field staff that may possess quantities of cultural plants that could be harvested in a sustainable manner.
4. BLM will coordinate Tribal/BLM visits to locations where cultural plants have been observed by BLM field staff.
5. Coordinate with the Tribes as requested to visit areas identified as important for traditional plant use to tribal communities.
6. On an annual schedule and where feasible, pursue opportunities for the Tribes and BLM to exchange information in the form of maps, global positioning system (GPS) readings, and approximate numbers of plants discovered in specific locations.
7. Pursue opportunities with Tribal Officials and staff to develop and collaborate on efforts to improve access to, and enhance the condition and quantity of, cultural plants at specific locations.
8. Assure that sensitive information about the locations of cultural plants is kept confidential to the maximum extent allowable by law.

Ecosystem Assessment

Objective V - 5: 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.

Guidelines:

1. Integrate assessments at all scales with complementary or associated efforts by other entities such as watershed councils and non-profit organizations.
2. Project proposals will consider an assessment of resource conditions, and ecosystem health risks and opportunities at appropriate scales. Current and historic conditions and trends will be considered in all project proposals and treatment prescriptions.
3. Geographically prioritize condition assessments according to the objectives of the Resource Management Plan and treatment priorities.
4. Assessments will be conducted using the most current and relevant guidance such as that in the "Standards for Rangeland Health and Guidelines for Grazing Management" (USDI-BLM, 1997), President Bush's "Healthy Forest Initiative" (2002), the Healthy Forest Restoration Act (2003), the National Fire Plan (2000), Governor Kitzhaber's "An 11-Point Strategy for Restoring Eastern Oregon Forests, Watersheds and Communities" (USDI-BLM, 2001), "Ecosystem Review at the Subbasin Scale" (USDA-FS et al., 1999), and "Ecosystem Analysis at the Watershed Scale" (USDA-FS et al., 1995).
5. 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 are replaced with more accurate mapping and inventory efforts.
6. 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.
7. Stored information may include 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.

Stewardship Units/Contracts

Objective V- 6: Promote involvement of local stakeholders, and small businesses to accomplish resource management objectives.

Guidelines:

1. 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 will also be able to obtain permits to remove firewood, posts, poles and other products resulting from treatments.
2. Identify 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.
3. Consider the more formal Stewardship Contracts to efficiently achieve a wide variety of resource management projects over a multiple year time frame.

Hydrology

Watershed/Hydrologic Function)

Objective H – 1: 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:

The Fundamentals of Rangeland Health captured in 43 CFR 4180 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 will re-pattern vegetation patches and succession/disturbance regimes in order to sustain hydrologic processes characteristic of the geoclimatic setting. Restoration of landscape succession/disturbance regimes will 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.

Scientific assessments completed at the Columbia basin scale, have indicated where some critical areas for restoration focus are located. These areas were noted and identified as broad-scale high priority restoration subbasins (see objective H-2). Verified high priority areas in the planning area are based on broad-scale priority subbasins identified at the regional scale and are designated after verifying their actual restoration needs based on local site conditions. These areas will receive priority consideration for future treatments to restore hydrologic function.

Allocations/Allowable Uses:

1. Designate areas for high restoration priority where site conditions support science findings of broad-scale high restoration areas identified by the Interior Columbia Basin Management Project Scientific Assessment (USDA-FS and USDI-BLM, 1996 and 1997).

Guidelines:

1. Determine watershed condition and restoration potential using a variety of evaluation techniques including but not limited to Rangeland Health Standards, Proper Functioning Condition assessments, "Ecosystem Review at the Subbasin Scale" (USDA-FS et al., 1999), "Ecosystem Analysis at the Watershed Scale" (USDA-FS et al., 1995), site surveys, or other existing information. Based on assessments, establish guidance to:
 - a. prevent impairment of watershed hydrologic function
 - b. improve hydrologic function
 - c. restore hydrologic function
2. Reduce compaction and artificial conduits for overland flow of water by rehabilitating all non-designated roads and trails. Road designation will occur in project-specific documents. Any road that is not designated as a local road or motorized travel route will 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.
3. Work cooperatively with state agencies, including Oregon Water Resources Department (OWRD), Oregon Department of Fish & Wildlife (ODFW), Oregon Parks and Recreation, and Oregon Department of Environmental Quality (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 Deschutes 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.
4. Emphasize moving vegetation composition and densities to structural and physical historic ranges to promote infiltration and minimize overland flow.

Objective H - 2: Within the Broad Scale High Restoration Priority Subbasins (Upper Crooked Subbasin shown on Map S-14, available on CD) determine actual restoration needs prior to any large scale site disturbing activities that could affect hydrologic function.

Rationale:

The Interior Columbia Basin Scientific Assessment (USDA-FS and USDI-BLM, 1996 and 1997) identified the Upper Crooked River Subbasin as a broad-scale high restoration priority. This signifies this sub-basin has a need to restore hydrologic processes to ensure favorable water quality conditions for aquatic, riparian, and municipal uses. Within the Crooked River subbasin, this objective will provide management emphasis to compare subbasin priorities with watershed conditions to determine specific approaches to restoration needs (such as aquatics, water quality, vegetation management, disturbance regimes) that will promote effective and efficient restoration efforts.

Guidelines:

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

Objective H - 3: Maintain productivity and minimize accelerated erosion. Soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and the timing and duration of flow.

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.

Guidelines:

1. Take corrective actions, where practicable, to resolve erosive conditions. Surface disturbance at all project sites are to be held to a minimum.
2. 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.

Water Quality

Objective H - 4: Ensure that water quality (surface and ground) influenced by BLM activities a) achieves or is making significant progress toward achieving established BLM objectives for watershed functions, and b) complies with or is 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, BLM will not allow water quality to 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 will be implemented with the intent to restore water quality to levels that meet State water quality standards, and to 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 will be designed for healthy sustainable and functional rangeland ecosystems as described in The Standards for Rangeland Health (USDI-BLM, 1997). These standards meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Fundamentals of Rangeland Health), and are hereby incorporated by reference to this section, and are not repeated here.

Allocations/Allowable Uses:

In watersheds where stream segments are identified as water quality limited by the State of Oregon, current BLM management, public uses, and activities will be adjusted as needed if they adversely affect the restoration of water to State water quality standards.

New uses and activities will be allowed only if they have no adverse effects on restoring water to State water quality standards.

Guidelines:

1. Eliminate all non-designated roads and maintain designated roads to reduce gullying and rilling in RCAs of intermittent and perennial streams (see also Riparian and Aquatics).
2. Streams and water bodies not meeting State water quality standards and/or PFC will 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.
3. Adjust, restrict or limit 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 if water quality and PFC cannot be attained or maintained with existing management.
4. Evaluate grazing allotments according to the Fundamentals of Rangeland Health. Modify livestock grazing where the standard for watershed function is not being achieved, or where measurable progress is not made toward achieving the standard, in accordance with Rangeland Health Assessments.
5. 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. 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).
6. Assure surface water and groundwater quality, as influenced by agency actions, complies with state water quality standards.

Air Quality

Objective AQ - 1: Meet the National Ambient Air Quality Standards (NAAQS) as described in the Clean Air Act.

Rationale:

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.

Guidelines:

The Smoke Management Guide for Prescribed and Wildland Fire (Hardy et al., 2001) provides smoke management and emission reduction techniques for federal land managers to use when completing project specific NEPA. These guidelines are summarized, below.

1. Consider air quality in project specific NEPA when:
 - a. Air quality is raised as a significant issue in scoping,
 - b. The project includes burning,
 - c. The project includes significant road construction, road use or other soil disturbing procedures where fugitive dust may be a concern,

- d. The project includes significant machinery operation in close proximity to publicly accessible areas,
 - e. The project may have any impact on air quality, sensitive vistas, or visibility in a Class I area,
 - f. The area is in close proximity to a non-attainment area, or
 - g. The project will make a significant amount of firewood available to the public.
2. Disclose the following information when considering air quality impacts in a NEPA document:
 - a. Description of the air quality environment of the project area.
 - b. Description of alternative fuel treatments considered and reasons why they were not selected over prescribed fire.
 - c. Quantification of the fuels to be burned (areas, tons, types).
 - d. Description of the types of burning planned (broadcast, piles, understory, etc).
 - e. Description of measures taken to reduce emissions and emission impacts.
 - f. Estimation of the amount and timing of emissions to be released.
 - g. Description of the regulatory and permit requirements for burning.
 - h. 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.
 - i. If an air quality analysis is deemed unnecessary, state that potential air quality impacts were considered but were determined to be inconsequential, and a justification for this statement must be included.
 3. Reduce emissions by reducing the area burned through project design, including:
 - 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 fire line, 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 burn to exclude more moist areas or mimic natural ignition patterns.
 4. Reduce the fuel load to reduce overall emissions or eliminate the need for burning by:
 - 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.
 5. Reduce the fuel consumed in prescribed fire by:
 - a. Burning when large wood fuels are moist and unlikely to consume.
 - b. Burning when there are moist litter and duff conditions in forest ecosystems.
 - c. Burning when a precipitation event is forecast in the near future.
 - d. Burning before large fuels cure, within 3-4 drying months of a harvest activity in forest types.
 - e. Burning before new fuels appear.
 - f. Burning before litter falls or greens-up. Less fuel will be available for consumption, so fewer emissions.
 6. Increase combustion efficiency by:
 - a. Burning more in the efficient flaming phase than in the smoldering phase.
 - b. Burning clean, dry piles.
 - c. Using pattern design in backing fire, to slow the fire and provide more complete combustion than head fire.

- d. Burning under dry conditions to increase combustion efficiency in target fuel size classes.
 - e. Rapidly moping-up to reduce smoldering phase of combustion.
 - f. Using aerial ignition/mass ignition to speed combustion.
 - g. Using air curtain incinerators, large metal containers or pits in which combustion is aided by powerful fans to force additional oxygen into combustion process.
7. Redistribute emissions by:
- a. Burning when dispersion is good with an unstable atmosphere.
 - b. Sharing the air shed with other agencies and smoke producers to reduce the likelihood of smoke impacts, by coordinating with the Oregon Department of Forestry (ODF) in compliance with the Smoke Management Plan for Oregon.
 - c. Avoiding sensitive areas, burning when winds are favorable to carry smoke away from highways, populated areas, and scenic vistas.
 - d. Burning larger units in smaller subunits over several days to limit short-term emissions.
 - e. Burning more frequently, managing fuel accumulation and producing fewer emissions with each burn.

Wildlife

All objectives in the wildlife section apply to the entire planning area. Specific allocations, allowable uses and guidelines for wildlife for each geographic area are described after Objective W-4d. See the Recreation section for corresponding recreation allocations and guidance for specific geographic areas.

Planning Area Wide Direction

Objective W – 1: Conserve federally listed species and the ecosystems on which they depend. 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 designate additional special status species.

Rationale:

The BLM has been directed to contribute to the protection and recovery of species federally listed or proposed for listing (or subspecies or populations) across their ranges by maintaining and restoring habitat quality, quantity and effectiveness (Endangered Species Act of 1973, 16 USC 1531 et seq., as amended; and BLM Manual 6840, Special Status Species Management). Meeting these responsibilities requires maintenance of suitable habitat and restoration of degraded habitats necessary for the recovery of these species.

The Standards for Rangeland Health (USDI-BLM, 1997) 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:

1. Locate new roads and trails away from important habitats³ (e.g., at least ¼ mile from bald eagle habitats).

2. During seasonally sensitive periods (e.g., breeding, nesting, winter roosting), or in sensitive sites (e.g., raptor roosts, great blue heron rookeries) avoid or mitigate for impacts from activities occurring in or near habitats of species listed or proposed to be listed as threatened or endangered. See Table 1 for a list of species that may require seasonal restrictions, seasonal restriction dates and distance buffers.
 - a. Disturbance activities include, but are not limited to, people walking or running; riding a bike, horse or motorized vehicle; creating loud noises (chain sawing, blasting); on-site or at a distance of ¼ to 1 mile, depending on species.
 - b. Mitigation may include but not be limited to seasonal use restrictions and/or distance buffers around sensitive sites.
 - c. For nest sites, seasonal closures may be ended early if, through monitoring, the nest is determined to be unoccupied. However, the closure period must include dates that will allow late nesting birds. Prior to disturbing activities, conduct surveys to determine presence/absence of special status species; allow the action to proceed if field exam indicates the nest is inactive.
3. Bald eagles: Include current and potential habitat⁴ into an overall Bald Eagle Habitat conservation strategy where current populations occur near Prineville Reservoir and Grizzly Mountain.
4. Sage grouse:
 - a. Design and implement management activities to be consistent with adopted sage grouse conservation strategies and current, accepted science.
 - b. Vegetation altering activities may occur in sage grouse habitat where it does not result in the long-term loss of habitats or contribute to the need to list.
 - c. Disturbance activities may occur in sage grouse habitat if they do not disrupt breeding and over-wintering activities or compromise habitat suitability.

Guidelines:

General

1. Enhance health of roost and nest trees by reducing competing vegetation.
2. Enhance conditions for future large perch/nest trees.
3. As new habitat areas or potential habitat areas become known, consider including them into the Bald Eagle Habitat Conservation Strategy and managing them with an emphasis on bald eagles.
4. Action will be taken, when practical, to determine the distribution, abundance, reason for current status, and management needs of special status species occurring on BLM administered lands, and will evaluate needed management for the conservation of these species. The District will also document observations of, and minimize impacts to Bureau assessment and Bureau tracking species.
5. Assess habitat potential within all caves and identify which caves (if any) contain potentially suitable habitat for bats (especially, Townsend's big-eared bat).
6. Consider providing suitable habitat for the restoration of bat populations (including Townsend's big-eared bats) in a portion of the Redmond Caves lava tube system.
7. 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 (USDI-BLM et al., 2000).

Habitat Modification and Disturbance

8. Vegetative habitats may be maintained or improved using a variety of techniques, such as mowing shrubs, altering or removing trees and shrubs, prescribed burning,

³"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.

⁴"Potential habitats" are areas that either historically were or naturally have the potential to develop into bald eagle habitat. These areas will 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.

Table 1: General Guidelines* for Seasonal Restriction and Distance Buffers

Species	Habitat	Spatial Buffer	Restriction Dates
Bald eagle	Nest	¼ mile non-line of sight ½ mi line of sight 1.0 mile blasting	January 1 – August 31
	Winter Roosts	½ mile	December 1 – April 1
Golden eagle	Nest	¼ to ½ mile	February 1 – August 31
Northern goshawk	Nest	¼ mile	March 1 – August 31
Cooper's hawk	Nest	¼ mile	March 1 – August 31
Sharp-shinned hawk	Nest	¼ mile	March 1 – August 31
Ferruginous hawk	Nest	½ mi direct line of sight ¼ mi with visual buffer	March 1 – August 1
Red-tailed hawk	Nest	¼ mile	March 1 – August 31
Swainson's hawk	Nest	¼ - ½ mile	April 1 – August 31
Peregrine falcon	Nest	1.0 mile	January 1 – August 15
Prairie falcon	Nest	¼ - ½ mile	March 15 – August 15
Osprey	Nest	¼ mile	March 1 – August 31
Burrowing owl	Nest	¼ mile	March 1 – August 31
Flammulated owl	Nest	¼ mile	April 1 – September 30
Great gray owl	Nest	¼ mile	March 1 – July 31
Sage grouse	Lekking	0.6 mile	March 1 st – May 15 ** February 15– May 1
	Nesting, Brooding and Rearing	Not applicable (N/A)	April 1 – July 31 *March 15– July 31
	Winter Habitat	N/A	November 15 – March 15 **November 1– March 31
Great blue heron	Nest	660 ft – ¼ mile	15 March – 15 July
Mule deer	Winter Range	N/A	01 December – 30 April **01 November – 01 May
Rocky Mountain elk	Winter Range	N/A	01 December – 30 April **01 December – 01 May
	Calving	N/A	May 15 – Jun 30
Pronghorn	Winter Range	N/A	01 December – 30 April **01 November – 01 April
Townsend's big-eared bat	Hibernaculum	N/A	November 1 – April 15
	Nursery	N/A	April 15 – October 31

*These general guidelines are typical restrictions that could be applied. Specific dates and distances may vary depending on the type of action proposed and the local breeding chronology of species or the local weather patterns.

** Millican Dates

- managed wildland fire, planting, livestock grazing, and commercial and non-commercial tree cutting.
9. Balance the need for restorative actions to address long-term threats to special status species with the short-term need to protect special status species and their habitats.
 10. Management activities in the habitat of federally listed, candidate threatened, or endangered and sensitive species will maintain or improve habitat conditions and/or not prevent or retard attainment of future desirable habitat conditions.
 11. Develop a species response matrix that includes documented (from literature searches) responses of the species to management activities or natural phenomena. This information will be used to determine management activities for which mitigation measures should be recommended or are needed.
 12. Identify needs to protect special status species and their habitats when authorizing activities by conducting an appropriate assessment of the wildlife resources depending upon the level of anticipated impacts. Include consideration of:
 - a. The Wildlife Observations Database and conduct field surveys during appropriate seasons to identify existing habitat conditions and species occurrences and habitat associations.
 - b. Impacts and develop mitigation measures to be applied to project implementation requirements.
 - c. Opportunities for habitat enhancement as part of project design.
 - d. Contract stipulations to allow work to be stopped if special status species are discovered to be present in or adjacent to a project area.
 - e. Adjustment of clearance and mitigation activities to accommodate additions or deletions in official listings of special status species.
 13. 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 will be evaluated through the NEPA process (Instruction Memorandum No. OR-91-57).
 14. Seek opportunities to conserve and improve habitats for special status species and native animals in BLM authorized activities.
 15. Design and implement relevant management activities to be consistent with BLM adopted recovery plans, conservation strategies, and other appropriate reports.
 16. In situations where data are insufficient to make an assessment of proposed actions, surveys of potential habitats will be made before a decision is made to take any action that could affect special status species.
 17. 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 No. OR-200-334).
 18. 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.
 19. Conduct periodic surveys of potential raptor habitats and monitor active and historic sites to determine occupancy and management consistency.

Objective W - 2: Protect and restore special habitat features that contribute to the productivity of species. These special habitat 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).

Rationale:

Under the Federal Land Policy and Management Act of 1976, public lands are to be managed in a manner that protects ecological values, maintains their natural condition

and provides food and habitat for wildlife. Special habitat features 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.

The special habitat features described here were identified as critical to the long-term conservation of a variety of species in Source Habitats for Terrestrial Vertebrates of Focus in the Interior Columbia Basin (USDA & USDI, 2000a) and in Assessment of Ecosystem Components (USDA & USDI, 1997, p. 64, modified). The Federal Cave Resources Protection Act (FCRPA) 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 will 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.

Allocations/Allowable Uses

1. Special habitats and features may be maintained or improved using a variety of techniques, such as mowing shrubs, prescribed burning, livestock grazing, commercial and non-commercial tree cutting, spatial buffers and seasonal closures.
2. Mineral material mining may be allowed on cliffs or talus slopes not occupied by special status species provided that special habitat features are provided in appropriate amounts and arrangements across the landscape to support general species needs.
3. Also see specific management direction for caves in the section on Special Management Areas.

Guidelines:

1. Consider presence and abundance of wildlife values when evaluating proposed mining reclamation/rehabilitation plans.
2. Whenever practical, avoid special habitat features when authorizing activities.
3. Provide reasonable mitigation, by reducing, avoiding, restoring or compensating for important special habitats that are altered by management actions such as mineral material mining, road construction, et cetera.
4. 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.
5. Except where public safety is a concern, forest and woodland management activities will retain an adequate number of 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 will:
 - a. Retain all soft snags
 - b. Retain scattered hard snags and large live trees, both to provide the current needs of hard snag dependent species and to serve as a source of future hard and soft snags.
 - c. 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.
 - d. Where snag densities are below the established, desired range, initiate management activities to increase snag levels (USDA-BLM and USDI-BLM, 2000a, p. 48).
 - e. Retain and consider increasing snag numbers and coarse woody debris levels in areas that have been burned.
 - f. Trees retained for current and future snags and as "legacy trees" will be chosen from the largest trees available.
 6. The potential population levels for snags described above will be determined using one the following three methods:
 - a. Use the amounts described in Wildlife-Habitat Relationships in Oregon and Washington (Johnson and O'Neil, 2001, Chapter 24, p. 596, Tables 1, 2 and 3), or;
 - b. Use the interim standard densities described in the Interior Columbia Basin Supplemental Draft EIS (USDA & USDI, 2000c, Vol. 2, Appendix 12, pp. 12-13, Tables 1, 2 and 3) for snags and downed wood to be used in designing field projects, or;
 - c. Determine site specific natural variability of snag and down log amounts for the planning area using the snag analysis and coarse woody debris process described in the Interior Columbia Basin Supplemental Draft EIS (USDA & USDI, 2000c, Vol. 2, Appendix 12, pp. 12-13, Tables 1, 2 and 3), 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.
 7. Dead and down woody material will 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.
 8. Coarse woody debris will be left in place across treatment areas rather than piled and burned (unless precluded for safety reasons, see Fire/Fuels Management section).
 9. Salvage dead and down material only where an adequate amount of such material will be retained to provide sufficient habitat to maintain populations of dependent wildlife.
 10. When approving habitat modification activities, determine the importance of special habitat features to special status species, and maintain the integrity of the site.
 11. Where possible, avoid or minimize changes to special habitat features.

Disturbance actions

12. Minimize activities that could adversely influence wildlife use of special habitat features by using one or more techniques appropriate to the species' needs and status. These techniques may include:
 - a. Seasonal restrictions
 - b. Distance buffers

- c. Signs
 - d. Closures
 - e. Relocating disturbance (i.e. moving trails, etc.)
13. Identify, and, where appropriate, maintain, restore or enhance wetland habitats such as playas, springs, and other riparian habitats.

Objective W - 3: Determine the distributions, abundance, reasons for current status, habitat, and management needs of Species of Focus (which include special status species and species of local interest) occurring on BLM administered lands, and evaluate the significance of these lands and BLM actions for the conservation of these species.

Rationale:

Inventory and conservation of habitats for Bureau designated special status species, and other state or federally protected species, is directed by FLPMA, NEPA, and Bureau policy in BLM Manual 6840 and BLM Fish and Wildlife 2000. This manual also directs the agency to provide habitat for species listed or proposed to be listed as threatened or endangered. Meeting these responsibilities requires maintenance of high quality habitat and restoration of degraded habitats necessary for species recovery.

Guidelines:

1. Map the habitat of all Species of Focus (see Table 2). Periodically update the maps as new information becomes available and as habitats change relative to land management actions and natural events.
2. 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.
3. Record observations of and minimize impacts to BLM assessment and tracking species.
4. Prior to initiating ground disturbing projects within potential habitat of Species of Focus, review habitat and management relationships for these species to assess key wildlife issues concerning these species and identify conservation measures and management opportunities to address these issues.
5. Conduct literature searches and identify potential disturbance or habitat altering actions that may have a negative impact on important wildlife resources and develop mitigating measures to lessen the negative affects.
6. Conduct and record systematic inventories of populations and distributions of Species of Focus.
7. Conduct monitoring and evaluation studies on Species of Focus on a regular periodic basis.
8. Evaluate potential effects of management actions (i.e., grazing, recreation and timber management plans, right-of-way applications, etc) on fish and wildlife habitat on a case-by-case basis as part of project-level planning. Consider the significance of the proposed projects and the sensitivity of fish and wildlife habitats in the affected areas. Stipulations will be attached as appropriate to assure compatibility of projects with management objectives for fish and wildlife habitat.

Objective W - 4: 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, elk, and pronghorn.

Rationale:

As directed under the Federal Land Policy and Management Act of 1976 public lands will be managed in a manner that protects ecological values, maintains their natural

Table 2: Species of Focus

	Common Name	Scientific Name	Source Habitat
Federally Listed Species (Threatened)			
Birds	Northern bald eagle	<i>Haliaeetus leucocephalus</i>	Old growth ponderosa pine, riparian
Federal Candidate Species			
Amphibians & reptiles	Columbia spotted frog	<i>Rana luteiventris</i>	Riparian
	Oregon spotted frog	<i>Rana pretiosa</i>	Riparian
Bureau Sensitive Species			
Birds	American peregrine falcon	<i>Falco peregrinus anatum</i>	Riparian
	Black-backed woodpecker	<i>Picoides arcticus</i>	Ponderosa pine/lodgepole pine forest
	Burrowing owl	<i>Athene cunicularia</i>	Shrub-steppe
	Ferruginous hawk	<i>Buteo regalis</i>	Shrub-steppe
	Flammulated owl	<i>Otus Flammeolus</i>	Ponderosa pine/lodgepole pine forest
	Lewis's woodpecker	<i>Melanerpes lewis</i>	Ponderosa pine/lodgepole pine forest
	Northern goshawk	<i>Accipiter gentilis</i>	Ponderosa pine/lodgepole pine forest
	Northern pygmy owl	<i>Glaucidium gnoma</i>	Ponderosa pine/lodgepole pine forest
	Northern three-toed woodpecker	<i>Picoides tridactylus</i>	Ponderosa pine/lodgepole pine forest
	Pygmy nuthatch (BM)	<i>Sitta pygmaea</i>	Ponderosa pine/lodgepole pine forest
	Sage grouse	<i>Centrocercus urophasianus</i>	Shrub-steppe
	Upland sandpiper	<i>Bartramia longicauda</i>	Riparian, grassland
	White-headed woodpecker	<i>Picoides albolarvatus</i>	Ponderosa pine/lodgepole pine forest
	Mammals	Fisher	<i>Martes pennanti</i>
Townsend's big-eared bat		<i>Corynorhinus townsendii</i>	Generally associated with all; close association with riparian
Bureau Assessment Species			
Birds	Black-throated sparrow	<i>Amphispiza bilineata</i>	Shrub-steppe
	Northern water thrush	<i>Seiurus noveboracensis</i>	Riparian
	Tricolored blackbird	<i>Agelaius tricolor</i>	Riparian
Mammals	Pygmy rabbit	<i>Backylagus idahoensis</i>	Shrub-steppe
	Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>	Generally associated with all
	Spotted bat	<i>Euderma maculatum</i>	Generally associated with shrub-steppe, forest, woodland, riparian
Bureau Tracking Species			
Amphibians & reptiles	Cascade frog	<i>Rana cascadae</i>	Riparian
	Northern sagebrush lizard	<i>Sceloporus graciosus graciosus</i>	Shrub-steppe
	Western toad	<i>Bufo Boreas</i>	Generally associated with all

Birds	Bank swallow	<i>Riparia riparia</i>	Riparian, shrub-steppe
	Great gray owl	<i>Strix nebulosa</i>	Ponderosa pine/lodgepole pine forest
	Greater sandhill crane	<i>Grus Canadensis tabida</i>	Riparian
	Loggerhead shrike	<i>Lanius ludocicianus</i>	Shrub-steppe, juniper woodland
	Long-billed curlew	<i>Numenius americanus</i>	Shrub-steppe, Riparian
	Mountain quail	<i>Oreortyx pictus</i>	Ponderosa pine, juniper woodland
	Olive-sided flycatcher	<i>Contopus borealis</i>	Ponderosa pine/lodgepole pine forest
	Pileated woodpecker	<i>Cryocopus pileatus</i>	Ponderosa pine/lodgepole pine forest
	Pine grosbeak	<i>Pinicola enucleator</i>	Ponderosa pine/lodgepole pine forest
	Pygmy nuthatch (EC, HP)	<i>Sitta pygmaea</i>	Ponderosa pine/lodgepole pine forest
	Sage sparrow	<i>Amphispiza billi</i>	Shrub-steppe
	Williamson's sapsucker	<i>Sphyrapicus throideus</i>	Ponderosa pine/lodgepole pine forest
	Willow flycatcher	<i>Empidonax trailii brewsteri</i>	Riparian/woodland
	Mammals	American marten	<i>Martes Americana</i>
Bighorn sheep		<i>Ovis canadensis</i>	Shrub-steppe and woodlands near steep, rugged terrain
Long-eared myotis		<i>Myotis evotis</i>	Forest, shrub-steppe, woodland, riparian
Long-legged myotis		<i>Myotis volans</i>	Forest, shrub-steppe, woodland, riparian
Pallid bat		<i>Antozous pallidus</i>	Shrub-steppe, riparian, ponderosa pine, juniper woodland
Preble's shrew		<i>Sorex Preblei</i>	Shrub-steppe, riparian
Silver-haired bat		<i>Euderma maculatum</i>	Ponderosa pine/lodgepole pine forest
Spotted bat		<i>Lasionycteris noctivagans</i>	Shrub-steppe, woodland
Western gray squirrel		<i>Sciurus griseus</i>	Ponderosa Pine Forest
Western small-footed myotis		<i>Myotis ciliolabrum</i>	Shrub-steppe, ponderosa pine, juniper, riparian
White-tailed jackrabbit		<i>Lepus townsendii</i>	Shrub-steppe, ponderosa pine, juniper
Yuma myotis		<i>Myotis yumanensis</i>	Generally associated with all; closely associated with riparian
Species of Local Interest			
Birds	Golden eagle	<i>Aquila chrysaetos</i>	Shrub-steppe
Mammals	Mule deer	<i>Odocoileus hemionus</i>	Generally associated with all
	Pronghorn	<i>Antilocapra Americana</i>	Shrub-steppe
	Rocky Mountain elk	<i>Cervus elaphus nelsoni</i>	Generally associated with all

condition and provides food and habitat for wildlife. As directed in BLM Manual 6840 - Special Status Species Management, the BLM will 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).

As noted by Johnson and O'Neil (2001), the conservation of wildlife and of biological diversity at large has taken various approaches in the U.S. Sometimes the focus is on the provisions of life requisites for a single species, sometimes for a suite of species (i.e.: guild or biological community such as cavity-dependent or wetland and riparian dependent species), and sometimes the focus is on ecosystems (i.e.: integrated systems of land, water, and biota in contiguous areas such as watersheds, landscapes, or regions).

In this plan, management considerations are directed at some individual species such as sage grouse, deer, elk, and pronghorn by designating wildlife management emphasis levels described here; at groups of species represented by the emphasis on management of source habitats such as shrub-steppe, juniper woodlands, or riparian in the vegetation section; and on ecosystem function represented by the emphasis on restoration of the historic structure and extent of vegetation conditions and hydrologic function in high priority watersheds.

For individual and groups of species, habitat factors that most influence wildlife use in an area include habitat patch size, quality, connection to habitats that provide for all life requisites, and disturbance – most often from human activities and most prominently from open motorized travel routes. Objectives and guidelines focus on providing effective wildlife habitat at various emphasis levels based on those factors. Habitat effectiveness⁵ is one model that provides guidance for evaluating the influences of disturbances caused by open motorized travel routes. Use of the model in this planning process was described in detail on pages 357-358 of the Draft Upper Deschutes RMP/EIS (USDI-BLM, 2003).

Allocations/Allowable Uses:

1. Avoid or minimize actions that may cause disturbance to important or seasonally important wildlife habitats.
2. Designate areas for primary, secondary, or general wildlife management emphases in winter range, breeding and rearing habitats, connectivity areas, and source habitats.

Guidelines:

General

1. Consider partnering with ODFW, OMD, USFWS and others in developing a multi-species habitat conservation strategy for the Bend/Redmond, Horse Ridge, Mayfield Pond, Millican Plateau, North Millican and Prineville Reservoir geographic areas. Focal species for this strategy are to include, but not be limited to sage grouse, deer, elk, pronghorn and golden eagles.

Habitat Modification

2. Maintain or improve habitats using a variety of techniques, such as, mowing vegetation, prescribed burning, livestock grazing, commercial timber harvest, non-commercial tree cutting and planting and seeding.
3. In order to restore native plants, areas disturbed during project construction will be seeded with a mix of native grasses, forbs, and shrubs to meet site-specific needs or habitat requirements.

⁵Habitat 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 and others (USDA-FS, 1988) was used (with modifications) in developing this RMP, and may be used with other research (e.g., 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.

4. Non-native species may be used when they will contribute to the recovery of the site, contribute to soil conservation, help manage against weeds, and/or prepare the site for eventual occupation by native plant species and will not impede the growth of native plants.
5. Activities authorized by permit (with interdisciplinary team review) will 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.
6. Range developments will be designed to achieve both wildlife and livestock grazing management objectives.
7. Where natural springs exist and are developed, the development will provide a more dependable water source for wildlife as well as livestock. Water troughs will accommodate use by wildlife and livestock, and will be constructed with wildlife escape devices. The spring area and the overflow will be fenced to exclude livestock trampling.
8. Where pipelines are developed to deliver water more than two miles from an existing water source, the water system will be designed to provide water for wildlife between July and October.

Structural Developments

9. Guzzlers (artificial structures that collect rain water and then regulate the flow to a drinking basin) will be installed only where they facilitate distribution of target wildlife species. Maintenance of existing guzzlers will receive priority funding over the development of new guzzlers, except when managing for special status species.
10. To the maximum extent feasible, new guzzlers will be located away from existing designated trails to avoid the potential for seasonal trail closures or rerouting of trails.
11. In suitable habitats, where important nesting structures are absent, consider installing nesting platforms, nest boxes, and other structures to improve habitat conditions for snag dependent species.
12. New fences will be built to standard Bureau wildlife specifications to allow wildlife passage, with the exception of fences built specifically to keep wild 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 will be modified to meet the standard when major reconstruction is done or as funding allows.

Disturbance Actions

13. Manage important wildlife habitats to minimize human disturbance by maintaining seasonal closures throughout the sensitive period (See Table 1 for a list of species that may require seasonal restrictions, the restriction dates, and distance buffers).
14. In seasonally important wildlife habitats (winter range, nest sites, roosts, etc.), major construction and maintenance work will be scheduled to avoid or minimize disturbance to wildlife.
15. Timber sales will be designed to provide sufficient cover to maintain the existing deer migration corridor through the La Pine area.

Objective W – 4a – Primary Wildlife Emphasis: Provide habitat that benefits wildlife and retains high wildlife use. Wildlife habitat is a primary management consideration in these areas.

Guidelines:

1. Habitat effectiveness should advance toward 70 percent or greater.
2. Where possible, maintain large un-fragmented patches (1,000 to 2,000 acres).

3. Where possible, manage for low densities of open motorized travel routes (approximately 1.5 mi/mi^2).
4. Rate as a high priority for habitat restoration treatments.
5. Group use restrictions may be applied in some areas or during some seasons.
6. Seasonal closures.

Objective W-4b – Secondary Wildlife Emphasis: Provide habitats that support wildlife and maintain a moderate level of wildlife use. Wildlife habitats may receive a secondary management emphasis in these areas.

Guidelines:

1. Habitat effectiveness should advance toward 50 percent or greater.
2. Maintain moderate size un-fragmented habitat patches (400 to 800 acres).
3. Target low to moderate densities of open motorized travel routes (approximately $\leq 2.5 \text{ mi/mi}^2$).

Objective W-4c – General Wildlife Emphasis: Provide habitat that contributes to species occurrence and distribution. Wildlife habitats typically are not the focus of management in these areas.

Guidelines:

1. Consider focused management effort to maintain or improve the condition of important habitat areas (i.e., nest sites of special status species or connectivity corridors of species of local importance)
2. When opportunities arise, employ management actions that will maintain or improve wildlife habitat conditions.

Objective W-4d – Jurisdictional Limitations: Provide habitat conditions that move toward primary or secondary wildlife management emphasis to the extent practicable within jurisdictional limitations.

Rationale:

Northwest, Tumalo, La Pine (Northern Area and Southern Area), Prineville Reservoir (Chimney Rock, Eagle Rock, West Eagle Rock, Taylor Butte and Reservoir North) and Prineville Geographic Areas are examples of geographic areas where guidelines for primary or secondary emphasis may not be achievable because of conditions (such as fragmented land ownership or occurrence of county/state roadways) outside of BLM jurisdiction. In those or other areas with similar conditions the guidance is to manage toward those objectives.

Guidelines:

1. During the development of management facilities (mineral sites, access roads, etc.) or infrastructure (trails) emphasize maintenance of relatively large un-fragmented habitat patches. The term “relatively large un-fragmented habitat patches” means the size of the patch is related to the size of the BLM parcel(s) in the area and the goal is to minimize the amount of human disturbance of wildlife and human influence on the physical condition of the habitat.
2. Non-motorized trail systems will be developed in a manner that leaves some un-fragmented areas across the geographic area.
3. Motorized travel routes will be kept to a minimum. Roads and driveways that access private land and are not needed for general public access may be gated to limit use only to land owners. Consider building roads and driveways to the minimum standard necessary that allows reasonable access and has the least impact on wildlife resources possible.

Direction for Specific Geographic Areas

Badlands WSA

Allocations/Allowable Uses:

1. Primary emphasis will be for deer and elk winter range, pronghorn year-round and connectivity habitats.

Guidelines:

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

Bend/Redmond Recreation Area

Allocations/Allowable Uses:

1. General wildlife emphasis for pronghorn year-round habitat and secondary wildlife emphasis for the potential pronghorn connectivity corridor located along Highway 126.
2. Consider managing the potential pronghorn connectivity corridor along Highway 126 to maintain a low to moderate level of motorized travel routes.

Cline Buttes Recreation Area

Allocations:

1. Main Block: General wildlife emphasis.
2. Southwest: Secondary emphasis for deer, elk and raptor habitats.
3. Southeast: General wildlife emphasis.
4. The Dry Canyon area south of State Highway 126 and east of Fryrear Road will be managed for secondary wildlife emphasis.
5. Maston allotment: Primary emphasis for elk, raptors and riparian habitat.

Horse Ridge Recreation Area

Allocations:

1. Primary emphasis for deer and elk winter range, sage grouse habitat and year-round habitat for pronghorn.

Guidelines:

See guidelines for Recreation Objective R – 3 and R – 4 for Horse Ridge area.

La Pine Recreation Area

Allocations:

1. Northern portion: Primary emphasis for elk winter range, deer migration corridor, ponderosa pine and riparian source habitats.
2. Isolated parcels along the Little Deschutes River: Primary emphasis for riparian habitats, deer migration, elk winter range and raptor nesting and foraging habitats.
3. Southern area: Primary emphasis for deer migration corridor, ponderosa pine and riparian source habitats.
4. Rosland OHV Play Area and area south and east of the Play Area: General emphasis.

Mayfield Pond Recreation Area

Allocations/Allowable Uses:

1. Main: Secondary emphasis for year-round pronghorn habitat and connectivity corridors.

2. South Alfalfa: Primary emphasis for deer and pronghorn year-round and connectivity habitats;

Guidelines:

1. North of Alfalfa-Market Road: Avoid actions in pronghorn connectivity corridors that create barriers to pronghorn movements and relocate the existing access road to Mayfield Pond away from the pond to improve habitat condition and decrease disturbance to wildlife.
2. South of Alfalfa-Market Road and west of Dodds Road: Avoid actions in pronghorn connectivity corridors that create barriers to pronghorn movements.

Millican Off-Highway Vehicle (OHV) Area

Millican Plateau OHV Area

Allocations/Allowable Uses:

1. Main: General wildlife emphasis except the Mayfield link (west side of the block north of Alfalfa) which has a secondary wildlife emphasis for pronghorn connectivity. Also See Objective MU-2, Allocations/Allowable Uses, 3. a.
2. Wild and Scenic River Corridor: Primary emphasis for deer and pronghorn winter range, and riparian and raptor nesting and foraging habitats.
3. West Butte: Primary emphasis for elk and sage grouse winter range and breeding habitat.
4. Northern Peninsula: About 800 acres Primary for pronghorn winter range.
5. Crooked River Rim: Primary wildlife emphasis for deer and pronghorn winter range, and raptor nesting and foraging habitats.
6. South: General wildlife emphasis.
7. Mayfield Link (west side of the block north of Alfalfa): Secondary for pronghorn connectivity routes.

Guidelines:

1. Winter closures of this area may be implemented during especially severe winter conditions upon request by ODFW. Such requests will be evaluated on a case-by-case basis.

North Millican OHV Area

Allocations/Allowable Uses:

1. Dry River Canyon: Primary emphasis for deer, elk and sage grouse.
2. Main (East and West): Primary emphasis for deer and elk winter range, sage grouse habitats and pronghorn year-round and connectivity habitats.

Guidelines:

1. Manage for habitat effectiveness (HE) of 50-60 percent for road influences and have concurrent (integrated) vegetation management goals to improve poor quality habitat conditions and maintain existing good quality habitat conditions.
2. Manage for a wide range of un-fragmented habitat patch sizes, with some as large as 1,000 acres, some smaller sizes in less effective habitats and some considerably larger in key habitat areas.
3. Avoid locating motorized trails within two to four miles of any active leks.
4. Through trail design provide some un-fragmented habitat patches of high value wintering habitat for deer and elk.
5. Seasonally close road/trail system to OHV and bicycle use within areas or on portions of the trail system.
6. Concentrate year round open trail areas in/near areas of lower value habitats.

7. Winter closures of this area may be implemented during especially severe winter conditions upon request by ODFW. Such requests will be evaluated on a case-by-case basis.

South Millican OHV Area

Allocations/Allowable Uses:

1. Primary emphasis for deer and elk habitat, sage grouse winter and breeding habitats, and year-round pronghorn habitat.

Guidelines:

1. Increase the size of habitat patches by permanently closing some trails and roads and rehabilitating them to natural vegetation.

Northwest Recreation Area

Allocations/Allowable Uses:

1. Primary emphasis for deer and elk winter range and raptor nesting and foraging habitats.

Prineville Geographic Area

Allocations/Allowable Uses:

1. Section 32 north of Ochoco Reservoir: Primary emphasis for deer winter range and raptor nesting and foraging habitats. The area will be closed to motorized travel. Other activities may be subject to seasonal restrictions or limitations on types of use depending upon their potential effects to deer and raptors (See Table 1).
2. Powell Buttes: Primary emphasis for year-round deer habitat.
3. Grizzly/Scattered Northern parcels: Primary emphasis for deer and elk; with remaining isolated parcels secondary to deer and elk.
4. Combs Flat: Secondary emphasis for deer and pronghorn winter range and year round habitat.
5. Miscellaneous Scattered Parcels: Some primary and some secondary emphasis for deer and year-round pronghorn habitat.

Prineville Reservoir Recreation Area

Allocations/Allowable Uses:

1. Eagle Rock: Primary emphasis for deer and elk winter range and elk connectivity habitat.
2. Lower Crooked River (W&S River): Primary emphasis for deer, riparian and raptor habitats.
3. Chimney Rock: Primary emphasis for deer winter range and raptor habitat.
4. West Eagle Rock: Secondary wildlife emphasis for deer winter range and year-round pronghorn habitat.
5. Main: Primary emphasis for deer and elk winter range, elk connectivity and raptor habitats.
6. Taylor Butte: Primary for deer and raptors.
7. Reservoir North: Primary emphasis for deer winter range, elk connectivity routes and raptor habitat.

Guideline:

1. When considering developing a motorized use area (see Recreation section), first consider locating it in secondary habitat emphasis areas. Consider primary habitat emphasis areas only if secondary are found unsuitable. Avoid the Eagle Rock area as well as the area adjacent to the north portion of the Prineville Reservoir Recreation Area.

Smith Rock Recreation Area

Allocations/Allowable Uses

1. Primary emphasis for deer winter range and raptor nesting and foraging habitats. See Table 1 for distance or seasonal restrictions that could be applied to climbing activities.

Steamboat Rock Recreation Area

Allocations/Allowable Uses:

1. 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.
2. Main Block: General emphasis.
3. River in Main Block: Primary emphasis for deer and elk winter range, raptors and riparian habitat.

Tumalo Recreation Area

Allocations/Allowable Uses:

1. Primary emphasis for deer and elk winter range.

Guidelines:

1. Consider limiting activities authorized under permit during the winter if necessary to manage for wintering deer and elk.

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 will 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. Property and natural and cultural resources are lower priorities.

The Review & Update of the 1995 Federal Wildland Fire Management Policy (USDI et al., 2001) 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 2000b) 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 (USDA, 2003) 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.

Allocations/Allowable Uses:

1. Use natural and human-created barriers (i.e., roads) as available for control lines.
2. Use of heavy equipment in ACECs, WSAs, and RNAs will 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 will be restricted to existing roads and trails. Use of retardant will be allowed within these areas for initial attack.

Guidelines:

1. Provide for an appropriate management response of initial attack and full suppression on all wildland fires.
2. Retardant use during extended attack will 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) outlines the process for implementing emergency fire rehabilitation projects following wildland fires and wildland fire use.

Allocations/Allowable Uses:

1. After prescribed burns or wildland fire, livestock grazing will typically be excluded through the second full growing season (see Livestock Grazing section for details).

Guidelines:

1. After a fire disturbance event which results in undesirable soil or plant conditions, review current uses including but not limited to recreation, rights of way and permitted uses to determine whether site has recovered sufficiently to support those uses without further degradation.
2. Emergency fire rehabilitation activities will be implemented after wildland fire. Separate environmental analysis will be completed only for emergency fire rehabilitation projects that are outside the scope of activities described in the burn rehabilitation plan.

Objective FF – 3: 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 that may contribute to extreme fire behavior.

Rationale:

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 (USDI et al., 2001) recognize fire's essential role as an ecological process.

Allocations/Allowable Uses:

1. Prescribed fire use will not be allowed within the plan area due to proximity to developed areas unless otherwise determined by site specific analysis.

Guidelines:

1. Subsequent analysis will identify conditions and potential locations for prescribed fires, as well as other factors pertaining to fire management in the RMP area.

2. Fuels treatments in non-WUI areas will be designed to restore acres currently in Fire Regime Condition Classes 2 and 3 where the probability of success is high and other resource objectives can be met. Fuel treatments, mostly in the form of prescribed burning, will be done in condition class 1 areas to maintain desired conditions and prevent these areas from progressing into condition class 2.
3. Vegetative treatments will be designed to break up treated and untreated areas in a mosaic effect to meet fire and vegetation management objectives.
4. After prescribed burns or wildland fire, livestock grazing will typically be excluded through the second full growing season (see details in Livestock Grazing section). Other temporary use restrictions, such as no off-road travel, may be imposed where warranted.
5. 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.
6. Prescribed fires will be conducted under fuel and weather conditions that allow for public and firefighter safety while meeting desired resource management objectives.

Objective FF- 4: In the wildland urban interface, live and dead vegetation will be managed so that a wildland fire would burn with fire behavior where firefighters can be safe and successful in suppression efforts under hot, dry summer weather conditions. Treatments will be designed for human safety while still considering recreation opportunities, wildlife habitat and corridors, visual quality, air and water quality, and public access.

Rationale:

The Healthy Forests Restoration Act of 2003, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A 10-Year Comprehensive Strategy (USDA et al., 2001), and the National Fire Plan (USDA et al., 2000) all emphasize the need to reduce hazardous fuels that pose a risk to Communities at Risk from the undesired effects of wildland fire.

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.

Allocations/Allowable Uses:

1. 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.
2. Wildland Urban Interface zones are designated as follows:
 - a. Forested Zones: up to 1.5 miles adjacent to Communities at Risk.
 - b. Rangeland/Woodland Zones: up to ½ mile adjacent to Communities at Risk.

Guidelines

Fuels Management in Forested Wildland Urban Interface Zones

1. For site specific planning, the forested WUI zone is subdivided into three bands with treatments designed to give desired fire behavior given 90th percentile (extreme) summer weather conditions. The actual width of these three bands and treatment prescriptions will 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.
2. The first band, nearest to homes and private property, will managed for conditions

that will not support crown fire, and will only allow for surface fires with flame lengths of less than 2 feet under average weather conditions.

3. Treatments in the second band will 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.
4. Treatments in the third band, farthest away from homes, will be designed to reduce the occurrence, size, and severity of crown fires by breaking up fuel continuities and limiting ladder fuels. Most wildland fires will be limited to surface fires less than 4 foot flame lengths under average weather conditions, with opportunities for limited passive crown fire (occasional ignition and torching of individual or small groups of overstory trees). Stand replacement fires will be a rare occurrence. Crown fire approaching this zone will fall from the tree canopy to the forest floor in this area due to lack of horizontal and vertical fuel continuity. Treatment objectives will 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.
5. Prescribed fire in the WUI will 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

6. As in forested areas, the actual width and treatment prescriptions of two treatment bands will vary according to site-specific conditions.
7. The first band may be 500 to 600 feet wide. Approximately 50 to 70 percent of the area within this band will be treated to prevent crown fires and keep surface fuel flame lengths in the 1 to 2 foot range.
 - a. Brush treatments will be initiated when shrub canopy exceeds 50 percent or is greater than 2 feet in height.
 - b. Thinning in this area will favor leaving older juniper (greater than 150 years old) and removal of younger trees.
 - c. All naturally occurring juniper snags will be left within this band. An exception to this is snags less than 6 inches diameter at breast-height (dbh) in a fire-killed juniper stand. In this case dead trees will be reduced to a density of 5 to 7 trees per acre.
 - d. No hazard trees will be left within reach of property, roads or other facilities.
8. The second band will be 600 feet to 1/2 mile wide. Treatments will be designed to reduce the occurrence, size, and intensity of fires by breaking up fuel continuities and limiting ladder fuels.
 - a. Wildland fires will be limited to surface fires with flame lengths of 3 to 4 feet.
 - b. Crown fires will 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.
 - c. Juniper less than 150 years old will occur in small clumps where needed for hiding cover, and will be discouraged elsewhere.
 - d. Most of the old juniper will be left.
 - e. Treatment objectives will 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 will be emphasized.
 - f. Prescribed fire will 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 Wildland-Urban Interface (WUI)

9. The COFMS Fuels Management Priority Framework guides fuels project priorities in the wildland urban interface by considering the potential for damaging fire behavior, economic opportunities, community involvement, values at risk, and the condition of vegetation and fuels. 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:
 - a. The community is physically close to federal lands, with structures or other improvements within 1 mile of BLM administered lands.
 - b. 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.
 - c. Adjacent BLM administered lands exhibit heavy fuel loading and high potential for crown fire or fast moving surface fire at the average weather conditions, especially if those fuels are "upwind" given the dominant summer wind directions.
 - d. Adjacent BLM administered lands 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

10. 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.
11. Reduction of hazardous fuels in the WUI may increase conflicts between recreational users and adjacent landowners, increase incidents of unauthorized use, and could 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 administered 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:
 - a. Information sharing, including posting of signs and working with the adjacent homeowners to enlist their support for appropriate use of BLM administered land.
 - b. 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
 - c. 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.
 - d. 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 administered land through the treated area.

Special Management Areas

Special Management Areas within the Upper Deschutes Planning Area include Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), Wilderness Study Areas (WSAs), Wild and Scenic Rivers (WSRs), 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 Upper Deschutes Wild and Scenic River and State Scenic Waterway Comprehensive Management Plan (USDA-FS, 1996) and the Middle Deschutes and Lower Crooked Rivers Management Plan (USDI-BLM and USDA-FS, 1992) prepared since the adoption of the B/LP RMP.

Most of the planning area is designated as a Special Recreation Management Area. For a description of this designation, see the Recreation section, planning area wide direction.

Areas of Critical Environmental Concern (ACEC)

ACECs are areas designated for special management. In the Upper Deschutes area, some ACECs have additional overlying designations. These include two RNAs (which are also ACECs) and the Badlands WSA (a portion of which is also an ACEC). Objectives SMA – 1 and SMA – 2 apply to all ACECs; Objectives SMA – 1a, 1b, 1c, and 1d are additional guidance specific to individual ACECs.

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 will not impair the values for which the ACEC was designated.

Rationale:

Under the 1976 Federal Land Policy and Management Act (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, fish and wildlife resources, or other natural systems or processes, or to protect public health and safety from natural hazards. By BLM policy, every RNA is also designated as an ACEC.

Allocations/Allowable Uses:

1. The following areas are designated as ACECs:
 - a. Badlands – 16,684 acres (note: this ACEC includes some but not all of the Badlands WSA).
 - b. Peck's Milkvetch – 14,075 acres.
 - c. Tumalo Canals – 1,055 acres.
 - d. Wagon Roads – 982 acres.
 - e. Horse Ridge RNA – 609 acres (note: this area is also an Instant Study Area or ISA).
 - f. Powell Butte RNA – 510 acres.
2. Unless specifically addressed in other guidance, uses that will not impair the values for which the ACEC was designated will be allowed.

Guidelines:

1. Establish baseline conditions for ACEC values and monitor for trends in the condition of those values. If declining conditions are observed, identify and take action to mitigate the cause(s).
2. Evaluate proposed uses within ACECs to determine whether those values for which the ACEC was designated would be adversely affected. Evaluations should consider the context, intensity, and duration of modifications to resource conditions that contribute to the ACEC values.
3. If an ACEC value will be adversely affected by a proposed but not prohibited use, seek modifications that will mitigate the adverse effects.

Objective SMA – 1a: Continue designation of the core Badlands area as an ACEC to provide for continued protection if the WSA designation is dropped by Congress.

Rationale:

The continuing designation of the Badlands as a WSA is not within the authority of the BLM. Congress can designate this area as a wilderness or release this area for other uses. If the WSA designation is dropped by Congress, the BLM will continue to apply ACEC designation to provide protection for old growth juniper, geologic formations, pictographs, and primitive recreation opportunities.

Allocations/Allowable Uses:

1. **ACEC Area:** 16,684 acres are designated as an ACEC.
2. **General:** See Badlands WSA. If the Badlands WSA designation is discontinued, the allocations/allowable uses and guidelines for the Badlands WSA will continue to apply to the Badlands ACEC, except a) those specific to the interim policy (USDI-BLM, 1995) for lands under wilderness review would not continue, and b) the closure to mineral leasing would change to a closure to surface occupancy within the ACEC. ACEC protection for old growth juniper, geologic formations, pictographs, and primitive recreation opportunities would continue. The ACEC designation will be removed if the Badlands is designated as a wilderness area.

Objective SMA – 1b: Manage land uses and other activities so as to not impair Peck’s milkvetch (*Astragalus peckii*) populations or its habitat.

Rationale:

The ACEC encompasses the central known habitat for Peck’s milkvetch (*Astragalus peckii*), a Federal candidate plant. The high levels of public use of the area pose potential threats to this species.

Allocations/Allowable Uses:

1. **ACEC Area:** 14,075 acres are designated as an ACEC.
2. **Fire Management:** Unless life or property is threatened, off-road use of fire suppression vehicles will not be allowed and fire lines will be limited to hand lines only. Prescribed burning will be allowed.
3. **Vegetative Treatments:** Treatments designed to maintain or enhance Peck’s milkvetch populations or its habitat will be allowed.
4. **Forest and Range Products:** Generally, harvesting of wood products will not be allowed except in conjunction with restoration treatments or if it does not impair the values of this ACEC.
5. **Minerals:** Rockhounding and the collection of decorative stone will not be allowed. Mineral material mining, development of mining claims, and geophysical exploration will be restricted as necessary based on site-specific analysis to protect the special values of this ACEC. Approved plans of operation will have stipulations to protect special values. Surface occupancy for fluid mineral leasing will not be allowed.
6. **Livestock Grazing:** Livestock grazing will continue to be allowed under a deferred rotation system, but deferment will be until Peck’s milkvetch dormancy (usually mid-August) at least every other year.
7. **Recreation:** See Recreation sections for additional area guidance.
8. **Firearm Discharge:** No allocations/allowable uses specific to this ACEC. See Public Health and Safety sections for area guidance.
9. **Rights-of-Way:**
 - a. New rights-of-ways (ROWS) will be granted only if no other reasonable route is available. Where new ROW cannot be reasonably accommodated outside of ACECs, consider first along existing utility corridors, county roads, or BLM system roads.
 - b. A vacated ROW will be considered for conversion to compatible trails prior to obliteration.

10. **Land Ownership:** Recreation and Public Purposes Act (R&PP) leases will not be issued for lands within the ACEC unless such leases are non-patent leases that will not impair the values of the ACEC.

Objective SMA – 1c: Protect and maintain the integrity of the identified relic, historical Tumalo Canal segment and associated features, and provide for their use as an interpretive resource. Manage land uses, recreation, and other activities to maintain or enhance the archaeological and interpretive values of the Tumalo Canals.

Rationale:

The relic canal system was developed during the first decade of the twentieth century and represents an excellent example of efforts to provide irrigation water to the high desert during the early settlement period of central Oregon. Integrity and significance of the identified canal segment has been assessed by a BLM archaeologist and is considered eligible to the National Register of Historic Places by the State Historic Preservation Office.

Allocations/Allowable Uses:

1. **ACEC Area:** 1,055 acres are designated as an ACEC, containing a portion of the historic Tumalo irrigation canals. The ACEC is managed with an emphasis on interpretation of the historic values.
2. **Fire Management:** Fire lines will not be constructed on or adjacent to the canal features and surface disturbance will be kept to the minimum amount necessary.
3. **Vegetative Treatments:** Treatments that will not impair historical and interpretive values will be allowed.
4. **Forest and Range Products:** Generally, harvesting of wood products and special forest and range products will not be allowed except in conjunction with restoration treatments or if the values of the ACEC will not be impaired.
5. **Minerals:**
 - a. Mineral material mining will not be allowed in the south ½ sections 29 and 30 and the north ½ of sections 31 and 32 of T15S, R12E to protect the canal features and interpretive values. Surface occupancy for fluid mineral leasing will not be allowed within the ACEC boundary.
 - b. Plans of operation will be required prior to any development of mining claims. Approved plans of operation will have stipulations to protect the interpretive and historical values of this ACEC.
 - c. Rockhounding and the collection of decorative stone will not be allowed in the ACEC.
6. **Livestock Grazing:** Not allowed within the core area around the canal features.
7. **Recreation:**
 - a. Overnight use, campfires, geocaching and use of paintball guns will not be allowed within the core area around the canal features. The core area will be designated during plan implementation.
 - b. Motorized, mechanized, and equestrian uses will be restricted to designated trail systems throughout the ACEC.
8. **Firearm Discharge:** The entire ACEC will be closed to all firearm discharge.
9. **Rights-of-Way:**
 - a. New rights-of-ways (ROWs) will be granted only if no other reasonable route is available. Where new ROW cannot be reasonably accommodated outside of the ACEC, consider first along existing utility corridors, county roads, or BLM system roads.
 - b. A vacated ROW will be considered for conversion to compatible trails prior to obliteration.
10. **Land Ownership:** Recreation and Public Purposes Act (R&PP) leases will not be issued for lands within the ACEC unless such leases are non-patent leases that will not impair the values of this ACEC.

Guidelines:

1. Pursue opportunities to form partnerships between the BLM and interested parties to develop a pedestrian interpretive trail in the approximately 433-acre area of the ACEC that comprises the relic canal system.
2. Consider fencing and/or signing the area that includes the relic canal system following site-specific analysis.
3. Consider designation of equestrian and mountain bike trails at the minimum density necessary to provide trail links between BLM lands on eastern slope of Cline Buttes and east of Cline Falls Highway with BLM lands west of Barr Road.
4. Emphasize restoration/enhancement projects to improve native plant communities, old-growth juniper woodlands, and habitat for raptors, neo-tropical birds and threatened, endangered or other special status plants and animals. Long-term vegetation maintenance will be designed to emulate natural processes.

Objective SMA – 1d: Protect and maintain the segments of the historic Horner, Huntington and Bend-Prineville roads designated as an ACEC. Manage land uses, recreation, and other activities to maintain or enhance the archaeological and interpretive values of these roads.

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 ACEC also contains relatively intact segments of historic Bend-Prineville Road and Horner Road, and various historic features associated with these two roads and with the Huntington Road segment. 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 this ACEC are considered eligible for inclusion to the National Register of Historic Places, based on assessments by archaeologists employed by the BLM and in the private sector.

The high levels of public use in the area pose potential threats to the integrity of this feature; therefore the ACEC designation has been determined relevant.

Allocations/Allowable Uses

1. **ACEC Area:** The Wagon Roads ACEC contains approximately six miles of the Historic Horner Road and approximately five miles of the historic Bend -Prineville Road, including a 300 ft. distance on each side of these road segments (see RMP Map 1). The ACEC totals about 982 acres.
2. **Fire Management:** Wildland fire will be fought aggressively if within, or threatening the ACEC. Fire lines will not be constructed within the ACEC and surface disturbance will be kept to the minimum amount necessary. Prescribed fire will not be allowed.
3. **Vegetative Treatments:** Vegetative treatments designed to maintain or enhance the values of this ACEC will be allowed.
4. **Forest and Range Products:** Generally, harvesting of wood products and special forest and range products will not be allowed except in conjunction with restoration treatments or if it is consistent with the values of the ACEC. Firewood cutting will not be allowed.
5. **Livestock Grazing:** Livestock grazing and associated developments will be allowed provided that livestock are not allowed to concentrate in the ACEC and developments do not impair ACEC values.
6. **Military Use:** Tracked military vehicles will not be allowed on the protected road segments. Locations where tracked vehicles may cross the historic roads have

been, or will be in the future, determined in consultation with the Oregon Military Department.

7. **Minerals:**
 - a. An area one-half mile on each side of the historic roads will be closed to mineral material mining and surface occupancy for fluid mineral leasing.
 - b. Geophysical exploration will be allowed if the values of this ACEC will not be impaired.
 - c. Plans of operation will be required prior to development of mining claims. Approved plans of operation will have stipulations to protect the interpretive and archeological values of this ACEC.
 - d. Rockhounding and the collection of decorative stone will not be allowed.
8. **Recreation:**
 - a. The ACEC will be closed to overnight use, campfires, use of paintball guns, and geocaching.
 - b. OHV use will be allowed on designated trails within the 300 foot area on each side of each road (except the southernmost segment which is designated closed, see RMP Maps 1 and 12) to the extent necessary to create safe and maintainable trail crossings. OHV trails that parallel the historic roads will be located beyond 300 feet from each side of the road to the maximum extent feasible. Guidelines for the issuance of Special Recreation Permits (SRPs) are in the Recreation section.
9. **Firearm Discharge:** Will not be allowed within the fence enclosure that surrounds the segment of Huntington Road in Section 1.
10. **Rights-of-Way:**
 - a. New rights-of-ways (ROWs) will be granted only if no other reasonable route is available. Where new ROW cannot be reasonably accommodated outside of the ACEC, consider first along existing utility corridors, county roads, or BLM system roads.
 - b. A vacated ROW will be considered for conversion to compatible trails prior to obliteration.
11. **Land Ownership:** Recreation and Public Purposes Act (R&PP) leases will not be issued for lands within the ACEC unless such leases are non-patent leases that will not impair the values of this ACEC.

Guidelines

1. Protect and preserve the integrity of identified segments of historic Huntington, Horner, and Bend-Prineville roads, its associated rock features, and blazed trees from BLM authorizations and actions.
2. Revise boundaries to reflect modifications to the ACEC.
3. Emphasize partnerships for interpretive development and educational products for the ACEC.
4. As funding permits, pursue opportunities to form partnerships between the BLM and interested parties to develop an interpretive pedestrian trail system along segments of the historic roads.
5. Complete a cultural resource survey and documentation of the historic road segments and their associated features.
6. Continue a site stewardship program with the Archaeological Society of Central Oregon (ASCO) to monitor the condition of the ACEC.
7. Continue the partnership with Deschutes County Historical Society for interpretive development and educational products for the ACEC.
8. Periodically assess the condition of the ACEC.
9. Periodically examine the fence that surrounds Section 1 in which the ACEC is located. Coordinate with grazing permittee to mend segments of the fence as necessary.

Objective SMA – 2: Provide public information concerning ACECs (boundaries, management guidelines, reasons for designation, etc.) to increase public awareness of the location and importance of specific ACEC values.

Guidelines:

1. Identify perimeter and locations of ACECs
2. Improve public understanding of ACEC values through methods including but not limited to websites, maps and brochures, signing, field tours, and news releases.
3. Develop programs to increase adoption and other volunteer stewardship activities

Research Natural Areas (RNA)

Objective SMA – 3: 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 Horse Ridge RNA provides representation of the western juniper/big sagebrush/threadleaf sedge community, filling the cell need for this community as identified in the Oregon Natural Heritage Plan (Oregon Department of State Lands, 2003).

The Powell Buttes RNA provides representation of the western juniper/big sagebrush/bluebunch wheatgrass and juniper/bunchgrass communities, primarily on a south slope, filling the cell needs for these communities as identified in the Oregon Natural Heritage Plan.

Allocations/Allowable Uses:

1. **RNA Areas:** Continue designation of the 609-acre Horse Ridge RNA/Instant Study Area (ISA) and 510-acre Powell Buttes RNA.
2. **Vegetative Treatments:** Vegetative treatments other than restoring or maintaining characteristic disturbances to meet the purposes of the RNA will not generally be allowed. RNA management strategies or site specific projects may determine whether activities are suitable to further the purpose of the RNA. See the Horse Ridge ACEC/RNA Natural Area Management Plan (USDI-BLM, 1996) for management direction for introduced plant species.
3. **Fire Management:** Consistent with the District’s Fire Management Plan, prescribed fire will be allowed as well as suppression activities, provided restrictions or stipulations are designed to maintain or enhance natural vegetation communities. Fire management direction provided in the Horse Ridge ACEC/RNA Natural Area Management Plan (USDI-BLM, 1996) will continue to apply.
4. **Special Forest and Range Products:** Generally, harvesting of wood products and special forest and range products will not be allowed. See the Horse Ridge ACEC/RNA Natural Area Management Plan (USDI-BLM, 1996) for additional management direction.
5. **Minerals:**
 - a. Plans of operation must be submitted and approved prior to any development of mining claims in the Powell Butte RNA. Approved plans of operation will have stipulations to protect the values of this RNA.
 - b. The Horse Ridge RNA area is withdrawn from locatable mineral entry under the 1872 mining laws.
 - c. Surface occupancy for fluid mineral leasing will not be allowed. Geophysical exploration will be restricted to protect the natural values for which the RNA was designated.
 - d. Rockhounding and the collection of decorative stone will not be allowed.
6. **Livestock Grazing:** Will not be allowed.

7. **Recreation:** Both RNAs will be closed to overnight use, OHV use, mechanized travel, campfires, geocaching and the use of paintball guns.
8. **Firearm Discharge:** Both RNAs will be closed to firearm discharge unless legally hunting.
9. **Rights-of-way:** New rights of way will not be allowed.
10. **Land Ownership:** Recreation and Public Purposes Act (R&PP) leases will not be issued for lands within either RNA unless such leases are non-patent leases that will not impair the condition of natural plant communities.

Guidelines:

1. The Horse Ridge RNA is also an Instant Study Area (ISA) and will be managed in accordance with the "Interim Management Policy for Lands under Wilderness Review" (USDI-BLM, 1995).

Wilderness Study Areas

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

Rationale:

Steelhead Falls and Badlands WSAs are existing WSAs located in the planning area. The BLM is required to maintain the suitability of these WSAs for possible future wilderness designation by Congress (H-8550-1). 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 administered 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. There are ongoing occurrences of vandalism to cultural resources, and theft of firewood, furniture wood and decorative stone in the Badlands WSA.

Allocations/Allowable Uses:

1. **WSA Area:** Badlands WSA, 29,545 acres⁶; Steelhead Falls WSA, 3,071 acres.
2. **Fire Management:** Prescribed fire and suppression activities will be allowed consistent with the District's Fire Management Plan and with the non-impairment standard of the "Interim Management Policy for Lands under Wilderness Review" ("IMP", USDI BLM, 1995).
3. **Vegetative treatments:** Treatments will be allowed that meet the non-impairment standard of the IMP.
4. **Forest/range products:** Generally, harvesting of wood products and special forest and range products will not be allowed except in conjunction with restoration treatments.
5. **Minerals:**
 - a. Mining for mineral materials will not be allowed.
 - b. Development of mining claims and geophysical exploration may be allowed with restrictions designed to prevent impairment of wilderness suitability. Approved plans of operation must meet the non-impairment standard of the IMP.
 - c. The Badlands WSA designation closes the area to mineral leasing. If the WSA designation is dropped, mineral leasing will be allowed in the Badlands ACEC but the area will be closed to surface occupancy.
 - d. Decorative stone collection will not be allowed.
 - e. Rockhounding will not be allowed.

⁶The 29,545 acres published here is less than the 32,221 published in the past. There have been no changes in the WSA boundary or reduction in the area within the boundary. The change is the result of utilizing new techniques for determining the acreage within the boundary.

6. **Livestock Grazing:** Livestock grazing will be managed according to the non-impairment standards of the IMP.
7. **Recreation:** Motorized vehicle use will not be allowed. The use of paintball guns is not allowed (also see Recreation section).
8. **Firearm Discharge:** Firearm discharge will not be allowed unless legally hunting. Within ¼ mile of Badlands Rock, there is a seasonal closure to all firearm discharge.
9. **Rights-of-Way:**
 - a. New rights-of-ways (ROWs) will be granted only if no other reasonable route is available. Where new ROW cannot be reasonably accommodated outside of the WSA, consider first along existing utility corridors, county roads, or BLM system roads.
 - b. Vacated ROWs will be considered for conversion to compatible trails prior to obliteration.
10. **Land Ownership:** Recreation and Public Purposes Act (R&PP) leases will not be issued for lands within the WSA unless such leases are non-patent leases that will not impair the values of this WSA.
11. All Wilderness Study Areas recommended to Congress maintain that designation unless Congress decides otherwise.
12. Additional management direction for the Steelhead Falls WSA is provided in the Middle Deschutes/Lower Crooked River Management Plan (USDI-BLM and USDA-FS, 1992).

Guidelines:

1. Survey and locate boundaries of each WSA on the ground.
2. Use signs, fences and other appropriate techniques to define and mark the boundaries of each WSA.
3. Vegetation management efforts will be designed to mimic natural processes and avoid impairment of the area's suitability for wilderness designation.
4. Geocaching will be managed in the Badlands and Steelhead Falls WSAs so as to not impair each area's suitability for wilderness designation by Congress. Within these WSAs, geocaches will not be allowed in areas that are closed year-round or seasonally for wildlife management reasons.
 - a. The BLM may request removal of geocaches located in sensitive locations or impairing wilderness characteristics. The BLM may remove caches as needed to maintain wilderness suitability or protect resources. These may include locations within or adjacent to sensitive wildlife habitat, wildlife water guzzlers, sensitive or special status plant communities, or archeological sites.
 - b. Caches in locations where the use creates obvious surface disturbance of the soil or vegetation, including vegetative trampling, that will necessitate reclamation will be relocated or removed. Geocaches must be concealed in a way that does not disturb an area, and will not require damage to vegetation to reveal the cache. Concealment of geocaches by burial in the ground is prohibited.
 - c. To prevent degradation to wilderness characteristics, the total number of caches allowed at any one time in the WSAs will be limited to no more than the number known to exist on the date that this provision was crafted (i.e., 17 in the Badlands WSA and 3 in the Steelhead Falls WSA). Given the larger area and more dispersed, open setting, the threshold of geocache sites in the Badlands is greater than the much smaller river canyon setting of Steelhead Falls WSA.
 - d. A record of repeated violations of the above provisions, of instances where BLM must relocate or remove caches, or of increasing disturbance to wilderness characteristics and other special wilderness features from geocaching activities will result in either closure of the entire WSA to physical geocaching or in development of an alternative restriction on geocaching activities designed to remedy the problem, and to be determined by the authorized officer.
 - e. If either WSA becomes designated as Wilderness, the geocaching provisions described above will be reviewed during the development of the required

Wilderness Management Plan. The geocaching provisions described above for the WSA could be revised, if necessary, at that time.

Caves

The guidance provided under Objective SMA - 5 applies to all nominated/significant caves. Objectives SMA - 5a and SMA - 5b apply only to the caves specified.

Objective SMA - 5: Manage caves nominated for significance or determined significant with an emphasis on education, research, and protection of cave resources while providing for public use opportunities.

Rationale:

A number of caves within the planning area have been nominated as "significant" under the Federal Cave Resources Protection Act of 1988 (FCRPA, 1988). The act directs the agency to a) Secure, protect, and preserve significant caves on Federal lands for the perpetual use, enjoyment, and benefit of all people; and b) 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. BLM Washington/Oregon Policy directs the BLM to manage significant caves or nominated caves in accordance with the provisions of the FCRPA and interim Cave Management Policy. The following caves within the planning area have been determined "significant" under FCRPA, (year of determination in parentheses):

- Horse Butte Indian Cave (1995)
- Pictograph (Stout) Cave (1995)
- Redmond Cave (1995)

Allocations/Allowable Uses:

1. Recreational or other human activities are allowed in caves consistent with protecting other cave resource values.
2. 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 will act to protect these resources.
3. On public lands administered by the BLM, no new surface disturbing activities will 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.
4. Acts that are not allowed in significant/nominated caves:
 - a. Willfully defacing, removing, or destroying plants or their parts, soils, rocks, minerals, or other cave resources.
 - b. Smoking.
 - c. Possessing, discharging, or using any kind of fireworks or other pyrotechnic devices.
 - d. Possessing a domestic animal.
 - e. Depositing or disposing of human waste.
 - f. Digging, excavation, or displacement of natural and/or cultural features.
 - g. Entering without written authorization, if required.
5. **Vegetative Treatments:**
 - a. Trees will not be harvested in a 150-200 ft radius around cave entrances and feeder drainages with slopes greater than 30 degrees.
 - b. Clearing of vegetation, except for noxious weeds, will not be allowed within 250 feet of the entrance to caves with significant populations of bats.
 - c. Similar buffers will be maintained around direct drainages into caves, including sinkholes, cave collapse areas known to open into a cave's drainage system, and perennial, intermittent, or ephemeral streams flowing into caves.

6. **Forest and Range Products:** Follow Allocations/Allowable Uses listed above for Vegetative Treatments.
7. **Minerals:** An area ½ mile from the entrance and ½ mile on each side of the centerline along the length of any significant/nominated cave will be closed to mining for mineral materials and surface occupancy for fluid mineral leasing.
8. **Livestock Grazing:** Not applicable.
9. **Recreation:**
 - a. Access to all Significant/nominated Caves will be restricted to foot access only.
 - b. Group and commercial use:
 - i. Group and commercial use of caves will be allowed only under Special Recreation Permit authorizations, and must comply with seasonal restrictions and provisions of the FCRPA.
 - ii. In Pictograph Cave, limit group size to no less than six and no more than eight people at one time (group leader(s) included), and no more than one tour per cave per day (group and commercial use combined).
 - c. The following acts are not allowed in nominated/significant caves:
 - i. Building, maintaining, attending, or using any fire, campfire, or stove.
 - ii. Camping or overnight use.
 - iii. Mountain bike, horse, or motor vehicle use.
 - iv. Use and possession of chalk or hand drying agents for climbing which are not natural appearing.
 - v. Geocaching.
 - vi. Possession and use of paintball guns.
 - vii. Possession and use of alcoholic beverages as defined by state law.
 - viii. Use of glass containers.
10. **Firearm Discharge:** Discharging a firearm, air rifle, or gas gun will not be allowed.
11. **Rights-of-way:** New rights-of-way will not be granted within ½ mile of entrance(s) to any significant/nominated cave unless no reasonable alternative routes are available. Where new ROW cannot be reasonably accommodated outside of the ½-mile buffer, consider first along existing utility corridors, county roads, or BLM system roads.

Guidelines:

1. Determine significance for nominated caves according to the following FCRPA criteria (43 CFR Part 37.11(c)):
 - a. **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.
 - b. **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.
 - c. **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.
 - d. **Hydrologic:** The cave is part of a hydrologic system or contains water that is important to humans, biota, or development of cave resources.
 - e. **Recreational:** The cave provides or could provide recreational opportunities or scenic values.
 - f. **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.
2. Survey nominated and potentially significant caves under BLM jurisdiction to determine significance. Periodically update list of significant caves based on results.
 3. As funding permits, develop a management plan for each significant cave, including an inventory and mapping of cave resources, research and monitoring programs, and if necessary, a clean-up or rehabilitation program.
 4. 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.
 5. For caves with designated parking areas, provide signs with cave information, cave etiquette and leave no trace information.
 6. Where appropriate, locate sign to minimize advertisement of the cave location, and to provide information to those who already know the cave's location.
 7. Maintain current native plant populations or rehabilitate denuded areas at cave entrances by encouraging foot traffic in designated areas only (mark entry trails).
 8. Provide multi-agency consistency with seasonal closure periods. Hibernacula closure dates will be approximately October 15 to May 1, and maternity closure dates will be April 15 to September 30.

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

Allocations/Allowable Uses:

1. **Vegetative Treatments:** Emphasize restoration/enhancement projects to improve native plant and animal communities. Where feasible, vegetation maintenance will be designed to emulate natural processes.
2. **Recreation:** The following activities that are not allowed within significant/nominated caves will also not be allowed in all of the 40-acre Redmond Caves Parcel:
 - a. Motorized and mechanized vehicles.
 - b. Campfires.
 - c. Overnight use, except under permit.
 - d. Geocaching.
 - e. Paintball use.
 - f. All firearm discharge.
3. **Minerals:** Rockhounding and the collection of decorative stone will not be allowed within the 40-acre Redmond Caves Parcel.

Guidelines:

1. In partnership with the City of Redmond, continue to pursue the development of the 40 acre parcel into a "natural" community park.
2. Fence the area and designate a parking area.
3. Provide for marked and signed foot trails.
4. Work with the City of Redmond, local Tribes, and interested parties to develop the interpretive component of the future community park.
5. If portions of the Redmond Caves lava tube system are found to be suitable habitat for Townsend's big-eared bat, consider excluding human uses from some portion of caves.

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 will be oriented toward interpretive and educational opportunities.

Allocations/Allowable Uses:

1. Recreation:
 - a. Bolted climbing routes will not be allowed.
 - b. Pictograph Cave will be closed seasonally (October 15 – May 1) for bat hibernacula.

Guidelines:

1. Manage cave access for hike-in visitation only. No developed or designated roads or trails will be built to provide access to the cave site. No designated parking area will be provided.
2. Place signs at the cave informing visitors of cave management policy.
3. Remove all existing bolts and climbing hardware and manage the cave under Leave No Trace principles.

Land Uses

Livestock Grazing

Objective LG - 1: Promote healthy sustainable rangelands, provide for continued livestock grazing, and limit conflicts between livestock grazing and other uses and values of public land and adjacent private land.

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; and, among other things, to provide for improved forage conditions to benefit wildlife, watershed protection and livestock production. 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.

Prineville District BLM policy, based on the Emergency Fire Rehabilitation Handbook (BLM Manual Handbook H-1742-1), typically calls for exclusion of livestock grazing through the second full growing season after fire.

In 1997 the Oregon/Washington BLM adopted The Standards for Rangeland Health and Guidelines for Grazing Management ("The Standards", USDI 1997), and incorporated the Standards into existing land use plans. The Standards meet the intent of 43 CFR 4180 (the rangeland health regulations). The Standards direct the BLM to modify 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.

During the planning process, public comments urged the BLM to modify or discontinue grazing in sensitive areas, critical plant/animal habitats, and areas not grazed in many years. Livestock grazing permittees who rely on public lands also expressed continued concerns about the difficulty of managing allotments in areas adjacent to resorts and residential areas, and in areas of high recreation uses. BLM management direction is to reduce threats to public health, safety, and property as well as to provide guidance for grazing management.

Allocations/Allowable Uses:*General Uses*

1. Allow livestock grazing that allows upland soils, riparian-wetland areas, ecological processes (nutrient cycling, energy flow, hydrologic cycle), and water quality to support healthy, diverse and productive populations and communities of native plants and animals.
2. Allow prescribed livestock grazing to control weeds, reduce fire danger, or accomplish other management objectives, regardless of parcel status (including active, vacant, RFA, or area of discontinued grazing).
3. Livestock grazing will not be allowed in the fenced area around Mayfield Pond, after an alternate water source for livestock is established.
4. Additional direction for livestock grazing in Peck's milkvetch ACEC is described in the Special Management Areas section.
5. After a disturbance event (such as wildland fire, prescribed burns, timber management treatments, juniper cuts, rehabilitation seedings), livestock grazing will typically not be permitted the remainder of the calendar year, and through the growing season of the next year. After fire, livestock grazing will typically be excluded through the second full growing season. Interdisciplinary review will be necessary to approve exemptions to this guidance, to resume grazing after disturbances, and to allow grazing as a tool, as described in a, b, and c, below.
 - a. Exemptions: Livestock grazing may continue in pastures if the disturbance event does not result in undesirable soil or vegetative conditions. Livestock exclusion after disturbance events will also not be required if livestock will not be trailed through the affected area, and attractants (e.g., water, supplemental feed, salt) are not provided within one mile. Attractants may be closer than one mile if physical barriers (e.g., rimrock, fences) will prevent livestock access to the affected area. Other exceptions will be for cases where such grazing will either not impede site recovery, or where livestock are used as a tool to aid in achieving certain recovery objectives (such as cheatgrass control).
 - b. Resuming grazing: Livestock grazing will be excluded until determination that soil and vegetation have recovered sufficiently from the initial disturbance to support livestock grazing.
 - c. Livestock as a tool: Prescribed or permitted livestock grazing may occur any time after disturbances in pastures containing affected areas if an interdisciplinary team designs and monitors the grazing to accomplish resource objectives (e.g. to control noxious weeds, or assist in getting broadcast seeds worked into the soil).
5. Continue to allocate AUMs as shown in B/LP RMP (USDI-BLM, 1989) and subsequent Rangeland Program Summaries.
6. Up to about 4,700 additional animal unit months (AUMs) may be allocated in the La Pine area as a result of increased forage production following timber treatments, on a temporary, non-renewable basis, and only if supported by monitoring and subsequent analysis by an interdisciplinary team. Make these AUMs available first for wildlife and riparian objectives, and then to livestock grazing. This amount of AUMs is adjusted from B/LP RMP – see explanation in Chapter 3 Livestock Grazing section in the Upper Deschutes Proposed RMP/FEIS (USDI-BLM, 2005).

Allotment Classification

7. The "Grazing Matrix Classification" column in Appendix G shows areas available for livestock grazing. Allotments are listed in one of several categories: "Open," "If permit is relinquished (IPR), Open or create Reserve Forage Allotment (RFA)", "IPR, create RFA," "IPR, Close or create RFA," "IPR, Close" or "Close." Some of these categories allow manager discretion (ones with "or"). See explanation of RFA below under guidelines.

8. Livestock grazing will continue to be allowed for allotments in the "Open" category on the Grazing Matrix (Table 3). See section below on "Using the Grazing Matrix" for instructions on how to rate allotments, and see Table 4 for allotments' raw scores on each factor. Currently about 90 allotments (75 percent) of the allotments are in the "Open" category.
9. Livestock grazing will continue be allowed under permit or as an RFA for allotments falling in the "IPR, Open or Create RFA" category on the Grazing Matrix if the grazing permittee voluntarily relinquishes his or her grazing permit.
10. Allow livestock grazing as an RFA for allotments falling into the "IPR, Create RFA" category if the grazing permittee voluntarily relinquishes his or her grazing permit.
11. Livestock grazing will not be allowed under permit but may be allowed as an RFA for allotments falling into the "IPR, Close or Create RFA" category if the grazing permittee voluntarily relinquishes his or her grazing permit.
12. Livestock grazing will not be allowed for allotments falling in the "IPR, Close" category if the grazing permittee voluntarily relinquishes his or her grazing permit.
13. Livestock grazing will not be allowed for allotments falling in the "Close" category.
14. All areas currently closed to livestock grazing will stay closed (all unallotted areas in northern planning area).

Guidelines:

1. Involve diverse interests in rangeland assessment, planning and monitoring.
2. Conduct monitoring using a qualitative method of assessment to identify critical, site-specific problems or issues using interdisciplinary teams of specialists, managers, and knowledgeable land users.
3. Base the season, timing, frequency, duration and intensity of livestock grazing use on the physical and biological characteristics of the site and the management unit in order to: (a) Provide adequate cover (live plants, plant litter and residue) to promote infiltration, conserve soil moisture and to maintain soil stability in upland areas; (b) Provide adequate cover and plant community structure to promote stream bank stability, debris and sediment capture, and floodwater energy dissipation in riparian areas; (c) Promote soil surface conditions that support infiltration; (d) Avoid sub-surface soil compaction that retards the movement of water in the soil profile; (e) Help prevent the increase and spread of noxious weeds; (f) Maintain or restore diverse plant populations and communities that fully occupy the potential rooting volume of the soil; (g) Maintain or restore plant communities to promote photosynthesis throughout the potential growing season; (h) Promote soil and site conditions that provide the opportunity for the establishment of desirable plants; (i) Protect or restore water quality; and (j) Provide for the life cycle requirements, and maintain or restore the habitat elements of native (including T&E, special status, and locally important species) and desired plants and animals.
4. Tailor grazing management plans to site-specific conditions and plan objectives.
 - a. Coordinate livestock grazing with the timing of precipitation, plant growth and plant form. Soil moisture, plant growth stage and the timing of peak stream flows are key factors in determining when to graze. Response to different grazing strategies varies with differing ecological sites.
 - b. Consider nutritional and herd health requirements of the livestock when designing grazing management systems.
 - c. Integrate grazing management systems into the year-round management strategy and resources of the permittee(s). Consider the use of collaborative approaches (e.g., Coordinated Resource Management, Working Groups) in this integration.
 - d. Consider competition for forage and browse among livestock, big game animals, and wild horses in designing and implementing a grazing plan.
 - e. Provide periodic rest from grazing for rangeland vegetation during critical growth periods to promote plant vigor, reproduction and productivity.

- f. Consider the potential for conflict between grazing use on public land and adjoining land uses in the design and implementation of a grazing management plan.
 - g. When implementing grazing systems, consider the kind and class of animals managed, indigenous wildlife, wild horses, the terrain and the availability of water, to: (a) Promote livestock distribution; (b) Encourage a uniform level of proper grazing use throughout the grazing unit; (c) Avoid unwanted or potentially damaging concentrations of livestock on stream banks, in riparian areas and other sensitive areas such as highly erodible soils, unique wildlife habitats and plant communities; and (d) Protect water quality.
5. Construct and maintain roads and trails used to facilitate livestock grazing in a manner that minimizes the effects on landscape hydrology (avoid concentrating overland flow, prevent sediment transport, and retain subsurface flows).
 6. Monitor and evaluate allotments consistent with the schedule in the Oregon Rangeland Handbook (H-1734-2, and newer versions); and Maintain current grazing systems as identified in Appendix G.
 7. 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.
 8. Prevent BLM-permitted livestock from straying onto private land in closed range, where requested by private landowner.
 9. Leave currently unallotted (no permitted livestock grazing) areas in the northern portion of the planning area unallotted.
 10. Allow temporary non-renewable grazing use in vacant allotments.
 11. Permits for Reserve Forage Allotments will not be held by specific grazing operators. In these allotments, temporary, non-renewable use will be granted to federal permit holders when there is a demonstrated need to rest a permittee's allotment. "Need" for rest will include but not be limited to the following reasons: Prior to prescribed fire or necessary fence construction, or during/after rehabilitation projects, wildland fire or prescribed fire, drought, flood, insect damage, or disease. Use will meet goals described for the area in the RMP and, if applicable, in an Allotment Management Plan.
 12. Grazing operators in good standing can continue to hold or transfer permits to other qualified applicants in all but those allotments in the "Close" category on the Grazing Matrix.

Using the Grazing Matrix

13. Estimate the potential demand for and social and ecological conflict in each allotment, using a number of indicators, or factors, as shown in Table 5, below. Note conflict/demand are interrelated, so there is some overlap of factors used in their estimates. The weighting of each factor in the conflict/demand rating is also shown in the Table 5. Use Table 6, Grazing Matrix Rating, to determine if the score correlates to Low, Moderate, or High rating.
14. Allotment classifications shown in Appendix G may be adjusted when new or more site-specific information about allotments becomes available.

Table 3: Grazing Matrix

		SOCIAL & ECOLOGICAL RATING								
		Low Ecological			Moderate Ecological			High Ecological		
		Low Social	Moderate Social	High Social	Low Social	Moderate Social	High Social	Low Social	Moderate Social	High Social
DEMAND RATING	Low Demand	IPR ¹ , Close or create RFA ²	IPR, Close or create RFA	IPR, Close or create RFA	IPR, Close or create RFA	IPR, Close	IPR, Close	IPR, Close	Close ³	Close
	Moderate Demand	Open	Open	IPR, create RFA	Open	IPR, Close or create RFA	IPR, Close	IPR, Close or create RFA	IPR, Close	IPR, Close
	High Demand	Open	Open	IPR, Open or create RFA	Open	IPR, Open or Create RFA	IPR, create RFA	IPR, Open or create RFA	IPR, create RFA	IPR, Close or create RFA

¹ IPR = if permit is relinquished

² RFA = Reserve Forage Allotment

³Close = Discontinue livestock grazing for the life of the plan. BLM would provide two years notice of cancellation unless waived by permittee.

Table 4: Indicators of and estimated levels of conflict/demand regarding livestock grazing (for use in Grazing Matrix)

Allotment Number	Indicators (factors)											Estimated Levels Total score in category, and rating (Low, Moderate, High)					
	SMA Soc	Zoning	Recreation	Waiting List	Fences	Water	Seasonal	Forage	Wildlife	SMA Eco	S&Gs	Social	Demand	Ecological			
0072	0	12	75	75	57	100	100	30	3	0	0	43	M	58	M	1	L
5001	0	100	75	90	29	100	50	100	3	0	0	88	H	72	L	1	L
5002	0	100	75	95	100	0	100	100	0	0	0	88	H	74	L	0	L
5003	0	100	0	95	100	100	50	100	0	0	0	51	M	72	L	0	L
5004	0	0	0	90	25	0	100	100	0	0	0	0	L	43	M	0	L
5006	0	100	75	95	100	100	50	100	100	100	0	88	H	91	L	60	M
5007	0	0	75	85	68	50	100	100	100	100	0	37	M	72	L	60	M
5011	0	0	0	0	17	0	0	100	100	0	0	0	L	24	H	30	L
5012	0	72	75	75	77	100	0	30	100	0	0	74	H	68	L	30	L
5018	0	41	75	50	27	0	50	51	100	0	0	58	M	48	M	30	L
5019	0	0	100	10	5	40	25	13	10	0	0	50	M	24	H	3	L
5022	0	100	75	75	42	0	100	40	0	0	20	88	H	56	M	8	L
5023	0	0	0	0	40	0	0	100	80	0	0	0	L	25	H	24	L
5024	0	0	0	0	20	0	25	100	100	0	0	0	L	27	H	30	L
5026	0	67	0	95	100	0	50	83	100	2	0	34	M	64	M	31	L
5031	0	0	75	90	100	0	0	37	100	0	40	37	M	53	M	46	M
5032	0	0	0	90	25	100	100	100	53	0	0	0	L	60	M	16	L
5050	0	0	100	85	11	100	50	89	100	0	0	50	M	68	L	30	L
5051	0	0	100	85	20	100	0	49	100	0	0	50	M	59	M	30	L
5052	0	0	100	85	50	100	0	100	82	0	0	50	M	67	L	25	L
5061	0	100	100	95	100	100	50	7	100	0	0	100	H	83	L	30	L
5064	0	0	0	65	23	100	50	57	100	0	0	0	L	50	M	30	L
5065	0	52	75	50	34	100	100	8	100	0	0	63	M	62	M	30	L
5066	0	29	0	75	32	100	100	74	100	0	0	15	L	63	M	30	L
5067	0	0	75	95	100	0	50	100	100	0	0	37	M	67	L	30	L
5068	0	0	75	95	100	100	50	54	100	0	0	37	M	74	L	30	L
5069	0	100	75	95	100	50	50	100	100	0	0	88	H	85	L	30	L
5070	0	0	75	95	100	100	50	13	100	0	0	37	M	69	L	30	L

Table 4: Indicators of and estimated levels of conflict/demand regarding livestock grazing (for use in Grazing Matrix)

Allotment Number	Indicators (factors)											Estimated Levels Total score in category, and rating (Low, Moderate, High)					
	SMA Soc	Zoning	Recreation	Waiting List	Fences	Water	Seasonal	Forage	Wildlife	SMA Eco	S&Gs	Social	Demand	Ecological			
5071	0	56	75	95	100	100	50	10	100	0	0	65	M	75	L	30	L
5072	0	42	100	90	90	100	50	17	100	0	0	71	H	75	L	30	L
5073	0	13	100	60	10	100	0	4	100	43	0	56	M	49	M	43	M
5075	0	71	100	60	50	100	0	22	100	65	0	86	H	63	M	50	M
5076	0	0	0	75	4	0	100	37	100	0	40	0	L	40	M	46	M
5078	0	100	100	75	12	100	50	13	100	100	40	100	H	69	L	76	H
5079	0	10	100	75	12	100	50	25	100	49	40	55	M	60	M	61	M
5080	0	24	75	50	37	100	0	12	100	0	0	49	M	50	M	30	L
5081	0	0	0	80	36	0	100	100	100	0	0	0	L	52	M	30	L
5082	0	0	0	95	100	0	50	100	100	0	0	0	L	58	M	30	L
5084	0	0	75	95	100	100	50	100	0	0	0	37	M	69	L	0	L
5086	0	0	0	90	100	0	100	100	20	0	0	0	L	54	M	6	L
5088	0	0	0	90	12	0	25	100	79	0	0	0	L	42	M	24	L
5089	0	0	75	90	100	25	100	100	0	0	0	37	M	64	M	0	L
5092	0	0	100	90	36	0	100	76	0	0	0	50	M	53	M	0	L
5093	0	0	0	90	84	0	50	100	0	0	0	0	L	45	M	0	L
5094	0	0	0	90	13	100	25	100	0	0	0	0	L	46	M	0	L
5096	0	83	0	90	25	0	0	100	100	0	0	43	M	53	M	30	L
5107	0	0	0	90	6	0	25	69	0	0	0	0	L	30	H	0	L
5108	15	0	100	80	17	0	25	33	100	0	0	57	M	47	M	30	L
5109	0	0	75	60	17	100	0	10	100	0	0	37	M	46	M	30	L
5110	0	0	0	90	11	0	25	71	0	0	0	0	L	30	H	0	L
5111	0	100	75	75	37	100	100	51	0	0	0	88	H	69	L	0	L
5112	0	4	75	60	15	50	50	10	0	0	0	39	M	36	M	0	L
5113	0	0	100	60	27	50	100	25	0	0	0	50	M	46	M	0	L
5114	0	0	100	60	11	50	25	14	0	0	0	50	M	36	M	0	L
5115	0	0	100	50	24	0	50	23	0	0	0	50	M	33	H	0	L
5116	2	60	100	50	11	0	100	4	0	0	0	81	H	41	M	0	L

Table 4: Indicators of and estimated levels of conflict/demand regarding livestock grazing (for use in Grazing Matrix)

Allotment Number	Indicators (factors)											Estimated Levels Total score in category, and rating (Low, Moderate, High)					
	SMA Soc	Zoning	Recreation	Waiting List	Fences	Water	Seasonal	Forage	Wildlife	SMA Eco	S&Gs	Social	Demand	Ecological			
5117	5	0	100	50	9	0	50	5	0	0	0	52	M	29	H	0	L
5119	0	0	0	50	4	0	100	50	0	0	0	0	L	26	H	0	L
5120	4	0	100	50	13	50	25	11	0	0	0	51	M	33	M	0	L
5121	0	0	75	25	13	100	0	21	0	0	0	37	M	30	H	0	L
5122	13	100	75	85	13	0	25	37	0	0	0	95	H	47	M	0	L
5123	0	0	0	0	8	0	0	49	100	0	0	0	L	17	H	30	L
5125	0	0	100	50	14	50	25	8	0	0	0	50	M	33	H	0	L
5127	0	0	100	25	14	100	25	4	100	0	0	50	M	44	M	30	L
5130	0	0	0	0	6	0	0	24	100	0	0	0	L	14	H	30	L
5132	0	25	100	25	21	75	0	6	100	0	0	62	M	42	M	30	L
5133	0	0	0	0	53	0	25	100	100	0	0	0	L	31	H	30	L
5134	0	0	100	0	14	5	0	4	100	0	60	50	M	25	H	54	M
5135	0	72	100	25	12	0	0	7	100	0	0	86	H	38	M	30	L
5136	0	57	100	10	13	0	75	7	100	0	0	78	H	41	M	30	L
5138	0	0	75	25	23	100	0	10	100	0	0	37	M	40	M	30	L
5140	0	0	75	0	6	0	50	2	100	0	0	37	M	25	H	30	L
5141	0	0	0	0	6	0	50	7	100	0	0	0	L	17	H	30	L
5142	0	100	75	0	23	0	0	54	100	0	0	88	H	40	M	30	L
5143	0	0	75	0	14	0	75	15	100	0	0	37	M	30	H	30	L
5145	0	0	100	0	16	0	50	15	100	0	0	50	M	31	H	30	L
5176	0	0	0	95	100	0	50	100	100	0	0	0	L	58	M	30	L
5177	0	0	0	90	16	0	50	25	100	0	0	0	L	38	M	30	L
5178	0	0	0	95	100	50	50	36	100	0	0	0	L	56	M	30	L
5179	0	0	0	90	100	0	50	100	60	0	0	0	L	53	M	18	L
5180	0	0	0	85	100	0	50	100	99	0	0	0	L	56	M	30	L
5182	0	0	0	95	100	0	50	32	100	0	0	0	L	50	M	30	L
5198	0	0	0	95	100	0	50	100	80	0	60	0	L	56	M	48	M
5201	0	43	100	75	13	100	50	18	0	0	0	71	H	53	M	0	L

Table 4: Indicators of and estimated levels of conflict/demand regarding livestock grazing (for use in Grazing Matrix)

Allotment Number	Indicators (factors)											Estimated Levels Total score in category, and rating (Low, Moderate, High)					
	SMA Soc	Zoning	Recreation	Waiting List	Fences	Water	Seasonal	Forage	Wildlife	SMA Eco	S&Gs	Social	Demand	Ecological			
5204	100	71	75	90	25	100	25	89	100	0	0	100	H	74	L	30	L
5205	56	0	75	85	48	0	0	33	100	0	40	65	M	46	M	46	M
5206	0	100	75	95	100	100	50	100	100	0	0	88	H	91	L	30	L
5207	100	0	75	85	39	100	25	66	100	0	40	87	H	63	M	46	M
5208	0	28	75	25	6	0	50	4	100	0	0	52	M	34	M	30	L
5209	93	0	75	25	11	100	25	5	100	0	20	83	H	40	M	38	M
5210	0	0	75	0	5	100	0	2	100	0	0	37	M	32	H	30	L
5211	0	0	100	10	7	85	0	8	100	0	0	50	M	36	M	30	L
5212	5	0	100	10	5	0	0	1	100	0	0	52	M	25	H	30	L
5213	44	0	100	10	8	100	0	4	100	0	0	71	H	37	M	30	L
5214	0	0	100	0	9	0	0	3	100	0	0	50	M	23	H	30	L
5216	0	0	75	85	75	0	100	100	0	0	0	37	M	57	M	0	L
5224	0	0	0	0	47	0	0	100	100	0	0	0	L	28	H	30	L
5228	0	0	0	0	7	0	0	15	100	0	0	0	L	13	H	30	L
5231	0	0	75	0	4	0	50	1	100	0	0	37	M	25	H	30	L
5233	0	0	0	0	3	10	0	5	100	0	0	0	L	12	H	30	L
5234	0	0	0	0	6	0	25	13	100	0	0	0	L	15	H	30	L
5252	0	0	75	95	79	0	50	74	0	0	0	37	M	51	M	0	L
5257	0	0	0	0	10	0	0	100	42	0	0	0	L	17	H	13	L
5261	0	91	0	0	14	0	25	57	100	0	0	46	M	32	H	30	L
7502	0	4	0	85	43	100	0	2	100	0	0	2	L	45	M	30	L
7504	0	11	0	75	9	0	25	27	100	0	0	5	L	33	H	30	L
7509	0	100	75	75	55	0	50	28	100	0	0	88	H	61	M	30	L
7514	0	100	0	90	61	0	100	93	100	0	0	51	M	68	L	30	L
7515	0	0	75	85	13	0	25	42	100	0	0	37	M	45	M	30	L
7530	0	0	0	90	3	0	100	78	0	0	0	0	L	38	M	0	L
7538	0	100	75	95	100	0	50	96	100	0	0	88	H	79	L	30	L

Table 4: Indicators of and estimated levels of conflict/demand regarding livestock grazing (for use in Grazing Matrix)

Allotment Number	Indicators (factors)											Estimated Levels Total score in category, and rating (Low, Moderate, High)					
	SMA Soc	Zoning	Recreation	Waiting List	Fences	Water	Seasonal	Forage	Wildlife	SMA Eco	S&Gs	Social		Demand		Ecological	
7552	0	2	0	60	7	50	50	4	100	0	0	1	L	34	M	30	L
7554	0	0	0	90	27	0	50	100	40	0	20	0	L	42	M	20	L
7559	0	28	75	60	8	50	25	14	100	0	0	51	M	46	M	30	L
7571	0	38	0	95	42	0	50	96	0	0	0	20	L	45	M	0	L
7572	0	100	0	90	29	0	25	100	0	0	0	51	M	48	M	0	L
7574	0	0	0	95	41	100	50	74	39	0	0	0	L	54	M	12	L
7575	0	82	0	80	55	0	75	34	0	0	0	42	M	44	M	0	L
7582	0	0	0	75	29	100	0	100	99	0	0	0	L	52	M	30	L
7586	0	61	75	80	21	100	75	76	0	0	0	68	H	63	M	0	L
7594	0	0	0	95	25	0	25	100	13	0	0	0	L	38	M	4	L
7595	0	100	0	80	22	50	25	35	100	0	0	51	M	53	M	30	L
7597	0	0	75	73	5	0	50	10	100	0	80	37	M	40	M	62	M
9999	0	6	75	75	26	50	50	0	100	0	0	40	M	49	M	30	L

Table 5: Grazing Matrix factors¹

Factor title	What factor measures	How factor is calculated ²	Weight of factor		
			Social (X 1.5)	Demand	Eco-logical
SMA Social	Percent of acres within allotment designated as a Special Management Area (SMA) in part for social values (e.g., WSA for scenery, solitude)	Acres SMA-social/total acres in allotment	34		
Zoning	Miles of high-density zoning (resort, residential) along allotment boundary relative to number of AUMs in allotment, and relative to other allotments	Miles X 4000/AUMs in allotment ³	33	12	
Recreation	Amount of recreational use in allotment	If C3 on Allotment Categorization Form (see App. G) is "M" then the score is 75; if it is "H" the score is 100	33	12	
Wait List	Rancher interest in allotment	Relative interest shown in an allotment compared to other allotments, based on considerations including but not limited to applications, letters of interest and personal contacts		20	
Fencing	Cost to install new fence and maintain existing fence, relative to other allotments.	Miles of fence maintenance X 4 X \$50/mi/yr + miles of new fence X \$4,000/mi/decade ⁴		12	
Water	Percent of allotment needing water hauled to troughs	Permittee and BLM estimate of number of acres served by hauling water to troughs, divided by the total number of acres in the allotment		12	
Seasonal	Amount of seasonal restrictions on livestock grazing	Grazing restricted to one season = 100, two seasons = 50, three seasons = 25, year-round permit = 0		10	
Forage	Relative amount of forage in allotment, compared to other allotments in planning area	For each allotment, 2500/AUMs ⁵		12	
Wildlife	Percent of allotment containing important deer, grouse, and elk habitats	For each allotment, 0.5 X (percent of acres deer winter range + percent of acres sage grouse habitat + percent elk winter range) ⁶		10	30
SMA Ecological	Percent of acres within allotment designated SMA at least in part for ecological values (e.g. Peck's Milkvetch ACEC)	Acres SMA-ecological/total acres in allotment			30
Rangeland Health Assessment	Percent of Standards not met during Rangeland Health Assessment, where livestock have been determined to be part of that failure	Number of Standards not met where livestock are a factor/total number of Standards (5)			40

¹Each allotment's score on the above factors at the time of this printing is listed in Table 4. These scores are not constant; they change as the amount of residentially zoned land around allotments changes, as the proportion of the allotment where water is hauled vs. piped changes, and as each of the other factors making up the scores changes.

²All calculations are estimates, and would require site visit, updated information, and permittee input to get more accurate estimate. Scores at time of this printing are shown in Table 4 and Appendix G.

^{3,4,5,6,7}Score is multiplied (by number indicated) and scores over 100 are set at 100, to get a more even spread of scores and to make the indicators sensitive enough to register differences.

Table 6: Grazing Matrix rating

Factor	Rating		
	Low	Moderate	High
Social	<34	34-66	>66
Demand	>66	34-66	<34
Ecological	<34	34-66	>66

Minerals

Objective MN – 1: Provide for leasable, locatable, and mineral material prospecting, exploration, and development on BLM administered lands, while protecting other resource values.

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:

1. Public lands open to mineral uses may be explored and developed for mineral resources in accordance with the 43 CFR Parts 3000 through 3800:
 - a. Where not withdrawn from mineral entry or otherwise closed to the development of mineral resources;
 - b. In a manner that will not cause unnecessary or undue degradation of the landscape; and
 - c. 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.
2. The following activities will be allowed:
 - a. Approximately 396,185 acres are available for locatable mineral entry under the 1872 mining laws.
 - b. Approximately 366,640 acres are available for mineral leasing.
 - c. Approximately 349,199 acres will be available for the development of mineral material sites.
 - d. All surface disturbances on mining claims including disturbances resulting from casual use and operations under a notice or plan must be reclaimed. Reclamation will include but is not limited to:
 - i. Stockpiling any removed soil for later reapplication;

- ii. Measures to control erosion, landslides, and water runoff, and the spread of noxious weeds;
 - iii. Measures to isolate, remove, or control toxic materials;
 - iv. Reshaping of the area disturbed, application of the topsoil, and re-vegetation of the disturbed areas, where reasonably practicable; and
 - v. Rehabilitation of fisheries and wildlife habitat.
- e. Surface occupancy for fluid mineral leasing is not allowed on approximately 16,480 acres surrounding Prineville Reservoir.
 - f. Reserved Federal mineral estate (Federally owned minerals in non-Federally owned lands) may be explored and developed for mineral resources.
 - g. 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

1. 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.
2. 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.
3. Monitor and inspect all mining sites to ensure compliance with notices and plans of operation including reclamation requirements.
4. 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:
 - a. That there are no known valuable mineral deposits in the land, or
 - b. That the reservation of mineral rights in the United States will 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.
5. In T15S R13E sections 1, 13, 24, 25, and 26 consult with Redmond Airport officials to ensure that proposed mineral uses would not conflict with the safe operation or development of the airport.

Special Management Areas

6. Mineral material site development is not allowed in ACECs, WSAs or RNAs listed as closed to this use.
7. Mineral material site development is restricted in ACECs, WSAs and RNAs not listed as closed to this use in a manner that preserves the values for which these areas are designated.
8. Fluid mineral leasing is not allowed in WSAs.
9. Fluid mineral leasing and locatable mineral development are restricted in all ACECs and RNAs to protect the values for which these areas are designated.
10. 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: Reduce mining conflicts with residents, recreational users, and natural resource management objectives.

Rationale:

The Brothers/La Pine RMP (1989) did not anticipate the rapid population growth of Central Oregon, growth in demand for mineral 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.

Allocations/Allowable Uses:

1. Public lands not withdrawn from mineral entry or otherwise closed to the development of mineral resources may be explored and/or developed for mineral materials and locatable and leasable minerals with consideration for conflicts with residents, recreation and resource management objectives. Plans of operation for mineral material sites, mineral leasing and mining claims will include measures to mitigate conflicts with recreation and residents where such conflicts exist.
2. Mineral material sites will not be developed within 1/8 mile of residentially zoned areas or designated recreation sites (See RMP Map 8). Designated recreation sites that depend upon or exist in mineral sites generally will not be considered to be in conflict with mining for the purposes of setting up a 1/8 mile closure area.
3. Roads under BLM jurisdiction that feed into residentially zoned areas may be used for mining-related traffic only if alternate routes are not available.
4. In "urban" areas, mineral material site development will not occur within 1/8 mile of designated recreation sites.
5. In "rural" areas, mineral material site development will not occur within 1/2 mile of designated recreation sites.
6. Seasonal Restrictions on all mineral operations could apply on 60,521 acres to protect wildlife and habitat (see FEIS Map 3, Travel Management Designations and Seasonal Use Periods and Table 1, General Guidelines for Seasonal Restriction and Distance Buffers).
7. Surface occupancy for fluid mineral leasing will not be allowed on 48,305 acres.

Guidelines:

1. Hours of operation for surface mining activities may be limited as needed to mitigate conflict with residents and recreation:
 - a. For mineral material sites within 1/2 mile of designated recreation sites and residentially zoned areas, mineral extraction, processing, and equipment operation may be restricted to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday.
 - b. For mineral material sites located farther than 1/2 mile from developed recreation sites and residentially zoned areas, mineral extraction, processing, and equipment operation may be restricted to the hours of 7:00 a.m. to 10:00 p.m. Monday through Friday.
 - c. Operations at mineral material sites may not be allowed 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.
2. Blasting restrictions may also be implemented as needed to mitigate conflicts:
 - a. For mineral material sites within one mile of designated recreation sites, residential areas, and agricultural use sites involving the raising of animals, blasting may be restricted to the hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.
 - b. The operator may be required to 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 will be given at least once each month if such notification is required.
 - c. Blasting at mineral material sites may not be allowed on weekends (Saturdays and Sundays) or any of the legal holidays.
3. Designated recreation sites that depend upon or exist in mineral material sites generally will not be considered to be in conflict with mining operations for the purposes of setting up a buffer zone. During periods of authorized mining activity,

- designated recreation sites that depend on or exist in the mineral material site may be temporarily closed.
4. Environmental Assessments written for proposed mineral material sites will include stipulations for allowable recreation uses of those sites approved for development. Allowable recreation uses will be specified for periods of active operations and for periods of inactivity over the expected life of each new mineral pit.
 5. When a new mineral materials site is initially permitted within the Planning Area the BLM will explicitly address the following:
 - a. Firearm discharge, generally managed under one of the following guidelines:
 - i. No restrictions on firearm discharge
 - ii. No firearm discharge unless legally hunting
 - iii. No firearm discharge
 - b. Off-Highway Vehicle (OHV) use, generally managed under one of the following guidelines:
 - i. No restrictions on motorized use
 - ii. The type of motorized use is limited
 - iii. All motorized use is prohibited
 - c. 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.
 6. 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.
 7. See Special Management Areas for other guidelines and allocations for minerals.
 8. See Appendix B, Minerals in the Upper Deschutes RMP, for detailed mineral development scenarios, guidelines, exceptions, modifications, and waivers.

Rockhounding

Objective MN – 3: Provide recreational rockhounding⁷ 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 rockhounding. 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. 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.

⁷Rockhounding is defined in this plan as the non-commercial hobby collection of mineral specimens, semi-precious gemstones, common invertebrate fossils and petrified wood. These rock types include but are not limited to agate, jasper, quartz, calcite, cinnabar, opal, obsidian, botanical (leaf) fossils, and marine invertebrate fossils (clams, snails, etc.).

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; and 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:

1. Continue designation of the North Ochoco Reservoir, Eagle Rock, and Fischer Canyon sites for rockhounding. These rockhounding sites are designated as all BLM administered lands within the following areas: (1) North Ochoco Reservoir – SE ¼ Section 31 of T14S, R17E, (2) Eagle Rock – NW ¼ of Section 14 and NE ¼ Section 15 of T16S, R17E, and (3) Fischer Canyon – Section 9 T18S, R17 (see RMP Map 1).
2. Permits for commercial use generally will not be issued for areas within the boundaries of designated rockhounding sites to protect recreational collecting opportunities.
3. On public lands open to rockhounding, no person is allowed to create or occupy excavations or holes that (1) undermine the root systems of trees, (2) enter into the ground at a non-vertical angle so as to create a tunnel or overhang or (3) have vertical walls that exceed a depth or height of four feet. The walls of holes or excavations that exceed a depth of four feet must be sloped to an angle not greater than 45 degrees from horizontal.
4. All persons excavating, digging or otherwise removing soil to explore for, discover, or remove buried rock materials outside of designated rockhounding site boundaries are required to fill all holes prior to departure from the digging site.
5. In all riparian areas and stream channels including the channel banks, rockhounding activities are restricted to surface collection only. Stream channels are defined as all perennial, intermittent, and ephemeral channels having defined beds and banks. A stream channel is an open conduit which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water. No person is allowed to excavate, dig, or otherwise remove soil, sand, or gravel in stream channels to explore for, discover, or remove buried rock materials. The collecting restrictions in stream channels will not preclude casual use for locatable minerals as provided for in 43 CFR 3809.5.
6. See "Special Management Areas" for additional rockhounding management direction.

Guidelines:

1. Develop rockhounding management plans for North Ochoco Reservoir, Eagle Rock and Fischer Canyon.
2. 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.

Decorative Stone

Objective MN – 4: Provide decorative stone⁸ collecting opportunities while protecting other values. Manage decorative stone resources to provide long-term collecting opportunities while discouraging illegal commercial use and mitigating ground disturbances and widespread damage to rock outcrops.

⁸The collection of mineral materials for decorative stone, landscaping, or other similar uses will not be considered rockhounding. Rocks considered to be decorative stone will include but not be limited to basalt, andesite, rhyolite, tuff, pumice, and cinder. Specific forms of these rock types include but are not limited to gravel, rounded river cobbles, basalt columns, flagstone, stepping stones, and boulders. Mineral specimens, semi-precious gemstones, common invertebrate fossils, and petrified wood are not considered to be decorative stone for the purposes of this plan (see Rockhounding).

Rationale:

The unregulated collection of decorative stone has resulted in damaged and defaced pressure ridges, cliff faces, and other rock outcrops across the planning area, mainly in the urban interface. Moreover, vehicles have been driven off-road to reach outcrops and surface deposits. Due to increasing populations and high commercial prices, the demand for decorative stone from public lands is likely to increase during the life of this plan. The effects of decorative stone collection will likely continue to spread and increase in the absence of regulation.

Allocations/Allowable Uses:

Until common use area(s) are designated, the following will apply across the planning area, except for existing community pits:

1. Where rock collecting is allowed, the general public will be allowed to collect small amounts⁹ of decorative stone without a permit provided that:
 - a. Only loose rocks (float) on soil are collected.
 - b. No rocks are removed from outcrops including but not limited to bedrock surfaces, cliff faces, pressure ridges, or other lava flow exposures.
 - c. The material is collected for noncommercial use; any commercial use will require a permit.
 - d. No vehicles are driven off-road or in a manner inconsistent with motorized travel regulations.

After common use area(s) are designated, the following will apply:

2. Any collection of decorative stone in the planning area will require a sales contract or free use permit.
3. Sales contracts/free use permits to the general public will only be issued for common use area(s) or existing community pits. The collection of decorative stone will not be allowed in areas without common use or community pit designation.

Use of the Prineville Reservoir Pit will be allowed as follows:

4. The pit will be inaccessible most of the year due to road closures in the area.
5. The access road to the pit will be opened to the public and commercial operators during the month of May unless otherwise determined by site specific analysis. Only those persons with valid sales contracts for the site will be allowed to use motorized vehicles to access pit, and they will have authorization to drive only on the main access road.
6. Government agencies with valid free use permits will be granted administrative access to the site.

Guidelines:

1. Designate common use area(s) through site-specific environmental analyses for personal and commercial decorative stone collection. Determine maximum collection amounts per household or per person and whether commercial use will be allowed. Determine conditions for free use permit vs. sales contract, consistent with 43 CFR Part 3600.
2. The decorative stone management direction (before and after community pit designation(s)) will not change or alter existing management direction for considering mineral material permit requests from private commercial operators or government agencies. Commercial operators and government agencies may apply for development of new mineral material sites on any lands that are open to that use.

⁹Small amounts are defined as no more than 1 cubic yard or ton per household per year. This is approximately the amount that can fit in the bed of a full size pickup truck.

Forest, Range and Woodland Products

Objective FP – 1: Manage forests, woodlands, and rangelands to provide for social and economic values, including wood products, consistent with ecosystem sustainability and other resource management objectives. Timber harvest will normally be associated with ecosystem restoration treatments and will also be designed to meet objectives for fuels reduction, hazard tree removal, special status species, recreation, travel, and wildlife habitat.

Rationale:

The Federal Land Policy and Management Act declares that 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. Harvest of forest, range, and woodland products is consistent with BLM's multiple-use mandate as described above.

The accelerated timber harvest/salvage schedule that was specified in the Brothers/La Pine RMP (due to the pine beetle epidemic) has been substantially accomplished 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 will likely be determined during a future RMP planning effort for the Upper Deschutes Planning Area.

To enhance forest ecosystem health, and to realign the balance of forest structure and seral stages, timber harvest will be done primarily for stewardship objectives. Such objectives include: 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 (outside of the La Pine area) will also be limited in this RMP and for the foreseeable future due to dry site, low productivity conditions, and the scattered land ownership pattern in this area.

Allocations/Allowable Uses

Commercial Timber and Biomass Fiber

1. 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 at a sustainable level to ensure the availability of forest products in perpetuity for social/economic needs.
2. Allow harvest of juniper for wood products such as commercial timber and biomass from the approximately 170,000 acres of juniper woodlands, except where restricted within RNAs, WSAs and other special designations. Harvest will be consistent with woodland/shrub-steppe maintenance/restoration and fuels management objectives.

Special Products

3. Allow juniper harvest for special products such as firewood, post and poles, furniture wood, and hobbywood in conjunction with ecosystem and fuels management treatments in the approximately 170,000 acres of juniper woodlands within the planning area.
4. Allow juniper bough harvest in the planning area, except within WSAs, ACECs, developed recreation sites, river corridors, along major highways/roads, and other restricted areas identified on permits.

5. Allow collection of minor amounts of native plants, seed, lichen, and other vegetative products at a sustainable level and in accordance with permit guidelines established for specific products or specific areas.

Guidelines

Commercial Timber and Biomass Fiber

1. Forest product outputs for the next 30-40 years in the La Pine area will be limited to less than the annual incremental growth rate to allow forest recovery from the pine beetle epidemic and extensive salvage efforts occurring in the 1980s and 1990s.
2. Harvest may be accomplished by a variety of manual and mechanized techniques including, but not limited to, feller-bunchers, harvesters, skidders, portable chippers, chainsaw, pick-up trucks, and other wheeled or tracked equipment.
3. A range of silvicultural systems will be considered to achieve resource objectives as appropriate to site-specific conditions. Appropriate prescriptions will include, but not be limited to, thinning, seed tree, shelterwood, patch cuts, uneven-aged management, and salvage.
4. Allow harvest of forest and woodland products produced from restoration and WUI fuels reduction treatments where practicable and where compatible with other resource objectives. Sale receipts will be used, where allowable under current policies, to help offset treatment costs.
5. Where compatible with restoration and other resource objectives, manage for the long-term sustained production of forest products through a program of periodic pre-commercial and commercial thinning. Commercial and pre-commercial thinning and other forest treatments in the La Pine area will occur on an estimated average 1,500 acres per year producing an estimated average 3,000 CCF (hundred cubic feet) per year. Commercial and pre-commercial thinning and other forest treatments in the northern area ponderosa pine type (outside of La Pine) will occur on an estimated average of up to 80 acres per year producing an estimated average of up to 158 CCF per year.
6. 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 serve as a substitute for other products with higher environmental and/or economic cost (i.e. metals, plastics, petroleum based fuel/products).
7. Salvage of killed and damaged trees from wildland fire, windthrow, insects, disease and other causes will be considered in conjunction with snag and down wood retention guidelines and other resource objectives. Recovery of economic value will also be a primary consideration. When salvage is appropriate, high priority will be given to rapid action to minimize loss of timber value.
8. Wood product harvest, site preparation, and other ground-disturbing actions will 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 will also be followed where applicable.
9. Plantation management treatments including site preparation, planting, replanting, animal damage control, and fertilization will be implemented as appropriate and in accordance with site-specific project plans.
10. Snags and down logs will be retained to meet objectives for specific habitat types as specified in Wildlife Guidelines.
11. Harvest prescriptions will follow appropriate VRM guidelines.
12. Harvest will comply with all applicable travel management regulations, except where specifically allowed as administrative access.

Special Products

13. Restoration and fuels management treatments using mechanical methods will provide opportunities to harvest juniper for furniture wood, hobby wood, fence posts, boughs, and other uses where available and where appropriate.
14. For long-term sustainability of the public firewood program, opportunities will be sought to transition away from cutting of dead standing trees to utilization of smaller diameter green trees obtained from thinning and fuels reduction treatments.
15. Harvest of special products will comply with all applicable travel management regulations, except where specifically allowed as administrative access.

Objective FP - 2: Provide for maintenance and safety of facilities within and adjacent to urban areas, residential zones, recreational developments, public roads, trails, and other facilities.

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.

Guidelines:

1. Cutting and removal of individual or small groups of hazard trees will 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 will be evaluated on a case-by-case basis. Mitigation measures such as topping trees or relocating low-value structures, in lieu of cutting high value trees, will also be considered.
2. 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.

Objective FP - 3: Help achieve the goals and objectives of the La Pine State Park Master Plan (Oregon Parks and Recreation Department, 1986). Offer BLM's expertise in helping to maintain and restore healthy and functioning forest, meadow, and riparian ecosystems within La Pine State Park.

Rationale:

BLM retains title to timber 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:

1. Manage the BLM-owned vegetative resource, including timber harvest and fuels reduction, in La Pine State Park considering direction provided in the La Pine State Park Master Plan (Oregon Parks and Recreation Department, 1986).
2. Because the vegetative resource is federally owned, vegetative treatments proposed on BLM patent lands within the State Park will also be managed in accordance with the guidelines in the Upper Deschutes RMP and with the appropriate level of analysis required by the National Environmental Policy Act.

Military Uses

Objective MU - 1: Provide a reliable land base suitable for meeting short and long term national and state military readiness needs.

Rationale:

The National Guard requires a large training maneuver area within the State of Oregon to train troops and maintain troop readiness in support of State and national missions including State emergencies that may affect public health and safety. No comparable maneuver training area presently exists within the State of Oregon.

The BLM is authorized to make lands available for multiple uses, including military training, under the Federal Land Policy and Management Act (FLPMA), (90 Stat. 2743; 43 U.S.C. 1701, et seq.) and the Engle Act (72 Stat. 27; 43 U.S.C. 155 - 158). The primary regulatory guidance is at 43 CFR Parts 2300, 2800, and 2900. BLM policy concerning making lands available for use by the military is described in Instruction Memorandum No. 2001-030 and includes "All authorizations for military activity must provide the proponent agency the minimum land area necessary to accomplish the authorized activity in a safe and generally unimpeded manner, subject to valid existing rights."

Allocations/Allowable Uses:

Training Area

1. Long-term military use may occur where shown on RMP Map 6 – Land Ownership and Military Use Areas. Also see Appendix C – Legal Description of Lands Designated for Military Training.
2. Table 7, Military Training Area Acres, displays the acreage of core and extended areas available for training by the Oregon Military Department and National Guard.
3. The designated core training area is located as described as Appendix C, Part 1
4. Two designated extended training areas, G and H, are located as described in Appendix C, Part 2.

Table 7: Military training area acres

Training area	Acres	Total acres
Core	A	5,290
	B	5,695
	C	2,013
	D	9,094
	E	6,563
	F	163
Extended	G	6,072
	H	9,095
Total acres		43,985

Objective MU – 2: Allow OMD uses and rights necessary to accomplish the authorized activity in a safe and generally unimpeded manner while meeting the objectives of this Resource Management Plan.

Rationale:

Conditions of use for military training in the planning area have been continuously approved for more than 20 years through a variety of use authorizations, and are brought forward as continued management direction. While the area within which these uses have been allowed will be modified by management direction in this RMP, the conditions for use within the core training area designated below does not change.

Use of combat vehicles and training activity of personnel pose risks to public lands and disturbance of visitors and adjacent landowners. BLM policy (Instruction Memorandum No. 2001-030) notes that "Requests for use of the public lands for military activity are not given any special status." Proposals made to the BLM and OMD must be considered within the BLM's existing processes, including land use planning, compliance with the National Environmental Policy Act of 1969 (NEPA), other natural resource and cultural resource laws and Executive Orders, and standard public participation practices. To reduce such risks to resources and other uses the military is responsible for rehabilitation activities, resource protection, and other mitigations as specified or authorized in 43 CFR Part 2920.7 Terms and Conditions as part of authorized uses.

Allocations/Allowable Uses:

1. Designated Training Area -- Unless otherwise provided for by specific waiver, the following actions are prohibited in any designated training areas:
 - a. Possession or use of live (projectile firing) ammunition by military units during training on BLM administered lands is prohibited.
 - b. Use of wheeled or tracked vehicles, except on designated roads, within ¼ mile of private property boundaries, or within 500' of Highway 126 or the Powell Butte Highway.
 - c. Wheeled or tracked vehicles on the Pacific Gas Transmission Co. pipeline except at designated crossings identified in the terms and conditions of use authorization.
 - d. Heavy equipment surface excavation outside of the existing Clay Pit area (Core Training area F).
 - e. Closure of roads or trails commonly in public use.
2. Core Training Area – Areas A-F are open for use year round to the following uses.
 - a. Area A: Open to dismounted soldiers, wheeled and tracked vehicles off road.
 - b. Area B: Open to dismounted soldiers, wheeled and tracked vehicles off road.
 - c. Area C: Vehicles restricted to designated roads only. Dismounted soldiers permitted off road.
 - d. Area D: North of Morrill Road Tracked vehicles restricted to designated roads. Dismounted soldiers and wheeled vehicles permitted off road. South of Morrill Road all vehicles restricted to designated roads Dismounted Soldiers permitted off road.
 - e. Area E: Vehicles restricted to designated roads only. Dismounted soldiers permitted off road.
 - f. Area F: Open to dismounted soldiers, wheeled and tracked vehicles off road. Additional restrictions may be added after consultation.
3. Extended Training Area
 - a. Areas G and H: Closed from December 1 to May 1 for pronghorn winter range. A waiver may be granted, after formal request, to allow operations between April 15 and May 1 if the BLM concludes that such use will not significantly affect wildlife or recreational uses.
 - b. Area G: Open to dismounted soldiers and wheeled vehicles off road. Tracked vehicles limited to designated roads.

- c. Area H: Vehicles restricted to designated roads only. Dismounted soldiers permitted off road.

Guidelines:

1. BLM administered lands within the designated training areas, not withdrawn for exclusive use by the Military, will be open to and shared with the public except when OMD and the BLM agree that the security of OMD resources or public and/or OMD personnel safety will be at risk as a result of the intermingling of military and civilian activities.
2. Restricted access to public lands during military operations will be temporary and procedures for establishing location and duration of closures will be established in the terms and conditions of the use authorization agreement between the BLM and the OMD
3. All military activity will be consistent with direction provided by the following Documents and references cited therein:
 - a. Environmental Assessment: Fielding the Bradley Fighting Vehicle and Cavalry Fighting Vehicle and Other Proposed Federal Actions at the Central Oregon Training Site by the Oregon National Guard (OMD, 1995).
 - b. Biak Training Center Integrated Natural Resources Management Plan and Environmental Assessment ("INRMP", OMD, 2001).
 - c. Integrated Cultural Resources Management Plan for the Oregon Army National Guard ("ICRMP", OMD, 2002).
4. Amendments to existing or new NEPA decisions that support authorization of military activities will not require amendment to the RMP unless they modify specific objectives or allowable uses.
5. When necessary to meet training needs the BLM may authorize exemptions from travel management restrictions for military operations consistent with administrative access guidelines included in Transportation and Utilities.
6. The use of extended training areas (G, H) may be used as needed for maneuvers when ground and vegetation conditions meet or exceed established baseline conditions.
7. Military training use will be designed to minimize use conflicts with livestock grazing, recreation, and wildlife while still meeting the objectives for military training.
8. Baseline conditions will be established by an interdisciplinary process and will include consultation with interested and affected government agencies.
9. Use of small areas of concentration which have been treated by providing gravel cover, barriers, road improvement/maintenance or other engineering works to reduce general area resource damage is encouraged.
10. Meeting objectives for public uses of BLM administered lands will be a secondary objective when selecting types and locations of improvements
11. OMD will provide the BLM with a quarterly training summary of unit(s) that will be using any of the designated training area 30 days prior to use of the area. This summary will include but not be limited to: the designated area to be used, the training unit identification, and unit contact.
12. Military use will be reviewed by BLM and OMD staff on a yearly basis.

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. 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)
- VRM Class 2 areas – Retain the existing character of landscapes. 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.

- VRM Class 3 areas – Partially retain the existing character of the landscape. 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.
- VRM Class 4 areas – Allow major modifications of existing character of landscapes. 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.
- VRM Class 5 areas – Areas in need of rehabilitation from a visual resource standpoint.

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 will ensure the integrated use of...environmental design in the planning and decision making process.” The rapid development of rural lands in Central Oregon increases the value of and concern over the scenic resources that BLM administered lands possess.

VRM Process: 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. Key Observation Points 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:

1. Specific VRM classifications for lands within the planning area are shown on RMP Map 10. The following list identifies general areas that are included in each VRM Class in the RMP area:
 - a. VRM Class 1 – 32,928 acres:
 - Badlands WSA
 - Steelhead Falls WSA
 - Horse Ridge RNA/ACEC/ISA

- b. VRM Class 2 - 37,590 acres:
 - Areas visible from Prineville Reservoir (foreground views)
 - Smith Rock block
 - Horse Ridge and Dry River 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 Roads ACEC
 - Powell Butte RNA
 - Redmond Caves parcel
 - State Highway 31/Outback Scenic Byway
 - Little Deschutes River Parcel

- c. VRM Class 3 - 88,179 acres:
 - 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 superseded by other VRM Class designations

- d. VRM Class 4 - 246,163 acres:
 - Remainder of planning area

- e. VRM Class 5 - 8 acres:
 - Crooked River Canyon area north of Chimney Rock Wild and Scenic River segment

Guidelines:

General

1. Work with State and local governments to manage visual resources and interpretive opportunities along roads and highways including the Hwy 31/Outback Scenic Byway.
2. 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.

All Activities

3. All surface disturbing activities under permit or lease or done by BLM will require visual resource analysis using BLM's contrast rating methodology. Visual design considerations will be incorporated into all surface-disturbing projects regardless of size or potential impact. Projects will 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:
 - a. Provide 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 will 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.
 - b. 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 RMP as a baseline.

- c. Emphasize monitoring during project construction to assure visual resource mitigation measures are met.
4. 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, will be rehabilitated as funding allows.
5. Identify and rehabilitate negative visual elements on public lands within the immediate foreground (0 to 1/4 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.

Facilities

6. Parking facilities, structures, structural range improvements, and recreational facilities will normally be placed where they are not visible from key observations points (KOPs). Emphasis will 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 will be designed to blend with the elements found in the natural landscape and remain subordinate to the overall strength of the landscape being viewed.
7. New heliports, gravel pits, gravel stockpile locations, clay pits, and borrow areas will be located out of foreground view from KOPs. If a site is not available outside of the immediate (0 to 1/4 mile) foreground view of KOPs, then appropriate mitigation will be determined (e.g., screening, project design, berms, etc.) prior to permits being issued.
8. Improve entry signage to BLM administered 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.
9. All transmission line towers, conductors, and communication antennas will utilize non-reflective surfaces or be painted to minimize visual impacts.

Rights-of-Way

10. New roads, ROWs and other surface disturbing projects will be designed to meet the Visual Resource Management Class of the affected area. Routes likely to be popular with recreational visitors will be designed and maintained to enhance the area's scenic qualities. Road improvements or new road construction in VRM Class I or II areas will use non-reflective surfaces such as Corten Steel guard rails to minimize contrast with the surrounding landscape. Materials will be specified before ROW permits are issued.
11. New roads or utility ROWs will be constructed when new routes will enhance, improve, or protect an area's scenic qualities better than improvement of existing roads or expanding or co-located ROWs.

Vegetation

12. 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:
 - a. Treatment objectives in old growth juniper woodlands/savanna will include enhancing foreground visual characteristics of the old-growth juniper woodlands/ savanna and the overall scenic quality of the area. Juniper

woodland characteristics that are expected to generate high visual appeal include:

- i. "Healthy" woodlands with large and old trees of various densities and structure
- ii. Understories of diverse native shrub, grasses and forbs
- iii. A low occurrence of noxious weeds and other non-native species
- iv. High visual diversity with regard to vegetative and geologic features of the characteristic landscape.
- b. Where possible and appropriate, background and vista views will be enhanced by treatments such as thinning, pruning, or clearing corridors through foreground juniper woodlands, emphasizing removal of younger, smaller trees.
- c. Treatments in old growth juniper woodlands will emphasize treating the "best" old-growth juniper woodlands within major travel corridors, along backcountry byways, and near recreation and residential/urban areas. Primary objectives will be to maintain old woodland health and longevity and to improve or highlight scenic values.
- d. Cutting or pruning to produce small openings in dense stands to clear vistas or expose other natural features of interest.
- e. Stand management to clear dead and down trees or promote different ages, sizes, densities, species composition, and vertical layers for increased visual diversity.
- f. Rehabilitation of sites with noxious weeds, exotic annuals, and other disturbed/unbalanced vegetative communities to transition toward a more natural vegetative landscape.
- g. Enhancement of visually interesting meadows, riparian areas, and old-growth trees.
- h. Treatments to improve wildlife viewing, education, and interpretation opportunities.
- i. All other standard operating procedures for reducing visual effects from mechanical vegetative treatments and prescribed burning will 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.
- j. Vegetation treatments designed solely for long-term ecosystem health may entail short term impacts to visual quality (up to 5 years). However, these treatments would be designed and implemented in a way that reduces impacts to visual quality and maintains VRM Class standards to the maximum degree.

Recreation

Management direction for recreation is provided with planning area-wide direction and with management guidance specific to the High Desert Special Recreation sub-units. These geographic areas are described following the Planning Area direction. One existing Special Recreation Management Area – the Millican Valley OHV area was incorporated into the High Desert Special Recreation Management Area. It includes three subunits of the High Desert SRMA, Millican Plateau, North Millican, and South Millican. These are grouped together in the objectives and guidelines.

Planning Area Wide Direction

Objective R - 1: Provide and maintain a wide range of recreation opportunities and 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", Oregon Parks & Recreation, 2003) 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 will 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 administered 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 will reduce the potential for future conflicts between public land users and neighbors. This concept is established in this management plan through different Recreation Emphases.

Allocations/Allowable Uses:

1. All lands within the planning area are identified as the High Desert Special Recreation Management Area, except the lands north of Prineville because of the scattered nature of the public land parcels surrounding the area. Those parcels not included in the SRMA are addressed as part of the Prineville geographic area. The specific components or subunits of this SRMA are identified (See RMP Map 1) as:
 - a. Badlands WSA
 - b. Bend/Redmond Recreation Area
 - c. Cline Buttes Recreation Area
 - d. Horse Ridge Recreation Area
 - e. La Pine Recreation Area
 - f. Mayfield Pond Recreation Area
 - g. Millican Valley OHV Area
 - i. Millican Plateau OHV Area
 - ii. North Millican OHV Area
 - iii. South Millican OHV Area
 - h. Northwest Recreation Area
 - i. Prineville Reservoir Recreation Area
 - j. Smith Rock Recreation Area
 - k. Steamboat Rock Recreation Area
 - i. Steelhead Falls WSA
 - l. Tumalo Recreation Area
2. **Recreation Emphasis:** Each subunit is designated with one or more Recreation Emphasis classifications that establish trail management goals for an area. These are displayed on RMP Map 4: Wildlife and Recreation Emphasis.

Guidelines:

1. Areas designated **Non-motorized recreation exclusive** will be managed to promote non-motorized recreation uses. Trails and facilities in these areas will be designed and managed for non-motorized trail use. These areas are designated closed to motorized use except for use of public roads and rights-of-way, or roads that access recreation facilities, trailheads, etc.
2. Areas designated **Non-motorized Recreation Emphasis** will be managed to provide for motorized use on roads only, with road systems that provide for general access into an area or loop roads to tour an area. Trails and related facilities in these areas will be designed and managed for non-motorized trail use.
3. Areas designated **Multiple Use, Shared Facilities** will emphasize shared road and trail systems for both motorized and non-motorized uses. The majority of trails and facilities in these areas will be designed to accommodate OHV use. Some separated trail or road use could occur in these areas, depending on specific features or management classifications (e.g., ACECs)
4. Areas designated **Multiple Use, Separated Facilities** will manage all or a portion of the road and trail use with separate routes and related facilities for motorized and non-motorized uses. The separation of uses may be seasonal, by area, or by specific routes or facilities.
5. Areas designated as **Non-Recreation Emphasis** will be managed to provide research opportunities or as administrative sites or leases. Recreation use of these areas will not be promoted.
6. Areas designated as **Roads Only Emphasis** will generally not receive designated trail systems, due to the area's location, size, or fragmented ownership pattern.
7. The Upper Deschutes RMP will serve as a recreation management plan or will allow the completion of the following required elements of a Special Recreation Area management plan:
 - a. 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).
 - b. Designated access points, staging areas, trailheads, parking areas, day use sites, campgrounds, and other site facilities.
 - c. A specific trail system layout that includes shared use trails or user-specific trails as dictated by the RMP. Designated trail system layouts will include segments to be closed, segments to retain as is or improve, and new segments to be constructed to make a useable system.
 - d. Other recreation site improvements, including sign plans, interpretive plans, and volunteer agreements.
8. In T15S, R13E sections 1, 13, 24, 25, and 26 consult with Redmond Airport officials to ensure that recreational developments and uses do not conflict with the safe operation or development of the airport.

Objective R – 2: Provide designated access points (includes entry points, parking areas, trailheads, and/or staging areas) to enhance visitor experience, protect resources, and minimize conflicts with adjacent 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 throughout the planning area.

Allocations/Allowable Uses

1. Motorized access on designated roads is allowed in areas designated Closed on state highways, county roads, rights-of-way, and for administrative purposes. (See also Transportation, Administrative Access)
2. Unless specifically identified and designated as a campground, all designated trailheads/staging areas are closed to overnight camping/occupancy and campfires.

Guidelines:

1. 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:
 - a. Paved public roads that are not Expressways (includes county major and minor arterials) are used as a first priority.
 - b. Paved collector streets not within local subdivisions are used as a second priority.
 - c. Paved or unpaved local subdivisions are used as a third priority.
2. Incorporate ODOT transportation corridor management strategies with access designations.
3. General public access points will be limited to the minimum necessary to meet recreation and other management objectives.
4. 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.
5. Designate new or move existing access points, when feasible, away from private property boundaries.
6. Access to public lands, particularly for full-size vehicles, will be limited within several miles of urban growth boundaries, especially access from high volume state highways or paved county roads. Existing rights-of-ways may be used as primary public access.
7. Avoid locating trailheads above buried pipelines. Where unavoidable, BLM will complete the project in a manner that will ensure that proper pipeline functioning is retained.
8. Mark access points and managed parking areas with physical barriers that define the area.
9. Consider range of the developments at designated access points depending upon projected use levels, that include but are not limited to:
 - a. 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.
 - b. Informational and regulatory signs
 - c. Sanitary facilities
 - d. Site hardening for parking or staging areas
10. Road and trail maps will not, where practicable, show unauthorized access across private lands

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate 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 are classified with a Travel Management designation of 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. In accordance with national direction, all geographic areas within the planning area are designated in one of those classifications. Off-highway designations were developed to provide an integrated balance and mix of uses across the planning area, providing areas for more extensive trail development in larger blocks more removed from urban development, and opportunities for smaller, shorter trail systems in closer to urban developments.

Allocations/Allowable Uses:

See RMP Maps 3 and 11-24 for Open, Closed, and Limited motorized vehicle travel designations. See recreation guidance by geographical area for exceptions to area designations

Guidelines:

1. Areas with a travel management designation of "Limited to Designated Roads Only" or a Recreation Emphasis designation of "Non-Motorized Recreation Emphasis" or "Roads Only Emphasis" may have designated motorized trails provided the following conditions are met:
 - a. The trail link provides a connection to a designated trail system on BLM or other public land;
 - b. The trail link does not change the overall management emphasis of the area; and
 - c. The provision of a trail provides better travel management conditions than use of an existing road or development of a new road.
2. Any area or seasonal closures will be clearly signed. Signs posted on BLM administered lands by other agencies under cooperative agreement must be approved by the BLM.
3. Roads closed to motorized travel by the public may be retained if needed for administrative or public safety purposes.
4. 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.
5. 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.
6. In areas designated as Closed to motor vehicles or designated as Limited (seasonally), existing roads may be retained or new roads created that provide access to parking areas, trailheads, or other use areas year-round.
7. OHV trails and site development will provide for a diversity of activities, including but not limited to motorcycle, quad, and four-wheel drive opportunities.
 - a. Obtain trail or road easements from willing landowners, in order to provide access to currently landlocked BLM public land parcels or promote trail system continuity and regional trail development.
8. Installation of OHV related facilities above buried pipelines will be avoided. Where unavoidable, BLM will complete necessary project mitigation to ensure that proper pipeline functioning is retained.
9. Facilities will be built when needed for public safety and resource protection. Toilets are considered needed for resource protection when high use levels are reached.
10. Facilities will be located at least one-quarter mile from known raptor nests.
11. BLM will coordinate with the Deschutes and Ochoco National Forests to provide outreach programs and form partnerships with local schools, user groups, and other organizations. Outreach programs may include "Right Rider", "Tread Lightly" and other programs which promote appropriate outdoor ethics.

12. Cattle guards will be placed where designated trails cross fences. Gates will be installed next to cattle guards to accommodate recreational horse use and other uses.
13. Event stipulations will be reviewed annually with the users to determine needed deletions, additions and revisions.
14. New trails and developments will be designed and constructed to avoid or minimize conflicts with known raptor and sage grouse areas. Existing trails and developments will be managed to avoid or minimize conflicts with those areas which may be known or are identified in the future. Management in these areas may include trail closure, trail relocation, or season of use restrictions
15. The spread of noxious weeds will be monitored along designated trails and staging areas. Infestation sites will be controlled using the most appropriate methods as identified in the BLM Prineville District Integrated Weed Management Plan (USDI-BLM 1994). These methods may include the use of herbicides. This plan is available for review at the Prineville District office.
16. During the course of public information programs, users of OHV travel areas will be provided information about protecting wildlife habitat, rangeland improvements, avoiding excess noise and activity in the presence of livestock, and the importance of keeping gates closed. These same measures will be incorporated into Special Recreation Permits and bonding requirements for organized events.
17. Public use information will be available at key points including all trailheads and staging areas. These locations will have bulletin boards that display information about motorized and non-motorized trail riding, natural history, resource protection, and how to avoid private lands.
18. Trail maintenance will be the level necessary to promote visitor safety, resource protection, and to maintain trail difficulty ratings.
19. Roads and/or trails located on private property that is acquired through exchanges, sales, or acquisition of easements will be evaluated for addition to the road and trail system. Priority will be given to roads that provide key linkages or provide loop opportunities, or roads and trails that will replace other routes with resource or safety concerns.

Interim Guidelines for use of Existing Roads and Trails

20. Road and trail maintenance will occur to the level necessary to promote visitor safety and resource protection. Road and trail maintenance on routes that are currently part of the BLM's transportation system or part of the existing Millican Valley OHV system will be done to promote visitor safety, resource protection, and to maintain trail difficulty or road maintenance ratings.
21. Existing roads and trails will generally be open for use in the areas designated Limited to Designated Roads or Limited to Designated Roads and Trails pending completion of local transportation system designations within each geographic area consistent with management direction in the final RMP.
22. Rights-of-way – Rights of way currently open to motorized use will generally remain open, and those closed seasonally or year round to general public use will continue closed until final designation of a local transportation system for the area, or updates to specific rights-of-way have been completed.
23. RMP Maps 12-24 display known and mapped motorized travelways under BLM jurisdiction that will continue to be open to motorized uses pending completion of local transportation decisions or updates to specific rights-of-way have been completed. Some existing motorized travel ways may not be shown because of one or more of the following factors:
 - a. Roads and trails that occur in known problem areas (e.g., unsafe intersections with paved public roads)
 - b. Any road or trails on private land without legal easements for public use and roads and trails that occur for a majority of their length on private land.
 - c. Roads and trails that directly link Limited areas with closed areas.

24. Motorized travel will generally not be allowed (see also administrative access guidelines) outside of the travel ways shown on RMP Map 3 and RMP Maps 12-24 until a final local transportation system is designated or updates to specific rights-of-way have been completed. Other road and trail links, realignments, and ROWs may be available for motorized use on a case by case basis prior to final transportation system designations.
25. In areas designated Closed to motor vehicle use and outside WSAs, existing road rights of way that are open to general public use and provide access to residential areas (i.e., more than a single residence) or connections to other public roads may remain open as part of the interim management of existing roads and trails until a final road and trail system is designated.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

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... Non-motorized recreation demand is growing, as are conflicts associated between motorized and non-motorized users and often different non-motorized user groups. Recreation Emphases allow for blocks of areas with exclusive non-motorized trail management guidance, areas where motorized and non-motorized uses are mixed or separated, and provides for direction on where non-motorized opportunities will be emphasized.

Allocations/Allowable Uses:

1. In all areas, construction, placement or maintenance of roads or trails without authorization, contract, or approved operating plan is prohibited.
 - a. See RMP Maps 3 and 11-24 for areas closed to motorized travel.

Guidelines:

1. When consistent with plan objectives convert non-designated roads and old travel ways 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.
2. Incorporate BLM administered non-motorized trails into regional trail networks when consistent with other resource management goals.
3. 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.
4. Develop campgrounds as needed, with an emphasis on camping facilities that support designated trail systems.
5. Geocaching is not regulated throughout the planning area except as noted under special management area direction. (See Special Management Area discussion for closures and areas with special restrictions.)

Trail Design and Construction

6. Close redundant trails.
7. Rehabilitate or repair trails that are unsafe or contribute to erosion.
8. Design trail routes that avoid private property or obtain easements from willing landowner if avoidance is difficult or expensive.
9. Reroute roads and trails that cross private property to create road and trail loops that are exclusively on BLM administered lands to allow continued recreation use and authorization of SRPs for events that do not require private landowner approval.

10. If necessary for public safety or to protect natural conditions, trails may be closed temporarily until rehabilitated or reconstructed.
11. Relocate or eliminate at-grade trail crossings whenever possible, and especially:
 - a. When road construction or reconstruction fragments existing trail systems.
 - b. When road is subject to high speed travel.
 - c. When either trail system or road is subject to high use levels
 - d. When line of sight at crossings is limited.
12. Provide trail maps and install route markers to designate trails.
13. Construct gates for equestrian use adjacent to cattle guards where such structures are built to facilitate motorized travel on shared use trails.

Objective R – 5: 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 (USDI-BLM, 2000a) 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 administered 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. Management of group uses within an urban interface setting is needed to minimize conflicts between public land users and adjacent landowners. The adjacent USFS group use permit threshold is 75 participants; however, given the fragmented public ownership pattern and variety of uses in the urban interface, the permit threshold is set lower at 50 participants.

Allocation/Allowable Uses:

1. Special Recreation Permits (SRPs) are required for all commercial and competitive uses on BLM administered lands.
2. New commercial SRPs for non-foot traffic, trail dependent annual use (e.g., guided horseback rides, llama pack trips, mountain bike rides, etc.) will only be issued for designated trails or routes that are part of BLM's transportation system.
3. Group use authorizations are required for organized group activities involving greater than 50 participants within the High Desert Special Recreation Management Area.
4. The following apply to organized group use in both the Steelhead Falls and Badlands Wilderness Study Areas:
 - a. Group use authorizations are required for all organized group activities involving 12 or more participants, and may be required for organized groups involving less than 12 participants depending upon factors including but not limited to: proposed activity, season of use, and potential impacts.
 - b. An SRP is required for all organized groups not on an inventoried route. Management of organized group use will emphasize the use of inventoried, designated routes.
 - c. No competitive events allowed.
 - d. No vending allowed.
5. In the Badlands WSA, organized group use will have the following restrictions:
 - a. 20 people/group maximum (both commercial and non commercial)
 - b. 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.

6. The Steelhead Falls area will have the following restrictions for organized group (commercial and non-commercial):
 - a. No organized group use on holiday weekends
 - b. 1 group/day maximum
 - c. 12 people/group maximum (including commercial groups)
 - d. 6 cars/group maximum
 - e. In the Steelhead Falls Area - only foot travel is allowed.
 - f. In the Foley Waters Area - only foot or equestrian travel is allowed.
7. In the Steelhead Falls area, allow up to four commercial filming activities per year, providing the following:
 - a. Group size is limited to no more than eight people.
 - b. All activities take place on signed and designated trails.
 - c. Motor vehicle use is limited to the Steelhead Falls trailhead and campground area (i.e., designated routes only).
 - d. Filming activities occur only on weekdays and not on holidays.
 - e. No helicopters or aircraft are used.
 - f. Filming activities do not occur within a 1/4 mile distance from known and active raptor nests.
 - g. The BLM will monitor the progress of the filming.
 - h. No surface disturbance takes place.
 - i. The filming sites will be maintained in a sanitary condition at all times: waste materials at the sites will 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.
 - j. All other standard permit stipulations will be followed.
8. In the Horse Ridge area, organized group use will have the following restrictions:
 - a. Group use authorizations are required for all organized group activities involving 12 or more participants.
 - b. Trail dependent special recreation events (trail rides, races, etc.) are 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 will be separated by at least 12 days with no scheduled events.
9. In the Wagon Road ACEC, special recreation permits or authorizations will be issued for commercial or group use involving foot traffic events only on the ACEC road segments. No competitive events will be allowed on the ACEC road segments. SRPs or authorizations will be allowed for commercial/group vehicular or pack stock use at designated trail or road crossing points with the historic roads. Maintain and improve cooperative efforts to provide interpretation of the Wagon Roads ACEC.

Guidelines:

General

1. Prior to the issuance of a SRP, assess the proposed activity to determine if it is in the public interest and to assure adequate mitigation of effects. This assessment will include but not necessarily be limited to consideration of:
 - a. Effects on natural and cultural resources.
 - b. Effects on the social experience.
 - c. Effects on facilities.
 - d. 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?
 - e. Proposed project mitigations – what are the expected levels of effects, and what prevention, mitigation, or rehabilitation will be needed to meet resource management objectives for the area.

2. 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.
3. For hiking/foot traffic use, emphasize authorizing commercial annual use on designated trails, then consider non-designated routes (in areas where no trail systems have been designated) through the SRP process if these routes are mapped and do not present resource or social concerns. In areas where a designated trail system is implemented after the ROD, manage trail dependent commercial use (including hiking) through this system to avoid creation of additional routes.
4. For the purposes of issuing SRPs (per BLM National SRP Policy, 43 CFR 8372), Commercial Use is defined as:
 - a. When any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands, the use is considered commercial. An activity, service, or use is commercial if anyone collects a fee or receives other compensation that is not strictly a sharing or, or is in excess of, actual expenses incurred for the purposes of the activity, service or use. Commercial use may also be characterized by public advertising for participants or situations where a duty of care or expectation of safety is owed participants by service providers as a result of compensation.
 - b. Use by scientific, educational, and therapeutic institutions or non-profit organizations is considered commercial when the above criteria are met and subject to a permit when the above conditions exist. Non-profit status of any group or organization does not, in itself, determine whether an event or activity arranged by such a group or organization is non-commercial. Profit making organizations are automatically classified as commercial, even if that part of their activity covered by the permit is not profit-making.
 - c. Examples of permit activities include outfitters and guides, jeep tours, horse trail and wagon train rides, cattle drives, and photography associated with a recreational activity, i.e., when images are taken of recreation participants for sale to participants or filming of recreational activities to be sold to the public.
5. Group use levels that are likely to exceed the capacity of facilities such as trailheads, staging areas, and other facilities, may be subject to use of a reservations system to meet growing demands for group uses such as group camping, day use for special events, etc without exceeding the capacity of existing facilities.

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 administered 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:

1. New facilities may be developed when needed for public safety or to protect resources.
2. Development may include but will not be limited to trails, picnic tables, site designations, hardened and delineated parking areas, and permanent toilets.

3. Day use and group use areas may be developed, with an emphasis on day use facilities that support areas with designated trail systems or interpretive features.
4. When necessary to protect facilities or resources adjacent to facilities, boundaries will be defined through techniques such as signing and/or fencing or other appropriate means.
5. Installation of recreation facilities above buried pipelines will be avoided. Where unavoidable, a proper pipeline functioning must be retained.
6. Work with other agencies and local governments to provide regional trail corridors, interpretive services, park development and other recreation services.

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

Rationale:

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 Roads 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.

Allowable Uses/Allocation:

1. Areas closed to camping/overnight use:
 - a. Powell Butte RNA
 - b. Horse Ridge RNA
 - c. Wagon Roads ACEC
 - d. Tumalo Canal ACEC
 - e. Area west of the North Unit Canal north and immediately south of State Highway 126.
 - f. Redmond Caves parcel
 - g. BLM parcel north of Highway 126 and adjacent to Cline Falls State Park
 - h. 40 acre parcel on State Highway 97 south of Deschutes Junction
 - i. Sisters Climbing Area

Guidelines:

1. 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.
2. Unless otherwise authorized by permit, on BLM parcels managed for non-motorized exclusive use overnight camping will be limited to 3 nights of per 28 day period, except where closed to all overnight use.

Management Direction for Specific Geographic Areas

The recreation management direction specific to geographic areas is described below with a brief discussion of the overall emphasis and road and trail system goals for that area.

Badlands WSA

The existing inventoried system of routes that connect to the following trailheads (Obermolte, Route 5, Milepost 16, and Route 8) will be retained. A non-motorized trail

entrance at the east boundary of the Badlands will be provided. For direction on parking/trailhead improvements, see plan guidance for the Mayfield Pond and North Millican areas.

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

Guidelines:

1. Reduce unauthorized vehicular entry into WSA by using appropriate mechanisms (e.g., fencing, signs, etc.).
2. Provide improvements to parking/trailhead areas to better handle equestrian use (e.g., hitching rails, adequate turning radius for trailers, and adequate parking space).
3. Provide designated and managed parking areas that respond to increased needs when the area is closed to motor vehicles.
4. Provide visitor information at parking areas on WSA designation, travel management, and interpretation of natural and cultural resources.
5. Due to the motorized vehicle closures, providing designated parking areas and trailhead improvements at major entry points is a high priority (this includes travel management and trailhead improvements outside the WSA, including in the Mayfield Pond area and in the North Millican area at the base of Dry River Canyon).

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

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.

Allocations/Allowable Uses:

1. The WSA is Closed to motor vehicle use year-round (Travel Management Designation: Closed) (see RMP Maps 3 and 11).
 - a. The WSA is open year round for non-motorized use.
 - b. All mechanized travel and stock use is limited to the designated system of inventoried routes (see RMP Map 11).

Guidelines:

1. The recreation emphasis in the Badlands WSA is Non-motorized Recreation Exclusive.
2. The Badlands WSA will be managed for primitive, non-motorized recreation.

Bend/Redmond Recreation Area

A multi-use trail system will be developed in the Bend-Redmond block that can function with portions closed if needed to minimize conflicts with OMD training exercises. The road system needed for OMD use and other administrative uses will be retained. The non-motorized trails in this area include a potential regional trail along the North Unit Canal (with BOR and NUID concurrence), and use of roads within the Wagon Roads ACEC.

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

Allocations/Allowable Uses:

1. Access from the following subdivisions will be non-motorized trail access only: Powell Butte Estates West, Boonesborough and other major subdivisions.
2. Provide staging areas, where appropriate, to support OHV use on the designated trail system.

Guidelines:

1. Appropriate measures will be taken to reduce conflicts and safety hazards due to OHV access across State Route 126.
2. The emphasis for staging area development is to serve different local customers, with staging areas/trailheads easily accessible for Redmond, Bend and Prineville residents.
3. Staging area development should address the needs of the OMD, and the ability to disperse users on the trail system and reduce user conflicts.
4. Trailheads and staging areas for trail systems will be designed to help increase public awareness of travel management regulations and other uses of the area, such as OMD training exercises.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Rationale:

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:

1. See RMP Maps 3 and 12 for Travel Management within the Bend/Redmond Recreation Area

Guidelines:

1. The recreation emphasis for the majority of the Bend/Redmond Recreation Area is Multiple Use Shared Facilities.
2. The Bend/Redmond area will be managed for motorized use on designated roads and trails, both north and south of State Highway 126.
3. Trail system will 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).
4. 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.
5. The designated trail system in the Bend/Redmond area will be designed to minimize development of user created trails that require crossing of State Highway 126.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Rationale:

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

Guidelines:

1. 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 and to consider possible water-oriented recreation use.
2. Consider the development of non-motorized trail connections between the two longer segments of historic road in the Wagon Roads ACEC and the North Unit Canal, if the Canal Corridor becomes a regional trail and the values for which the ACEC was designated can be maintained.
3. Work with city of Redmond and Deschutes County on future management of BLM administered lands west of the North Unit Canal north and immediately south of State Highway 126.

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:

The BLM and the City of Redmond have been involved in the cooperative management of the 40 Redmond Caves parcel for several years. Over the last 10-20 years, this site has been the victim of repeated vandalism and garbage dumping. Cooperative projects such as fencing, archeological site evaluation, and clean-ups have been the focus of these cooperative efforts in the last few years. A draft "master plan" for how the site will ultimately be developed and managed was developed in the 1990s but not completed. The caves are important cultural resources and have had identified in the past some use by Townsend's big-eared bat.

Guidelines:

1. Work with the City of Redmond to develop the Redmond Caves site as an interpretive park site.
2. Interpretive site development will include an emphasis on old growth juniper and native plant communities associated with the area, restoration of suitable bat habitat in some portion of the cave system and interpretation of archeological values.
3. Explore opportunities for community involvement in removal of graffiti and site stewardship.

Cline Buttes Recreation Area

The Cline Buttes area will be managed for multiple recreation use, with some areas being designated specifically for non-motorized trail development, while other areas will have multiple use trails. The Maston Allotment area east of Cline Falls Highway will be managed exclusively for non-motorized use. Like motorized users, equestrians and mountain bikes will be limited to a designated trail system, once completed.

Roads will be retained or developed in the Cline Buttes block to the extent necessary to provide for 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 will be retained in the Maston Allotment. Other roads in the Maston Allotment may be either designated and managed as non-motorized trails or closed and rehabilitated. Trail development in the higher elevation portions of the buttes will be oriented toward providing non-motorized trails for hiking, mountain biking, and equestrian use.

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

Allocations/Allowable Uses:

1. Identify designated access points, parking areas and trailheads to support the non-motorized trail system.
2. Limit the number of access points through trail layout and rehabilitation efforts.

Guidelines:

1. Designate trailheads for hiking access to the Deschutes River. Move existing access points away from private residences and provide marked, defined parking areas and signed trails to public portions of the river.
2. Provide improvements to Fryrear Road trailhead or develop a replacement trailhead as needed to accommodate additional vehicles and adequate turning radius for horse trailers.
3. Provide signs and information on Sisters area trails if regional trail link is developed along Jordan Road from Sisters to BLM administered land at Cline Buttes.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 13 for Travel Management within the Cline Buttes Recreation Area

Guidelines:

1. The majority of the Cline Buttes Block will be managed with a Multiple Use, Separate Facilities Emphasis.
2. Multi-use trail system emphasis will be most heavily developed in center and north portions of the Cline Buttes block. In other areas, management of motorized use will emphasize motorized use on designated roads, with trails being used by non-motorized recreationists.
3. Work with ODOT to cooperatively manage the existing material site west of Barr Road as an OHV play area while maintaining the site for mineral material use. Manage trails in the area between Cline Falls Highway and Barr Road to minimize erosion and visual impacts.
4. For motorized trails, the trail system will be developed to:
 - a. Provide year-round opportunities.
 - b. Provide riding opportunities in a variety of terrain.
 - c. Limit the number of trailheads to a manageable number.
 - d. Provide play area opportunities.
 - e. Separate OHV use from other non-motorized trails to the extent feasible.
 - f. Take advantage of scenic and interpretive opportunities.
 - g. Provide separate loops and a variety of choices that help to disperse users, given the relatively small acreage of the trail system.
 - h. Allow motorized trail designation within or along the Tumalo Canals outside the ACEC and areas designated as Closed.
 - i. Locate trails to minimize conflicts with adjacent land owners to the extent feasible while maintaining a workable trail system.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

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:

1. A portion of the Tumalo Canals ACEC in the area east of Barr Road will be managed for foot traffic only (See Special Management Areas. Area to be closed to motorized trail is not on Maps 3 or 13 because the perimeter has not yet been determined).

Guidelines:

1. The Maston Allotment and Harper Road parcels will be managed to achieve a Non-motorized Recreation Exclusive Emphasis.
2. Manage equestrian and mountain bike use on a designated trail system. The non-motorized trail system will emphasize shared use non-motorized trails; however, separate trails may be considered to meet recreation user needs at the area management plan level by:
 - a. Specific trail designations, or
 - b. Identifying trail design and maintenance standards to meet a specific user group and informing the public of the trail emphasis without specifically closing the trail to any non-motorized user.
3. For non-motorized trails, the trail system will be developed to:
 - a. Provide year-round opportunities.
 - b. Clearly differentiate between motorized and non-motorized trails.
 - c. Provide opportunities for all non-motorized users, but allow separation of uses (e.g., horses and mountain bikes) where appropriate).
 - d. Provide a variety of trail conditions that suit different type of users (mountain bikes vs. equestrians).
 - e. Provide connections from trails at the buttes to the Maston Allotment area and to the Dry Canyon complex.
 - f. Connect to regional trail networks.
 - g. Provide a loop trail around Cline Buttes.
 - h. Provide a variety of trail difficulties, particularly for hiking and mountain biking.
 - i. Provide connections between the area east of Cline Falls Highway and the areas west of Cline Falls Highway and West of Barr Road.
 - j. Separate trailheads for motorized and non-motorized use to the maximum extent feasible.
 - k. Provide managed and maintained trail access to public portions of the Middle Deschutes.
 - l. Take advantage of scenic and interpretive opportunities.

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 administered 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:

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

Horse Ridge Recreation Area

The Skeleton Fire area will be managed for motorized use on a few main roads, much as it has been prior to this RMP. Roads may be retained or previously closed roads reopened only to the extent necessary to create a loop road from the Gosney Road access and State Highway 20 access. The remaining roads in the area may either be closed and rehabilitated or converted to non-motorized trails, which to provide various trail loops and connect to non-motorized trails in the Horse Ridge area. Trails on Horse Ridge will be developed to serve a variety of non-motorized users; however separated trails for different users may be considered at the area management plan level.

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

Rationale:

The Skeleton Fire and Horse Ridge areas are high use trail areas that lack designated trails and trailheads. The lack of these facilities has led to private land trespass and reduces the opportunity for communication of regulations and resource concerns in the area.

Guidelines:

1. Designate adequate access to parking and user information for non-motorized trail use in the Horse Ridge and Skeleton Fire area.
2. Maintain and improve conditions at South Millican Horse Camp by clearly defining boundaries, signs and trail information. Consider increased development if multiple user groups can be served.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Rationale:

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:

1. See RMP Maps 3 and 14 for Travel Management Allowable uses within the Horse Ridge Recreation Area.

Guidelines:

1. The Skeleton Fire area is designated as Non-motorized recreation emphasis.
2. Designated roads in the Skeleton Fire area will form a loop system that allows for recreational use, including special events.
3. Trail dependent special recreation events (trail rides, races, etc.) are allowed on designated roads or trails. A maximum of 2 events (motorized or non-motorized) may be held per month, with events up to 2 days long allowed. Each permitted event must be separated by at least 12 days with no scheduled events.
4. 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 – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The Horse Ridge area is designated as Non-motorized Recreation Exclusive (Recreation Emphasis) (see RMP Map 4) and managed for year-round non-motorized trail use with a designated trail system (see RMP Maps 3 and 14).
2. The BLM administered land bounded by State Highway 20 on the east, Rickard Road on the south, and private lands to the west and north is designated as Non-motorized Recreation Exclusive (Recreation Emphasis) and managed for non-motorized trail use on a designated trail system.
3. The area between State Highway 20 and the old highway is designated Non-motorized Recreation Exclusive (Recreation Emphasis) and managed for non-motorized trail use on a designated trail system.
4. The Skeleton Fire area is designated as Non-motorized Recreation Emphasis (see RMP Map 4) and managed for year-round non-motorized trail use with a designated trail system.
5. Roads may 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.
6. 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 will be designed and managed to differentiate it from roads, and to reduce redundant access points, avoid trespass, and avoid sensitive resource areas. Construct additional trails as needed to complete a system that offers loops of varying lengths.
7. Develop non-motorized trails on Horse Ridge that avoid private parcels and allow continuation of existing trail use. Closed roads in the Horse Ridge area needed for a non motorized trail system will be converted into trails for non-motorized use.
8. Designated trails will be located outside the Horse Ridge RNA.
9. Trail dependent special recreation events (trail rides, races, etc.) are 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 will be separated by at least 12 days with no scheduled events.
10. Provide a designated trail link from Horse Ridge trails to the existing culvert trail crossing under State Highway 20.

La Pine Recreation Area

The majority of the La Pine area will be managed for motorized use on designated roads only. The middle portion of the La Pine area east of State Highway 97 will be managed for motorized use on designated roads and trails year-round. This area encompasses the Rosland OHV Play area, and provides additional 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 will 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.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 15 for Travel Management Allowable Uses within the La Pine Recreation Area. A newly acquired parcel on the Little Deschutes River north of State Recreation Road is displayed only on Map 15.

Guidelines:

1. Motor vehicle travel will be limited to a designated system throughout the majority of the area
2. The area south and east of the Rosland OHV area is designated as Multiple Use Shared Facilities Recreation Emphasis. The emphasis for the area is to enlarge the trail system linked to the Rosland OHV Play area site.
3. The areas designated as Roads Only and Multiple Use Separate Facilities may contain designated OHV trails at the minimum needed to provide trail links to other adjacent designated OHV trail systems.
4. Designated OHV trail links may be allowed in the areas identified for motorized use on roads only in La Pine. Trail links will be provided to the extent practicable in order to provide access to trail or road systems on adjacent public lands or to reach the designated trail systems associated with the Rosland area.

Objective R - 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The southern portion of the La Pine block is designated Roads only Recreation Emphasis.
2. The northern portion of the La Pine block is designated Non-motorized Recreation Emphasis, and managed to provide trails for non-motorized uses and roads for motorized vehicles.
3. Isolated blocks will be managed for dispersed non-motorized use.
4. If opportunities for non-motorized trail connections exist, consider development of non-motorized trails in the northern portion of the La Pine area.
5. The Little Deschutes River parcel located north of State Recreation Road will be managed for non-motorized trail use with an emphasis on hiking 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:

The unincorporated city of La Pine has, proportionally, a larger percentage of public lands within the unincorporated community urban growth boundary than other areas in the planning area. As a consequence, the area has had a long history of requests for uses of BLM - managed lands things such as parks, rodeo grounds, and other community interests.

Guidelines:

1. Work with Deschutes County, State Parks, and the community of La Pine to explore R&PP lease options for park development in La Pine.
2. Development of new park sites could occur under R&PP lease or if management responsibilities were assumed by another public entity.

Mayfield Pond Recreation Area

The Mayfield Pond area will 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.

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

Guidelines:

1. Provide designated trailhead and parking facilities to support trail use in the Airport Allotment.
2. Provide designated entry points and trailheads that support trail use in the Mayfield Pond block.
3. Provide designated access/parking at Mayfield Pond.
4. Provide designated access/parking at the Route 5 entrance to the Badlands WSA or at the Reynolds Pond area with a designated road/trail link to the Route 5 entrance. This trailhead will be designed to:
 - a. Accommodate horse trailers.
 - b. Minimize the spread or expansion of user created parking areas.
 - c. Provide interpretive information on WSA resources and management.
5. Consider providing new designated access to the area south of Alfalfa Market Road from Dodds Road.
6. Relocate road and parking at Alfalfa Pond.
7. General public use, motorized access points into the area north of Alfalfa Market Road will 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).
8. Access controls will be made to support the motorized vehicle closure south of Alfalfa Market Road (e.g., fences, signs, barriers, etc.).
9. Provide a parking area/trailhead 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 may be provided to serve surrounding residential access, but will be minor access gates, without improved parking.
10. Vehicle parking will be moved farther away from Alfalfa Pond, but still be available off Dodds Road. The road will 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.
11. Relocate the existing access road to Mayfield Pond farther away from the pond to improve recreation and resource conditions at the pond site.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 16 for Travel Management Allowable Uses within the Mayfield Pond Recreation Area.
2. Area within the fence around Mayfield Pond is closed to motorized travel (this area is too small to display on maps).

Guidelines:

1. The Mayfield Pond area north of Alfalfa Market Road is designated as Non-motorized Recreation Emphasis and will be managed to allow motorized use on a road network. This road system will be designed to:
 - a. Provide road loops in the area that can be used by both motorized and non-motorized recreationists and provide access for permittees.
 - b. Rerouting of the existing road away from the edge of Mayfield Pond will be a priority.
 - c. Designated roads will be located approximately 1/4 to 1/2 mile from bordering subdivisions.
 - d. Non-motorized trail connections will be considered at the surrounding subdivisions.
 - e. Roads not designated will be rehabilitated or converted to trails.
 - f. Avoid dead-end roads, and limit the number of motorized access points from adjacent roads, subdivisions or private property.
2. Roads in the area east of Dodds Road will be limited to those needed for canal maintenance access or to reach trailheads or ponds.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Allocations/Allowable Uses:

1. Non-motorized use south of Alfalfa Market Road and west of Dodds Road (except hiking) will be limited to designated roads and trails when a designated system is implemented.

Guidelines:

1. The Mayfield Pond area north of Alfalfa Market Road is designated as Non-motorized recreation emphasis.
2. The Mayfield Pond area south of Alfalfa Market Road and north of Dodds Road, and the Airport Allotment is designated as Non-motorized Recreation Exclusive (Recreation Emphasis) and will be managed for non-motorized trail use. Trails in the area will provide several different length loops for hiking, running, equestrian and mountain bike use.
3. Manage non-motorized use by developing a designated, signed, non-motorized trail system in the following areas:
 - a. The main block (north of Alfalfa Market Road).
 - b. BLM land south of Alfalfa Market Road and west and north of Dodds Road.
 - c. The Airport Allotment.
4. The trail system in the main block north of Alfalfa Market road will 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 may be provided from adjacent subdivisions.
5. To the maximum extent feasible, non-motorized trails will be located away from designated roads in the main block, to avoid conflicts between motorized and non-motorized uses.
6. Create a designated, non-motorized trail link between the Reynolds Pond parking area and the Badlands WSA Route 5 trailhead.
7. Where possible, the road system in the Airport allotment area will be modified to create a single track system that includes trail loops and avoids dead-end trails.
8. Where possible, roads will be converted to trails.
9. 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 - 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:

1. 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 Valley Off-Highway Vehicle Area

Guidance that applies to Millican Plateau, North Millican, and South Millican includes the following:

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Guidelines:

1. In addition to general guidance for Objective R – 3 the following guidelines will continue to apply within the boundaries of the existing Millican Valley OHV area:
 - a. Trails, camping areas, warm up areas, and other facilities will be located away from Highway 20 to the extent feasible.
 - b. The Millican Valley OHV area is a designated use area for Class 1, 2, and 3 OHV users.

Millican Plateau OHV Area

The majority of the geographic area will be managed for year-round use on designated road and trails. The goal of OHV trail system is to provide diverse OHV opportunities by creating new trails and play areas and to provide trail opportunities when the seasonal and trail density restrictions in North Millican and South Millican areas are in effect.

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 power line crossing at Millican/West Butte Road (see RMP Maps 3 and 17).

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

Guidelines

1. Develop trailheads to access the Millican Plateau portion of the OHV area, while controlling parking and spread of dispersed use. Trailheads and staging areas will be provided to:
 - a. Disperse users throughout the system to avoid user conflicts.
 - b. Provide a diversity of experiences.
 - c. Minimize visual impacts from Millican/West Butte Road and Reservoir Road.
 - d. Minimize need for at-grade trail crossings of Millican/West Butte Road and Reservoir Road.
 - e. Provide facilities that serve causal use and also special event use.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 17 for Travel Management Allowable Uses within the Millican Plateau portion of the Millican Valley Off Highway Vehicle Recreation Area. The following trail loop is not displayed on the maps because the trail has not been designed: In the closed area immediately west of the Crooked River one OHV trail loop will be designated that provides scenic views of the Crooked River Canyon. This designated trail must be outside the Crooked Wild and Scenic River boundary.

Guidelines:

1. Designate and manage the majority of the Millican Plateau area for a Multiple Use Shared Facility Recreation Emphasis.
2. Retain and enlarge the Millican Plateau area as part of the Millican Valley OHV Area. Goals for the management of OHV use in the area include:
 - a. An increased density of trails compared to the North and South Millican Areas to provide dispersal of users.
 - b. A range of opportunities, including trails, play areas, and technical four-wheel drive opportunities.
 - c. Year-round trail connections to the North Millican Area.
3. Staging areas to disperse users and provide OHV area access from Prineville.
4. Increased development of staging areas, with provision of toilets or camping areas as needed.
5. Additional trails are designated in area between Millican/West Butte Road and Johnson Market Road.
6. Additional trails are designated in area east of Road 6555-b to allow for one or more trail loops.
7. 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).
8. Designate trails in the area west of Millican/West Butte Road and south of Powell Butte.
9. The trail system in the area will be revised to maintain a functional system on both sides of Millican/West Butte Road. The number of trail crossings of Millican/West Butte Road will be limited, and frontage trails may be provided to collect trail use and lead it to grade separated crossings.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to promote visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The area along the west rim of the Crooked River is designated as Non-motorized Recreation Exclusive and managed for non-motorized trail use.
2. The Millican Plateau area will be open year-round to non-motorized trail use.
3. The West Butte area is designated and managed as Non-motorized Recreation Exclusive (Recreation Emphasis), providing for non-motorized designated trails.

North Millican OHV Area

Most of the area will be managed for shared use on a designated trail system. The OHV system will allow for year-round use and maintain connections to the South Millican and Millican Plateau areas. Certain areas, such as the Dry River Canyon area along State Highway 20, a portion of West Butte, and the area west of, and adjacent to State Highway

27, will not have any motorized trails designated in them. The designated trail system will 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 will be given to trails, and all roads not needed for administrative access may be closed and rehabilitated.

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

Guidelines:

1. Develop trailhead and parking area at base of Dry River Canyon to serve the Badlands WSA and Dry River Canyon use areas.
2. Consider providing a primitive camping area at base of Dry River Canyon if needed and if this development will reduce impacts to wilderness suitability in the Badlands WSA.
3. Consider developed group use and camping site near the Central Oregon Shooting Sports Association (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.
4. 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 other trailheads.
5. 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 R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 18 for Travel Management Allowable Uses within the North Millican portion of the Millican Valley Off Highway Vehicle Recreation Area.
2. ODOT Pit Play area will be open all year.

Guidelines:

1. The majority of the area is designated as Multiple Use Shared Facilities and managed as part of the larger Millican Valley OHV area, with OHV trail connections to South Millican and Millican Plateau.
2. Interim guidelines for the existing Road and trail system in North Millican will include:
 - a. The interim road and trail system in North Millican will 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. It will also include existing roads open to street legal vehicles year-round.
 - b. The existing designated OHV system will be subject to the pre-plan seasonal closures (Area closed from December 1 through April 30), until a final road and trail system is implemented.
3. Some portion of the area or portions of trails may be seasonally closed (December 1 to April 30) to maintain wildlife habitat objectives.
4. Increase the diversity of motorized recreation opportunities by providing trails or sites specifically for Class 1, 2, and 3 vehicles (motorcycles, quads, and jeeps/pickups).
5. The cinder pit in North Millican will be developed as a staging area. This staging area will have a graveled parking area, loading ramp, and an information bulletin board.

6. The BLM will continue to pursue a cooperative agreement to manage the area known as the ODOT pit. If acquired, the BLM will develop the site as a permanent casual-use staging area, warm up area, and the hill climb areas behind the play area will be closed, but the play area itself will be Open year-round. Improvements may include vault toilet, load up ramp, information kiosk, etc.
7. A primitive campground will be located in the North Millican area; typical improvements will include a cindered road loop, vault toilet, and a group gathering area with a fire pit. A staging area will be associated with the camping area.
8. Warm up areas will be developed with the staging areas (one at the Cinder Pit, another at the north end of the North area).
9. The hill climb at the Cinder Pit OHV Play Area will remain open for OHV use.
10. The hill climb located near Highway 20 and adjacent to the ODOT gravel pit will remain closed to public use.
11. Consider development of camping facilities to support recreation use in the SE portion of the planning area.
12. Improve ODOT pit to increase usefulness as a staging area and increase safety and user satisfaction at the play area.
13. Staging areas will be developed on each side of Millican/West Butte Road, to serve public recreational use and allow for events to be focused on one side of Millican/West Butte Road or the other.
14. Modify the OHV trail system in the area to reduce the need for at grade crossings of Millican/West Butte Road and to increase trail mileage on east side of Millican/West Butte Road.
15. Retain juniper trees in adequate numbers along trail corridors to keep riders on trails and reduce maintenance needs, consistent with other resource objectives.
16. Motorized use Road and trail density will be limited to approximately 1.5 miles per square mile.
17. Road and trail dependent special recreation events (e.g., races, trail rides) will 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.
18. The trail system layout will also emphasize retention of large, un-fragmented habitat blocks (in a range of 1,000 to 2,500 acres or greater) throughout the area.
19. Areas or portions of the trail system may be closed during the winter; however, the trail system goals for the North Millican area will include:
 - a. A workable winter trail system that, in combination with Millican Plateau and South Millican, provides high quality, diverse riding opportunities over a variety of difficulties and terrain.
 - b. A trail system designed to encourage winding, challenging trails that increase the hours of riding opportunity per mile of trail corridor.
 - c. A range of opportunities, including trails, play areas, and technical four-wheel drive routes.
 - d. Year-round trail connections to Millican Plateau, to provide for dispersal of users and longer riding opportunities.
 - e. Multiple staging areas to disperse users throughout a less dense trail system than is currently present.
 - f. Provision of toilets and camping areas as needed.
 - g. Maintain connections to the South Millican Area.
 - h. Development of grade separated trail crossings of Millican/West Butte and Reservoir Roads.
 - i. Provide a range of riding opportunities during the best riding conditions (winter) by providing winter trails in areas of steeper topography that offer challenge and provide scenic qualities.
20. The trail system in the area will be revised to maintain a functional system on both sides of Millican/West Butte Road. The number of trail crossings of Millican/West Butte Road will be limited, and frontage trails may be provided to collect trail use and lead it to grade separated crossings.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The area immediately west of State Highway 27 will be managed as Non-motorized recreation emphasis.
2. The Dry River Canyon area in the northwest corner of North Millican area will 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 River Canyon and the area to the north of Dry River Canyon.
3. A designated trail link will be provided from Dry River Canyon to the Route 8 entrance to the Badlands WSA.
4. If opportunity occurs, add grade separated crossings of Millican/West Butte Road or State Highway 20 to provide additional trail connections or to separate user types on different crossings.
5. A designated trail link will be provided at the upper end of Dry River Canyon to link with trails in Horse Ridge area. Consider connection of Dry River Canyon trail routes to existing culverts under State Highway 20 to provide safe crossing of the Highway for trail users.

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.

Guidelines:

1. The North Millican Cinder Pit will be redesigned for better and safer OHV use if this can be done without compromising the site's effectiveness for material extraction.
2. 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 plan.
3. Consider development of a primitive camping area at base of Dry River Canyon.

South Millican OHV Area

South Millican will remain as an OHV use area, but will retain the existing seasonal closure (area closed to motorized use from December 1 through July 31). The existing trail system will be retained. No new trail connections will be provided between the motorized trail system in South Millican and trails in the adjacent Deschutes National Forest.

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

Guidelines:

1. Maintain staging areas for OHV use in the South Millican area.
2. Provide improvements to staging areas in South Millican that accommodate both motorized and non-motorized uses.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. The South Millican Area will be designated as Limited to Designated Roads and Trails. The OHV system will be closed seasonally (open to motorized use from August 1 to November 30, closed the remainder of the year) (see RMP Maps 3 and 19).

Guidelines:

1. The South Millican area will be designated as Multiple Use Shared Facilities Recreation Emphasis.
2. The South Millican OHV area will be maintained for OHV use on designated roads and trails.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

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

Northwest Recreation Area

The area will 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 the Crooked River National Grassland (CRNG) to the north. Roads will 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.

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

Guidelines:

1. 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.
2. Provide trailhead(s) at appropriate locations to serve the local area community of Sisters.
3. Where feasible, provide trailheads in locations that connect to area or regional trails as identified by the Sisters Community Action Team, or by adjacent land management agencies.
4. The existing road on BLM administered land that connects Holmes Road to Forest Road 6360 will be retained as a BLM system road.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 20 for Travel Management within the Northwest Recreation Area.

2. All BLM roads in this area (except access roads to non-motorized trailheads or developed sites) will be Closed to motorized use seasonally, from December 1 to March 31.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The Northwest Area will be designated as Non-motorized Recreation Emphasis and managed to :
 - a. Provide year-round non-motorized trail opportunities.
 - b. Provide a trail link from the Sisters area through BLM administered lands to access the road leading to Alder Springs trailhead on the Crooked River National Grassland (e.g., a portion of the Cascade Mountain/Willamette Valley Wagon Road could be identified and managed as a non-motorized trail).
2. Construct new trail alignments as necessary to avoid private property.
3. Consider development of one or more loop trails off the main trail.

Objective R – 5: 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.

Guidelines:

1. 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 Sisters Climbing Area (Fremont Canyon) as a publicly accessible climbing opportunity.
2. The Sisters Climbing Area will be managed specifically for climbing use, and will be identifiable as BLM administered land.

Prineville Geographic Area

The many small isolated tracts of BLM administered land north of Prineville will be closed to motorized vehicle use. This also includes one of the larger tracts, the 640-acre parcel located adjacent to Ochoco Reservoir. BLM public lands located south of Prineville and north of the Prineville Reservoir geographic area are managed primarily for motorized use on designated roads year-round.

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

Guidelines:

1. If legal access is obtained, provide trailheads for Powell Butte.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 21 for Travel Management within the Prineville Area.

Guidelines:

1. See general guidelines for Objective R – 3.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The scattered parcels north of Prineville are designated as Non-motorized Recreation Exclusive (Recreation Emphasis).
2. The majority of the parcels south of Prineville are designated as Roads Only Recreation Emphasis.
3. 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 – 5: 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.

Guidelines:

1. BLM will 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 Recreation Area

The area will 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 will be managed exclusively for non-motorized use only. The northeastern portion of the area (the Sanford Creek drainage) will be managed for motorized use on roads that are open seasonally. The remainder of the area including lands on each side of the Bear Creek arm of Prineville Reservoir will be limited to designated roads only year-round. These BLM administered lands will have designated, non-motorized trails that link to BOR/State Park managed sites at Prineville Reservoir.

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

Guidelines:

1. Designated non-motorized trails will utilize State Park/BOR trailhead facilities where feasible.
2. Consider development of a trailhead for non-motorized use off State Highway 27 at Taylor Butte.
3. Consider development of a trailhead on the east side of State Highway 27 south of Powderhouse Cove.
4. Consider development of trailheads for non-motorized trail use in the Eagle Rock area and the area between Prineville Reservoir and the Chimney Rock segment of the Wild and Scenic Crooked River.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3 and 22 for Travel Management within the Prineville Reservoir Recreation Area.
2. A localized developed OHV play area with small trail loop system may be allowed in the area north of Prineville Reservoir where the travel management designation is Limited to Designated Roads Only.

Guidelines:

1. Prior to development of OHV opportunities north of Prineville Reservoir consider the following:
 - a. Orient development toward local residents, not as a draw to regional users.
 - b. The development can be located in a defined area with clear boundaries.
 - c. The development can be located outside of areas designated as Closed to motorized use.
 - d. Consider first suitable areas within Secondary wildlife emphasis. Primary wildlife emphasis areas should be avoided if possible.
 - e. Do not locate development in the Eagle Rock area or immediately adjacent to the upper portion of Prineville Reservoir Recreation Area.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Guidelines:

1. The areas immediately north and south of Prineville Reservoir are designated as Non-motorized Recreation Emphasis.
2. The Area north of Prineville Reservoir and immediately east of the Crooked River is designated as Non-motorized Recreation Exclusive (Recreation Emphasis).
3. The southernmost portion of the area will be designated as Roads Only Recreation Emphasis.
4. Designated, non-motorized trail systems will be developed throughout the geographic area. The goal of the non-motorized trail systems in this geographic area will be for year-round non-motorized trail use, with connections made to Prineville Reservoir State Park and the Crooked Wild and Scenic River where appropriate.
5. 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.
6. The trail system will be designed to provide viewpoints of the reservoir and other scenic features.
7. The area north of Prineville Reservoir and immediately east of the Crooked River will be managed for non-motorized trail use on designated trails. 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 will be obliterated.
8. The existing Chimney Rock trail will be extended into a trail system with several loops that ultimately connects to a BOR and State Parks managed trailhead near the County Boat Ramp.
9. A non-motorized trailhead and parking area will be developed on the north side of this area; other access points will be the Chimney Rock Trailhead, and a trailhead near the County Boat Ramp.
10. Develop designated, non-motorized trails in the Taylor Butte/Powderhouse Cove area that will connect to BOR/State Park facilities, provide loops in the Powderhouse Cove area, and link Roberts Bay to the Bear Creek site.
11. A designated, non-motorized trail system will be developed in the Eagle Rock area, with a trail link to Prineville Reservoir. The intent of this trail system will be to

provide year-round non-motorized trail access. Access points closed seasonally to motor vehicles will have provisions made to allow for non-motorized access into the area.

Smith Rock Recreation Area

The entire block will 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.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Allocations/Allowable Uses:

1. Allow development of additional trails to reduce impacts at climbing areas and to provide additional mountain bike, hiking, and equestrian use opportunities.
2. Limit mechanized and horse travel to designated routes.

Guidelines:

1. Develop alternative access to BLM administered lands adjacent to Smith Rock State Park if:
 - a. Trails in Smith Rock State Park are closed to mountain bikes, or
 - b. The North Unit Canal is identified as a regional trail corridor.
2. Coordinate trail development with Smith Rock State Park and the Crooked River National Grassland.
3. Design and locate trails to protect resources and scenic values.

Steamboat Rock Recreation Area

The majority of the main block of public land in the Steamboat Rock area will be managed for both motorized and non-motorized use on a shared trail system. While this area will be open to OHV (Class I and III, i.e., motorcycles and quads), it will 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 existing high density (approximately 8 miles of roads per square mile) of roads in the main Steamboat Rock block will be reduced, with many roads being closed and rehabilitated while others will be managed as trails. A separate trail system for non-motorized use will be developed along the Deschutes River in the main block. The river parcels adjacent to Crooked River Ranch will continue to be managed to emphasize non-motorized use. Isolated parcels northwest of Redmond are managed exclusively for non-motorized use.

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

Rationale:

High use demand, increased developments adjacent to the area, continuing trespass and social conflicts, unmarked and unmaintained trails, large scale dumping of trash, enlarging and expanding access points.

Guidelines:

1. Provide permanent toilet facilities at high use trailheads such as Steelhead Falls.
2. 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.

3. Designate trailheads for hiking access to Deschutes and Crooked Rivers. Move existing access points away from private residences if feasible and provide marked, defined parking areas and signed trails to public portions of river.
4. Consider providing a designated parking and trailhead area for the Deschutes River area closed to motor vehicles located south of Lower Bridge Road.

Objective R – 3: Manage off highway motorized vehicle use on BLM administered land to provide visitor satisfaction, protect natural resources, provide visitor safety, minimize conflicts among public land visitors and adjacent land owners and integrate opportunities with adjacent land management agencies.

Allocations/Allowable Uses:

1. See RMP Maps 3, 23A, and 23B for Travel Management within the Steamboat Rock Recreation Area
2. Vehicle access to Steamboat Rock will be limited to designated parking areas, in order to control the expansion of cleared areas surrounding the rock.

Guidelines:

1. Hill-climbs south of Tetherow Crossing subdivision will be rehabilitated and reseeded as will hill climbs and shooting target areas at the Steamboat Rock formation.
2. Work with the City of Redmond to provide trail connectivity between the Redmond area and the Steamboat Rock block.
3. 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 administered lands.
4. Designate shared use trails in the main block. The goals of the trail system will include:
 - a. Include a reduction in the number of access points, and provision of designated trailheads.
 - b. Any access points needed solely for administrative access (e.g., at power line corridors) may be gated and not available as public access points.
 - c. New roads or trails will be created as needed to link existing roads back to common access points or trailheads.
 - d. Trails will be routed to avoid private lands and minimize conflicts with adjacent landowners.
 - e. Provide multiple loops and a variety of difficulty levels and trail conditions.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Allocations/Allowable Uses:

1. The Deschutes River corridor adjacent to Crooked River Ranch is designated Closed to motor vehicles.
2. The Crooked River corridor adjacent to Crooked River Ranch is limited to designated roads only.
3. The Deschutes River corridor located south of Lower Bridge Road is designated Closed to motor vehicles.
4. Small parcels located northwest of Redmond are designated Closed to motor vehicles.

Guidelines:

1. The Deschutes and Crooked River corridors adjacent to Crooked River Ranch is designated Non-motorized Recreation Exclusive and managed for non-motorized trail use and river access.
2. The Deschutes River corridor located south of Lower Bridge Road is designated Non-motorized Recreation Exclusive and managed for non-motorized trail use and river access.
3. Small parcels located northwest of Redmond are designated Non-motorized Recreation Exclusive.
4. 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.
5. A separate trail system for non-motorized use will 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 Recreation Area

Roads will 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 administrative use. Roads not needed for administrative access may be closed and rehabilitated or modified to serve as trails. Designated trails will be developed in the area.

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

Guidelines:

1. Identify designated access points, parking areas and trailheads to support the non-motorized trail system.
2. Limit the number of access points through trail layout and rehabilitation efforts.

Objective R – 4: Provide identifiable non-motorized recreation opportunities to provide visitor satisfaction, protect natural resources, and minimize conflicts among public land visitors and adjacent land owners.

Allocations/Allowable Uses:

The Tumalo area is closed to motorized use. See RMP Maps 3 and 24.

Guidelines:

1. The Tumalo area is designated as Non-motorized Recreation Exclusive.
2. Trail system goals for the area include:
 - a. Roads will be retained in this area only to the extent necessary to create or access parking areas and trailheads.
 - b. Roads not needed for administrative access will be either closed or converted to designated trails.
 - c. Trails will be available for year-round use.
 - d. Provide links to trail systems on adjacent lands.
 - e. Provide a variety of loops that offer a diversity of trail experiences and serve to disperse users and reduce user conflicts.
 - f. Trails will take advantage of scenic and interpretive opportunities.
3. Designate a system of non-motorized trails in both the main Tumalo Block and the area south of Tumalo Reservoir.
4. 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 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:

FLPMA (43 USC 1761 (a) (1-7) 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." 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..." 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 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." (43 USC 1765 (a) and (b))

Objectives in granting rights-of-way and temporary use permits (43 CFR 2800) are to "(1) protect the natural resources associated with the public lands and adjacent private or other lands administered by a government agency, (2) prevent unnecessary or undue environmental damage to the lands and resources, (3) promote the utilization of rights-of-way in common with respect to engineering and technological compatibility, national security and land use plans and (4) 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:

1. 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.
2. Areas of critical environmental concern, wilderness study areas, and Wild and Scenic Rivers are designated as right-of-way exclusion areas.
3. All areas identified as having special status plant or animal species are designated as avoidance areas.
4. Designate all existing right-of-way routes as local corridors for future collocation of compatible projects.

Guidelines:

1. BLM administered lands will continue to be available for rights-of-way, including multiple use and single use utility/transportation corridors, following existing routes, and roads.

2. 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.
3. Applicants are encouraged to locate new facilities adjacent to existing facilities to the extent technically and economically feasible and meet resource objectives.
4. 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.
5. All areas having high or sensitive (VRM classifications 1-3) visual qualities will be avoided or appropriate mitigation measures taken.
6. Each right-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.
7. Each right-of-way will contain terms and conditions requiring compliance with environmental quality standards applicable to Federal or State law.
8. 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.
9. Locate and design new rights-of-way to minimize fragmentation of public lands, and only construct new projects when the use of existing alignments will have substantially less desirable environmental impacts than new construction.
10. Consolidate transportation and utility systems within existing corridors if possible to reduce habitat loss, degradation and fragmentation caused by new construction.
11. In T15S, R13E sections 1, 13, 24, 25, and 26 consult with Redmond Airport officials to ensure that Transportation and Utility decisions do not conflict with the safe operation or development of the airport.

Objective TU – 2: Provide an integrated, functional, safe, efficient, transportation system that:

- Supports approved land uses that cannot be met on private, state, or county lands
- Provides links between local communities
- Reduces or minimize conflicts with adjacent landowners
- Supports approved common guidelines of joint jurisdictions
- Balances public access needs with resource protection

Rationale:

See Rationale for TU – 1.

Allocations/Allowable Uses:

1. Do not allow activities in transportation corridors and airport safety zones that will not meet the requirements of these areas.
2. In all areas, construction, placement or maintenance of roads or trails without authorization, contract, or approved operating plan will be prohibited.

Guidelines:

1. Coordinate development of transportation systems with State, local, and other federal jurisdictions to provide links between communities within and outside of the region.
2. 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.
3. 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.
4. 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.

5. Maintain roads providing access to trailheads, staging areas, picnic areas, campgrounds or other developed sites to a standard that provides safe access for passenger cars and recreational vehicles (campers, trailers, etc.).
6. Where grantees have alternative existing rights-of-way in the area of a new proposal, they will vacate the existing right or provide other reasonable compensation as a condition of the new authorization, if it is determined to be in excess of access needs.
7. Public access along transportation and utility corridors will be managed to meet recreational and travel management objectives.

Access

8. Designation of access points to public lands will provide safe ingress and egress from state highways and county roads. The network of local roads through public lands will be dependent upon administrative needs, recreational use and travel management objectives.
9. 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:
 - a. Access points off paved public roads (arterials, not expressways) as a first priority.
 - b. Second priority will be given to developing access points from collector roads.
 - c. Low priority will be given to developing motorized access points from local or subdivision roads.
10. 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.
11. Obtain permits from respective jurisdictions for all designated access points.
12. Retain public use of rights-of-way that provide access to the Middle Deschutes and Crooked River.
13. Minimize conflicts between landowners and users of public lands by relocating trails and parking areas away from private property boundaries, wherever feasible.
14. 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/West Butte Road/Highway, State Highway 126, State Highway 20, O'Neil Highway, Johnson Market Road, and the Powell Butte Highway.
15. 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 administered lands.

Roads

16. See Objective R-3, Guidelines 10-15 for Interim use of Existing Roads and Trails. Also see RMP Maps 11-24.
17. All local roads that are not needed to meet specific management objectives are available for designation as system roads or for closure following site specific analyses.
18. Roadways may be closed that meet the following criteria:
 - a. Repeated law enforcement violations exist.
 - b. Extremely difficult to maintain at prescribed maintenance levels.
 - c. Public safety hazards exist.
 - d. Resource damage cannot be mitigated.
 - e. Necessary to accomplish other resource objectives.

- f. User created roads (unauthorized travel ways created though public lands since passage of FLPMA, based on evidence found on aerial photos and maps of that period) not designated for use as a trail or needed for administrative access.
 - g. Local roads (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) that “dead end” or do not provide connectivity with the designated transportation system.
19. Existing road systems will 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.
 20. Motorized routes not selected for designation, but required for other uses, may have locked gates installed. Examples may include utility access roads, grazing access roads, or local roads needed for administrative access.
 21. Motorized routes may have gates or cattle guards installed to allow for continued grazing activities and to insure visitor safety.
 22. Rights-of-way determined not to be a necessary component of the transportation system may be closed to the general public to reduce dumping, illegal activities, and cross-country travel.
 23. During planning provide affected tribes the opportunity to review all proposed road closures to determine if opportunities for cultural uses will be adversely affected.

Objective TU - 3: 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, power line, 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 may impact natural resource and scenic values. Appropriate mitigation during design and development of new or expanded rights-of-way will help compensate for long-term and cumulative impacts to natural resources. Also see Rationale for Objective TU – 1.

Guidelines:

1. An environmental analysis will determine cumulative effects of the proposed project and appropriate mitigating measures.
2. BLM’s contrast rating system will be used to assess visual resource impacts and develop appropriate mitigation measures or project design changes (see also Visual Resources Section).
3. Treatments or mitigations should normally occur adjacent to or in the immediate vicinity of the development.
4. 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.
5. Specific mitigation requirements should 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 training 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.

Objective TU - 5: Consolidate transportation and utility systems with consideration for ecological and recreational values, while providing for regional transportation systems and meeting regional objectives.

Rationale:

See Objective TU - 1.

Allocations/Allowable Uses:

1. Designate the collector road network and transportation/utility corridors as shown on RMP Map 2.
2. Designate a transportation corridor, approximately ½ mile wide and extending from approximately the end of 19th Street in Redmond to Deschutes Market Road. This includes a corridor connection to Quarry Avenue that will allow for a future Federal Highway interchange.
3. Designate a corridor between the existing Antler road north of State Highway 126 and connecting with the existing State Highway 126 outside of the Redmond Airport runway protection zone for future realignment of Highway 126.

Objective TU - 6: Provide motorized access to facilitate reasonable entry and operations for administrative purposes.

Rationale:

To meet BLM administrative needs for land and resource management activities, public access restrictions may not apply or may be temporarily modified (see RMP Map 3 for Travel Management Designations). Administrative access will be required in cases of access required by law or regulation, to provide a more cost-effective means of protecting, restoring, or studying natural resources, and to construct, maintain, and access private property or facilities. Examples of such administrative and management activities include but may not be limited to: emergency access (i.e. fire suppression, hazmat clean-up, law enforcement), rights-of-way and facilities construction/maintenance and ingress/egress to private in-holdings, research/education, monitoring/inventory, military training, land treatments, authorized mineral material sites, traditional cultural uses, and other activities allowed under written authorization.

Allocations/Allowable Uses:

1. Vehicle use off of designated roads/trails is not allowed:
 - a. In WSAs and ISAs (Instant Study Areas) at any time of the year (access on designated roads in the Badlands WSA only for approved activities).
 - b. In the Peck's Milkvetch ACEC during March 1 - August 15.

Guidelines:

1. Groups and personnel granted administrative access will be guided by provisions and requirements in the specific contract, permit, or agreement which will stipulate what types of activities and travel will be allowed, and under what conditions.
2. Administrative access includes but is not limited to:
 - a. Access to designated Closed areas (seasonally or year-round).
 - b. Access on designated or existing road systems that are closed (seasonally or year-round).

- c. Access off designated roads and trails.
3. Administrative access authorization will include mitigation measures to protect resources and to rehabilitate impacts caused by temporary motorized access or activities. Some of these mitigations could include, but are not limited to:
 - a. Closure and rehabilitation of temporary access routes.
 - b. Activities/travel over snow or frozen ground.
 - c. Activities/travel limited by season or soil moisture conditions.
 - d. Use of low-impact equipment and techniques.
 - e. Use of gates and signs to preclude general access.
4. Decisions regarding access authorization and special requirements will be decided on a case-by-case basis. The authorizing officer will consider the resource values involved, potential effects of the activity, cost vs. benefit, and appropriate/reasonable mitigation measures to be applied. Access recommendations will normally be made during project planning through an interdisciplinary team process and with the appropriate level of NEPA analysis.
5. Grazing permittees/lessees must apply for a permit to provide supplemental livestock feed, salt, or nutrients, or to construct new fences or other range improvements. The BLM will decide during the permit process whether or not off-road vehicle use will be allowed for these activities. If allowed, written authorization and conditions will be included in the permit/lease. The annual grazing billing process will also provide an opportunity to include or change written access authorizations prior to turnout. Motorized vehicle use off of designated roads/trails will generally be approved when:
 - a. Moving cattle in to or out of a pasture, and checking for stragglers a day or two later.
 - b. Checking/repairing fences prior to turnout.
 - c. Checking for breaks in fence or open gates after finding strays.
 - d. Checking all perimeter fences/gates once per month (special authorization will be required for more frequent access).
 - e. Hauling water to troughs that are off-road.
6. If road closures eliminate access to sites used for traditional cultural uses, tribal members may be granted administrative access for purposes of those uses.

Land Ownership

Public lands have been classified for retention or disposal pursuant to the Section 7 of the Taylor Grazing Act (43 U.S.C. 315f) and other authorities described in Appendix A.

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 will generally be retained in public ownership, and where emphasis will be placed on increasing public land holdings.

Rationale:

Public lands in Central Oregon provide a variety of resource values. These include but are 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, and providing undeveloped space between burgeoning population areas. Underlying the objectives for land ownership is the assumption that retention of large blocks of public lands best serves these diverse values.

Allocations/Allowable Uses:

1. Those public lands in Wild and Scenic River areas, identified for retention in the Middle Deschutes/Lower Crooked River (Chimney Rock Segment) Management

- Plan (USDI-BLM 1992) and designated in the Brothers/La Pine Resource Management Plan (USDI-BLM 1989) will remain Z-1.
2. RMP Map 6 displays lands classified Z-1 for retention (approximately 323,931 acres).

Guidelines:

1. 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.
2. Retention designations will provide for protection and management of resources for public benefits that include but are not limited to:
 - a. Retain public lands along stream corridors, including headwaters with upland buffers.
 - b. Retain public lands with visible highland features including Cline Buttes, Smith Rocks, and Grizzly Mountain.
 - c. Retain public lands that connect large blocks of public lands for wildlife corridors, for access, and for recreation trails.
 - d. Retain large blocks of public ownership to maintain and protect the integrity of intact ecosystems.
 - e. Retain public lands that provide trail corridors or maintain opportunities for longer distance trail loops or regional trail corridors in rapidly developing areas.
 - f. Retain in federal ownership all habitat essential for the survival and recovery of any species federally listed or proposed for listing as threatened or endangered, or BLM sensitive species, including historic habitat that has retained its 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 may be considered.
3. In designated transportation corridors, until a site-specific NEPA analysis for that designated use has been completed, or other information indicates that the corridor is no longer needed for that use, do not authorize new uses that will preclude uses for which the corridor was designated.

Objective LO – 2 (Z-2): Identify parcels 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).

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. 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:

1. RMP Map 6 displays lands classified Z-2 for retention with an option to exchange (approximately 62,753 acres).
 - a. Some Isolated and fringe public parcels are 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 at Steamboat Rock, Mayfield Pond to Badlands, and Prineville Reservoir area to the Maury Mountains.
 - b. Areas identified for blocking up public lands include east and south of Juniper Acres, Horse Ridge, Bend/Redmond, Mayfield Pond, and Prineville Reservoir area.

- c. The majority of the public lands in La Pine are Z-2, extending south from Wickiup Junction to the boundary of the project area 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.

Guidelines:

1. 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.
2. The public parcels around Prineville will be available for exchange for parcels throughout the planning area.
3. Parcels generally having the potential for high public resource values to retain may be exchanged for private parcels with higher public resource values, for parcels that will block up larger blocks of public lands, or for parcels that will provide connectivity between larger blocks of public lands.
4. Do not dispose of lands that contain special status species habitats unless the parcel to be disposed of will 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): 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 will represent a greater public benefit in other ownership.

Rationale:

Many BLM administered 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 trespass. While the bulk of a parcel may represent one or more public values, trespass that includes part of a structure, for instance, has lost public value. If the trespass 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 will 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:

1. Selected public lands identified as Z-3 in Brothers/La Pine RMP will continue as Z-3 and qualify for retention of funds in accordance with the BACA Bill. These lands include isolated parcels between Bend and Redmond, isolated parcels around Prineville, and isolated parcels northwest of La Pine (see RMP Map 6).
2. RMP Map 6 identifies lands classified Z-3 for disposal, (approximately 15,186 acres). Parcels suitable for disposal include eight in the Northwest, eight south of Steamboat Rock, three at Cline Buttes, one west of Redmond, two along Highway 97, eight around O'Neal, 15 north of Prineville, 12 north of Highway 380, 19 between Prineville and Prineville Reservoir, three east of Prineville Reservoir, three in Alkali Flat, two southeast of Bend, four near Burgess Road in La Pine, and one at the intersection of Highway 97 with Highway 31.

Guidelines

1. 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.

2. Lands allocated Z-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.
3. Any exchange, sale, or transfer of public lands will be subject to appropriate analysis under NEPA, with applicable cultural, botanical or special status species clearances, as well as required mineral reports.
4. BLM retains the option to reconsider the disposal of all properties for the best interests of the public under the appropriate review process. A proposed disposal must be consistent with the objective of protecting resources.
5. Designate as Z-3 any parcels determined to be unsuitable for retention through subsequent site-specific analysis.
6. Use proceeds of sales (as permitted by BACA Bill) to acquire lands for the purpose of improving the BLM's land ownership pattern. (See Appendix D and Objective LO-5).
7. Lands will be available for sale or exchange if the encumbrances are resolved and the public will be better served. No exchanges will occur until satisfactory resolution of encumbrances.
8. The lands in La Pine will have a first priority for community use, and then open to the general public.
9. First priority for all land disposals will be to satisfy the State of Oregon's entitlement to in-lieu selection lands for the purposes of providing for school funding.

Objective LO – 4: Provide land for community needs and uses consistent with public land management mandates (community expansion).

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 most "urbanizable" lands adjacent to urban growth boundaries because they lie in the expanding urban area and are often classified as "non-resource lands" in the state land use planning process. 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.

Local land use planning and other community planning groups have identified public lands for potential community expansion needs.

The United States, through BLM, owes the State of Oregon, through the Department of State Land (DSL), several thousand acres of land, called "in lieu" lands. BLM is seeking in this plan to repay DSL by providing parcels identified as Community Expansion. When communities request lands that are Community Expansion, BLM will request that DSL consider requesting those lands as "in lieu". If DSL acquired the lands, they could then transfer them to the communities that requested them, which will provide public lands for community expansion while also relieving BLM of its debt.

Allocations/Allowable Uses:

1. Classify approximately 3,612 acres of BLM administered lands for disposal for Community Expansion (see RMP Map 6).
 - a. In Redmond, several public land parcels south of the Redmond Airport, south of Redmond, and east of Highway 97 are identified for community expansion.
 - b. Between Redmond and Bend, some public lands east of Highway 97 are identified for a park.
 - c. East of Prineville, at Barnes Butte, public lands are identified for a park.
 - d. Between La Pine and Wickiup Junction, several public land parcels are selected for public facilities and parks.

Guidelines:

1. Public land may be identified for community expansion when a bona-fide need for land has been identified through an urban reserve or other appropriate study. Such studies will consider unique resource values on those public lands but not recognized or prioritized by State Land Use urbanization processes.
2. 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 will 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.
3. Lands will be available for community expansion that will provide a greater public benefit being used for community expansion than for other public benefits. These lands will include but are not limited to lands with the following important characteristics:
 - a. 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.
 - b. Sufficient public lands will be selected for ancillary facilities outside the urban growth boundaries that complement them, for example, airport clear zones.
 - c. Public lands will be maintained as a development buffer between communities, thus retaining community identities.
 - d. When public lands are selected for community purposes, BLM will request that they be evaluated for compatibility with in lieu selection criteria by Oregon Division of State Lands prior to transfer for community purposes.
 - e. 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.
 - f. The lands in La Pine will provide trails/connectors from Rosland Pit to public lands to the south.

Objective LO - 5: Adjust land ownership patterns to improve the effectiveness of land management, wildlife habitats, and recreation. Provide connectivity for wildlife and recreation between larger blocks of lands, in urban areas and where no public access currently exists. Acquire isolated private parcels in large blocks of public lands.

Rationale:

Many privately held parcels of land provide unique or special values or benefits that will 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 and emphasizes selection of areas or specific parcels which will provide connectivity between, access to, or block up public lands.

Allocations/Allowable Uses:

Parcels of interest include those between Deschutes National Forest and Clines Buttes, Tumalo and Cline Buttes, Mayfield Pond and Badlands and Reservoir West, and Reservoir East and Maury Mountains. (See RMP Map 6 and Appendix D)

Guidelines:

1. Block up large blocks of public lands.
2. Align boundaries to recognizable features and topography.
3. Exchange isolated parcels that do not meet objectives and guidelines.
4. 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.
5. Acquisitions will occur only with willing land owners.
6. Acquisition priority will 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 will be acquisition to consolidate public lands in Millican Valley, Horse Ridge, and La Pine.
7. Lands with the following qualities may be considered for acquisition.
 - a. Located along stream corridors, including headwaters with upland buffers.
 - b. Include visible highland features including Cline Buttes, Smith Rocks, and Grizzly Mountain.
 - c. Connect large blocks of public lands for wildlife corridors, for access, and for recreation trails.
 - d. Will block up public ownership to maintain and protect the integrity of intact ecosystems.
 - e. Will 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.
 - f. 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).
 - g. Parcels will (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.
8. 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):
 - a. Reduce the number of developed in holdings.
 - b. 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:
 - i. Parcels located in the La Pine deer and elk travel corridor, especially ones that block-up ownership and/or contain riparian or wetland habitats.
 - ii. Parcels located along the Crooked River (and adjacent uplands) south of Prineville (to benefit riparian dependent species and potential bighorn sheep re-introduction).
 - iii. Parcels located in the Alkali Butte area that will help connect federal ownership between the BLM administered lands in the Reservoir East area with Forest Service administered lands located in the Maury Mountains.
 - iv. Parcels that contain important habitat for special status species and other species of high public interest or concern, including sage grouse.
 - c. Improve or increase riparian or wetland habitats.
 - d. 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:
 - i. Acquire lands in the Horse Ridge and Skeleton Fire areas to maintain or provide new trail systems.

- ii. Acquire lands surrounding Badlands WSA to better manage wilderness values and provide adequate parking/trailheads.
- iii. Acquire land in Dry Canyon at Cline Buttes to maintain trail system connectivity and improve parking/staging areas.
- iv. Acquire land in Cline Buttes to provide better trail opportunities and reduce social conflicts.
- v. Retain use of ODOT pit area on State Highway 20.
- vi. Provide unique recreation and river access opportunities via acquisition of in holdings along the Deschutes and Crooked River; including the Hollywood Road area at CRR.
- vii. Provide for better management of special management areas/sites such as ACECs, WSAs, etc.

Objective LO – 6: Use easements to complement acquisitions, in lieu of acquisition for conservation or access as appropriate to further public management objectives.

Guidelines:

1. Pursue easements or access agreements for public lands identified for retention that do not have public access.
2. Maintain or improve access to public lands whenever possible during realty actions.

Objective LO – 7: All withdrawals affecting the planning unit will be reviewed periodically to insure the lands being utilized are consistent with the purpose for which the lands were withdrawn.

Guidelines:

1. Lands found suitable for return to the public domain will be restored to entry and managed according to management prescriptions for lands having similar resource values.
2. All new withdrawal proposals will be considered on a case-by-case basis, including land use needs of other Federal agencies.

Public Health and Safety

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

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 (USDI-BLM, 2000a). The BLM Manual states one of the goals of the Bureau's visitor service effort will 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."

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 administered 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.

Federal Register firearm closures have been established to protect wildlife resources and other natural and cultural features, reduce vandalism, and to improve public safety. Examples include closures at Badlands Rock and Fryrear Road to protect raptors, and at Rosland OHV area to protect humans. These closures will be continued as presently enforced.

Allocations/Allowable Uses:

See Table 8 and Table 9 for specific closures and conditions. See Table 10 for Closures included in the Federal Register prior to the Upper Deschutes Resource Management Plan.

Guidelines:

1. **Area of High visitation** – BLM administered 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, many be closed to all firearm discharge or firearm discharge unless legally hunting (see glossary for definition of hunting). Decisions concerning these firearm discharge closures will consider numerous factors including but not limited to:
 - a. Incidences of dangerous firearm discharge (e.g. BLM firearm discharge citations, reports of recreationists being hit, or nearly hit by firearm discharge).
 - b. Type of recreational activity.
 - c. Compatibility of activities.
 - d. Type and size of recreational groups .
 - e. Geography and topography.
 - f. Presence of facilities (parking lots, bathrooms, roads, trails, interpretive signs and exhibits).
 - g. Land status of surrounding properties.
 - h. Ease of closure enforcement.
2. **BLM administered land** – BLM administered land considered for closure to all firearm discharge, or 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.
3. **Other Public Land** - City, county, state and federal agencies managing land adjoining BLM administered land where the non-shooting public visits in heavy concentrations may request a closure of firearm discharge on adjoining BLM administered 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 will be considered in the establishment of these closures including those identified in the preceding paragraphs.
4. **Border closures of large parcels of BLM administered land** - At the request of a government entity, BLM will consider extending an existing public land closure of all firearm discharge, or firearm discharge unless legally hunting, into large contiguous parcels of BLM administered 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.
5. **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 firearm discharge unless legally hunting, in their entirety if:
 - a. The parcel is about 360 acres in size, or smaller, or
 - b. More than half of the isolated parcel is 1/2-mile in length or width, or narrower.
6. All closures provide for the authorized officer to make exceptions to the closure on a case-by-case basis.

7. A closure to all firearm discharge will not apply to:
 - a. BLM personnel 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, or
 - b. Other government personnel in emergency situations, or
 - c. 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, or
 - d. 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.

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 (see Recreation section) are expected to possess a relatively heightened sensitivity to firearm discharge. Closures to all or some firearm discharge would complement the non-motorized recreation experience and emphasize use compatibility. Closures to all firearm discharge would reduce hunting and target shooting opportunities but increase opportunities to recreate in a natural setting with a reduced chance for user conflict. Closures to firearm discharge unless legally hunting would maintain hunting opportunities but still provide some reduction in user conflict.

Allocations/Allowable Uses:

See Tables 8, 9 and 10 for specific closures and conditions.

Guidelines:

1. Closed to Motorized Vehicles – Areas designated Non-Motorized Exclusive (see Recreation section) will be closed to all firearm discharge, or firearm discharge unless legally hunting.
2. Decisions concerning these firearm discharge closures will consider numerous factors including but not limited to:
 - a. Incidences of dangerous firearm discharge (e.g. BLM firearm discharge citations, reports of recreationists being hit, or nearly hit by firearm discharge).
 - b. Type of recreational activity .
 - c. Compatibility of activities.
 - d. Type and size of recreational groups.
 - e. Geography and topography .
 - f. Presence of facilities (parking lots, bathrooms, roads, trails, interpretive signs and exhibits) .
 - g. Land status of surrounding properties.
 - h. Ease of closure enforcement.
3. Areas adjacent to other public lands or private lands zoned for agricultural or forest uses may remain open to firearm discharge if consistent with adjacent land management direction.

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

Rationale:

Developed facilities, or 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 Wagon Road ACEC have already been impacted by visitors discharging firearms. Developed facilities can also be incompatible with firearm discharge, like the example of an electrical substation sited on BLM administered land.

Allocations/Allowable Uses:

See Tables 8, 9 and 10 for specific closures and conditions.

Guidelines:

1. BLM administered lands with reoccurring firearm discharge problems (identified by staff specialists and/or general public), or lands containing important developed facilities, or 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 zoned¹⁰ 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 administered land within the planning area. Under this objective, local citizens and their elected officials will initially be required to assess the threat to human life and the need for a firearm discharge closure on private land adjacent to BLM administered land. City, county and state governments retain the authority to regulate firearm discharge upon their respective lands, and each entity will 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 complementary closure on BLM administered land.

Guidelines:

1. Private land firearm discharge closures will have to be lawfully established under formal land use processes.
2. Decisions concerning placement of a boundary closure, or closure of an isolated parcel, will consider numerous factors including but not limited to:
 - a. Incidences of dangerous firearm discharge (e.g. BLM firearm discharge citations, reports of recreationists being hit, or nearly hit by firearm discharge).
 - b. Type of recreational activity.
 - c. Compatibility of activities.
 - d. Type and size of recreational groups.
 - e. Geography and topography.
 - f. Presence of facilities (parking lots, bathrooms, roads, trails, interpretive signs and exhibits).
 - g. Land status of surrounding properties.
 - h. Ease of closure enforcement.

¹⁰May apply to other types of land use zones with non-conforming uses, and high-density residential developments in non-residential zones.

3. Border closures of large parcels of BLM administered 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 administered 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.
4. 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:
 - a. The parcel is about 360 acres in size, or smaller, or
 - b. More than half of the isolated parcel is 1/2-mile in length or width, or narrower.
5. BLM administered 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 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:
6. Large adjoining parcels of BLM administered land will be considered for a border closure to all firearm discharge as described in Guideline 3 above, or;
7. Isolated parcels of BLM administered land will be considered for closure to all firearm discharge in their entirety as described in Guideline 4 above.

Table 8: Areas Closed to all firearm discharge

Location	RMP Objective Met by Closure		
	PHS - 1	PHS - 2	PHS - 3
Bend/Redmond Block (Immediately west of Cline Falls State Park, Redmond Caves, isolated 40-acre parcel with white bridge along Hwy. 97, Young Avenue isolated parcel, BPA substation, southwest of McGrath Road including Historic Roads ACEC, west of N. Unit Canal and north of Hwy. 126, west of N. Unit Canal and south of Hwy. 126 for approx. 1 mile)	X	X	X
Cline Buttes Block (2 triangular isolated pieces east of Middle Deschutes River, Jaguar Road isolated parcel, Tumalo Canal ACEC, 3 canyons west of Barr Road and south of Hwy. 126 (corresponds with areas where only non-motorized trails are allowed))	X	X	X
Horse Ridge Block (40-acre and 80-acre peninsulas on the west side of the Conestoga Hills subdivision, north of Rickert Road and south of Hwy. 20)	X	X	X
La Pine Block (8 isolated parcels north of La Pine)	X	X	X
Mayfield Pond Block (Airport allotment isolated parcel)	X	X	X
North Millican Block (Dry River Canyon, north of Hwy. 20 (east of Route 8 entrance to Badlands WSA))	X		X
Northwest Block (Sisters Bouldering Area)	X	X	X
Prineville Block (Barnes Butte)	X	X	X
Prineville Reservoir Block (160 acres surrounded by Prineville Lake Estates, Units 1&2 subdivision)	X	X	X
Steamboat Rock Block (All isolated pieces)	X	X	X
Tumalo Block (1025-acre parcel south and east of Tumalo Reservoir)	X	X	X

Table 9: Areas Closed to firearm discharge unless legally hunting

Location	RMP Objective Met by Closure		
	PHS - 1	PHS - 1	PHS - 1
Badlands Block (Entire Badlands Block except 1/4 mile around Badlands Rock from March 1 to August 31)	X	X	X
Cline Buttes Block (Main block – All BLM-administered land south of Hwy. 126, and east of Cline Falls Highway except where a firearm discharge closure already exists)	X	X	X
Horse Ridge Block (Between new and old Highway 20, Horse Ridge proper (approx. SE 2/5ths of the block))	X	X	X
La Pine Block (4 isolated parcels in southern section of block, near Little Deschutes River)	X	X	X
Mayfield Block (½ mile around Mayfield Pond, Main block – south of Alfalfa Market Road)	X	X	X
Millican Plateau Block (Powell Butte RNA, contiguous and west of the Lower Crooked WSR, west side of Lower Crooked River north of WSR section, west of Millican/West Butte Road for 2 miles south from northernmost point of peninsula)	X	X	X
Northwest Block (3 isolated 40-acre parcels, 1 isolated 80-acre parcel, 1 isolated 120-acre parcel)	X	X	X
Prineville Block (Powell Buttes)	X	X	X
Prineville Reservoir Block (Isolated and limited contiguous BLM-administered lands east of the Crooked River, north of the WSR segment, contiguous and east of Lower Crooked WSR and contiguous and west of BOR/Prineville Reservoir)	X	X	X
Smith Rock Block (All BLM-administered lands in the Block)	X	X	X
Steamboat Rock Block (Large parcel – north of Lower Bridge Road, Middle Deschutes WSR, south of Lower Bridge Road outside of the WSR corridor, 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
Tumalo Block (Entire block except where a firearm discharge closure already exists)	X	X	X

Table 10: Closure* guidelines in Federal Register

Closure Area	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

*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.

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

Rationale:

Currently BLM law enforcement 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 administered lands. There is a need for supplementary rules for federal enforcement of existing state laws on federal lands. The public is already accustomed and educated about these existing state laws. With improved authority, BLM law enforcement rangers would be better prepared to respond to and handle violations on BLM administered land, improve cooperation with law enforcement officers working in adjacent jurisdictions, and further public health and safety.

Allocations/Allowable Uses:

1. Federal law enforcement officers will be authorized to enforce the following existing state laws on federal lands within the Upper Deschutes planning area:
 - a. Operation and use of a motor vehicle on public lands in violation of Oregon State motor vehicle laws.
 - b. Possession and or use of alcoholic beverages in violation of any Oregon State alcohol liquor laws.
 - c. Taking possession of, occupying, or otherwise using public lands for residential purposes without a permit from the Bureau of Land Management.
 - d. Possession and or use of a firearm in violation of any Oregon State firearm laws.

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 travel ways (opposed to the designated road system). A third observation linked dumping activities with lands that allow full-sized vehicle access.

Guidelines:

1. Restrict or eliminate access to user-created travel ways leading to habitual dumping areas. While dumping is widespread throughout the planning area, the following sites have been identified as being especially problematic:
 - a. South of Prineville along Millican/West Butte Road;
 - b. South of Prineville at Juniper Canyon;
 - c. South of Prineville off Remington Road;
 - d. South of O'Neil Highway and west of the North Unit Canal;
 - e. East of Redmond and west of the North Unit Canal;
 - f. South of Redmond along Airport Avenue;
 - g. Northeast of Bend off of the Powell Butte Highway;
 - h. Immediately north and south of Alfalfa Market Road;
 - i. Barr Road in the southern portion of Cline Buttes;
 - j. Lands at the State Highway 126/Barr Road/Buckhorn Road intersection;
 - k. Steamboat Rock area west of Terrebonne and South of Crooked River Ranch;
 - l. 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:

1. 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:
 - a. All BLM parcels in the Steamboat Rock block;
 - b. Harper Road parcel in Cline Buttes.
2. The following areas are closed to campfires year-round:
 - a. Powell Butte RNA.
 - b. Horse Ridge RNA.
 - c. Wagon Roads ACEC.
 - d. Tumalo Canal ACEC.
 - e. BLM parcels north and south of Highway 126 and adjacent to Cline Falls State Park.
 - f. Redmond Caves parcel.
 - g. All designated parking areas, staging areas, and trailheads unless specifically authorized and posted.

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.

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:

1. 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).
2. Survey 50 acres annually in areas considered to be of high probability for the location and discoverability of significant archaeological sites.
3. The National Register of criteria for evaluation is as follows: The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
 - a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
 - b. that are associated with the lives of persons significant in our past; or
 - c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
 - d. that have yielded, or may be likely to yield, information important in prehistory or history.
4. Work closely with law enforcement in their pursuit and prosecution of ARPA violations.

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 will be withdrawn from the activities of surface disturbing mineral material development. "At-risk" significant archaeological resources will 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:

1. Treatment of "at-risk" resources will be based on Table 11, Severity and immediacy of threats to "at-risk" resources.
2. Limit uses and activities at those locations where the use or activity could diminish the historic value of a resource. Future limitations will proceed from least to greatest limitations: a) sign and post restrictions; b) fence area; c) close area to specific uses; and, d) close area to all use.
3. Wildland fire within or threatening "at-risk," significant archaeological resources will 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 (USDI-BLM, 2000a) 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.

Guidelines:

1. Prioritize interpretative development based on combined evaluations of:
 - a. Severity and immediacy of threats (see Table 11).
 - b. Significance of heritage properties as noted in Table 12.
 - c. Opportunities for partnerships/cost sharing (see Table 13).
 - d. Opportunities for interpretive and public education products as noted in Table 14 ("At-risk" significant archaeological resources that have yet been discovered can also be factored into the table for prioritization).
2. 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.
3. Interpretive development will be based on prehistoric and historic theme and developed in consultation with local Indian tribes and other interested parties.

Table 11: Severity (S) and immediacy (I) of threats to significant at-risk resources

	Historic Tumalo Canals		Historic Horner Road		Historic Bend-Prineville Road		Steelhead Falls		Redmond Caves		Pictograph Cave	
	S	I	S	I	S	I	S	I	S	I	S	I
Soil compaction	2	3	3	3	3	1	1	1	2	2	1	1
Vandalism	1	1	1	1	1	1	1	1	3	2	2	1
Artifact collection	1	2	1	1	1	1	1	1	1	2	2	1
Erosion	2	2	1	1	2	1	1	1	1	1	1	1
Surface disturbance	2	2	3	3	2	1	1	1	1	2	2	1
Garbage dumping	1	1	1	2	1	1	1	1	3	3	1	1
Fire	1	1	1	1	1	1	1	1	3	2	2	1
Total	10	11	11	12	11	7	7	7	14	14	11	7
Total for area	21		22		18		14		28		18	

Numerical ranking of threat where, Low=1; Moderate=2; High=3
 Severe = intense, serious, extreme, unrelenting
 Immediate = direct/indirect



Table 12: Priority ranking of at-risk significant archaeological resources

At-risk resources	Severity & immediacy of threats	Significance of heritage property	Opportunities for partnerships/cost-sharing	Opportunities for interpretive & outreach products	Weighted ranking (max. 500)
Weight	30%	50%	10%	10%	100%
Horner Road	3	3	3	5	320
Tumalo Canals	3	3	3	5	320
Redmond Caves	4	1	4	5	260
Bend/Prineville Road	2	2	2	2	200
Steelhead Falls	2	1	2	2	150
Pictograph Cave	2	1	1	2	140

Weighted ranking is determined by multiplying severity and immediacy of threats, heritage property significance, and opportunities by their respective weight percentages.

Example: Horner Road: 3x30%; 3x50%; 3x10%; and 5x10% = 320.

RANKING KEY

Severity/immediacy of threats:

- 5 = 35-42
- 4 = 27-34
- 3 = 19-26
- 2 = 11-18
- 1 = 0-10

Potential significance of heritage property

- 5 = A, B, C, D, & Discretionary
- 4 = A, B, C, D
- 3 = Three of A, B, C, or D
- 2 = Two of A, B, C, or D
- 1 = One of A, B, C, or D

Opportunities for partnerships/cost-sharing

- 5 = 100% of participation/funding likely
- 4 = 80% of participation/funding likely
- 3 = 60% of participation/funding likely
- 2 = 40% of participation/funding likely
- 1 = 20% of participation/funding likely

Opportunities for interpretive & public outreach products

- 5 = 5 or more products
- 4 = 4 products
- 3 = 3 products
- 2 = 2 products
- 1 = 1 products



Table 13: Opportunities for partnerships and cost-sharing

Partner	Redmond Caves	Steelhead Falls	Horner Road	Bend-Prineville Road	Tumalo Canals	Pictograph Cave
City of Redmond	X					
Confederated Tribes of the Warm Springs	X	X				X
Deschutes County			X	X		
Deschutes National Forest	X					
ASCO	X	X	X	X	X	X
Deschutes County Historical Society			X	X	X	
Tumalo Irrigation District					X	
BLM Recreation Program	X	X	X		X	
Other Interested Parties						
Total	5	3	4	3	4	2

Numerical ranking of partnership/cost-sharing opportunities where, 1-2 opportunities = Low; 3-4 opportunities = Moderate; greater than 4 opportunities = High.

Table 14: Opportunities for interpretive/public outreach products

Product	Redmond Caves	Steelhead Falls	Horner Road	Bend-Prineville Road	Tumalo Canals	Pictograph Cave
Signs	X	X	X	X	X	
Kiosks			X		X	
Self-guided Tours	X		X	X	X	
Brochures	X		X		X	
Interpretive Trail	X		X		X	
Tribal Input	X	X				X
Total	5	2	5	2	5	1

Numerical ranking for development of Interpretive/Public Outreach products where, 1-2 products =Low; 3-4 products=Moderate; greater than 4 products=High.



Management of Newly Acquired Lands

Lands may come under BLM administration after this RMP is approved. This could occur through exchange, donation, purchase, revocation of withdrawals to other Federal agencies, or relinquishment of Recreation and Public Purposes Act leases. Discretionary acquisitions (such as exchanges) will be guided by approved RMP "lands acquisition criteria" based on resource values of high public interest. Newly acquired lands will be managed for the highest potential purpose for which they were acquired. For example, lands acquired within special management areas with specific Congressional mandates (i.e., wild and scenic rivers) will be managed in conformance with established guidelines for those areas. If lands with unique or fragile resource values are acquired, those values will be protected and managed on an interim basis until the next plan amendment or revision was completed.

Lands acquired without identified special values or management goals will be managed in the same manner as comparable BLM lands. This implies typical livestock grazing, recreation management or timber harvest opportunities, and related management practices, management of the mineral estate, standard operating procedures and pre-committed mitigation measures. Exchanges of lands resulting in net adjustments in the livestock grazing program will be reported to the public in periodic Rangeland Program Summary Updates or RMP evaluation or progress reports.

Operations and Maintenance Actions

Maintenance of existing and newly constructed facilities or projects will occur over time; however, the level of maintenance could vary from year to year based on annual funding. Normally routine operation and maintenance actions are categorically excluded from NEPA analysis. Such activities could include, but are not limited to, routine maintenance of existing roads, ditches, culverts, water control structures, recreation facilities, pipelines, waterholes, fences, cattleguards, seedings, fish and wildlife structures, signs, and other similar facilities and projects. These types of actions are considered to be part of the implementation of this plan and should not require any further analysis to implement on the ground. Maintenance of existing facilities in WSAs will be considered on a case-by-case basis and may require additional NEPA analysis.

Plan Implementation

Introduction

The Resource Management Plan provides a long-term vision for how BLM administered lands in the plan area will function on the local, regional, and national landscape into the future. It establishes land allocations and allowable uses to meet specific goals and objectives for management of natural resources and land uses.

The RMP will be implemented over a roughly 10-20 year timeframe, as funding allows. Some of the land use plan decisions are effective upon approval of this document. However, many decisions will take a number of years to implement on the ground. Implementation monitoring will track progress of RMP decisions. Effectiveness monitoring will evaluate whether decisions or actions are achieving management goals. Adaptive management, as described below, will be used to make changes to those decisions which are not achieving management goals.

An implementation and monitoring schedule helps to focus priorities in order to leverage multiple resources; identifies key partnerships where mutual interests can be met with minimum costs; and provides specific interests an opportunity to focus their resources on areas of specialized interest.

Public Involvement in Plan Implementation

The Upper Deschutes Resource Management Plan was developed using a community and consensus - based process. That approach will also be applied to projects that implement the objectives and anticipated outcomes of the Upper Deschutes RMP.

The Deschutes basin is the focus of many basin-wide interests. In times of increasing public interest and changing public funds, integrating these efforts is critical. For instance, the recently completed Deschutes subbasin assessment has been drafted for the Northwest Power & Conservation Council to help focus restoration priorities and funding throughout the basin. Watershed councils in the Upper Deschutes and Crooked River watersheds are also working on securing funding for basin-wide priorities like water quality monitoring and watershed restoration activities such as containment or eradication of noxious weed populations. Many of these efforts are complementary and could be integrated with implementation and monitoring of many of the objectives of the Upper Deschutes Resource Management Plan.

Plan Maintenance and Evaluation

Minor changes, refinements, or clarifications in the RMP, including incorporating new data, are called plan maintenance actions. Plan maintenance actions do not expand the scope of resource uses or restrictions or change the terms, conditions, or decisions of the approved Upper Deschutes RMP. Maintenance actions are not considered plan amendments or revisions and do not require formal public involvement and interagency coordination. However, these types of actions will be reported in periodic planning updates.

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring of resource management plans on a continual basis with a formal plan evaluation done at regular intervals. Proposed future activity plan decisions will be evaluated to ensure consistency with RMP objectives.

As part of the evaluation process, other government agencies may be asked to review the implementation of the RMP and advise the BLM of consistency with their current plans, programs, and policies. Upon completion of periodic evaluations, the Prineville District Manager will determine what, if any, changes are necessary to ensure that management actions are consistent with management goals. This could be accomplished through adaptive management principles (see explanation below). It is also possible that the need to consider monitoring findings, new data, new or revised policy, or a new proposed action that may result in a change in the terms, conditions, or decisions of the RMP, could lead to changes so great that a plan amendment or revision must be initiated.

Formal plan evaluation will occur at about five-year intervals and evaluate:

- Whether management actions are resulting in satisfactory progress toward objectives;
- Whether actions are consistent with current policy;
- Whether original assumptions were correctly applied and impacts correctly predicted;
- Whether mitigation measures are satisfactory;
- Whether the RMP is consistent with the plans and policies of state and local government, other federal agencies and Indian Tribes;

- Whether new data are available that will require alteration of the plan; and
- Whether the RMP is still valid or needs to be amended or revised.

New Information and Adaptive Management

In developing the RMP, the BLM used the best science available, including the scientific assessment from the ICBEMP (USDA-FS and USDI-BLM, 1996 and 1997). The staff also collaborated with other federal, state, local, and tribal government agencies and involved the public. However, the agency's knowledge will change as local environmental conditions change, as new management techniques are learned, and as advances in science and technology are better understood. As a result, it is inevitable that in the future some of the management direction in the RMP will be found to be inadequate or in need of update.

To rectify such situations, implementation of the RMP decisions will use an adaptive management approach to modify management actions to incorporate new knowledge gained over time. New information could also cause a plan amendment or revision to be prepared.

Adaptive management is a procedure in which decisions and changes in management are made as part of an ongoing process. It is a continuous process of planning, implementing, monitoring, evaluating, and incorporating new information into strategies to meet the goals and objectives of the management described in the RMP. This process builds on current knowledge, observation, experimentation, and learning from experience. A continuous feedback loop allows for mid-course corrections in management to meet goals and objectives. It also provides a model for adjusting goals and objectives as new information develops and public desires change.

The complex interrelationships of physical, biological, and social components of the ecosystem and how they react to land management practices are often not fully understood when a land-use management plan is developed. To be successful, plans must have the flexibility to adapt and respond to new knowledge or conditions.

The following briefly describes the four parts of adaptive management:

1. **Planning/Decision** – plan development (or revision) is the process leading to decision-making. It starts with issue identification and goals development. The next step is to gather information necessary to develop alternatives for management direction that address the issues and goals. The final stage is to develop alternative management strategies to address issues and meet the management goals, analyze the consequences of the alternatives, and choose a preferred alternative for implementation.
2. **Implementation** – the process of putting a plan or decision into effect. Implementation includes short- and long-term actions.
3. **Monitoring** – collecting data to detect change in the condition and trend of the ecosystem and to determine if plan objectives are being met.
4. **Evaluation/Assessment** – this is the point where plan implementation is reviewed and monitoring data are analyzed to judge the success of the plan in meeting goals and objectives. This may lead to making recommendations for changes in management actions. The understanding gained through evaluations is critical to managing sustainable, healthy, and productive landscapes.

Monitoring

This section describes monitoring that will be conducted to determine how management is affecting resources, and whether we are achieving RMP objectives (effectiveness monitoring).

The monitoring program has three purposes; to help us:

- Determine the extent to which we are implementing the actions described in the RMP (implementation monitoring),
- Understand how management is affecting resources, e.g., are we achieving plan goals and objectives (effectiveness monitoring), and
- Identify where we should continue and where we may need to make changes in management, and determine whether plan goals and objectives are still relevant and important (validation monitoring).

This monitoring plan defines two scales of monitoring: monitoring of long-term trends, and monitoring of the effectiveness of specific actions.

Long-term monitoring will focus on the objectives which the plan is designed to achieve. The purpose of this level of monitoring is to determine whether resource conditions and user experiences in the planning area are improving, remaining the same, or declining over time.

The second scale of monitoring focuses on project or activity level monitoring. At this scale, monitoring will examine how well specific management direction has been applied on the ground and how effectively it produces expected results. Monitoring at broader levels will measure how successfully projects and other activities have achieved the objectives for those management areas.

Findings obtained through monitoring, together with research and other new information, will provide a basis for adaptive management changes to the plan. The monitoring program itself will not remain static. It will be periodically evaluated to ascertain that the monitoring questions and standards are still relevant, and will be adjusted as appropriate. Some monitoring items may be discontinued and others may be added as knowledge and issues change with implementation.

The monitoring process will collect information in the most cost-effective manner, and may involve sampling or remote sensing. Monitoring could be so costly as to be prohibitive if it is not carefully and reasonably designed. Therefore, it will not be necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs will be avoided by focusing on methods. The level and intensity of monitoring will vary depending on the sensitivity of the resource or area and the scope of the proposed management activity. The accomplishment of any monitoring project is dependent upon budgets and national, regional, and local allocations of resources.

The following table provides general direction for elements to monitor, and provides suggestions for specific monitoring methods and frequency. These lists are suggestions and are not comprehensive. Monitoring techniques change quickly, and newer methods may often be both more accurate and more economical. Any methods which will adequately answer the monitoring questions may be used; professional judgment will be used to determine monitoring frequency and methodology that is appropriate to the scope of the issues and environmental conditions.

Some of the monitoring program listed in this table is already in place or is part of a continuing base program. New monitoring activities will only be added if funding becomes available.

The monitoring purposes described in the table relate directly back to the RMP management objectives for each monitoring element.



Table 15: Monitoring

Monitoring element	RMP objective	Purpose of monitoring	Suggested methodology
Vegetation	V-1 V-3 V-4	<p>Determine changes in health, diversity and productivity of native plant communities, including special status plants and plants of traditional cultural significance.</p> <p>Determine success in meeting vegetation management objectives.</p>	<p>Conduct periodic measurements of plant composition, vigor, and productivity, as well as measurement of the amount and distribution of plant cover and litter. Monitor herbaceous or woody utilization, actual use, and climatic conditions to determine the effectiveness of established tools in meeting objectives. Monitoring of existing condition of vegetation would consist of identifying ecological sites, determining ecological status, determining soil types, vegetation mapping, baseline inventory, and assembling existing basic information. Procedures used (and frequency of use) would be primarily those in BLM Technical References 1734-7 and 4400-5.</p> <p>Measure trends in vegetative production, structure, and composition, soil/site stability, watershed function, and integrity of biotic community. Use the rangeland health assessment process prescribed in the most current versions of Interpreting Indicators of Rangeland Health (USDI-BLM, 2000b), Rangeland Health Standards and Guidelines (USDI-BLM, 1997), and BLM Manual 4180 and Handbook H-4180-1 guiding implementation of the rangeland health standards.</p> <p>Also use monitoring as described in hydrology section.</p>
	V-2	Document changes in presence and abundance of noxious weed populations, particularly in areas where ground disturbances have occurred.	Conduct annual monitoring for new noxious weeds, concentrating in areas where ground disturbing activities have occurred, and where the public or agency personnel have reported sightings. Visit known noxious weed sites which are identified for treatment, and evaluate for effectiveness of control (annually). Visit known sites not identified for treatment on a rotational basis over three years. For all known sites and any newly discovered sites, locate with a global positioning system (GPS) unit, photograph, measure, and determine the need for future treatment. Survey all burned areas (natural and prescribed) over 20 acres for noxious weeds for three years following the burn.
	V-5	Determine extent to which rehabilitation is: a) conducted in areas with greatest opportunity of success, and b) supported by data at appropriate scales.	Evaluate sub-basin assessments and project level analyses conducted on District, and determine if appropriate data was available and utilized. Determine rehabilitation success (as described under other objectives); compare to rehabilitation success; and evaluate if additional data would have had an effect on choice of area or rehabilitation success.
	V-6	Determine amount of involvement of local stakeholders and small businesses in helping BLM accomplish resource management objectives.	Document participation with communities, local stakeholders, and small businesses when BLM is involved in public outreach efforts. Examples include: Community Wildfire Protection Plans, public meetings to present proposed projects, tours to evaluate and monitor project implementation results, stewardship contracting opportunities for local operators, and volunteer projects with service clubs, schools, youth groups, and correction crews.

Table 15: Monitoring (continued)

Hydrology	H-1	Measure trend in upland and hydrologic function.	<ul style="list-style-type: none"> - Conduct Proper Functioning Condition Assessment TR 1737-9 and TR 1737-15 (assessment for streams) and TR 1737-11 and TR 1737-16 (assessments for lakes/wetlands) to assess the functionality of riparian and wetland areas. - Measure the amount and distribution of plants across a channel cross-section using riparian transects; document visual changes over time on the condition of the stream corridor using photo points. - Use Aquatic Habitat Inventories conducted by ODFW to measure channel condition parameters such as habitat units (pool, riffle, glide), channel shade, active channel height, active channel width, floodprone width, substrate, percent actively eroding bank, instream wood, and vegetation type and cover. - Use upland photo points and vegetative transects to document changes in surface cover that promotes infiltration and reduces overland flow.
	H-2		
	H-3	Determine changes in soil productivity and amount of accelerated soil erosion. Measure changes in the ability of soil and plant conditions to support infiltration and soil moisture storage, and to maintain or improve water quality, water quantity, and balanced timing and duration of flow.	
	H-4	Determine change in surface and ground water quality. Compare water quality to state standards and BLM objectives for watershed function.	Measure stream temperature, as a 7-day average of daily maximums.
Air Quality	AQ-1	Document trends in air quality as a result of BLM actions.	Utilize Oregon Department of Forestry air quality monitoring to measure background pollution levels and emissions during fire events and determine whether BLM actions may affect national ambient air quality standards.

Table 15: Monitoring (continued)

Wildlife	W-1	Determine trends in health, diversity, and productivity of populations of special status wildlife species, and the habitat on which they depend.	<p>Monitor BLM proposed and authorized actions to ensure they are consistent with the Bureau's Special Status Species Policy (6840) and to ensure they are consistent with the objectives and guidelines outlined in the RMP.</p> <p>Periodically assess the effectiveness of a sampling of different vegetation treatments and disturbance actions to determine effectiveness of management decisions.</p>
	W-2	Measure changes in amount of special habitat features.	<p>Monitor BLM proposed and authorized actions to ensure they are consistent with the objectives and guidelines outlined in the RMP.</p> <p>Periodically assess the effectiveness of management actions that occur in special habitats or potentially could affect special habitat features. For example, monitoring the effectiveness of seasonal closures during the winter at caves closed to protect hibernating Townsend's big-eared bats.</p>
	W-3	Measure changes in distribution and abundance of species of focus.	<p>In conjunction with other private, state or federal agencies, continue to monitor wildlife populations associated with source habitats in the planning area. Do this at several scales:</p> <ul style="list-style-type: none"> - For individual species such as bald and golden eagles, sage grouse, deer, elk and pronghorn. - Groups of species associated with source habitats such as shrub-steppe, juniper and ponderosa pine. - For individual species and groups of species at a regional scale such as bald and golden eagles, Townsend's big-eared bat, raptors, neotropical migratory songbirds, and bats associated with caves. <p>Periodically determine the adequacy of existing data (i.e., species, habitats, etc.) for supporting management decisions.</p> <p>Also, monitor riparian habitat condition on an allotment basis during allotment evaluations or during rangeland health assessments as part of determining properly functioning condition.</p>
	W-4	<p>Determine changes in health, diversity, and productivity of populations of native plants and animals.</p> <p>Measure changes in benefits to wildlife, and changes in wildlife use in Primary, Secondary, and General wildlife emphasis areas.</p>	<p>Periodically monitor, at a watershed or sub-watershed scale, habitat conditions to determine their suitability to support species associated with those habitats. Use this information to identify existing conditions and to aid in determining trends.</p> <p>Monitor BLM proposed and authorized actions to ensure they are consistent with the objectives and guidelines outlined in the RMP.</p> <p>Also monitor forage production and wildlife allocations on an allotment basis during allotment evaluations or during rangeland health assessments.</p>

Table 15: Monitoring (continued)

Fire & Fuels	FF-1	Document management response to wildland fires.	Document instances of use of heavy equipment for fire suppression in ACECs, WSAs, RNAs, and whether such equipment was restricted to existing roads and trails.
	FF-2	Measure changes in soil and vegetation (including weed) response to burned area rehabilitation.	Determine pre-fire condition and post-fire condition by monitoring plant community composition and trend in burn areas to determine natural recovery, responses from seed planting, and weed and cheatgrass invasion. Monitoring methods may include photo points, density, cover, frequency plots, and ocular estimates.
	FF-3	Determine trends in ecosystem health and susceptibility to extreme fire behavior.	Use FIREMON (http://fire.org/firemon/), a fire effects monitoring and inventory protocol, and/or recent version of Interagency fire effects monitoring guidance.
	FF-4	Determine changes in fire behavior, resource values, and recreational opportunities before and after hazardous fuels treatments in wildland urban interface areas.	Evaluate post-treatment fire behavior in wildland urban interface areas, including effects on: a) human safety, b) success of suppression. Periodically review treatments to determine effects on recreation opportunities, wildlife habitat and corridors, visual quality, air and water quality, and public access.

Table 15: Monitoring (continued)

Special Management Areas	SMA-1	Determine trends in "relevance and importance" criteria for ACECs, and in the values for which the ACECs were designated.	<p>Collate existing base information and develop additional baseline inventories of plant communities following "Research Natural Areas: Baseline Monitoring and Management" (USDA-FS, 1984). Periodically monitor the impacts of management actions on resource values, including the health of RNA plant community cells. This will be done using such techniques as photo points, line intercept transects, ocular surveillance, study plots, and value points.</p> <p><u>Pecks milkvetch ACEC:</u> Make periodic visits related to apparent threats and trend, wildfire, and other factors. Collect qualitative observations, estimate of the number of plants, documentation of threats and other information. Take photographs. Long-term monitoring consists of 16 macroplots (1 meter wide, 100 or 200 meters long) encompassing four distinct populations (four macroplots per population). These were established by The Nature Conservancy and are re-read approximately every five years by BLM. Data concerning plant size and reproductive status was originally collected; now the data consists mostly of simple census.</p> <p><u>Powell Butte RNA/ACEC:</u> Establish permanent plots conforming to RNA monitoring protocol (Pacific Northwest Research Station, USFS) in cooperation with the Natural Areas Association. Re-read these plots as needed. Monitor a) Insect infestations, b) Invasion or spread of exotic plant species, c) Juniper bough harvesting near the RNA, d) Research/education use, and e) Visitor/recreation use</p> <p><u>Horse Ridge RNA/ACEC:</u> Establish permanent plots, conforming to RNA monitoring protocol (Pacific Northwest Research Station, USFS) in cooperation with the Natural Areas Association. Re-read these plots as needed. During a natural fire, monitor daily to insure prescribed parameters are followed. Within two weeks of fire, map the extent of the fire and document other information such as extent of disturbance, if any, resulting from suppression activities, apparent mortality of the vegetation and any damage to perimeter fence. Re-visit in subsequent years to document changes in vegetation, regeneration, weeds, etc. Monitor a) Condition of boundary fence and signs, b) Insect infestations, c) Invasion or spread of exotic plant species, d) Juniper bough harvesting near the RNA, e) Research/education use, and f) Visitor/recreation use.</p>
	SMA-2	Measure change in public awareness of location and importance of ACEC values.	
	SMA-3	Determine District contribution towards national system of RNAs.	
	SMA-4	Document trends in wilderness characteristics in WSAs. Measure biologic, scientific, cultural and geologic values/resources of significant caves, and availability of research, interpretation and education opportunities.	<p><u>WSAs:</u> Follow direction within the existing policy for WSAs (USDI-BLM 1995). Monitor WSAs at least once per month during the months the area is accessible by the public, or more frequently if necessary because of potential use activities or other resource conflicts. Use aerial surveillance, on-the-ground surveillance, visitor contact, permit compliance checks, and other methods as appropriate.</p>
	SMA-5	Document trends in nominated values for caves which have been determined significant.	<p>Establish program for monitoring caves. Conduct periodic inventories that monitor trends such as: 1) rates of visitation, 2) evidence of human activities such as excavation, graffiti, fire rings, broken cave formations, and 3) population numbers of key species such as bats (including hibernacula and maternity roost use). Monitoring would also track changes in access to cave sites, including condition of roads, trails and parking areas and their size, condition and distribution. Also use monitoring as described in W-2, Wildlife section and in A-1, A-2, Archeology section.</p>

Table 15: Monitoring (continued)

Livestock Grazing	LG-1	<p>Determine trends in forage made available for livestock grazing.</p> <p>Measure changes in level of conflict between livestock grazing and other uses and values on public land, and with adjacent landowners.</p> <p>Document trends in health and sustainability of rangeland ecosystems (also see suggested monitoring methodology for Vegetation, above).</p>	<p>Collect <u>actual use</u> reports from grazing permittees (report includes livestock numbers, pasture use, turnout and gather dates).</p> <p>Maintain central log of verbal and written public inquiry/complaint regarding conflicts. Complete "Grazing Matrix" checklist (document potential conflicts) for an allotment when a permittee expresses intent to transfer or relinquish the permit.</p> <p>Grazing allotments in the planning area have been assigned to a management category so management efforts and funding can be directed to areas of greatest need. The three categories are I (Improve), M (Maintain), and C (Custodial), based on: (1) Present resource conditions, (2) Forage production and potential, (3) Potential conflicts with recreation and other users, (4) Potential conflicts with adjacent land use or busy roads, (5) Presence of important habitat, high priority watersheds, or other important resources, (6) Current livestock grazing management, and (7) opportunity for positive economic return on investment.</p> <p>In "I" category allotments, examine trend plots (see next paragraph) every five years, and record utilization data (key forage plant method, USDI BLM 1989) every other year. In "M" allotments, determine trend every 10 years, and utilization every five years. Monitoring in "C" allotments is limited to periodic inventories and observations to measure long-term resource condition changes.</p> <p>Measure trend by noting changes in composition, density, cover, production, vigor, age class, and frequency of the vegetation and related parameters of other resources. Use step-point nearest plant, nested frequency line intercept, photo plots, Parker three-step, and other methods as appropriate.</p> <p>On a periodic basis, evaluate every allotment using the "Healthy Rangelands Standards and Guidelines" (see Vegetation monitoring, above). Currently, this is expected to occur about once every 10 years.</p>
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Table 15: Monitoring (continued)

Minerals	MN-1	Determine trend in availability of leasable, locatable and mineral material prospecting, exploration and development.	Conduct annual review of maps and other records showing areas available for leasable, locatable, and mineral materials.
	MN-2	Determine effects on resource values from mineral prospecting, exploration and development. Measure level of conflict between mining (commercial and recreational) and other uses and adjacent landowners.	Monitor mining operations to ensure compliance with 3803, 3809, and other regulations and conditions of approval, especially preventing "unnecessary or undue degradation" of disturbed areas in coordination with state regulating agencies. Periodically inspect mining claim activities, including quarterly inspections for all operations using cyanide, biannual inspections for all other active operations, and more often in areas with a high potential for greater than usual impacts. Periodically inspect leasable mineral activities and applicable resource attributes. Determine compliance with applicable laws, regulations, lease(s) conditions, and exploration and development plans. Maintain log of phone calls and other complaints received from miners or from others concerning mining activity. On an annual basis, review concerns received and determine where problems are concentrated or increasing, compared to the year before.
	MN-3, 4	Document availability of recreational rockhounding and decorative stone collection opportunities. Measure ground disturbance and illegal commercial activity related to recreational rockhounding and decorative stone collection.	Conduct annual review of maps and other records showing areas available for recreational rockhounding and decorative stone collection. Compare with requests received for these uses.

Table 15: Monitoring (continued)

Forest, Range, and Woodland Products	FP-1	Document trends in availability of forest, range and woodland products.	Record accomplishments for providing wood products and special forest, range, and woodland products in the Timber Sale Information System database and in MIS reporting.
	FP-2	Determine trends in hazards to people and facilities from hazard trees or trees possessing other defects.	Document phone calls, letters, and other contacts with adjacent land owners and users of public lands when they are reporting hazard trees that threaten public safety or property. Survey recreation facilities, roads, and other frequently visited locations on public lands annually for hazard trees. Incorporate hazard tree surveys and evaluation with all vegetation management projects.
	FP-3	Document District contribution to helping manage health and function of forest, meadow and riparian ecosystems within La Pine State Park.	Document requests from Oregon Parks and Recreation Department to help manage the timber and vegetation resource within La Pine State Park. Include La Pine State Park in larger watershed or landscape-level vegetation monitoring plans when appropriate and cost-effective.
Military	MU-1 MU-2	Verify implementation of OMD's mitigation activities and procedures for protecting public safety.	Conduct site inspections, monitor resource impacts of individual training exercises, determine compliance to standards (e.g., water and air quality per Federal and State law), and collect and evaluate information from other agencies. Conduct independent and cooperative surveys with OMD including the Integrated Cultural Resources Management Plan and Integrated Natural Resources Plan
Visual Resources	VR-1	Determine changes in effects to character of landscape in each VRM Class area.	Periodically review resource area NEPA decisions to ensure that BLM's VRM Contrast Rating Process is being used and the VRM Classes identified in the Upper Deschutes RMP are being used.
Recreation	R-1 R-2 R-3 R-4 R-5 R-6	Determine trends in the amount and range of recreational opportunities for individual, group, and competitive recreational use. Uses include off-highway motorized use, developed or urban-based recreation, and non-motorized recreation opportunities. Measure trends in the associated visitor satisfaction, level of resource protection, and amount of conflict with other users and adjacent landowners.	Conduct monitoring, including periodic patrols to check boundaries, signing, and visitor use; to ensure visitor compliance with rules and regulations; to establish baseline data and observation points to determine current impacts from recreational use; and to develop studies to help determine appropriate levels and patterns of recreational use and the influences of other resource uses. Focus field monitoring on visitation levels, compliance with rules, regulations, and permit stipulations for specific sites, dispersed uses, and prescribed standards and guidelines. Use visitor surveys, traffic counters, surveillance at developed recreation sites, documentation of user conflicts, and photo documentation of the changes in resource conditions over time. Monitoring may also include collection of data from visitor comments and complaint or information request calls or emails. Use monitoring data to manage visitor use, develop plans and projects to reduce visitor impacts, and to provide appropriate facility or transportation system design.

Table 15: Monitoring (continued)

Transportation & Utilities	TU-1	Document new or modified rights-of-way for transportation corridors and communication/energy sites, and compare to recognized need for such ROWs.	Review ROWs for compatibility with other ROWs in the same areas. Monitor use on existing ROWs, placing emphasis on most used routes. Monitoring will be accomplished through the terms and conditions of the grant. Emphasize improvements on selected heavy use routes.
	TU-2	Determine how integrated, functional, safe and efficient the transportation system is. Monitor how it supports approved land uses, provides links between communities, reduces conflicts with adjacent landowners, and balances public access needs with resource protection.	Periodically review BLM road and ROW inventory sources for increases in the number of ROWs and compare to the number of new routes. Periodically check that developed roads are available to all communities and routes are planned to public and private lands where the road will cross public lands.
	TU-3	Determine level to which appropriate mitigation measures are included in ROWs.	Review terms and conditions of ROW every five years. Comparing actual effects to predicted effects.
	TU-4	Monitor the extent to which the long-term transportation system meets military's specific training objectives, maximizes benefits to other users (including recreation use of public lands), and minimizes impact to natural resources.	Inspect site and conduct independent and cooperative surveys with OMD including: a) the Integrated Cultural Resources Management Plan and Integrated Natural Resources Plan, b) recordation of compliance to standards established pursuant to applicable Federal and State law such as for water and air quality, c) collection and evaluation of information from other agencies, and d) evaluate resource impacts of individual training exercises. Hold annual meetings between BLM and OMD as provided for in the lease, to a) review adequacy of and compliance with the terms and conditions of the lease, and b) come to agreement on future actions suggested in studies and research described above.
	TU-5	Determine effects on regional transportation system needs and ecological and recreational values resulting from consolidation of transportation and utility systems.	Review regional transportation and utility systems against existing and predicted needs, in cooperation with local governments, agencies, and ROW holders. Review effects to ecological and recreational values (see suggested monitoring under affected resource value).
	TU-6	Determine changes in amount of and requests for administrative access.	Maintain log of administrative access requests and authorizations. Periodically review number and evaluate any unmet needs.

Table 15: Monitoring (continued)

Land Ownership	LO-1 LO-2 LO-3	Monitor the number of acres of high public resource values retained in or added to public ownership, and the acres of these lands transferred to other ownership through exchange or disposal.	Verify the number of acres of Z-1, Z-2 and Z-3 lands in public ownership. Compare existing ownership patterns with RMP objectives.
	LO-4	Monitor District contribution of public land to meet community needs.	Compare existing ownership patterns with RMP objectives. Periodically meet with communities to review progress in meeting those needs, and identify any new needs.
	LO-5	Monitor changes in land ownership patterns and the consequent effects on land management efficiency, wildlife habitat connectivity, and recreational access.	Verify wildlife habitat connectivity and compare to RMP objectives.
	LO-6	Monitor change in number of conservation easements.	Verify each easement, including year initiated, location, public acres affected, and other details.
	LO-7	Monitor the extent to which withdrawn lands are being used consistent with the purpose for which the lands were withdrawn.	Periodically conduct reviews of withdrawn lands within the planning area.
Public Health & Safety	PHS-1 PHS-2 PHS-3 PHS-4 PHS-5	Document trends in the number of reports of firearm discharge: a) towards public land visitors, b) in non-motorized use areas on public land and into residential areas adjacent to public land, and c) causing damage to facilities or natural/cultural resources.	Periodically review BLM law enforcement data from incident reports and assess the number of firearm discharge related incidents occurring on BLM administered public lands. Periodically track the number of firearm discharge closures processed by Deschutes or Crook County for subdivisions and whether these closures match restrictions on adjacent BLM administered lands.
	PHS-6 PHS-7	Document change in number/amount of illegal dumping of residential, commercial, industrial, and hazardous waste, and associated changes in public health and safety, recreation opportunities, and risk of wildland fire.	Periodically review BLM law enforcement data from incident reports and assess trends in the number/amount of illegal dumping of residential, commercial, industrial, and hazardous waste. Periodically review BLM expenditures per year for disposal of abandoned automobiles.

Table 15: Monitoring (continued)

Archaeology	A-1 A-2	Determine changes in condition of archaeological resources, with special attention to "at-risk" significant archaeological resources.	<p>In collaboration with the Archaeological Society of Central Oregon (ASCO), continue on-the-ground monitoring of identified sites to determine condition, impacts, deterioration, and use of such sites. Priority for site monitoring will be based on: 1) site significance or site's potential to yield significant information to determine its eligibility to the National Register, 2) the severity of threat to a site, 3) the immediacy of threat to a site.</p> <p>Visit Wagon Road and Tumalo Canal ACECs quarterly and twice yearly (respectively) to monitor cultural resource values. Monitor "at-risk" archaeological sites at Redmond Caves, Steelhead Falls, and Pictograph Cave twice yearly. All information resulting from site visits will be entered into the resource area cultural resource database.</p> <p>Visit other cultural resource sites within the planning area on a periodic basis, at a minimum of 10 sites annually. Monitor the condition of the site and document any disturbance or deterioration of the site, and enter information into the cultural resource database. If a site is considered eligible to the National Register of Historic Places, initiate consultation with the State Historic Preservation Officer, when necessary, to determine the appropriate action to stop site deterioration or apply mitigation measures. Work with BLM law enforcement in the case of criminal removal of site materials.</p>
	A-3	Document trends in availability of interpretive opportunities provided by District for the public to learn about and enjoy heritage resources.	Every two years, update list of heritage resource interpretive opportunities provided on District.

Glossary

Access - the ability of public land visitors to reach the areas they wish to visit.

Acre - a unit of area used in land measurement, equal to 43,560 square feet. There are 640 acres in one square mile.

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

Allotment Management Plan (AMP) - a BLM document that directs the management of livestock grazing on a specific area of public land.

Andesite - volcanic rock with a silicon dioxide (SiO₂) composition between 52 and 63 percent by weight. Its color is gray to black and it erupts at temperatures between 900 and 1100 C.

Animal Unit Month (AUM) - the amount of forage required to sustain one cow and calf for one month.

Archaeological Sites - geographic locations that contain the material remains of prehistoric and/or historic human activity.

Area of Critical Environmental Concern (ACEC) - a type of special land use designation specified within the Federal Land Policy and Management Act (FLPMA) used to protect areas with important resource values in need of special management.

Area of Traditional Cultural Significance - for the purposes of this plan, those locations used by Indian people to maintain their values, beliefs, and cultural identity, including, but not limited to, traditional plant collecting areas, fishing stations, or places for practicing traditional religious beliefs.

At-risk archaeological resources - those archaeological sites and materials that are threatened by natural forces (e.g., flood, drought, erosion, fire), or by adverse impacts related to unauthorized human activities.

Basalt - a dark-colored volcanic rock with less than 52% silicon dioxide by weight. Its temperature when erupting ranges from 1100 to 1250°C. Basalt is less viscous (more fluid) than andesite and rhyolite and is capable of flowing several tens of kilometers.

Biodiversity (Biological Diversity) – the variety and variability among living organisms and the ecological complexes in which they occur.

Biomass - dry weight of organic matter in plants and animals in an ecosystem, both above and below ground.

Biotic - living.

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

Broad Scale - a large, regional area, such as a river basin, and typically a multi-state area.

Broadcast Burning - burning natural fuels as they are, with no piling or windrowing.

Bureau of Land Management (BLM) - government agency with the mandate to manage Federal lands under its jurisdiction for multiple uses.

Bureau Tracking Species (TS) - Species for which more information is needed to determine status within the state or which no longer need active management. Districts are encouraged to collect occurrence data to enable an early warning for species which may become threatened or endangered in the future. Until status of such species changes to federal or state listed, candidate or assessment species, "tracking species" will not be considered as special status species for management purposes.

Candidate Species - any species included in the Federal Register Notice of Review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.

Cinder - a frothy form of basalt formed by expanding gases during an eruption.

Cinder Cone - a cone-shaped volcano created by the accumulation of cinders around a vent, formed as an individual volcano or in groups on the flanks of larger volcanoes.

Cinnabar - mercury sulfide, an ore of mercury.

Collaboration - a formalized process of identifying and involving interactive participants in different parts of the analysis process. Collaboration is expected to result in some level of informed consent by all participants concerning the issues and range of alternatives. For the purposes of this plan, that is intended to include members both exempt from and subject to the Federal Advisory Committee Act.

Common Use Area - a generally broad geographic area from which BLM can make disposals of mineral materials to many persons, with only negligible surface disturbance. The use is dispersed throughout the area.

Communication Site - (1) a hilltop or favorable signal receiving and transmitting location where a collection of facilities are sited; (2) a facility consisting of a small building and tower, used for transmission or reception of radio, television, telephone or other electronic signals.

Communities at Risk - areas where homes and wildlands intermix, identified by the National Fire Plan to receive funding for projects designed to reduce potential for catastrophic fire.

Community Pit - a relatively small, defined area from which BLM can make disposals of mineral materials to many persons. The surface disturbance is usually extensive in the confined area.

Connectivity (of habitats) - the linkage of similar but spatially separated vegetative stands (such as mature forests) by patches, corridors, or "stepping stones" of like vegetation across the landscape; also, the degree to which similar landscapes are so linked (PNW GTR-328, 1994).

Consultation - formal and informal consultation as defined by laws such as the National Historic Preservation and Endangered Species Acts. Also, any input formally requested for analysis purposes from any internal or external source.

Cultural Resource - material or non-material aspects of human culture which are significant to living cultures, including groups maintaining and preserving their traditions, and academic researchers such as anthropologists and historians.

Disturbance - any event which alters the structure, composition, or function of terrestrial or aquatic habitats (PNW GTR-328, 1994).

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

Ecosystem - a spatially explicit, relatively homogeneous unit of the earth that includes all interacting organisms and components of the abiotic environment within its boundaries. An ecosystem can be of any size; e.g., a log, pond, field, forest, or the earth's biosphere.

Ecosystem Health - a condition where the parts and functions of an ecosystem are sustained over time. The system's capacity for self-repair is maintained such that goals for uses, values, and services of the ecosystem are met. Also includes forest health, rangeland health, and aquatic system health.

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

Endangered Species - any species defined under the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range. Listings are published in the Federal Register.

Environmental Assessment (EA) - one type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that portrays the environmental consequences of proposed Federal actions that are not expected to have significant impacts on the human environment.

Environmental Impact Statement (EIS) - one type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that portrays the environmental consequences of proposed major Federal actions that are expected to have significant impacts on the human environment (see EA, above).

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

Erosion (accelerated) - erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, e.g., fire that exposes the surface.

Fire Regime - the frequency, predictability, intensity, seasonality, and extent characteristics of fires in an ecosystem.

FLPMA (Federal Land Policy and Management Act of 1976) - a law mandating that the Bureau of Land Management manage lands under its jurisdiction for multiple uses.

Fire Management Plan (FMP) - a strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the

approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans.

Forestland - land stocked with at least 10 percent live trees or land formerly having such tree cover and not currently developed for non-forest use.

Ground Water - water filling all the unblocked pores of the material below the water table.

Habitat Fragmentation - the splitting or isolating of patches of similar habitat, typically forest cover (but could also apply to grass fields, shrub patches, and other habitats). Habitat can be fragmented from natural conditions, such as thin or variable soils, or from management activities or development such as clear-cut logging, agriculture, or residential development.

Historic Condition - as used in this text, the condition of lands and ecosystems prior to European settlement. In central Oregon, European settlement occurred during the period from approximately 1850s to 1900. An approximation of these conditions is drawn from written and photographic accounts from the period and is used to determine the range of variability for plant and animal species across a landscape (Ochoco NF Viable Ecosystems Management Guide, 1994).

Historic Range of Variability (HRV) - the typical fluctuations of processes or functions, and the typical proportions of ecosystem elements in an area over a period of time when the ecosystem was not significantly affected by European settlement and management. HRV is the amplitude or minimum-maximum ranges of "natural" conditions.

Hunting - For the purposes of this plan, 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)).

Instant Study Area (ISA) - A designation of all primitive or natural areas formally identified prior to November 1, 1975, that were to be studied for wilderness suitability and recommended to the President by July 1, 1980 as mandated under Section 603 of FLPMA.

Information Sharing - a process designed to keep everyone informed about what is happening in the planning effort. This includes but is not limited to published material on a variety of media, and management and public briefings and/or presentations.

Interdisciplinary - involving more than one discipline or resource management program.

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

Interior Columbia Basin Ecosystem Management Project(ICBEMP) - a project conducted during the 1990s and early 2000s examining the effects (on a large, regional scale) of past and present land use activities on the Interior Columbia River Basin ecosystem and a small part of the Great Basin ecosystem.

Issue - an opportunity, conflict, or problem about use or management of public land resources. The resolution of issues is the basis for preparing the resource management plan.

Landscape - all the natural features which distinguish one part of the land from another. A spatially heterogeneous area with repeating patterns, similar climate, and landform, and the associated disturbance regimes.

Lava Tube - a cave formed by the draining of molten lava from a channel covered by a surficial crust.

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

Lek – an area used by sage grouse for courtship and mating.

Litter - the dead remains of plants, usually lying on the soil surface.

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

Management Concern - procedures or land-use allocations that do not constitute issues but, through the RMP/EIS preparation process, are recognized as needing to be modified or needing decisions made regarding management direction.

Management Opportunities - a component of the analysis of the management situation; actions or management directions that could be taken to resolve issues or management concerns.

Microbiotic Crusts - lichens, mosses, green algae, fungi, cyanobacteria, and bacteria growing on or just below the surface of soils.

Mineral Estate - refers to the ownership of minerals at or beneath the surface of the land.

Mitigating Measures - modifications of actions that (a) avoid impacts by not taking a certain action or parts of an action, (b) minimize impacts by limiting the degree or magnitude of the action and its implementation, (c) rectify impacts by repairing, rehabilitating, or restoring the affected environment, (d) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action, or (e) compensate for impacts by replacing or providing substitute resources or environments.

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

Multiple Use – the management of public land and its resources to best meet various present and future needs of the American people. This means coordinated management of resources and uses.

National Environmental Policy Act of 1969 (NEPA) - a law requiring all Federal agencies to evaluate the impacts of proposed major Federal actions with respect to their significance on the human environment.

Noxious Weed - a plant specified by law as being especially undesirable, troublesome, and difficult to control.

National Register of Historic Places (NRHP) - established by Congress with the passage of the National Historic Preservation Act of 1966, an ever increasing, formal list of sites that are culturally significant according to specific criteria.

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

Obsidian - a volcanic glass with a bulk composition equivalent to that of rhyolite except that obsidian has lower water content.

Occupancy - The taking, maintaining, or holding possession of a camp or residence on public land either by personal presence or leaving property at the location.

Off Highway Vehicle (OHV) - unless otherwise stated, this generally refers to Class I all-terrain vehicles, Class II full width four-wheel drive vehicles, and Class III motorcycles.

Old-growth - old forest often containing several canopy layers, variety in tree sizes and species, decadent old trees, standing and down dead woody material (PNW GTR-328, 1994).

Overstory - the upper canopy layer; the plants below comprise the understory.

Patch - an area of vegetation with homogeneous composition and structure.

Perennial Stream - a stream that flows continuously. Perennial streams are generally associated with a water table in the localities through which they flow.

Planning Area - the area containing all BLM-administered lands that would be managed under the UDRMP.

Preferred Alternative or Plan - the alternative plan in the Draft EIS that the agency has initially selected that best fulfills the agency's statutory mission and responsibilities and offers the most acceptable resolution of the planning issues and management concerns.

Prescribed Fire - the introduction of fire to an area under regulated conditions for specific management purposes (usually vegetation manipulation).

Prescribed Natural Fire - a fire caused by lightning for which minimal to no suppression action is taken if it is under pre-determined conditions and within acceptable parameters. Prescribed natural fire is used to accomplish certain resource objectives.

Pressure Ridge - a ridge formed during inflation of a basalt flow, often having one or more prominent tension cracks along the ridge axis.

Primary Wildlife Emphasis - designates that wildlife is one of the most important management considerations for an area. Areas allocated to primary emphasis are intended to benefit wildlife and retain high wildlife use by applying specific guidelines (see Chapter 2).

Proper Functioning Condition (PFC) - adequate vegetation, land form, or large woody debris present to dissipate stream or wave energy, filter sediment and capture bedload, improve flood water retention, develop root masses that stabilize stream banks, islands and shorelines, develop channel characteristics to provide habitat for aquatic species, support greater biodiversity, reduce erosion, and improve water quality (USDI, 1998).

Public Land - any land or interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

Public Participation - a process designed to inform and involve all people and organizations not otherwise involved in the planning effort through Consultation, Cooperation, or Collaboration. Involvement includes opportunities to comment on preliminary and draft published materials, general public information or comment meetings, and periodic receipt of update material.

Pumice - a frothy, lightweight form of volcanic glass formed from expanding gasses in a rhyolite magma.

Recreation and Public Purposes Act (R&PP Act) - an act passed by Congress which allows state and local governments and nonprofit organizations to lease and eventually acquire title to public lands for recreational or community expansion and other public purposes. The act was passed in recognition of the strong public need for a nationwide system of parks and historic preservation areas along with lands for other public purposes such as schools, fire houses, law enforcement facilities, municipal facilities, land fills, hospitals, and fairgrounds.

Resilience – 1) the ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states or successional stages; 2) in human communities, refers to the ability of a community to respond to externally induced changes such as larger economic forces.

Research Natural Area (RNA) - an area of significant scientific interest that is designated to protect its resource values for scientific research and study. Under current BLM policy, these areas must meet the relevance and importance criteria of ACECs and are designated as ACECs.

Resource Area - the “on-the-ground” management unit of the Bureau of Land Management comprised of BLM-administered land within a specific geographic area.

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

Restoration - as used in this text, vegetative treatments used to modify an ecosystem and designed to return plant and animal communities toward a condition and level of functioning that existed prior to human disturbance or influence.

Rhyolite - a light colored volcanic rock with a silicon dioxide composition greater than 68% by weight. It commonly exhibits flow banding and its temperature when erupting ranges from 700 and 850°C.

Right-of-Way - a grant that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, and reservoirs.

Riparian - a form of wetland transition between permanently saturated wetlands and upland areas. These areas exhibit vegetation or physical characteristics reflective of permanent surface or subsurface water influence. Lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.”

Sacred site - means any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an

appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site (Executive Order 13007, 1996:1).

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

Savanna - In this FEIS/RMP, non-forest (usually shrub-steppe) land where juniper occurs as widely scattered trees at less than 10% crown cover.

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

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

Secondary Wildlife Emphasis – a designation where wildlife is one of several resource management programs that are of focus in an area, and typically receive a slightly lower, but still significant, level of management consideration. Areas allocated to a secondary emphasis are intended to support wildlife and maintain a moderate amount of use, as outlined in Chapter 2.

Seral Stage - the rated departure of a plant community from a described potential natural community (PNC) for a specific ecological site. Low-seral stage is an existing plant community which is defined as 0-25% comparability to the defined PNC; Mid-seral stage is an existing plant community which has 26-50% comparability to the PNC; Late seral stage is 51-75% comparable to the PNC; PNC is an existing plant community with 76-100% comparability to the defined PNC.

Site Condition - the level of condition, or degree of function, used to express the current condition of a site in contrast to site potential.

Site Potential - a measure of resource availability based on interactions among soils, climate, hydrology, and vegetation. Site potential represents the highest ecological status an area can attain given no political, social, or economic constraints. It defines the capability of an area, its potential, and how it functions (ICBEMP, 2000).

Snag - a standing dead tree, usually larger than five feet tall and six inches in diameter at breast height. Snags are important as habitat for a variety of wildlife species and their prey.

Special Habitat Features – non-vegetative factors or finer-scale characteristics of vegetation, including caves, cliffs, playas, riparian areas, wetlands, foraging areas, snags, and down wood.

Special Status Species – a plant or animal species falling into any one of the following categories: Federally listed threatened or endangered species, species proposed for Federal listing as threatened or endangered, candidate species for Federal listing, State listed species, Bureau sensitive species, Bureau assessment species (see separate definition for each).

Species Diversity - the number, different kinds of, and relative abundances of species present in a given area.

Stand - a contiguous group of similar plants. For forest use, a contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

Structure - the physical organization and arrangement of vegetation; the size and arrangement (both vertical and horizontal) of vegetation.

Succession - the gradual supplanting of one community of plants by another. The sequence of communities is called a sere, or seral stage. A process of changes in structure and composition of plant and animal communities over time. Conditions of the prior plant community or successional stage create conditions that are favorable for establishment of the next stage. The different stages in succession are often referred to as seral stages.

Sustainability – 1) meeting the needs of the present without compromising the abilities of future generations to meet their needs; emphasizing and maintaining the underlying ecological processes that ensure long-term productivity of goods, services, and values without impairing productivity of the land; 2) in commodity production, refers to the yield of a natural resource that can be produced continually at a given intensity of management (ICBEMP, 2000).

Sustained Yield - maintenance of an annual or regular periodic out put of a renewable resource from public land consistent with the principles of multiple use. Also: The yield that a forest can produce continuously at a given intensity of management. Sustained yield management implies continuous production, so planned as to achieve, at the earliest practical time, a balance between increment and cutting.

Terrestrial - pertaining to the land.

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

The Nature Conservancy (TNC) - a private national organization dedicated to the preservation of biological diversity.

Tuff - a volcanic rock formed by the welding together of ash and rock fragments from an explosive volcanic eruption.

Understory - collectively, those plants that are beneath the overstory. See overstory.

Upland - the portion of the landscape above the valley floor or stream.

U.S. Department of Interior (USDI) - government department which oversees the Bureau of Land Management and many other agencies.

U.S. Fish and Wildlife Service (USFWS) - government agency responsible for managing fish and wildlife and their habitats.

Visual Resources - the aesthetic qualities of the landscape. This is determined by assessing the scenic quality of a site, the sensitivity of people to changes in the landscape, and the visibility of the landscape from major viewing routes and key observation points.

Watershed - the region draining into a river, river system, or body of water. A fifth-field hydrologic unit code of the U.S. Geologic Survey (USGS) comprising 50,000 to 100,000 acres.

Weed - a plant considered undesirable, unattractive, or troublesome, usually introduced and growing without intentional cultivation. See also Noxious Weed.

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

Wilderness - an area that is essentially natural in character that has been designated by Congressional action in order to preserve that naturalness.

Wilderness Study Area (WSA) - public land under the jurisdiction of the Bureau of Land Management which has been studied for wilderness character and is currently in an interim management status awaiting official wilderness designation or release from WSA status by Congress.

Wildfire - any unwanted wildland fire.

Wildland Fire - any non-structure fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Situation Analysis (WFSA) - a decision-making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Woodland - a plant community in which, in contrast to a typical forest, the trees are often small or short-boled relative to their crown width or height. Collectively, the trees form an open canopy with the intervening area occupied by lower vegetation, commonly grass or shrub.

Zones - BLM-administered lands are classified into four categories that establish guidance about their suitability for long-term ownership as follows:

- Zone 1 – lands with national or statewide significance (for wildlife, recreation, scenic or other values). Zone 1 lands are identified for retention in public ownership and are areas where management emphasis is being placed on increasing public land holdings through donations, exchange or sale.
- Zone 2 – lands with high resource values. Zone 2 lands are identified for retention or possible exchange for lands with higher resource values or transfer through the Recreation and Public Purposes Act.
- Zone 3 – lands that generally do not provide substantial resource, public, or tribal benefits; that many not be cost effective for BLM to manage; or that would represent a greater public benefit in other ownership. Zone 3 lands are potentially suitable for transfer, sale or other disposal, including lands identified as having potential land use benefits for local community expansion.
- Community Expansion (CE). Lands zoned CE are retained in public ownership until needed for specific community purposes.

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Appendices

Appendix A: Laws, Regulation, Policy Relevant to BLM

Appendix B: Minerals

Appendix C: Legal Description of Lands Designated for Military Training

Appendix D: Land Ownership Summary Tables

Appendix E: Listed Streams and Protocol

Appendix F: Best Management Practices

Appendix G: Livestock Grazing Mgmt. Summary

Appendix H: Visual Resources

Appendix A

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Appendix A

Law, regulation & policy relevant to the Upper Deschutes Planning Area

The following is a list of major legal authorities relevant to BLM land use planning. The list is not all-inclusive.

43 CFR 2621	The authority to transfer "in lieu" lands to the State is found in Sections 2275 and 2276 of the Revised Statutes, as amended (43 U.S.C. 851, 852), and guided by regulations found at 43 CFR 2621. See also Oregon Admission Act and Memorandum of Understanding for Indemnity Selections (in this table).
43 CFR 2806.1	Guidance for the designation of right-of-way corridors.
43 CFR 3100, 3200, 3600, and 3800	Regulates onshore oil and gas leasing, geothermal leasing, mineral materials disposal, and mining claims under the general mining laws respectively.
43 CFR 3622	Provides for the non-commercial collection of petrified wood from public lands for personal use.
43 CFR 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.
43 CFR Subpart 9212.2(a)	Seasonal fire closures on portions of the Lower Crooked and Middle Deschutes Rivers.
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.
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.
Archaeological Resources Protection Act of 1979 (ARPA)	As amended, defines and protects archaeological resources on Federal lands, establishes a permit system for resources over 100 years old, and requires agencies to provide for public education and continuing inventory of Federal lands.
Bald Eagle Protection Act	Provides for the protection of bald and golden eagles.
BLM 8100	Provides management policy and use allocations for the disposition and utilization of agency-managed heritage resources.
BLM Fish and Wildlife 2000	Directs field offices to identify and monitor key wildlife habitats.
BLM H-1601-1	Land Use Planning Handbook.
BLM H-1742-1	Provides direction for emergency fire rehabilitation.
BLM H-8550-1	Provides management in Badlands and Steelhead Falls Wilderness Study Areas under interim rules, until Congress either designates these lands as wilderness or releases them for other purposes.
BLM Manual 6840	Special Status Species Management: Directs conservation and protection of habitats for designated special status species, and other state or federally protected species.
Central Oregon Fire Management Plan	Initial plan 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.

Clean Air Act (CAA)	As amended, 42 U.S.C. 7418 requires Federal agencies to comply with all Federal, State and local requirements regarding the control and abatement of air pollution. This includes abiding by the requirements of State Implementation Plans. The CAA requires EPA to set National Ambient Air Quality Standards (NAAQS).
Emergency Fire Rehabilitation Handbook (H-1742-1)	Outlines the process for implementing emergency fire rehabilitation projects following wildland fires and wildland fire use.
Endangered Species Act (ESA)	As amended, 16 U.S.C. 1531 et seq. provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and provides a program for the conservation of such endangered and threatened species (Sec. 1531 (b), Purposes). It requires all Federal agencies to: <ul style="list-style-type: none"> - 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). - 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). - 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).
Executive Order 11593	Directs Federal agencies to inventory public lands and to nominate eligible properties to the National Register of Historic Places (1971).
Executive Order 12898 (Environmental Justice in Minority 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.
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: <ul style="list-style-type: none"> - Accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and - Avoid adversely affecting the physical integrity of such sacred sites.
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.
Executive Order 13175 (Consultation & Coordination with Indian Tribal Govs.)	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.
Executive Order 13287	Directs Federal agencies to efficiently and effectively advance historic preservation objectives in the pursuit of their missions (2003).

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.
Executive Order Preserve America	Directs Federal agencies to provide leadership in preserving America's heritage by actively advancing the protection, enhancement, and contemporary use of historic properties owned by the Federal Government, and by promoting intergovernmental cooperation and partnerships for the preservation and use of historic properties (2003).
Federal Cave Resources Protection Act	16 USC 4306 requires federal agencies to identify, protect and maintain significant caves.
Federal Land Policy and Management Act (FLPMA)	Sec. 102 (a) (7) and (8) and 103(c) set the policy of the United States concerning the management of BLM managed lands. Sec. 201 requires the Secretary of the Interior (the Secretary) to prepare and maintain an inventory of all BLM managed 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. 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 managed lands. Sec. 202 (c) (9) requires that land use plans for BLM managed lands be consistent with tribal plans and, to the maximum extent consistent with applicable Federal laws, with State and local plans. 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. 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. Sec. 302 (a) requires the Secretary to manage the BLM managed 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 managed lands has been dedicated to specific uses according to any other provisions of law, it shall be managed in accordance with such laws. 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. Sec. 505(a) requires that "... each right-of-way shall contain terms and conditions which will ... minimize damage to the scenic and esthetic values..."
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.
Fundamentals of Rangeland Health	43 CFR 4180.1 and associated Standards (43 CFR 4180.2).
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.
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.
Healthy Forest Restoration Act	A product of the Healthy Forests Initiative (2003) (see below).
Healthy Forests Initiative	Directs the Department of the Interior (and other agencies) to improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildland fires (2002).

IB No. OR-2000-334	Information Bulletin regarding maintaining existing sagebrush-steppe habitats in the existing sage grouse range in order to sustain sage grouse populations and protect options for the future
IM No. OR-95-021	Instruction Memorandum re: Interim Cave Management Policy. Provides guidelines for the protection of cave resources.
La Pine State Park Master Plan (1986)	Provides guidance for management of formerly public domain land conveyed to Oregon Parks and Recreation Department in the mid 1960s within two patents issued 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.
Memorandum of Understanding for Indemnity Selections	BLM MOU OR940-9509, between the US Department of Interior, BLM, and the State of Oregon, Division of State Lands, signed July 26, 1995. The MOU followed a 1991 ruling of the U.S. District Court, Civil No. 85-646-MA. See also Oregon Admission Act and 43 CFR 2621 (in this table).
Middle Oregon Treaty	Signed June 25, 1855, ratified March 8, 1859 (12 STAT 963), reserved rights for the Confederated Tribes of Warm Springs to fish, off-reservation, at usual and accustomed stations and to hunt, gather resources, and pasture animals on public lands in common with other citizens of the United States.
Mineral Leasing Act of 1920	As amended, 30 U.S.C. 181 et seq., authorizes the development and conservation of oil and gas resources. The BLM can 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.
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.
Mining Law of 1872	As amended provides guidance for exploring for, discovering, and purchasing locatable mineral deposits on federal lands open to those activities
National Ambient Air Quality Standards	See CAA, above, or http://www.thecre.com/fedlaw/legal14air/criteria.htm (July 2005).
National Cultural Programmatic Agreement	1997 agreement.
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.
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.
Native American Graves and Repatriation Act (1990)	25 U.S.C. 3001 provides protection of Native American grave sites and associated artifacts.
Onshore Oil and Gas Leasing Reform Act	30 U.S.C. 181 et seq., provides that federal land managers must: <ul style="list-style-type: none"> - Adequately address potential oil and gas resources be in planning documents; - Determine social, economic, and environmental consequences of exploration and development of oil and gas resources; and - Clearly identify any stipulations to be applied to oil and gas leases.
Oregon Admission Act	Outlines federal obligations related to Oregon becoming a State. See also 43 CFR 2621 and Memorandum of Understanding for Indemnity Selections (in this table).

Oregon Rangeland Handbook, H-1734-2 (and newer versions)	Guides monitoring and evaluation of grazing allotments.
Pacific States Bald Eagle Recovery Plan	Covers the states of Washington, Oregon, Idaho, Montana, Wyoming, California and Nevada (USFWS 1986). The Plan established recovery population goals, habitat management goals, and 47 management (recovery) zones. The High Cascades Zone (zone 11) includes the Upper Deschutes Planning Area. The Pacific States Bald Eagle Recovery Plan described specific criteria for the Pacific Recovery Area (PRA) as necessary for delisting.
Prineville District Integrated Weed Management EA (1994)	Provides guidance for weed Management across Prineville District.
Protocol for 303(d) listed Streams	The BLM will take actions relative to 303(d) listed waterbodies in accordance with the protocol (see details in Appendix E).
Protocol for Managing Cultural Resources	1998 protocol directing management on lands administered by the BLM in Oregon.
Public Rangelands Improvement Act (PRIA)	43 U.S.C. 1901 provides that the public rangelands be managed so that they become as productive as feasible in accordance with management objectives and the land use planning process established pursuant to 43 U.S.C. 1712.
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 managed lands for recreational and public purposes under specified conditions.
Safe Drinking Water Act	42 U.S.C. 201 is designed to make the Nation's waters "drinkable" as well as "swimable." Amendments establish a direct connection between safe drinking water, watershed protection, and management.
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.
Standards for Rangeland Health and Guidelines for Livestock Grazing Mgmt in OR & WA	The Standards meet the requirements and intent of 43 Code of Federal Regulations, Subpart 4180 (Rangeland Health). The Standards 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.
Taylor Grazing Act (TGA)	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.
Vegetation Treatment on BLM Lands EIS (1991)	Provides guidance for management of vegetation.
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.
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.

Appendix B

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 mill site 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 volcanoclastic 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 to 1,000 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-20¹ 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 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-13, 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

¹ All Maps with an S prefix before a number are support maps available on a CD that includes the ROD/RMP, maps printed with the ROD/RMP, and support maps that document conditions within the planning area during the development of the plan.

a moderate potential for the occurrence of mineral materials (Map S21, 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 will not be allowed.

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 will be filed.

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 to 12 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 downhole 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 on 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 will be drilled.

Geothermal Power Plant Development

Although not expected, a 24-megawatt power plant could be constructed within the Powell Buttes area 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 power lines 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 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 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.

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.

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 in the Resource Management Plan.

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

- *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

- *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

- *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

- *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 (see Table 1).

- *Stipulation:* Surface occupancy and use is prohibited in the spatial buffers during the dates shown for each raptor species in Table 1.
- *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

- *Stipulation:* Surface use is prohibited during the times listed in Table 1 within 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 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 no longer contain winter range. This stipulation can be expanded to cover additional portions of the lease if additional 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 1 are not valid for the leasehold.
- *Waiver:* This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains winter range. Consultation with the ODFW will be required prior to exception, modification, or waiver of this stipulation.

Resource – Sage grouse lek sites

- *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

- *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 shut-down, 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:

- For additional information, see operating guidelines in the Management Plan.
- 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.
- For additional information, see operating guidelines in the proposed Management Plan.

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.

Appendix C

Legal Description of Lands Designated for Military Training

Legal Land Description based on the US Public Land Survey System (USPLSS) for the area included in the Biak Training Center, Oregon National Guard.

T. 14 S., R. 14 E., Willamette Meridian and Baseline:

- Sections: 30: E¹/₂SW¹/₄; W¹/₂SE¹/₄.
 31: W¹/₂NE¹/₄; E¹/₂W¹/₂; SE¹/₄.
 32: SW¹/₄.

T. 15 S., R. 13 E., Willamette Meridian and Baseline:

- Sections: 1: SE¹/₄; to wit all that portion of the subsection including and east of North Unit Irrigation District Main Canal.
 12: E¹/₂; to wit all that portion of the subsection including and east of North Unit Irrigation District Main Canal.
 13: All; to wit all that portion of the section including and east of North Unit Irrigation District Main Canal.
 23: E¹/₂SE¹/₄.
 24: All.
 25: All.
 26: S¹/₂; S¹/₂NE¹/₄; NE¹/₄NE¹/₄; SE¹/₄NW¹/₄NE¹/₄; S¹/₂SW¹/₄NW¹/₄NE¹/₄; E¹/₂NE¹/₄NW¹/₄NE¹/₄.
 33: E¹/₂E¹/₂.
 34: All.
 35: All.
 36: SE¹/₄, E¹/₂NE¹/₄.

T. 15 S., R. 14 E., Willamette Meridian and Baseline:

- Sections: 5: W¹/₂.
 6: E¹/₂; E¹/₂NW¹/₄; SW¹/₄NW¹/₄; SW¹/₄.
 7: All.
 8: W¹/₂; S¹/₂SE¹/₄.
 9: S¹/₂SW¹/₄.
 16: W¹/₂.
 17: All.
 18: All.
 19: All.
 20: N¹/₂.
 21: NW¹/₄.
 30: All.
 31: All; to wit all portions excluding the withdrawn portion of SW¹/₄ lying east of McCaffery Road.
 32: W¹/₂, W¹/₂E¹/₂.

T. 16 S., R. 13 E., Willamette Meridian and Baseline:

- Sections: 1: All.
 2: All.
 3: All.
 4: E¹/₂.
 9: NE¹/₄; to wit all that portion of the subsection including, north, and east of the BPA power line Right-of-Way.
 10: All, to wit all that portion of the section including and east of GEN Phil Sheridan Road (also known as the Sheridan Road).

- 11: All.
- 12: All.
- 13: All.
- 14: All.
- 15: All, to wit all that portion of the section including and east of GEN Phil Sheridan Road (also known as the Sheridan Road).
- 21: SE $\frac{1}{4}$ SE $\frac{1}{4}$, to wit all that portion of the subsection including and east of GEN Phil Sheridan Road (also known as the Sheridan Road).
- 22: All, to wit all that portion of the section including and east of GEN Phil Sheridan Road (also known as the Sheridan Road).
- 23: All.
- 24: All; to wit all that portion of the section north and west of Powell Butte Hwy.
- 25: W $\frac{1}{2}$; NW $\frac{1}{4}$ NE $\frac{1}{4}$; to wit all those portions of the subsections north and west of Powell Butte Highway.
- 26: All.
- 27: All.
- 28: E $\frac{1}{2}$ E $\frac{1}{2}$, to wit all that portion of the subsection including and east of GEN Phil Sheridan Road (also known as the Sheridan Road) and Road 6585-C (Pronghorn Road).
- 33: E $\frac{1}{2}$ E $\frac{1}{2}$, to wit all that portion of the subsection including and east of Road 6585-C (Pronghorn Road).
- 34: All.
- 35: W $\frac{1}{2}$, W $\frac{1}{2}$ E $\frac{1}{2}$.

T. 16 S., R. 14 E., Willamette Meridian and Baseline:

- Sections:
- 5: W $\frac{1}{2}$; W $\frac{1}{2}$ E $\frac{1}{2}$.
 - 6: All.
 - 7: All.
 - 18: All.
 - 19: All; to wit that portion of the section north and west of Powell Butte Highway.

T. 17 S., R. 13 E., Willamette Meridian and Baseline:

- Sections:
- 1: All.
 - 2: All.
 - 3: All.
 - 10: E $\frac{1}{2}$.
 - 11: All.
 - 12: All.
 - 13: N $\frac{1}{2}$.
 - 14: N $\frac{1}{2}$.
 - 15: NE $\frac{1}{4}$.

T. 17 S., R. 14 E., Willamette Meridian and Baseline:

- Sections:
- 5: All.
 - 6: All.
 - 7: N $\frac{1}{2}$; SW $\frac{1}{4}$.
 - 8: N $\frac{1}{2}$.
 - 18: NW $\frac{1}{4}$.

Legal Land Description based on the US Public Land Survey System (USPLSS) for the area included in the Biak Training Center, Millican Plateau extended training area, Oregon National Guard.

T. 16 S., R. 15 E., Willamette Meridian and Baseline:

- Sections:
- 1: W $\frac{1}{2}$ W $\frac{1}{2}$; SE $\frac{1}{4}$ SW $\frac{1}{4}$.
 - 2: E $\frac{1}{2}$ NE $\frac{1}{4}$; SE $\frac{1}{4}$: to wit all those portions of the subsections east of Millican County Road.
 - 11: E $\frac{1}{2}$; E $\frac{1}{2}$ W $\frac{1}{2}$; to wit all those portions of the subsections east of Millican County Road.

- 12: NW $\frac{1}{4}$.
- 14: All; to wit all that portion of the section east of Millican County Road.
- 15: SE $\frac{1}{4}$; to wit all that portion of the subsection east of Millican County Road.
- 22: E $\frac{1}{2}$; E $\frac{1}{2}$ SW $\frac{1}{4}$; to wit all those portions of the subsections east of Millican County Road..
- 23: W $\frac{1}{2}$; W $\frac{1}{2}$ E $\frac{1}{2}$; SE $\frac{1}{4}$ SE $\frac{1}{4}$.
- 24: E $\frac{1}{2}$ E $\frac{1}{2}$; S $\frac{1}{2}$ SW $\frac{1}{4}$; SW $\frac{1}{4}$ SE $\frac{1}{4}$.
- 25: W $\frac{1}{2}$; S $\frac{1}{2}$ SE $\frac{1}{4}$.
- 26: N $\frac{1}{2}$; N $\frac{1}{2}$ S $\frac{1}{2}$; SW $\frac{1}{4}$ SW $\frac{1}{4}$; SE $\frac{1}{4}$ SE $\frac{1}{4}$.
- 27: All.
- 28: E $\frac{1}{2}$ SE $\frac{1}{4}$.
- 33: E $\frac{1}{2}$; E $\frac{1}{2}$ NW $\frac{1}{4}$; SW $\frac{1}{4}$ NW $\frac{1}{4}$; SW $\frac{1}{4}$.
- 34: All.
- 35: NE $\frac{1}{4}$ NE $\frac{1}{4}$; NW $\frac{1}{4}$ NW $\frac{1}{4}$; S $\frac{1}{2}$ N $\frac{1}{2}$; S $\frac{1}{2}$.

T. 16 S., R. 16 E., Willamette Meridian and Baseline:

- Sections: 18: SW $\frac{1}{4}$ SW $\frac{1}{4}$.
 19: SE $\frac{1}{4}$ NE $\frac{1}{4}$; W $\frac{1}{2}$ E $\frac{1}{2}$; W $\frac{1}{2}$.

T. 17 S., R. 15 E., Willamette Meridian and Baseline:

- Sections: 1: All.
 2: All.
 3: All, to wit all that portion of the section east of Millican County Road.
 10: All, to wit all that portion of the section east of Millican County Road.
 11: All.
 12: All.
 13: All.
 14: All.
 15: All, to wit all that portion of the section east of Millican County Road.
 22: All, to wit all that portion of the section east of Millican County Road.
 23: All.
 24: All, to wit all that portion of the section north of Prineville Reservoir County Road.
 25: N $\frac{1}{2}$, to wit all that portion of the subsection north of Prineville Reservoir County Road.
 26: All, to wit all that portion of the section north of Prineville Reservoir County Road.
 27: All, to wit all that portion of the section north of Prineville Reservoir County Road and east of Millican County Road.

T. 17 S., R. 16 E., Willamette Meridian and Baseline:

- Sections: 6: All.
 7: All.
 18: All.
 19: All, to wit all that portion of the section north of Prineville Reservoir County Road.

Appendix D¹

Land Ownership Summary

Public Lands Currently Withdrawn

A withdrawal is a formal action that accomplishes one or more of the following actions:

1. Transfers total or partial jurisdiction of Federal land between Federal agencies.
2. 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.
3. 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 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.

See Table D-1 for a list of the existing and pending withdrawal applications.

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 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 included in Table D-1. In the future, it is anticipated that R&PP will be used for sewage treatment facility expansions, municipal parks, and expansion of state parks.

¹ Source: 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. All parcels are within Willamette Meridian, Oregon.

Table D-1 Current Public Lands Withdrawals, R&PP Leases, and Pending Transfers within Planning Area

Agency	Location T. R. S.	Acreage	Purpose	Serial Number
BLM	T.19S., R.14E., Sec. 15 & 22	600	Western Juniper Natural Area	PLO 2956
BOR	T.17S., R. 16E., Sec. 1	1,120	Irrigation	>43 Ochoco Reclamation Project
BOR	T.17S., R.16E., Sec. 12	40	Irrigation	53' Crooked River Reclamation Project
BOR	T.17S., R.16E., Sec. 10, 11, & 24	320	Irrigation	58' Crooked River Reclamation Project
BOR	T. 17S., R.17E., Sec. 3 & 4	840	Irrigation	>43 Ochoco Reclamation Project
BOR	T. 17S., R.17E., Sec. 4	80	Irrigation	>46 Prineville Reservoir Reclamation Project
BOR	T. 17S., R.17E., Sec. 9, 10, & 19	320	Irrigation	53' Crooked River Reclamation Project
BOR	T.17S., R.17E., Sec. 9	40	Irrigation	58' Crooked River Reclamation Project
BOR	T.17S., R.17E., Sec. 9	40	Irrigation	PLO 2829 Crooked River
BOR	T.16., R.17E., Sec. 31, 32, & 33	360	Irrigation	>43 Ochoco Reclamation Project
BOR	T.16S., R.17E., Sec. 24, 23, 26, 27, 28, 31, & 32	520	Irrigation	53' Crooked River Reclamation Project
BOR	T.16S., R.17E., Sec. 24, 31, & 34	200	Irrigation	58' Crooked River Reclamation Project
BOR	T.16S., R.17E., Sec. 34	80	Irrigation	PLO 2829 Crooked River
BPA	T.15S., R.13E., Sec. 18	40	Electric Substation Site	OR 01989 PLO 821
City of Redmond	T.14S., R.12E, Sec. 24	160	R&PP: Water Facility	OR 054445
COSSA	T.19S., R.15E., Sec. 28, 29, & 33	500	R&PP: Shooting Range	OR 48823
FAA	T.15S., R.13E., Sec. 21	120	Radio Signal Site	PLO2141
FERC	T.13S, R.12E., Sec. 3, 4, 9, 10, 11, 13, & 14	440	Power Site	Res 425
FERC	T.13S, R.12E., Sec. 28 & 33	100	Power Site	Res 480
FERC	T.13S.,R.12E, Sec. 27	40	Power Site	Res 25
FERC	T.13S., R.12E., Sec. 5, 6, 7, 8, 17, 20, 21, 27, 28, 33, & 34	1,685	Power Site	Res 26
FERC	T.12S., R.12E., Sec. 32	280	Power Site	Res 26

Agency	Location T. R. S.	Acreage	Purpose	Serial Number
FERC	T.12S., R.12E., Sec. 33	120	Power Site	Res 63
FERC	T.15S., R.12E., Sec. 1 & 12	320	Power Site	Res 26
FERC	T.14S., R.12E., Sec. 9, 10, 11, 14, 26, & 35	560	Power Site	Res 26
FERC	T.19S., R.17E., Sec. 12	120	Power Site	Res 64OR 9629
Military	T.18S., R.13E., Sec. 11	160	Training	OR 39055
Military	T.15S., R.14E., Sec. 31	76	Training	OR 39055
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.14S., R.16E., Sec. 28	160	R&PP: Local Park	OR 11369
	Total Acres	9,166		

**Table D-2 Public Lands for Disposal
(Z-3, or Community Expansion through Sale, Exchange, or Transfer)**

Key--* Lands designated as Community Expansion.

Crook County

Parcels:	Legal Description	Acreage
Grizzly Mountain	T 13 S, R 15	
	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 13 S, R 16 E	
	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
O'Neil	T 14 S, R 14 E	
	Section 9: E1/2SE1/4	80
	10: SE1/4NE1/4	40
	24: N1/2N1/2, SW1/4NW1/4	200
	28: SE1/4NE1/4, S1/2	360

Parcels:	Legal Description	Acreage
Northwest of Prineville	T 14 S, R 15 E	
	Section 18: S1/2NE1/4, N1/2SE1/4 30: N1/2NE1/4, S1/2SE1/4	160 160
Northeast Of Prineville	T 14 S, R 16 E	
	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 *28: NE1/4SW1/4, NW1/4SE1/4, S1/2SE1/4	40 160
North Ochoco Reservoir	T 14 S, R 17 E	
	Section 34: NW1/4NW1/4	40
Powell Buttes N of HWY 26	T 15 S, R 14 E Section 3: E1/2NE1/4, NE1/4SE1/4	120
Southeast of Prineville	T 15 S, R 16 E	
	Section 2: SE1/4SW1/4, SE1/4	200
	10: NE1/4NE1/4	40
	22: E1/2	320
	34: All	640
South Ochoco Reservoir	T 15 S, R 17 E	
	Section 2: Lot 2	41.89
	12: SE1/4SW1/4, SW1/4SE1/4	80
	14: N1/2SW1/4, SW1/4SW1/4	120
	24: NE1/4NE1/4	40
	28: All	640
32: All	640	
34: W1/2NW1/4, S1/2	400	
East of Ochoco Reservoir	T 15 S, R 18 E	
	Section 6: S1/2SE1/4	80
	8: N1/2NE1/4, W1/2NW1/4 18: NE1/4SW1/4	160 40
Shumway	T 16 S, R 14 E Section 33: NE1/4NE1/4	40
Davis Road Subdivision	T 16 S, R 16 E	
	Section 2: Lot 1	37.28
	4: Lots 1-3, SE1/4NE1/4	161.86
	6: Lot 5, NW1/4SE1/4, SE1/4SE1/4	119.04
	12: SE1/4NE1/4	40
	13: S1/2SE1/4	80
	22: SW1/4SW1/4	40
	23: SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4	160
27: E1/2NE1/4	80	

Parcels:	Legal Description	Acreage
North Prineville Reservoir	T 16 S, R 17 E	
	Section 2: W1/2NW1/4, SE1/4NW1/4, N1/2SW1/4	200
	4: Lot 4	38.94
	6: Lot 1, Lot 2, Lot 5, Lot 8, S1/2NE1/4, SE1/4	396.29
	7: Lot 2, Lots 4-11, E1/2SW1/4, N1/2SE1/4	501.18
	8: N1/2, N1/2S1/2	480
	9: All	640
	18: Lot 1, Lot 2, E1/2NW1/4	170.8
East Prineville Reservoir	T 16 S, R 18 E	
	Section 20: SW1/4SW1/4	40
	31: SW1/4NE1/4	40
	32: NE1/4SW1/4	40
Alkali Flat	T 17 S, R 17 E	
	Section 17: E1/2NW1/4, NE1/4SW1/4	120
	19: SW1/4SE1/4	40
	20: SE1/4NW1/4	40
	30: W1/2NE1/4	80
	Total Z-3 Acres for Crook County	11710
	Total CE Acres for Crook County	160
	Total Disposal Acres for Crook County	11870

Deschutes County

Parcels:	Legal Description	Acreage
Northwest Area	T 14 S, R 11E	
	Section 4: W1/2SW1/4	80
	5: W1/2SW1/4, SE1/4SE1/4	120
	8: SW1/4NW1/4, W1/2SW1/4	120
	18: SE1/4SE1/4	40
	19: NW1/4NW1/4	40
	20: SW1/4NW1/4	40
	28: SW1/4NE1/4, S1/2NW1/4, NW1/4SE1/4	160
	29: N1/2S1/2	160
Steamboat Rock	T 14 S, R 12 E	
	Section 22: E1/2NE1/4, SW1/4NE1/4, W1/2 W1/2, SE1/4SW1/4, W1/2SE1/4	400
	27: N1/2NW1/4, SW1/4NW1/4	120
	34: E1/2 SE1/4	80
Terrebonne	T 14 S, R 13 E	
	Section 29: Lot 1, Lot 4, SE1/4NE1/4, NE1/4NW1/4, E1/2SE1/4	205
	30: Lot 6, SW1/4NE1/4NW1/4, W1/2SE1/4NW1/4, W1/2NE1/4SW1/4, SE1/4SW1/4	110.69
	31: E1/2 W1/2	160

Parcels:	Legal Description	Acreage
Cline Buttes	T 15 S, R 12 E	
	Section 2: SW1/4NE1/4, N1/2SW1/4, SW1/4SW1/4	160
	3: SE1/4NW1/4, N1/2SE1/4	120
	11: NW1/4NW1/4	40
	17: NE1/4SW1/4	40
	20: SE1/4SW1/4, NW1/4SE1/4	80
	29: N1/2NW1/4 30: NE1/4NE1/4	80 40
Redmond	T 15 S, R 13 E	
	Section 18: SE1/4NE1/4	40
	*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 *33: All	306 640
Deschutes Junction	T 16 S, R 12 E	
	Section 11: SW1/4SE1/4	40
	*12: SE1/4SE1/4	40
	*13: SW1/4NE1/4, SE1/4SW1/4, SE1/4 (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 RR track), NE1/4SW1/4 (that portion within one quarter mile east of the railroad track)	160 128.7
	34: SE1/4NE1/4	40
South of Redmond Airport	T 16 S, R 13 E	
	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)	155.17
	*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) *18: NW1/4NW1/4 (that portion within one-quarter mile east of the railroad track)	225.5 11.2
Horse Butte	T 18 S, R 13 E	
	Section 21: N1/2NE1/4, W1/2, SW1/4SE1/4	440
	29: S1/2SW1/4 32: NE1/4NW1/4	80 40

Parcels:	Legal Description	Acreage
La Pine	T 21 S, R 10 E	
	Section 33: W1/2SE1/4	80
	34: SW1/4SE1/4, E1/2SE1/4	120
	35: E1/2SE1/4	80
	T 22 S, R 10 E	
	*Section 1: Tract 37,	477.32
	*2: Lot 6	9.21
	3: Lot 1, Lot 2	80.83
	5: N1/2SE1/4	80
	*11: NE1/4 (that portion lying east of Hwy 97)	89.99
*12: N1/2, S1/2 (that portion lying east of the Burlington Northern rail road)	603.8	
	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	100
T 22 S, R 11 E		
*7: Lots 1-4, E1/2W1/2	296.4	
	Total Z-3 Acres for Deschutes County	3620
	Total CE Acres for Deschutes County	3140
	Total Z-3 and CE Acres for Deschutes County	6760
	Total Z-3 Acres for Planning Area	15330
	Total CE Acres for Planning Area	3300
	Total Disposal Acres for Planning Area	18630

Lands Identified for Acquisition

The following private lands have been proposed for acquisition. Lands will only be acquired from willing landowners. Refer to Table 4 for the legal descriptions of those public lands that would be considered for acquisition.

After the table, general areas and lineal features where acquisitions will be considered are described.

Table D-3 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;	440
	Sec. 26, NENE.	40
	T. 13 S., R. 16 E.,	
	Sec. 19, N, SSW, SE;	560
	Sec. 29, ENE, SWNE, WNW, SENW, SE;	400
	Sec. 30, N, SW.	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		
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. 14 S., 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;	240
	T. 19 S., R. 14 E., Sec. 3, SSW, SWSE;	120
	Sec. 18, WSW;	80
	Sec. 19, WNE, SENE, S;	440
	Sec. 20, SWNW, NESW, NSE, SESE;	200
	Sec. 21, SSW;	80
	Sec. 22, SS, NESE;	200
	Sec. 24, SESE;	40
	Sec. 25, WNE, SENE, WSW, SESW, NSE, SWSE;	360
	Sec. 26, ESESE;	20
	Sec. 27, NWNE;	40
	Sec. 28, NW, NSW;	240
	Sec. 29, NE;	160
	Sec. 33, ENE, SWNE, SWNW, SE;	320
	Sec. 35, all;	640
	Sec. 36, WNW, SWSNW, SW, ESE.	330
	T. 19 S., R. 15 E., Sec. 12, SE;	160
	Sec. 13, NNE;	80
	Sec. 14, all;	640
	Sec. 17, S;	320
Sec. 18, NESE;	40	
Sec. 20, NNE;	80	
Sec. 30, SNW, S;	400	
Sec. 31, WW;	160	
Sec. 34, NSE, that portion north of Hwy 20;	30	
Sec. 35, S, that portion north of Hwy 20.	140	
T. 20 S., R. 14 E., Sec. 2, SN;	160	
Sec. 3, SNE, WSE;	160	
Sec. 10, W.	320	
T. 20 S., R. 15 E., Sec. 16, all;	640	
Sec. 17, S.	320	
	Subtotal	19,740
Jefferson County		
East of Squaw Creek	T. 13 S., R. 11 E., Sec. 34, ENE, SE;	240
	Sec. 35, SNE, ESW, SWSW, WSE.	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

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:
 1. Southeast of Smith Rocks State Park for wildlife and recreation connectivity; parcels not identified though based on canal and river proposed trail system.
 2. Powell Buttes for access with several options under consideration.
 3. Five miles southeast of Prineville Reservoir, to block up and provide a corridor for wildlife and recreation between Alfalfa Flat and the Maury Mountains.
- Deschutes County:
 1. 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.
 2. 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.
 3. 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.
 4. Four miles north and 3 miles southwest of Alfalfa to block up and provide a corridor for wildlife and recreation.
 5. 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.

Appendix E

303(d) Listed Streams and Protocol for Addressing Impaired Waters on BLM Administered Lands

303(d) Listed Streams by Subbasin

Stream Name	River Mile	Approximate Location	Listed Parameter
Little Deschutes Subbasin			
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 Subbasin			
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 Subbasin			
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 Subbasin			
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

Protocol for 303(d) listed Streams

BLM will validate the 303(d) listing of its waterbodies.

BLM will review the current 303(d) list and listing rationale to determine if the waterbody was correctly listed.

BLM will provide the State with documentation or evidence if the waterbody was erroneously placed on the list while it actually meets the water quality standard for which it was listed.

BLM will assess the effect of its management actions on the water quality parameter for which a waterbody is 303(d) listed.

BLM management activities will be assessed for their effects on water quality for the standard for which it was listed. This will be done at the site-specific scale during evaluations of GMAs.

BLM will document and present evidence to the State where sufficiently stringent management measures (Appendix O) have been implemented to bring listed segments into compliance in a reasonable timeframe. For such situations, development of a TMDL and WQMP are not needed. EPA's current interpretation of this is measures that would allow the waterbody to meet the water quality standard within two years.

For waterbodies that remain on the 303(d) list and are affected by BLM management activities, BLM will develop or adjust management actions necessary to restore water quality and meet Oregon water quality standards. BLM will work with the State agencies and local tribes to set priorities and timelines for addressing listed waterbodies.

BLM will develop water quality restoration plans (WQRP), to address the water quality parameter at issue for lands it administers. A draft WQRP for the Upper Deschutes and Little Deschutes Subbasins, completed jointly with the Deschutes National Forest, is currently on file in the Prineville District BLM office. The expected completion date for the final WQRP is October, 2004. The remainder of the planning area will be addressed in the WQRP for the Lower and Upper Crooked River Subbasins, to be completed jointly with the Ochoco National Forest. BLM's WQRPs may be developed before or after the State's Total Maximum Daily Load standards (TMDLs) and Water Quality Management Plans (WQMPs), depending upon the State's timeframes. Once the State's WQMP is developed, the BLM's WQRP must incorporate the WQMP's management measures to meet the TMDL's load allocation. Any WQRP developed prior to a WQMP would have to be adjusted if needed to incorporate the management measures of the WQMP.

BLM will submit WQRPs to the State for coordination purposes. If WQRPs are developed prior to TMDLs and WQMPs, submission of the WQRP is a means for the BLM to provide the State with information that may be incorporated into the TMDL and WQMP. After WQMPs are developed, submission of the WQRP provides an opportunity for the State and BLM to jointly review BLM's management activities for compliance with the management measures of the WQMPs.

BLM will implement WQRPs upon their completion, with adjustments as necessary.

Appendix F

Best Management Practices and Road Standards for Proper Drainage

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), the US Forest Service San Dimas Technology Center, and internal RMP scoping comments.

Road Construction and Maintenance Guidelines

For additional, more detailed specifications concerning all aspects of road design, construction and maintenance refer to 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 (see Table F-1). An in-depth field review for each feasible location should be performed prior to construction. For each feasible location, consider environmental impacts and resource value impacts, including suitability of soil and geology, potential for road surface erosion, and impacts due to extension of the drainage network on water quality and quantity. Consult hydrologists and fisheries biologists for stream crossings. 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.

Geometric Standards-Design speeds, travelway widths, and maximum grades for various combinations of estimated average daily traffic (ADT), functional classification, and terrain types are shown in Table F-1 below:

Table F-1 Road Standards

Functional Classification	Estimated 20 yr. ADT	Terrain	Design Speed		Travelway Width		Maximum Grade	
			Preferred	Minimum	Preferred	Minimum	Preferred	Minimum
Resource	Less than 20	Level & Rolling	30	*	14	*	8	10
		Mountainous	15	*	14	*	8	16
Local	Less than 100	Level & Rolling	40	30	20	20	6	10
		Mountainous	20	15	14	12	8	15
	More than 75	Level & Rolling	50	40	24	20	6	10
		Mountainous	30	15	24	20	8	14
Collector	50-150	Level & Rolling	50	30	24	20	6	8
		Mountainous	30	20	24	20	8	12
	More than 100	Level & Rolling	50	40	24	20	6	8
		Mountainous	30	20	24	20	8	12

*If preferred design speed and travelway width are not feasible for specific resource roads, alternate values are determined by District Resource Specialists.

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. Cross drains 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. Whenever possible cross drains should be located to release water on convex slopes or other stable areas

that will disperse water rather than channeling it. 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 (for example, a software application for Windows called "FishXing," developed by the Six Rivers National Forest Watershed Interactions Team available from the Stream Systems Technology Center (www.stream.fs.fed.us/fishxing) or from the USDA-Forest Service San Dimas Technology and Development Center). 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 and would be seeded with native seed.

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 (USDA-FS, 1998). 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 (USDA-FS, 1995), metal waterbars, and rubber water diverters (USDA-FS, 1998).

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	Grazing Matrix Classification	Management Category								Grazing System	Vacant (Y or N)
					C1	C2	C3	C4	C5	C6	C7	Tot.		
0072	Miltenberger (Alfalfa)	1,670	82	G	U	I	M	I	C	I	M	M	E	N
5001	Whitaker	114	7	*/R	M	I	M	M	C	C	C	C	SD	N
5002	Sanowski	71	10	*/R	M	I	M	M	C	I	C	M	SD	N
5003	Broaddus-Carder	15	2	*/R	U	M	C	I	M	C	C	C	SD	Y
5004	Lamb	44	6	G	M	M	C	M	C	C	M	C	SD	N
5006	Emmrich	211	20	*	U	M	M	I	M	C	C	C	SD	Y
5007	Harsch	1,310	19	*	U	I	M	M	I	M	C	M	DR	N
5011	Alkali	467	12	G	U	M	C	C	M	C	I	C	SS	N
5012	Lynch	2,911	83	*/R	U	I	M	I	C	M	C	M	DR	N
5018	Wierleske	798	49	G	U	I	M	I	M	M	M	M	SF	N
5019	Dunham North	3,136	191	G	M	I	I	M	M	M	I	I	DR	N
5022	Airport	760	62	R	I	I	M	I	C	I	M	M	E	N
5023	Riverside South	80	5	G	U	I	C	C	I	M	I	M	SS	N
5024	Keystone	353	10	G	U	I	C	C	M	M	I	M	SD	N
5026	Couch	815	30	G	U	I	C	M	I	C	M	M	SD	Y
5031	Mayfield-Harris	1,010	68	*/R	I	M	M	M	M	I	M	M	DR	N
5032	Barrett	200	24	G	M	M	C	M	M	C	M	C	SD	N
5050	Gray Butte	807	28	*/R	U	I	I	C	M	M	C	M	SS	N
5051	Sherwood Canyon	1,125	51	G	U	I	I	M	I	C	M	M	SD	N
5052	Smith Rock	164	9	*/R	U	I	I	C	I	C	C	M	SD	N
5061	McWeizz	5,027	348	*/R	U	I	I	I	M	C	C	M	SD	Y
5064	Williams (Desch. Co.)	841	44	G	U	M	C	M	M	M	M	C	DR	N
5065	Lower Bridge	6,050	310	G	U	I	M	I	I	M	M	I	DR	N
5066	Pine Ridge	392	34	G	U	I	C	M	M	C	M	C	SD	N
5067	Fisher	254	14	*/R	U	I	M	C	I	C	C	C	SD	Y
5068	Stevens Fremont	675	46	*/R	U	M	M	C	M	C	C	C	SD	Y
5069	Squaw Creek	120	17	*/R	U	I	M	M	I	C	C	M	SD	Y
5070	Lafollette Butte	3,664	190	*/R	U	I	M	M	I	C	C	M	DR	Y

Allot #	Allotment Name	Acres	AUMs	Grazing Matrix Classification	Management Category								Grazing System	Vacant (Y or N)
					C1	C2	C3	C4	C5	C6	C7	Tot.		
5071	Odin Falls	3,795	252	*/R	U	I	M	I	I	M	C	M	SD	Y
5072	Struss	1,726	143	*/R	U	M	I	M	M	C	C	C	DR	Y
5073	Cline Butte	10,671	700	*/R	M	M	I	M	M	I	M	M	DR	N
5075	Desert Springs	2,227	112	*	C	M	I	M	M	M	M	M	WS	N
5076	Buckhorn Canyon	664	68	G	I	I	C	C	M	I	M	M	DR	N
5078	Home Ranch	3,773	193	-	I	I	I	I	M	I	C	I	DR	N
5079	Whiskey Still	1,415	100	*/R31%	I	I	I	I	M	I	M	I	E	N
5080	Maston	3,624	209	G	U	I	M	I	M	M	M	M	DR	N
5081	Paulus	164	14	G	U	I	C	C	M	C	M	C	SD	N
5082	Bull Flat	199	7	G	C	M	C	C	M	C	M	C	SD	Y
5084	Blackrock	187	24	*/R	U	M	M	M	C	C	C	C	DR	Y
5086	Lone Pine Canyon	119	5	G	U	I	C	C	C	C	M	C	SD	N
5088	Montgomery	157	17	G	U	I	C	M	M	C	M	C	SD	N
5089	Knoche	160	6	G	U	I	M	M	C	M	M	M	SD	N
5092	Red Cloud	578	33	G	U	I	I	M	M	M	M	M	DR	N
5093	Cronin	346	19	G	U	I	C	M	M	I	M	M	SS	N
5094	Brown (Powell Butte)	231	15	G	U	I	C	C	M	C	M	C	SD	N
5096	Foster	319	24	G	M	I	C	C	M	C	M	C	SD	N
5107	Cain Fields	37	36	G	U	M	C	M	C	C	I	C	SD	N
5108	Zell Pond	1,215	75	G	U	I	I	I	M	C	M	M	SD	N
5109	Hohnstein-Tatti	4,901	262	G	U	I	M	M	C	M	M	M	SD	N
5110	Bruckert	119	35	G	U	I	C	C	C	C	I	C	SD	N
5111	Cook	1,929	49	*/R	U	I	M	I	C	C	C	M	SD	N
5112	Driveway	3,258	240	G	U	I	M	M	C	M	M	M	R;W	N
5113	Hacker-Hassing	4,220	99	G	U	I	I	I	C	M	M	M	DR	N
5114	Weigand	3,084	177	G	U	I	I	M	C	M	M	M	DR	N
5115	Allen	3,565	110	G	U	I	I	M	C	I	I	I	DR	N
5116	Crenshaw	12,528	635	R	M	M	I	M	C	M	M	M	DR	N
5117	Pipeline	8,280	513	G	U	I	I	M	C	M	I	M	DR	N
5119	McDonald	40	50	G	U	M	C	C	C	C	I	C	SD	N
5120	Hutton	4,062	231	G	U	I	I	M	C	M	I	M	W	N
5121	Oertle	2,318	120	G	M	I	M	M	C	M	I	M	DR	N
5122	Howard	669	68	R	C	I	M	M	C	M	M	M	DR	N

Allot #	Allotment Name	Acres	AUMs	Grazing Matrix Classification	Management Category								Grazing System	Vacant (Y or N)
					C1	C2	C3	C4	C5	C6	C7	Tot.		
5123	West Salt Creek	517	51	G	U	I	C	C	M	M	I	M	DR	N
5125	Mayfield Pond	5,615	305	G	M	I	I	M	C	M	I	I	DR	N
5127	Powell Butte	14,842	680	G	U	I	I	M	M	M	M	M	DR	N
5130	Pilot Butte	323	104	G	U	I	C	C	M	M	I	M	SD	N
5132	North Stearns	8,535	403	G	U	I	I	I	M	M	M	I	DR	N
5133	Long Hollow	364	17	G	U	I	C	C	M	C	I	C	SD	N
5134	South Stearns	10,021	583	G/R	I	I	I	M	M	M	I	I	DR	N
5135	Dry Creek	6,134	334	R	M	I	I	I	M	M	M	I	DR	N
5136	Davis	4,661	352	R	M	M	I	I	I	M	M	I	WS	N
5138	Plateau	5,255	252	G	M	I	M	M	M	M	M	M	DR	N
5140	Salt Creek	12,455	1,364	G	M	I	M	M	I	M	I	I	DR;W	N
5141	Sanford Creek	4,809	375	G	U	I	C	C	I	M	I	M	DR	N
5142	Carey	1,740	46	R	U	I	M	I	I	M	M	I	DR	N
5143	Deer Creek	2,655	171	G	U	I	M	C	I	M	I	M	WS	N
5145	Eagle Rock	2,291	162	G	U	I	I	C	I	M	I	I	DR;W	N
5176	McCabe	230	10	G	U	C	C	C	M	C	M	C	E	Y
5177	Reynolds	1,751	101	G	U	I	C	C	M	C	M	C	SD	N
5178	Grizzly Mountain	756	69	G	C	M	C	C	I	C	M	C	SD	Y
5179	Lytle Creek	119	8	G	C	I	C	C	M	C	M	C	SD	N
5180	Golden Horseshoe	198	14	G	C	I	C	C	M	C	M	C	SD	N
5182	F. Jones	698	77	G	U	I	C	C	M	C	M	C	SD	Y
5198	Laire-gove	490	15	G	I	C	C	C	C	C	M	C	SD	Y
5201	Alfalfa Market Road	2,468	141	R	U	M	I	M	C	M	M	M	SS	N
5204	Sinclair	574	28	*/R	M	I	M	M	M	C	C	C	SD	N
5205	Dodds Road	2,256	75	*/R	I	M	M	M	M	M	M	M	DR	N
5206	Arnold Canal	603	18	*/R	U	I	M	M	C	C	C	C	DR	Y
5207	Michaels	1,315	38	*	I	I	M	M	M	M	M	M	DR	N
5208	Barlow Cave	11,035	600	G	U	I	M	M	I	M	M	M	DR	N
5209	Lava Beds	16,249	508	*	I	I	M	M	M	I	M	I	SS	N
5210	Horse Ridge	22,285	1,624	G	U	I	M	M	I	M	I	I	DR	N
5211	Pine Mountain	5,401	320	G	U	I	I	M	I	M	M	I	DR	N
5212	Millican	29,472	2,887	G	U	I	I	M	I	M	I	I	DR	N
5213	Rambo	15,765	670	R	U	I	I	M	I	M	M	I	DR	N

Allot #	Allotment Name	Acres	AUMs	Grazing Matrix Classification	Management Category								Grazing System	Vacant (Y or N)
					C1	C2	C3	C4	C5	C6	C7	Tot.		
5214	Williamson Creek	12,946	754	G	U	I	I	M	I	M	I	I	DR	N
5216	Grieve	80	4	G	M	M	M	M	C	C	M	C	SD	N
5224	Coffelt North	483	15	G	U	M	C	C	M	M	I	C	SS	N
5228	Dunham South	2,804	163	G	U	I	C	C	I	M	I	M	DR	N
5231	West Butte	17,136	1,781	G	U	I	M	M	I	M	I	I	DR	N
5233	Scott	4,825	536	G	U	I	C	C	I	M	I	M	DR;W	N
5234	Haughton	2,491	193	G	U	I	C	C	M	M	I	M	DR;W	N
5252	Meisner	64	34	G	U	M	M	M	C	M	M	C	SD	Y
5257	South Alkali	84	5	G	U	M	C	C	M	C	I	C	SS	N
5261	Hudson	656	44	G	U	I	C	C	M	M	I	M	SD	N
7502	A&L Sheep	6,027	1,012	G	U	M	C	M	M	M	M	C	E;D;DR;RR	Y
7504	Brown (La Pine)	552	93	G	U	M	C	M	C	M	I	C	E;D;DR;RR	N
7509	Cliff	1,885	88	R	U	M	M	I	M	M	M	M	E;D;DR;RR	N
7514	Cooper	313	27	*/R	U	M	C	M	M	C	C	C	A	N
7515	Helliwell	361	60	G	U	M	M	C	M	C	M	C	A	N
7530	Griffith	28	32	G	U	M	C	C	C	C	M	C	A	N
7538	Hogan	172	26	*/R	U	I	M	M	I	C	C	M	A	Y
7552	Miltenberger (La Pine)	4,612	656	G	C	M	C	M	C	M	M	C	E;D;DR;RR	N
7554	Morgart	79	11	G	I	I	C	C	M	I	M	M	A	N
7559	Poole	1,373	180	G	U	M	M	M	M	M	M	M	E;D;DR;RR	N
7571	Smith, E.V.	153	26	G	U	M	C	M	C	C	M	C	A	Y
7572	Smith, W.C.	41	7	G	U	M	C	M	C	C	M	C	A	N
7574	Kellems	196	34	G	U	M	C	M	M	C	M	C	E;D;DR;RR	Y
7575	Stearns	425	73	G	U	M	C	I	M	M	M	M	E;D;DR;RR	N
7582	Williams (Jeff. Co.)	99	7	G	U	I	C	M	M	C	M	C	A	N
7586	Yager	344	33	R	U	M	M	I	C	M	M	M	E;D;DR;RR	N
7594	LeBeau	26	6	G	U	M	C	C	M	C	M	C	A	N
7595	Finley	1,304	72	G	U	M	C	M	M	M	M	C	E;D;DR;RR	N
7597	Long Prairie	719	240	*/R	I	M	M	C	M	M	M	C	E;D;DR;RR	N
9999	Unallotted (La Pine)	23,524	6,800	G	U	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 (mandatory)
- * Livestock grazing discontinued if permit is voluntarily relinquished.
- R Reserve forage allotment (RFA) if the permit is voluntarily relinquished.
- G/R Open or RFA if the permit is voluntarily relinquished.
- */R Livestock grazing discontinued or RFA if the permit is voluntarily relinquished.
- 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.

Criteria 1-7 definitions

- C1 Standards for rangeland health. C = meeting all standards, M = not meeting one or more standards, but current livestock grazing is not a factor, U = Unknown, rangeland health not assessed yet, and I = not meeting one or more standards and current livestock grazing is 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 Current livestock grazing 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
- DR Deferred rotation
- E Early
- EX Exclusion
- R Rotation
- SD Short duration
- SF Summer/fall
- SS Spring/summer
- W Winter
- 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

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. 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:

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

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.

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.

Key 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. Key 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.

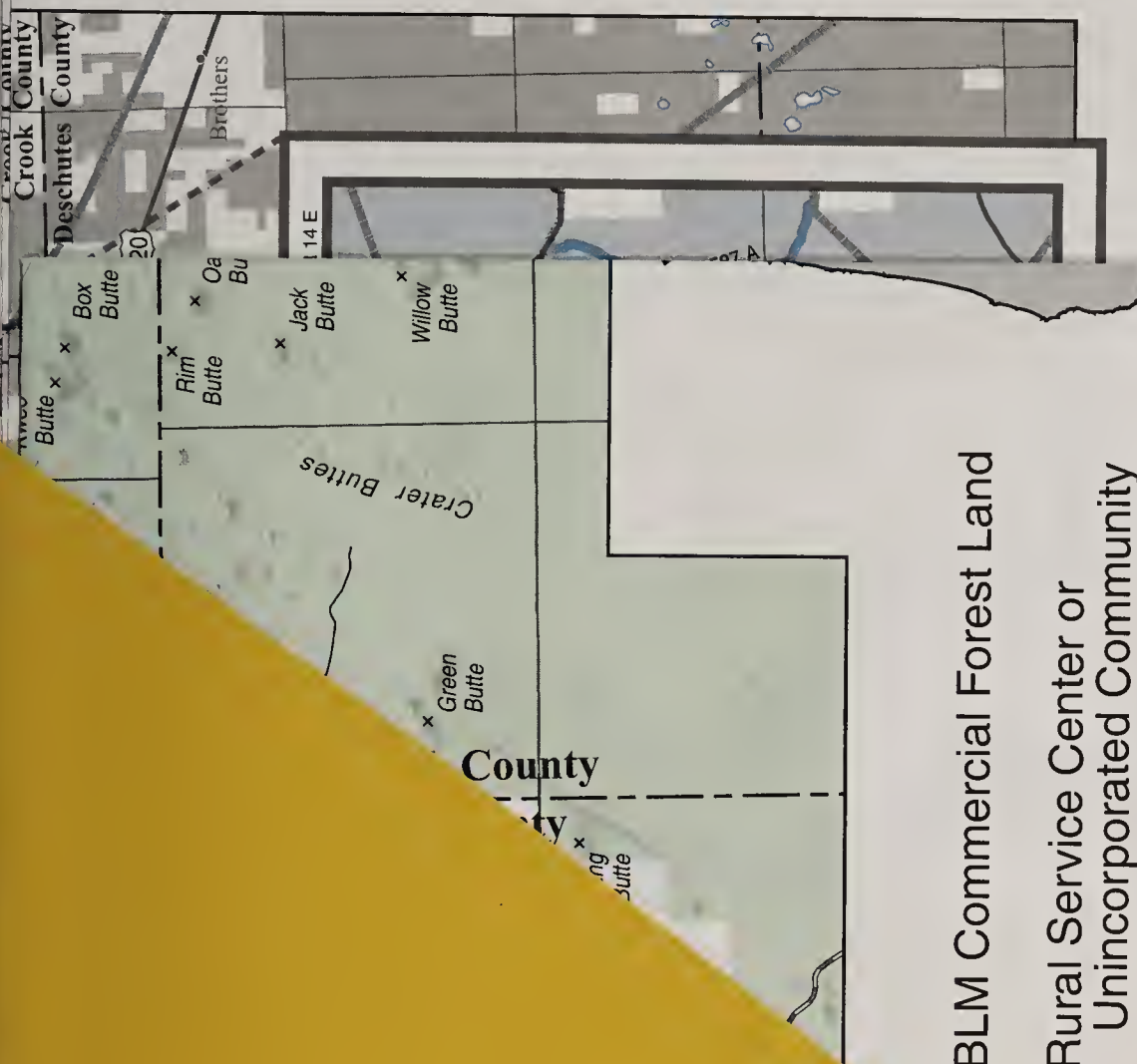
Class 3 – Contrasts to the basic elements caused by a management activity are evident, but should remain subordinate to the existing landscape.

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.

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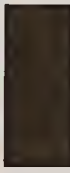



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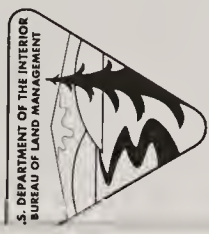
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BLM Commercial Forest Land
 Rural Service Center or
 Unincorporated Community

Special Management Areas

-  Research Natural Area (RNA)
-  Rockhounding Area
-  Wilderness Study Area (WSA)
-  Wild and Scenic River Corridor
-  Area of Critical Environmental Concern (ACEC)

-  State of Oregon
-  Private / Other



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RMP Map 1: Planning Area and Special Management Areas

25 maps

Distance Zones

Based on BLM Manual Handbook 8410-1, Visual Resource Inventory, distance zones are defined as follows:

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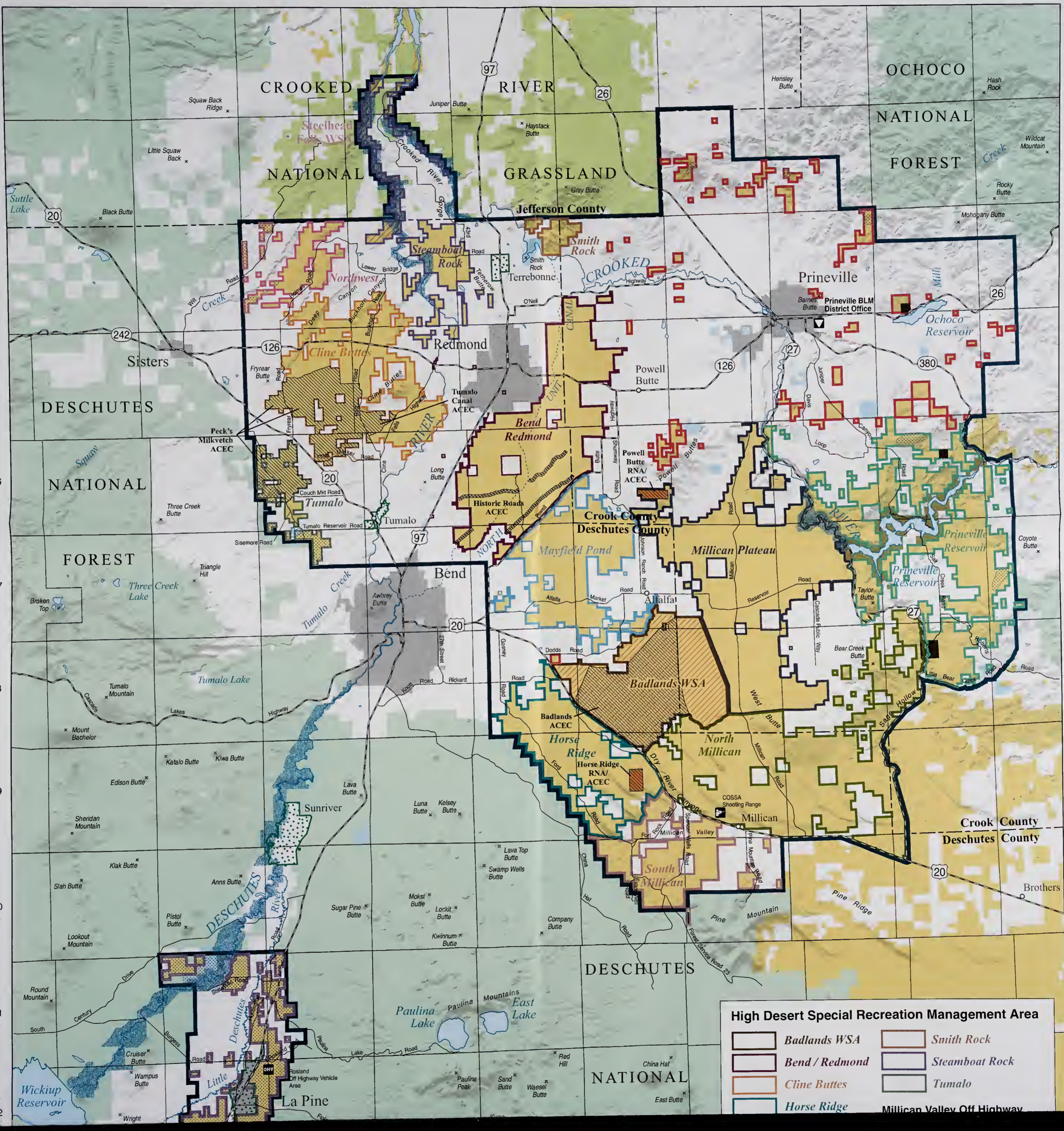
Class 3 – Contrasts to the basic elements caused by a management activity are evident, but should remain subordinate to the existing landscape.

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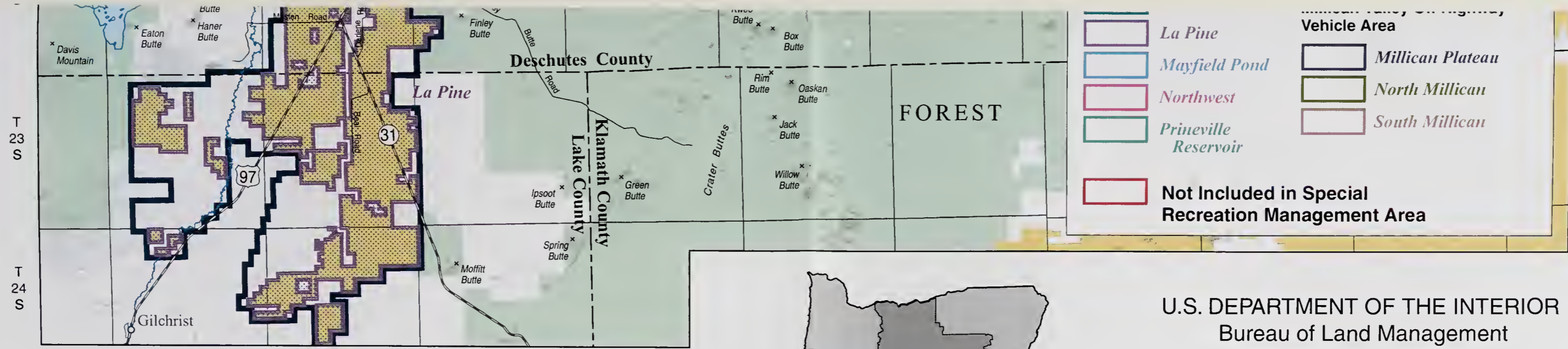
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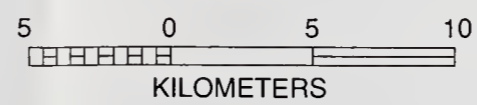
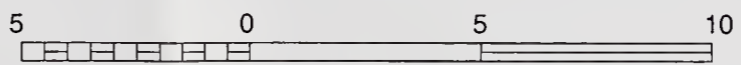
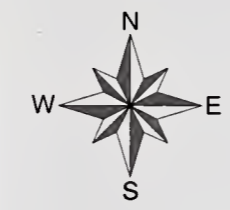
High Desert Special Recreation Management Area

	Badlands WSA		Smith Rock
	Bend / Redmond		Steamboat Rock
	Cline Buttes		Tumalo
	Horse Ridge		Millican Valley Off Highway

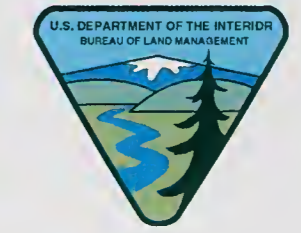


Legend

- | | |
|---|--|
| Planning Area | BLM Commercial Forest Land |
| Highway | Rural Service Center or Unincorporated Community |
| Road | |
| Urban Growth Boundary | |
| Administered Lands | |
| Bureau of Land Management | |
| National Forest | |
| National Grassland | |
| Bureau of Reclamation | |
| State of Oregon | |
| Private / Other | |
| Special Management Areas | |
| Research Natural Area (RNA) | |
| Rockhounding Area | |
| Wilderness Study Area (WSA) | |
| Wild and Scenic River Corridor | |
| Area of Critical Environmental Concern (ACEC) | |



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**Upper Deschutes Resource
 Management Plan**

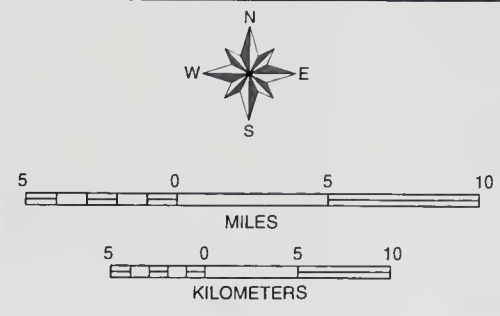
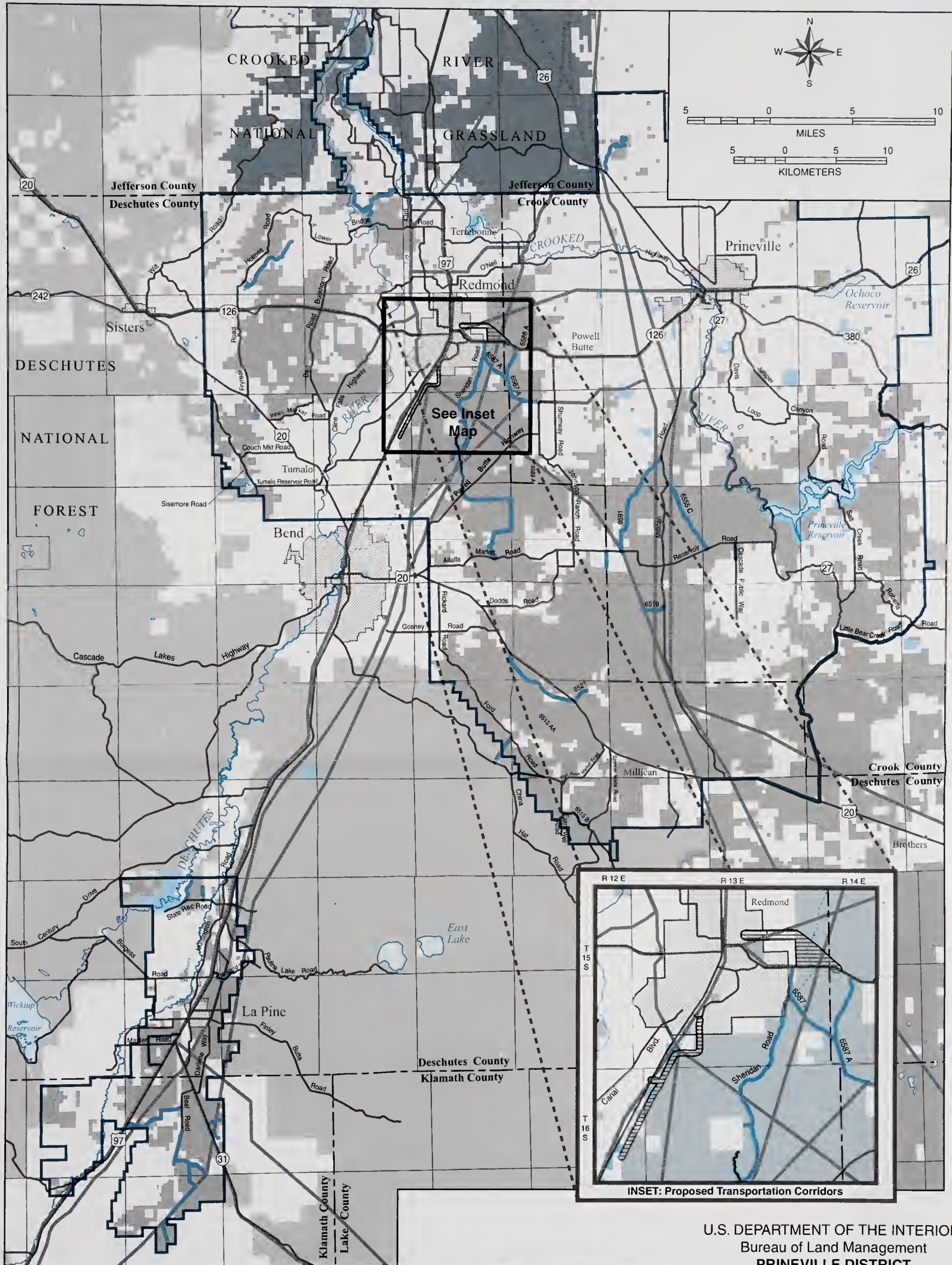
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RMP Map 1: Planning Area and Special Management Areas

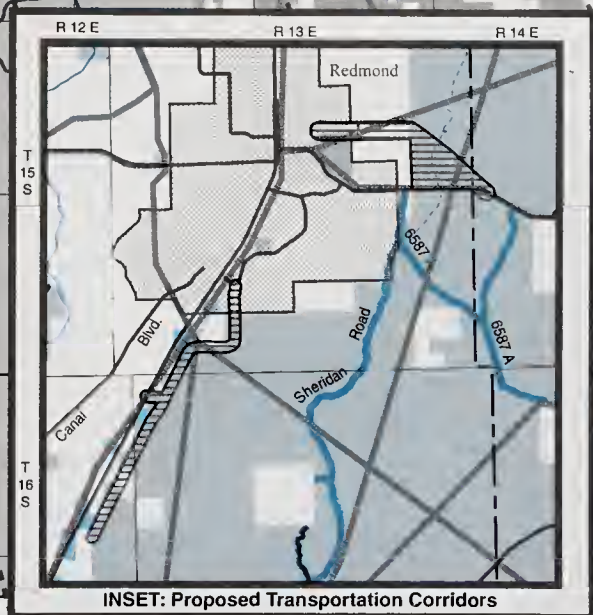
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See Inset Map

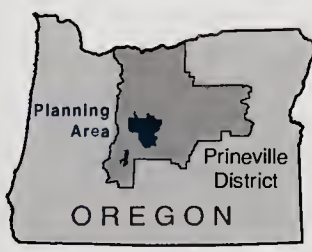


INSET: Proposed Transportation Corridors

Legend

- | | | |
|---------------------------|---------------------------|-----------------------------|
| Administered Lands | | — Regional Utility Corridor |
| | Bureau of Land Management | — Planning Area |
| | National Forest | |
| | National Grassland | Transportation * |
| | Bureau of Reclamation | |
| | State of Oregon | |
| | Private / Other | |

* Note: See RMP maps 12-24 for interim road system



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RMP Map 2: Transportation and Utilities

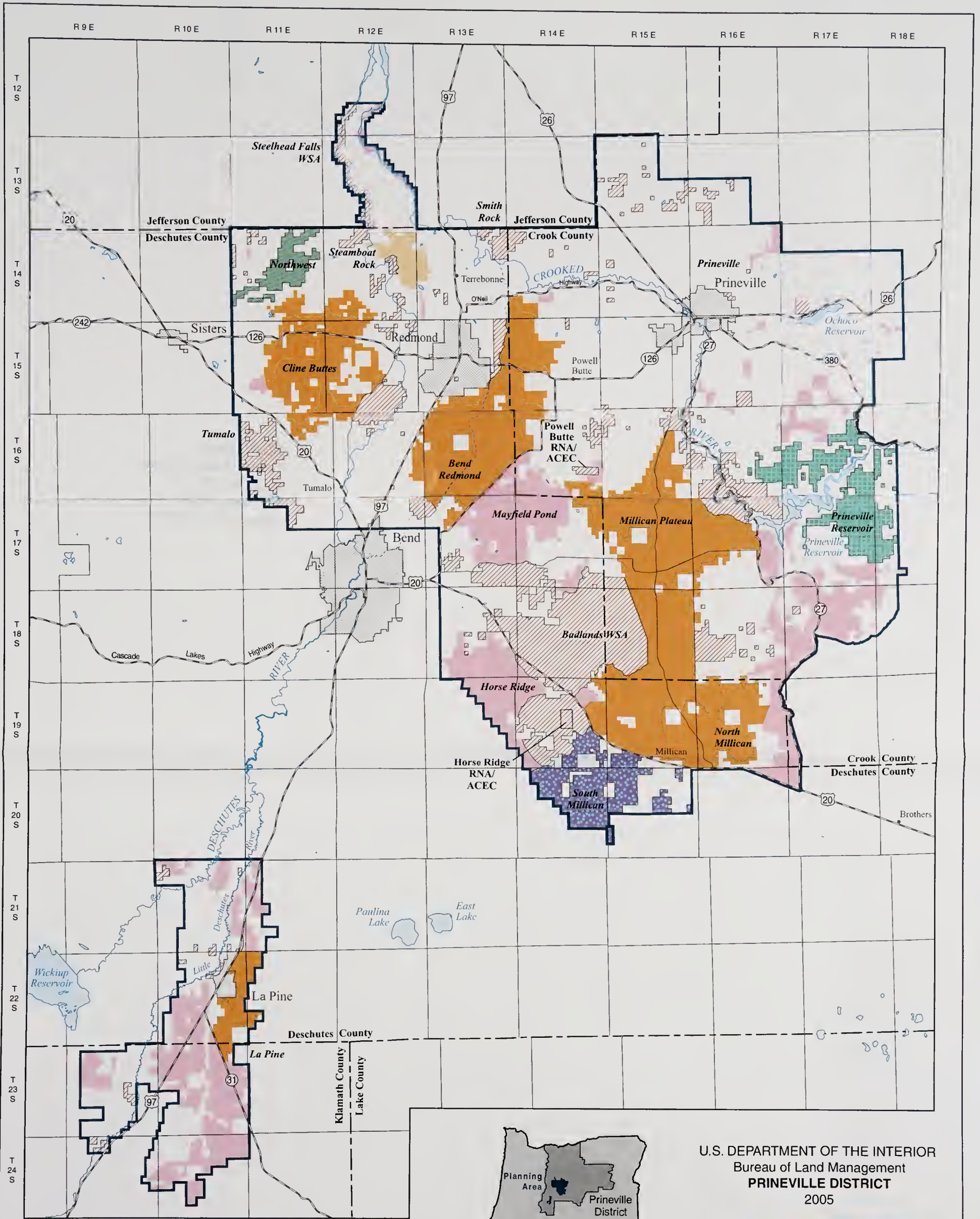
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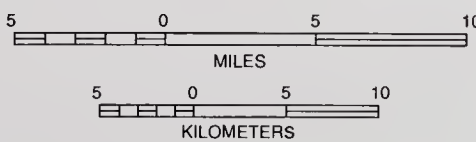
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- Legend**
- Planning Area
 - Highway
 - Road
 - ▨ Urban Growth Boundary
 - Motorized Seasonal Use Periods**
 - ▨ Closed From December 1st to March 31st
 - ▨ Closed From December 1st to April 30th
 - ▨ Closed From December 1st to July 31st
 - Recreation Travel Access**
 - ▨ Limited to Type of Vehicles
 - ▨ Limited to Designated Roads Only Year Round
 - ▨ Limited to Designated Roads and Trails Year Round
 - ▨ Limited to Designated Roads Seasonally
 - ▨ Limited to Designated Roads and Trails Seasonally
 - ▨ Closed Year Round



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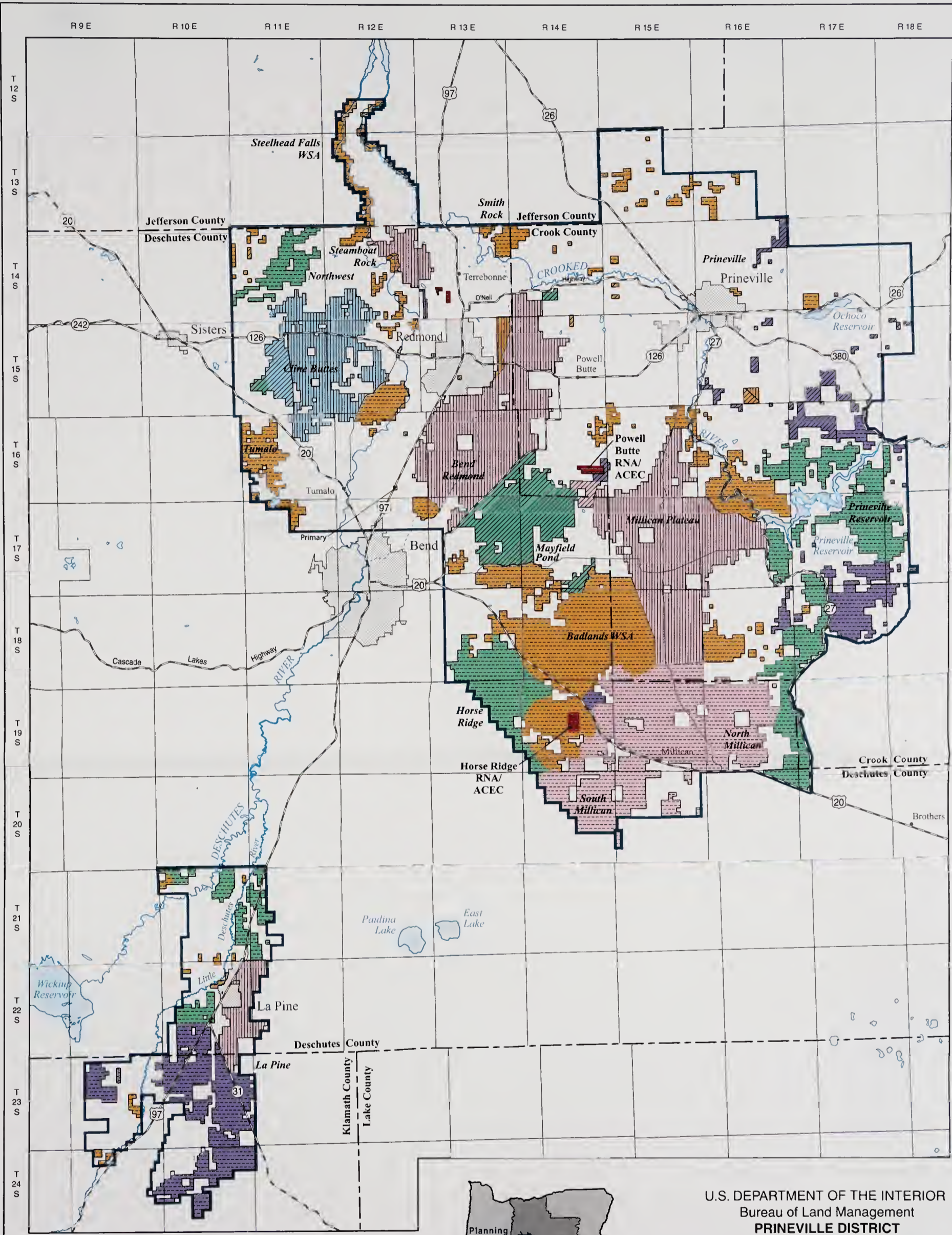
RMP Map 3: Travel Management Designations and Seasonal Use Periods

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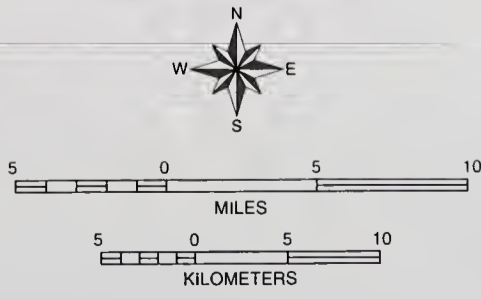
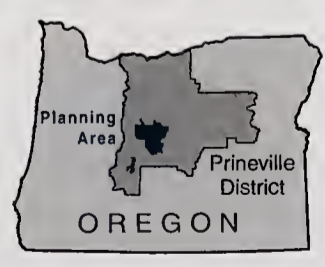
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Legend

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|------------------------------------|-----------------------------------|-----------------------|
| Recreation Emphasis | | — Planning Area |
| Multi-Use Separate Facilities | Multi-Use Shared Facilities | — Highway |
| Non-Motorized Recreation Exclusive | Non-Motorized Recreation Emphasis | — Road |
| Non-Recreation Emphasis | Roads Only Emphasis | Urban Growth Boundary |
| | Wildlife Emphasis | Primary |
| | Secondary | General |



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RMP Map 4: Wildlife and Recreation Emphasis

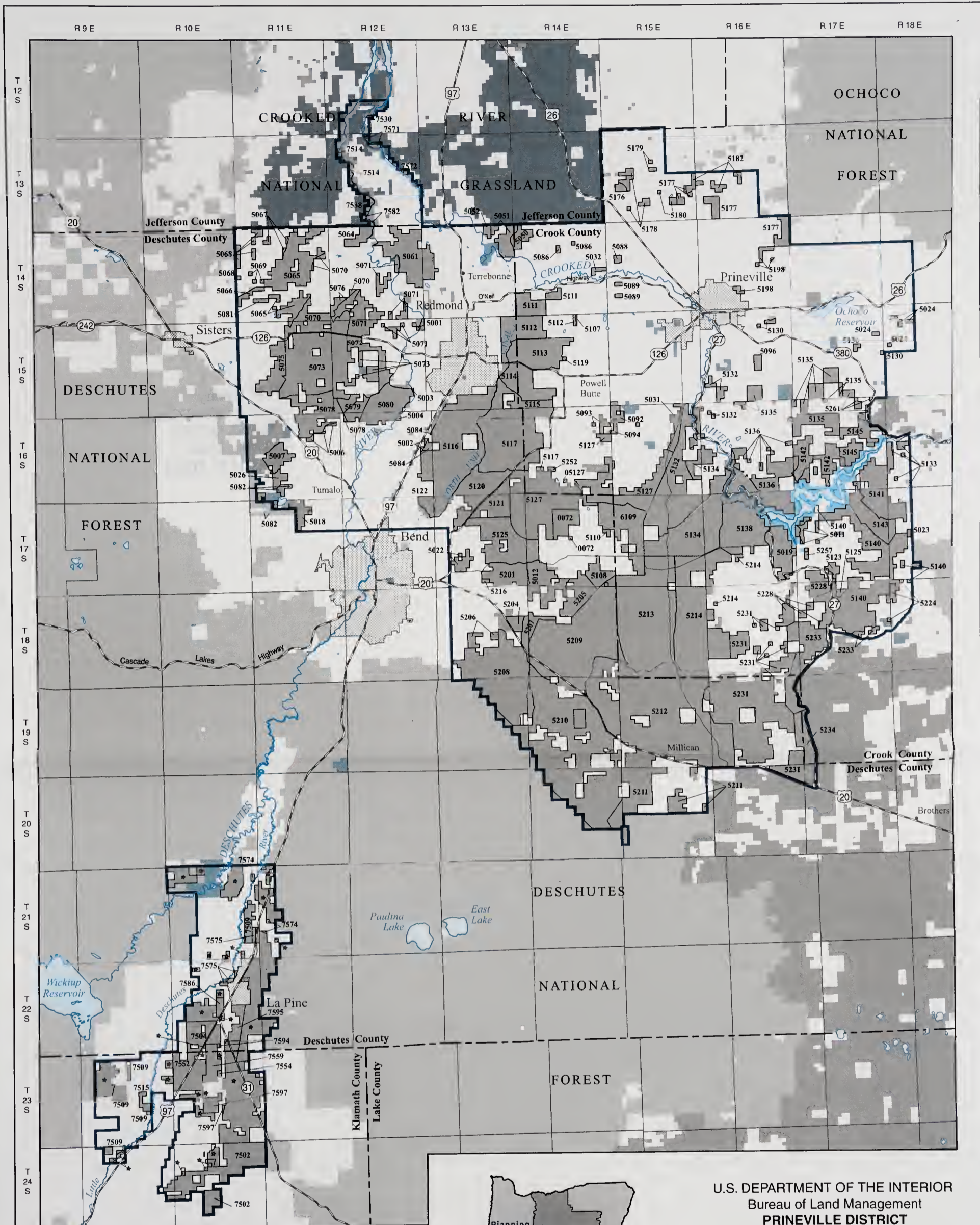
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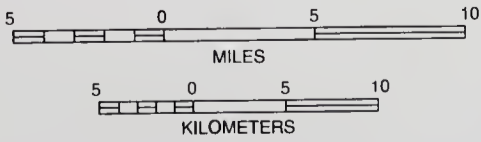
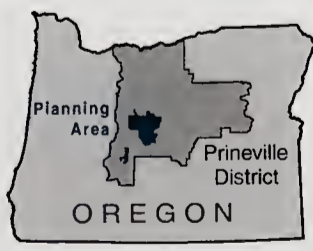
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Legend

- Planning Area
- Highway
- Road
- Urban Growth Boundary
- Administered Lands**
- Bureau of Land Management
- National Forest
- National Grassland
- Bureau of Reclamation
- State of Oregon
- Private / Other
- Allotment Number
- Unallotted Area in La Pine (9999)



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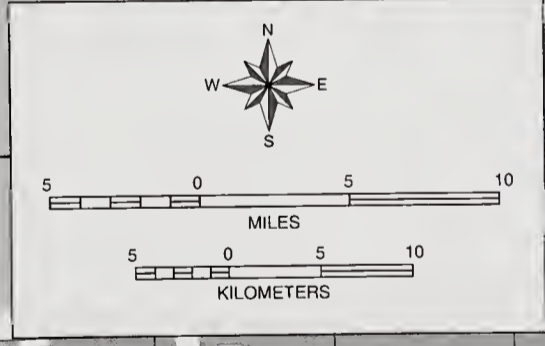
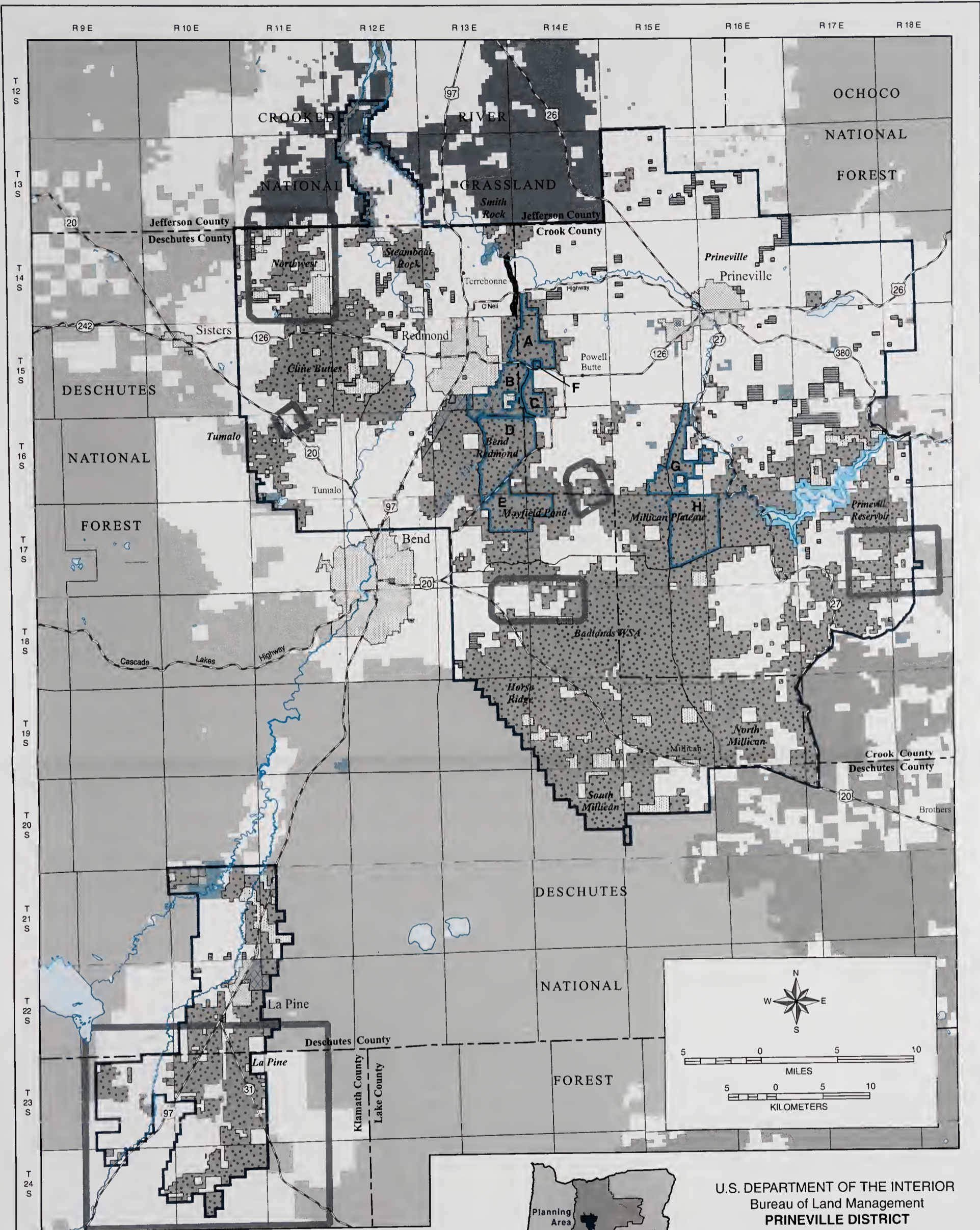
RMP Map 5: Livestock Grazing Allotments

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**Upper Deschutes
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- | | | |
|--|---|--|
| <ul style="list-style-type: none"> — Planning Area — Highway — Road ▨ Urban Growth Boundary <p>Administered Lands</p> <ul style="list-style-type: none"> ▨ Bureau of Land Management ▨ National Forest ▨ National Grassland ▨ Bureau of Reclamation ▨ State of Oregon ▨ Private / Other | <p>BLM Land Tenure Classification</p> <ul style="list-style-type: none"> ▨ Zone 1 Classified for Retention ▨ Zone 2 Classified for Retention with Option to Exchange ▨ Zone 3 Classified for Disposal ▨ Community Expansion ▨ Areas that Contain Private Land Parcels Desirable for Acquisition | <ul style="list-style-type: none"> ▨ Private Lands that may be Desirable for Acquisition ▨ Lands Desirable for Acquisition Along a Linear Feature <p>Military Training Area</p> <ul style="list-style-type: none"> ▨ Subunit Areas |
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RMP Map 6: Land Ownership and Military Land Use
(Land Tenure Zone Designations Apply Only to BLM Administered Land)

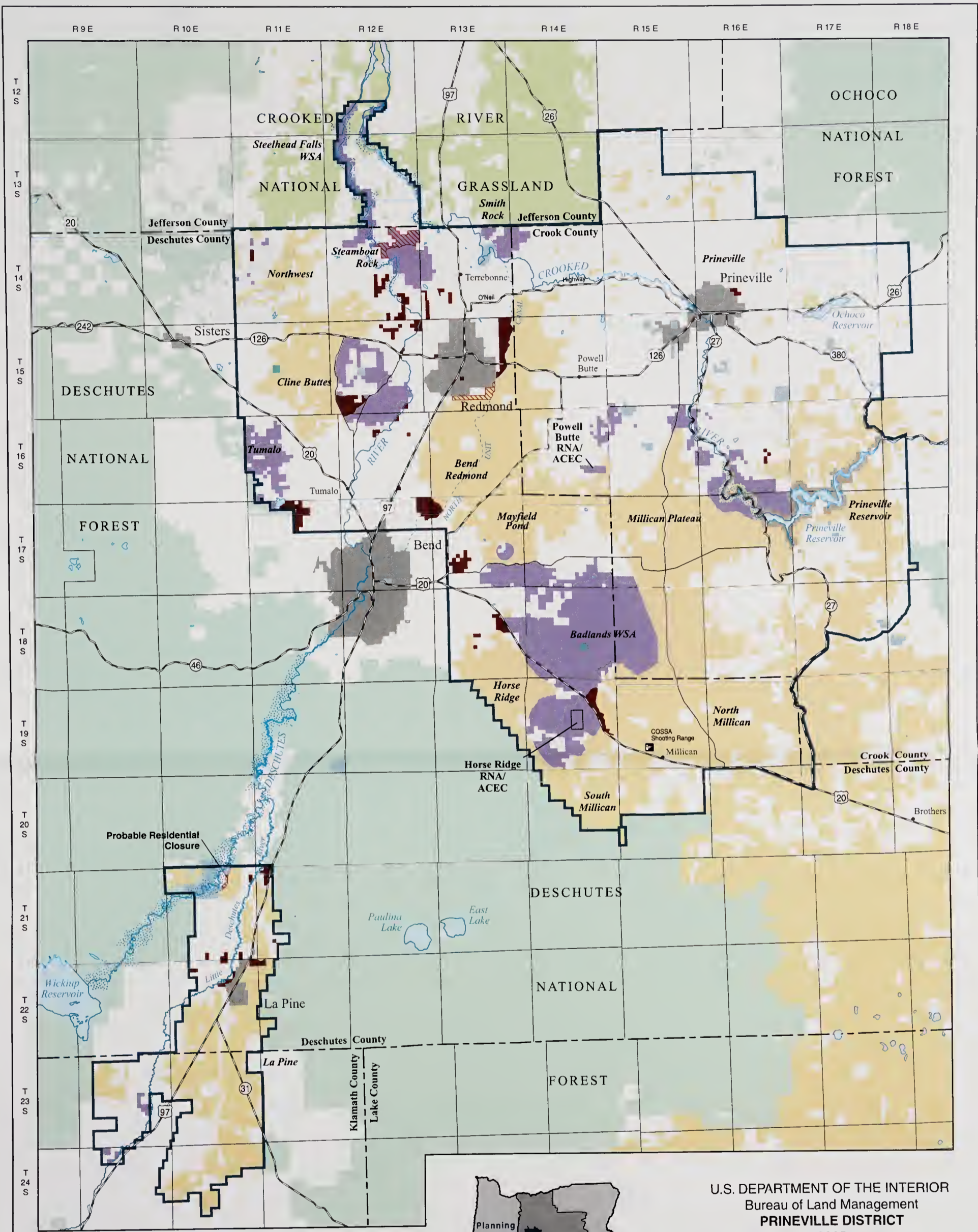
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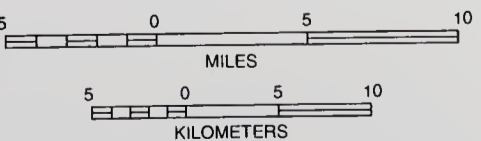
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- Legend**
- Planning Area
 - Highway
 - Road
 - Urban Growth Boundary
 - Administered Lands**
 - Bureau of Land Management
 - Forest Service
 - National Grassland
 - Bureau of Reclamation
 - State of Oregon
 - Private / Other
 - Wild and Scenic River
 - Closed to All Firearm Discharge Seasonally
 - Closed to All Firearm Discharge
 - Closed to Firearm Discharge Unless Legally Hunting
 - Probable Firearm Discharge Closure Adjacent to Private Development



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RMP Map 7: Public Health and Safety

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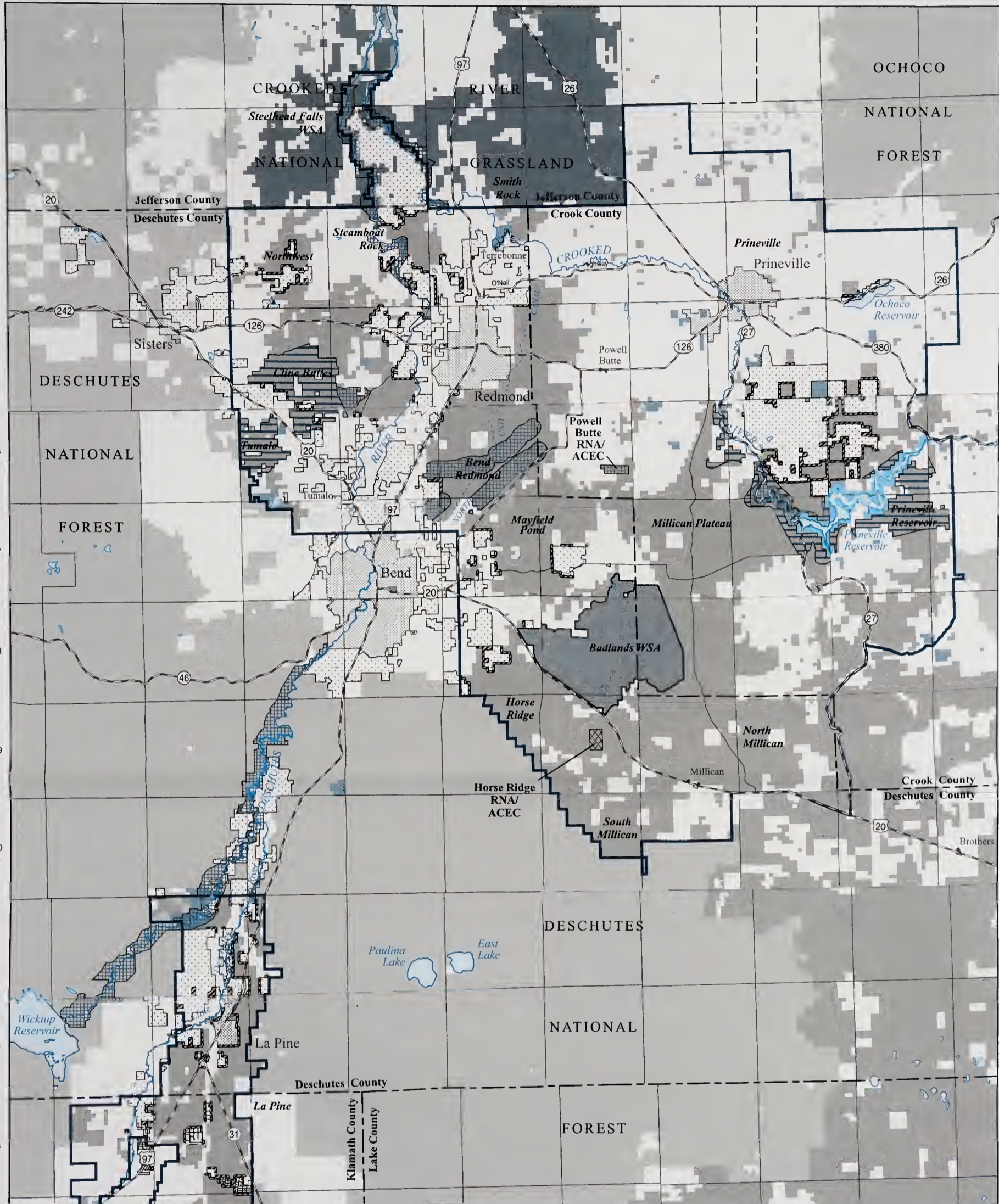
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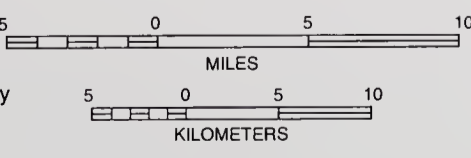
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Legend

- Planning Area
- Highway
- Road
- ▨ Urban Growth Boundary
- Administered Lands**
- Bureau of Land Management
- National Forest
- National Grassland
- Bureau of Reclamation
- State of Oregon
- Private / Other
- ▨ 1/8 Mile Buffer, Closed to Mineral Material Mining
- ▨ Closed to Surface Occupancy and Mineral Material Mining
- ▨ Closed to Mineral Material Mining and Mineral Leasing
- ▨ Withdrawn from Locatable Mineral Entry, Closed to Mineral Material Mining and Surface Occupancy
- ▨ Closed to Surface Occupancy
- ▨ Residential



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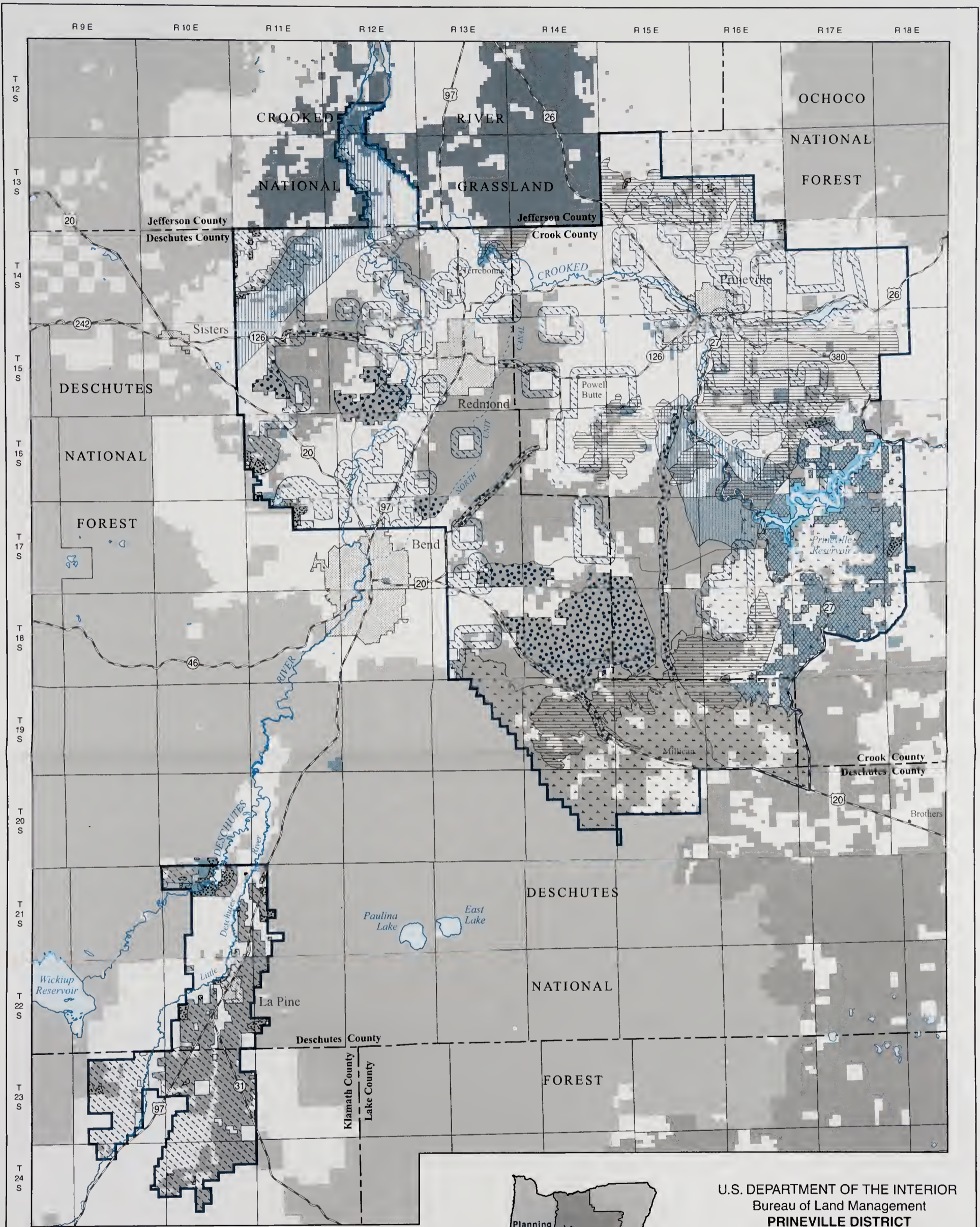
RMP Map 8: Minerals

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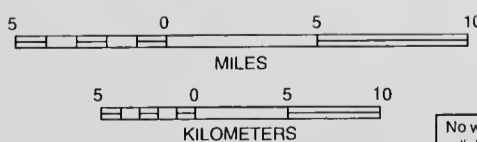
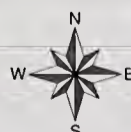
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Legend

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|---------------------------|---|---|
| Planning Area | Highway | Aquatic Stronghold Restoration |
| Road | Ponderosa Pine | Priority Old Growth Juniper Restoration |
| Urban Growth Boundary | Priority Sage Grouse Restoration | Verified High Priority Restoration-Upper Crooked River Subbasin |
| Administered Lands | Verified High Priority Restoration-Lower Crooked River Subbasin | Wildland Urban Interface Zones |
| Bureau of Land Management | | |
| National Forest | | |
| National Grassland | | |
| Bureau of Reclamation | | |
| State of Oregon | | |
| Private / Other | | |



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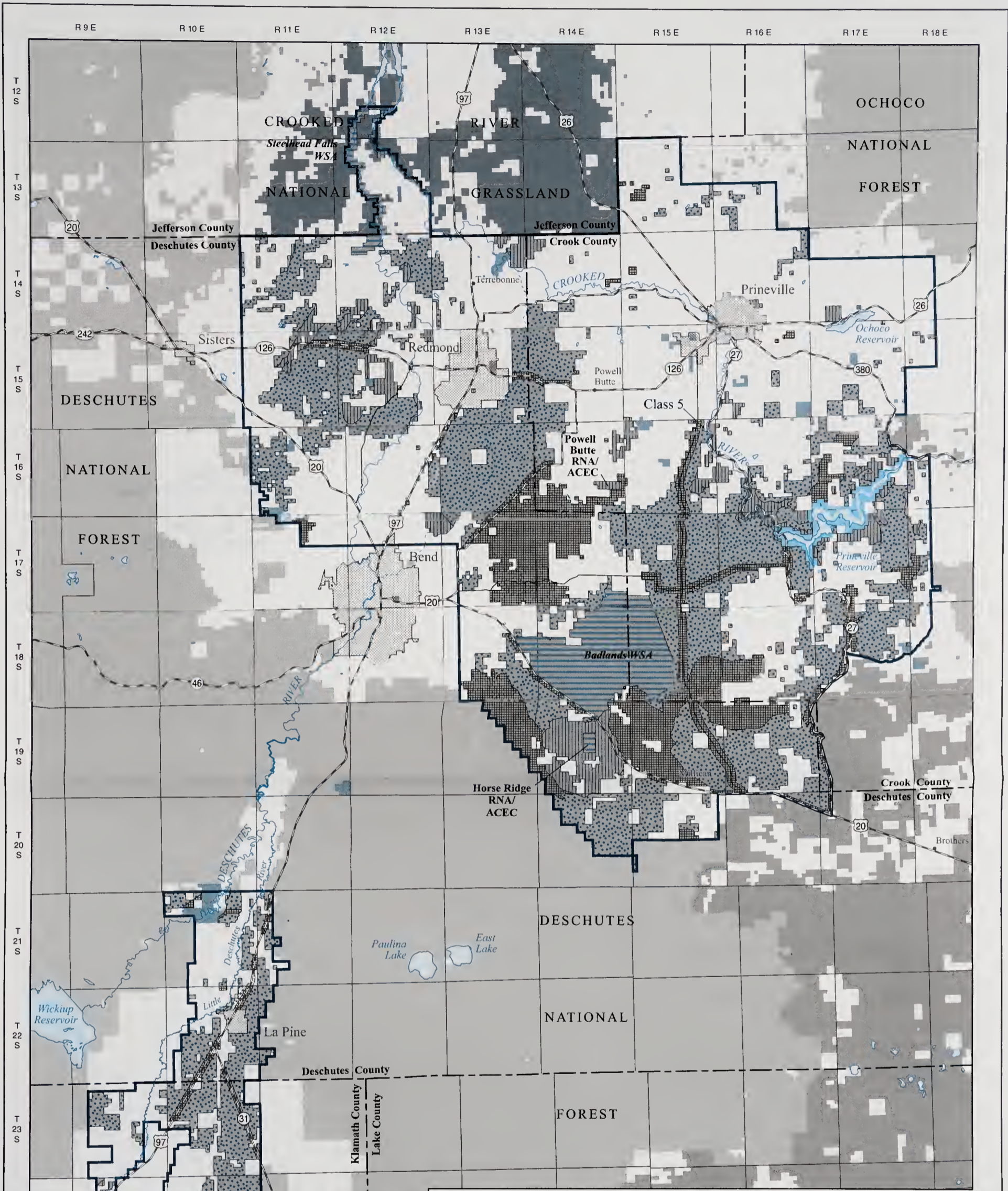
RMP Map 9: Priority Restoration Areas
(Designations Apply Only to BLM Administered Land)

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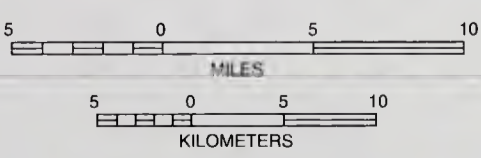
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Legend

- Planning Area
- Highway
- Road
- Urban Growth Boundary
- Administered Lands**
- Bureau of Land Management
- National Forest
- National Grassland
- Bureau of Reclamation
- State of Oregon
- Private / Other

- Visual Resource Management**
- Class 1
 - Class 2
 - Class 3
 - Class 4
 - Class 5



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RMP Map 10: Visual Resource Management Classes

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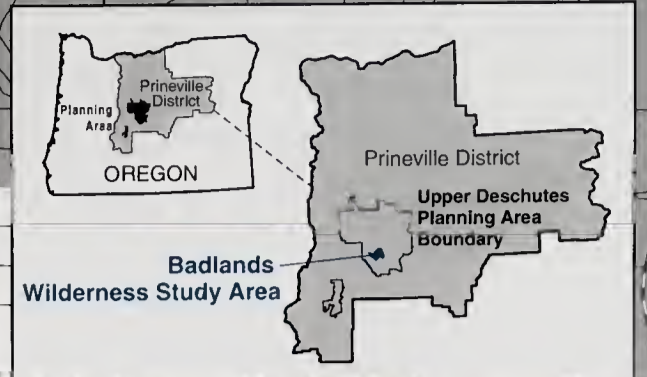
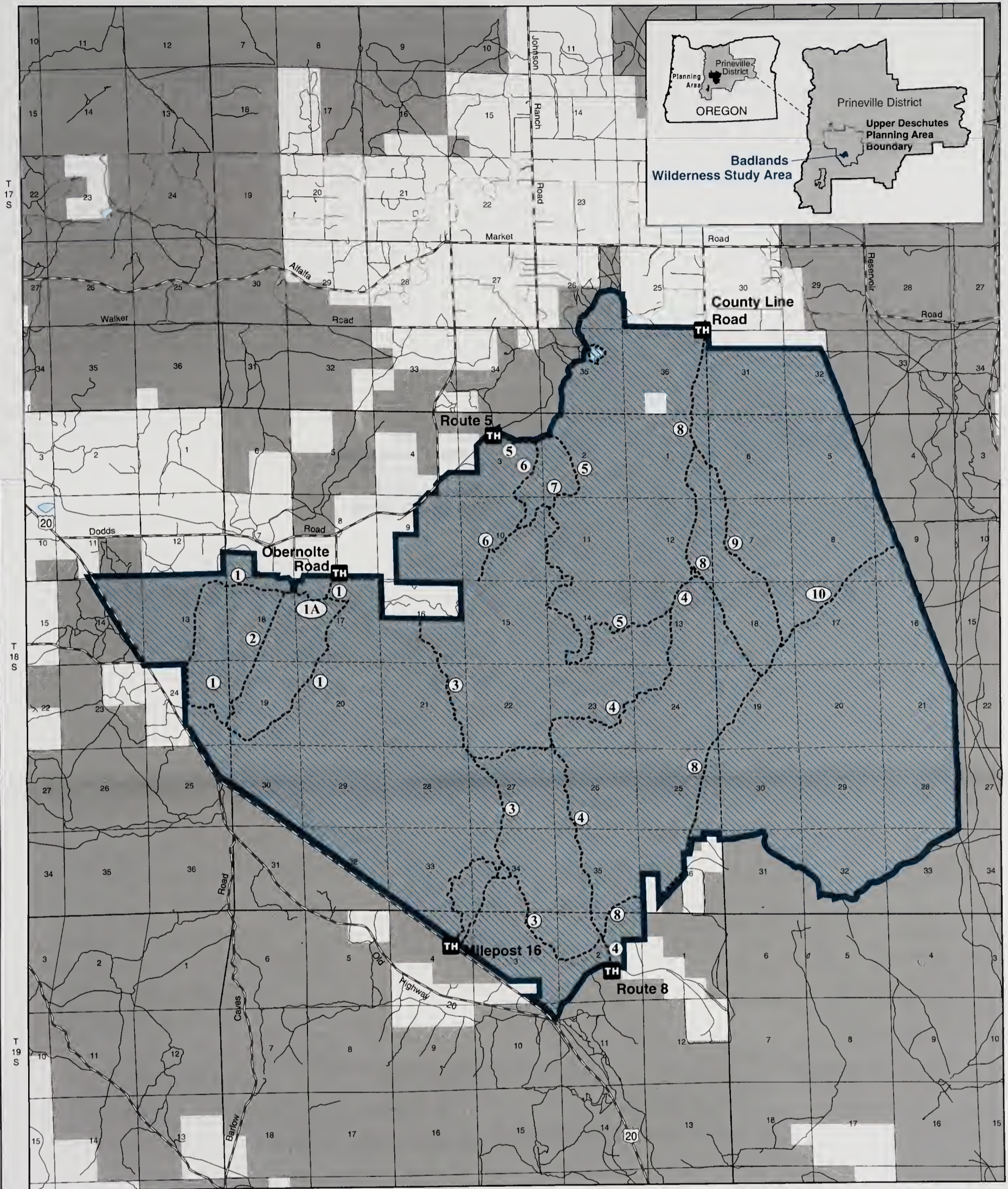
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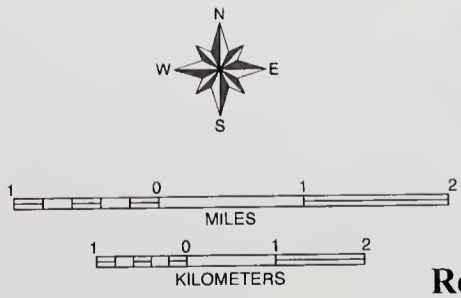
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| <p>Guidelines for Non-Motorized Use of Existing Roads and Trails</p> <ul style="list-style-type: none"> ----- Designated Routes Available for Non-Motorized Travel 3 Wilderness Study Area Route Numbers TH Trailhead Closed Year Round | <ul style="list-style-type: none"> Recreation Area / Wilderness Study Area Highway or County Route Road <p>Administered Lands</p> <ul style="list-style-type: none"> Bureau of Land Management Private / Other |
|--|--|



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RMP Map 11: Guidelines for Non-Motorized Use for the Badlands Wilderness Study Area

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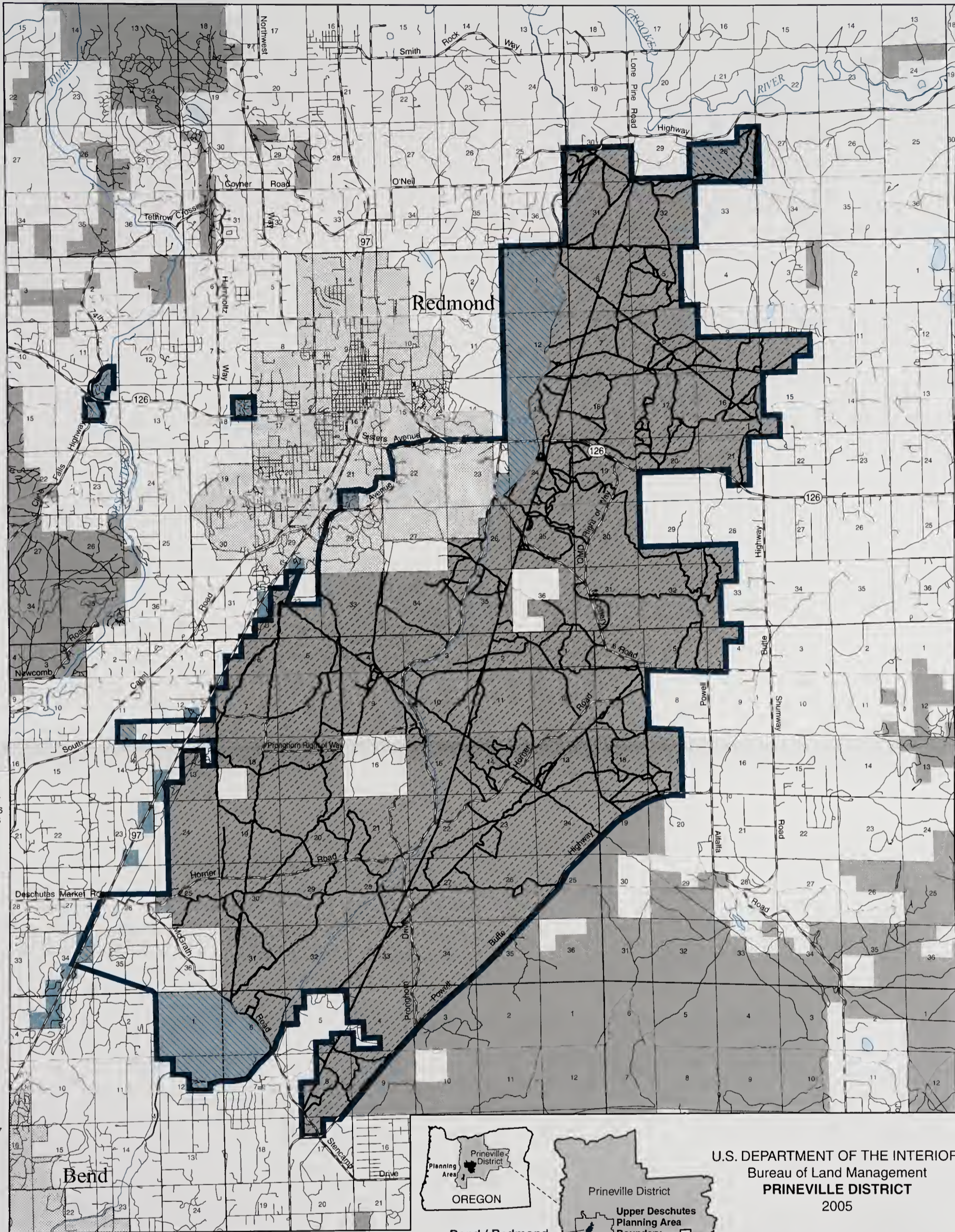
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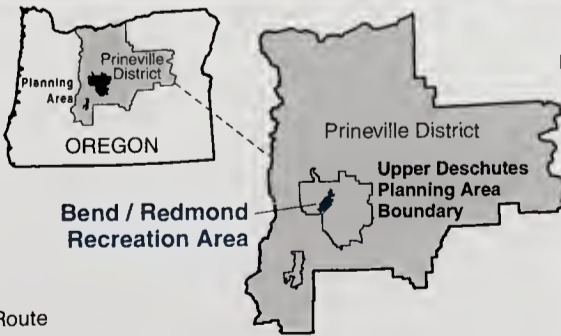
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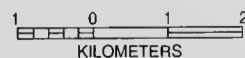
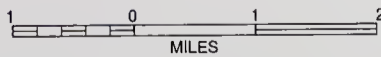
Legend

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|---|---------------------------|
| BLM Routes Available for Motorized Travel | Recreation Area |
| Closed Year Round | Highway or County Route |
| Limited to Designated Roads and Trails Year Round | Road |
| Limited to Designated Roads Only Year Round | Urban Area |
| | Administered Lands |
| | Bureau of Land Management |
| | State of Oregon |
| | Private / Other |

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.



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RMP Map 12: Interim Guidance for Motorized Use of Existing Roads Trails in the Bend / Redmond Recreation Area

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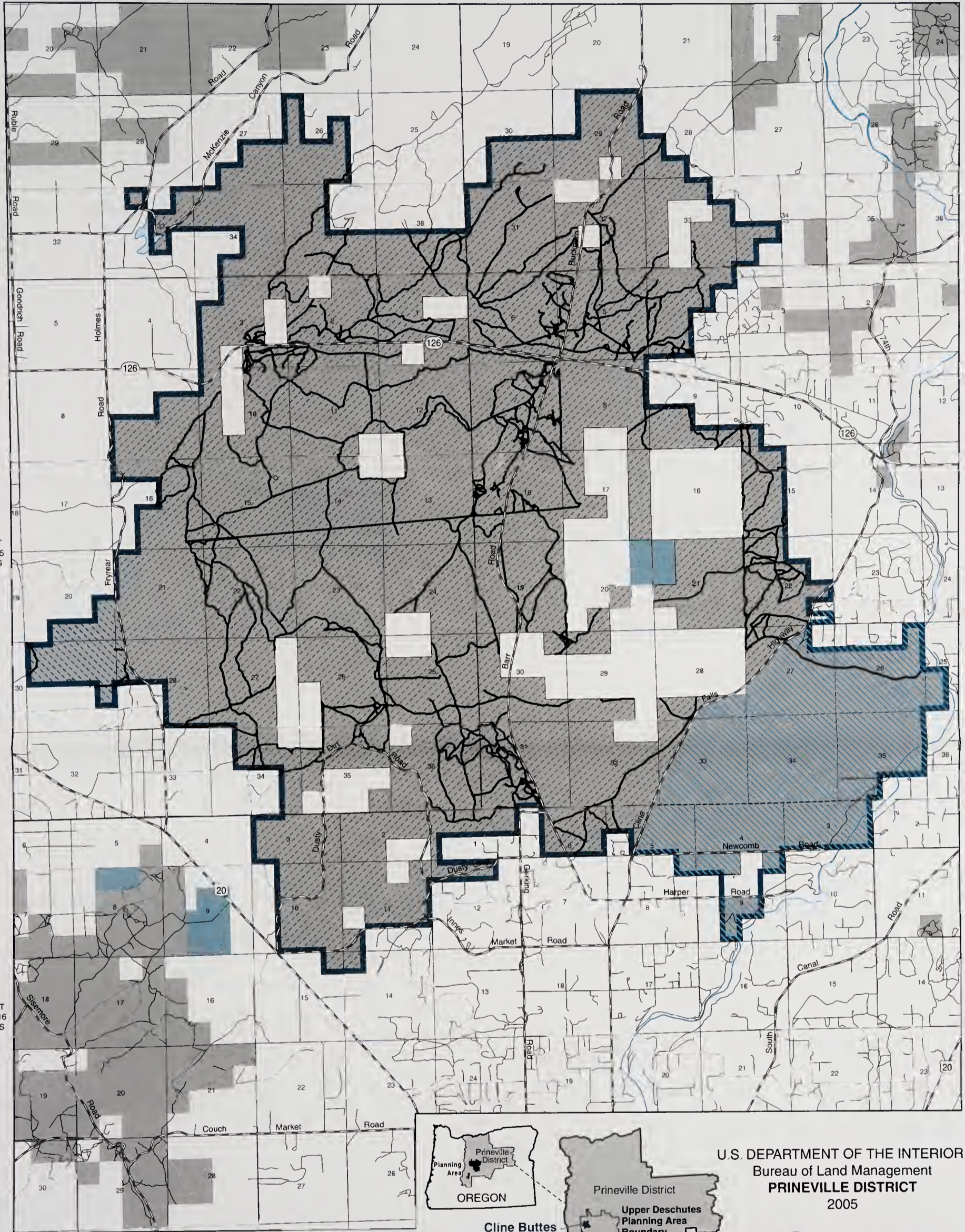
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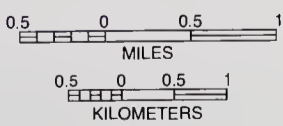
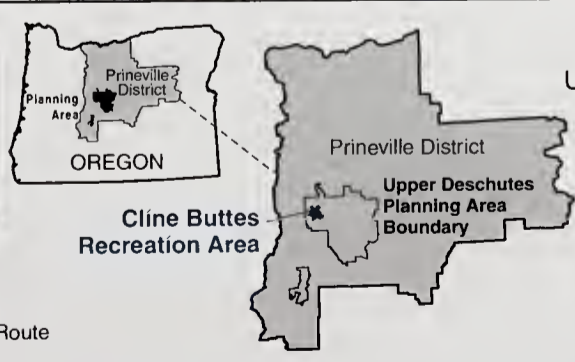
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| BLM Routes Available for Motorized Travel | Recreation Area |
| Closed Year Round | Highway or County Route |
| Limited to Designated Roads and Trails Year Round | Road |
| Limited to Designated Roads Only Year Round | Administered Lands |
| | Bureau of Land Management |
| | State Land |
| | Private / Other |

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.



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**Upper Deschutes
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RMP Map 13: Interim Guidance for Motorized Use of Existing Roads and Trails for the Cline Buttes Recreation Area

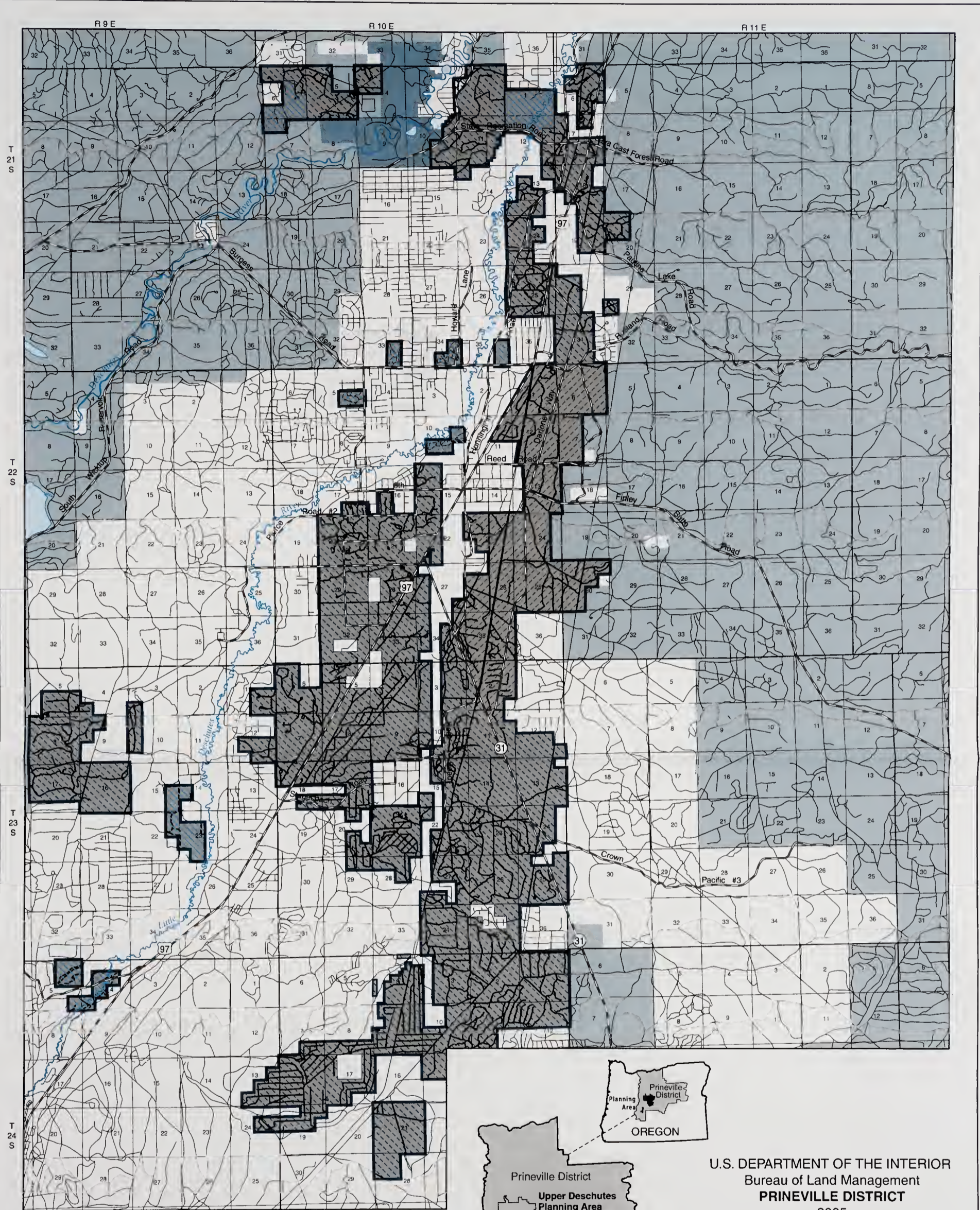
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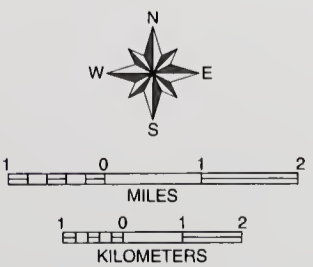
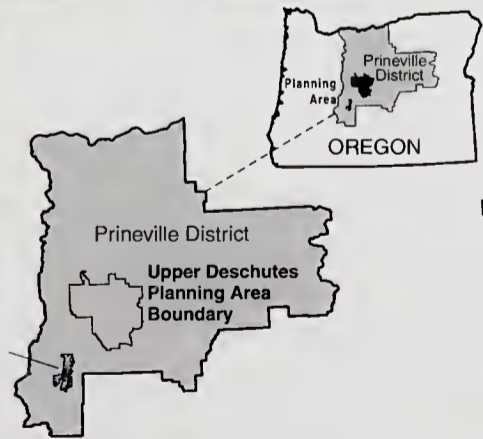
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Legend

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| Interim Guidance for Motorized Use of Existing Roads and Trails * | | — Recreation Area |
| — BLM Routes Available for Motorized Travel | — Closed Year Round | — Highway or County Route |
| — Limited to Designated Roads and Trails Year Round | — Limited to Designated Roads Only Year Round | — Road |
| Administered Lands | | ■ Bureau of Land Management |
| | | ■ National Forest |
| | | ■ State of Oregon |
| | | ■ Private / Other |

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.



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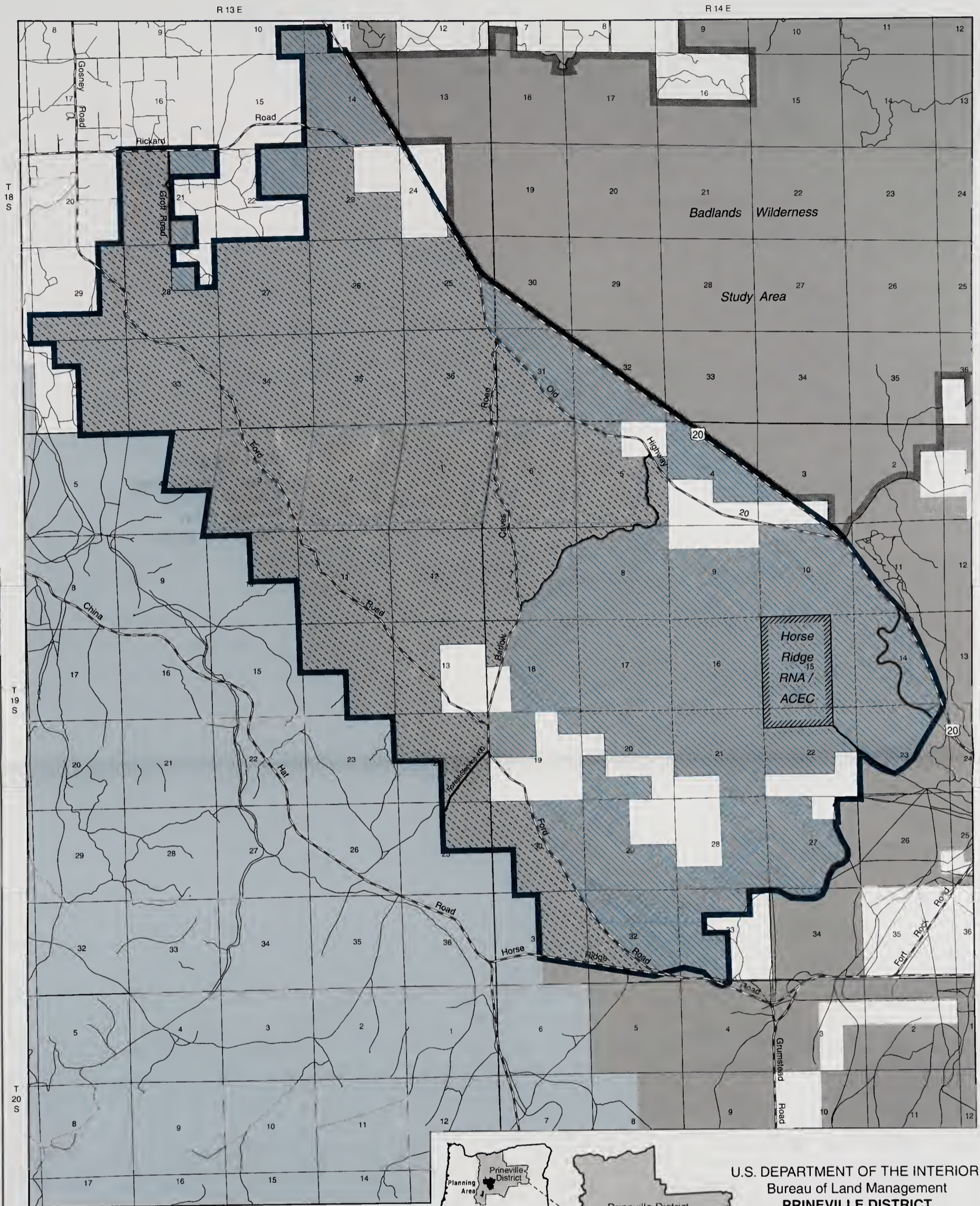
RMP Map 15: Interim Guidance for Motorized Use of Existing Roads and Trails for the La Pine Recreation Area

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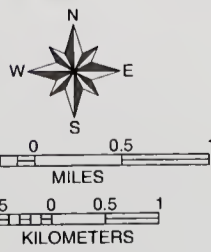
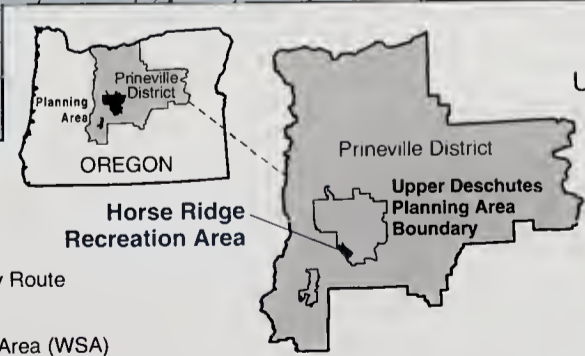
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- Interim Guidance for Motorized Use of Existing Roads and Trails ***
- BLM Routes Available for Motorized Travel
 - ▨ Closed Year Round
 - ▩ Limited to Designated Roads Only Year Round

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- ▭ Recreation Area
- Highway or County Route
- Road
- ▨ Wilderness Study Area (WSA)
- ▩ Resource Natural Area (RNA) / Area of Critical Environmental Concern (ACEC)

- Administered Lands**
- ▭ Bureau of Land Management
 - ▭ National Forest
 - ▭ Private / Other



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RMP Map 14: Interim Guidance for Motorized Use of Existing Roads and Trails for the Horse Ridge Recreation Area

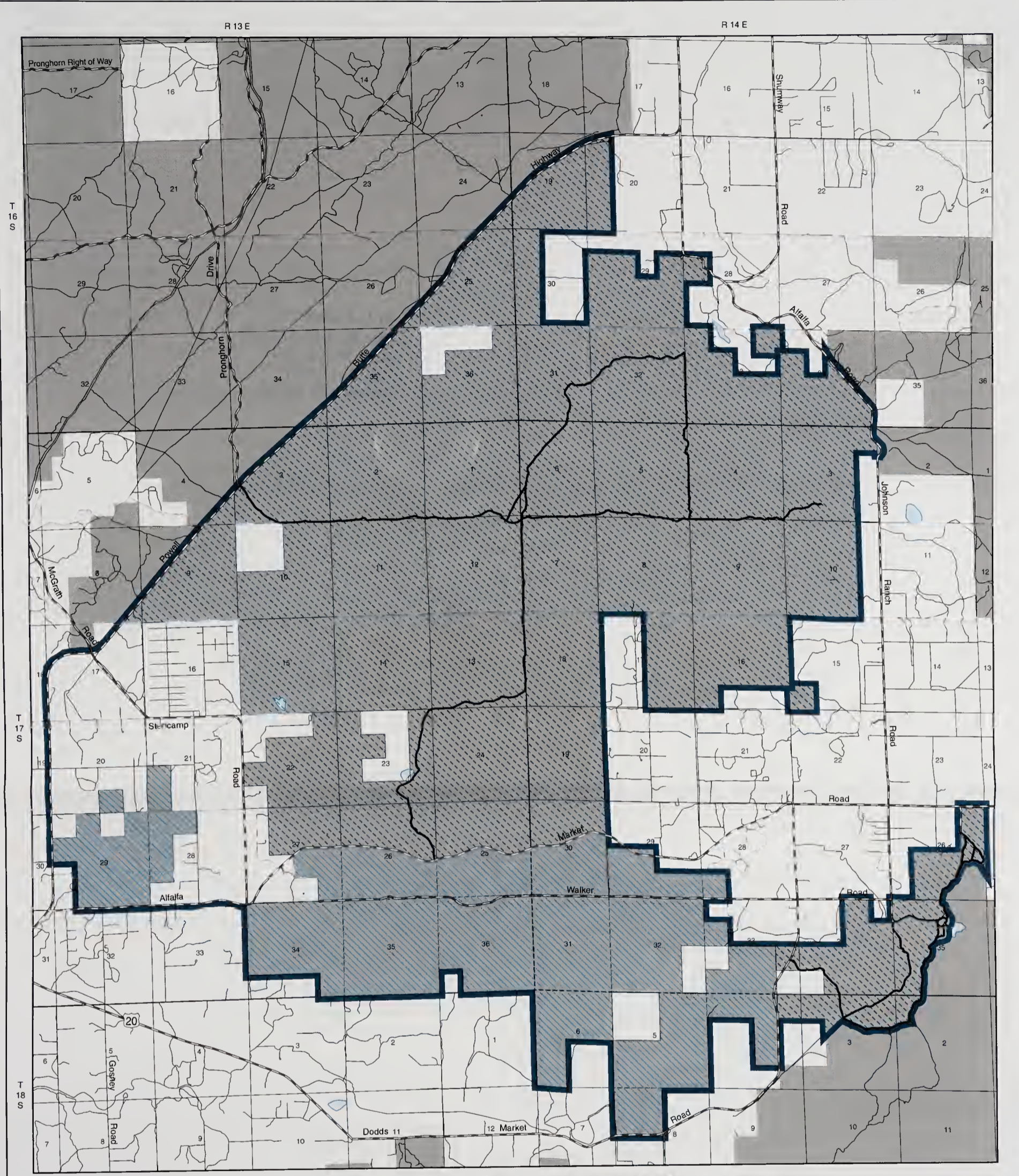
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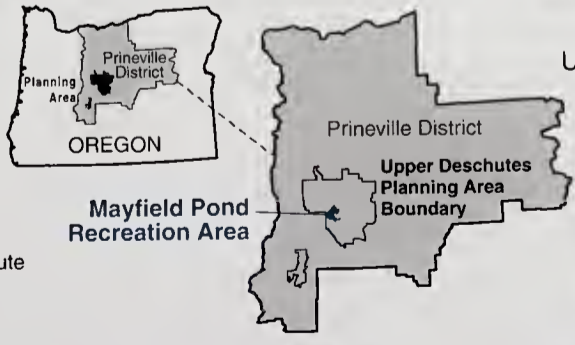
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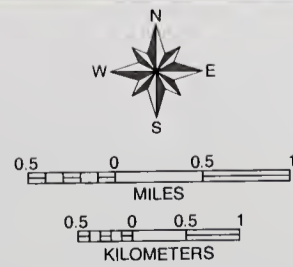
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- Recreation Area
- Highway or County Route
- Road
- BLM Routes Available for Motorized Travel
- Closed Year Round
- Limited to Designated Roads Only Year Round
- Administered Lands
- Bureau of Land Management
- Private / Other

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.



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RMP Map 16: Interim Guidance for Motorized Use of Existing Roads and Trails for the Mayfield Pond Recreation Area

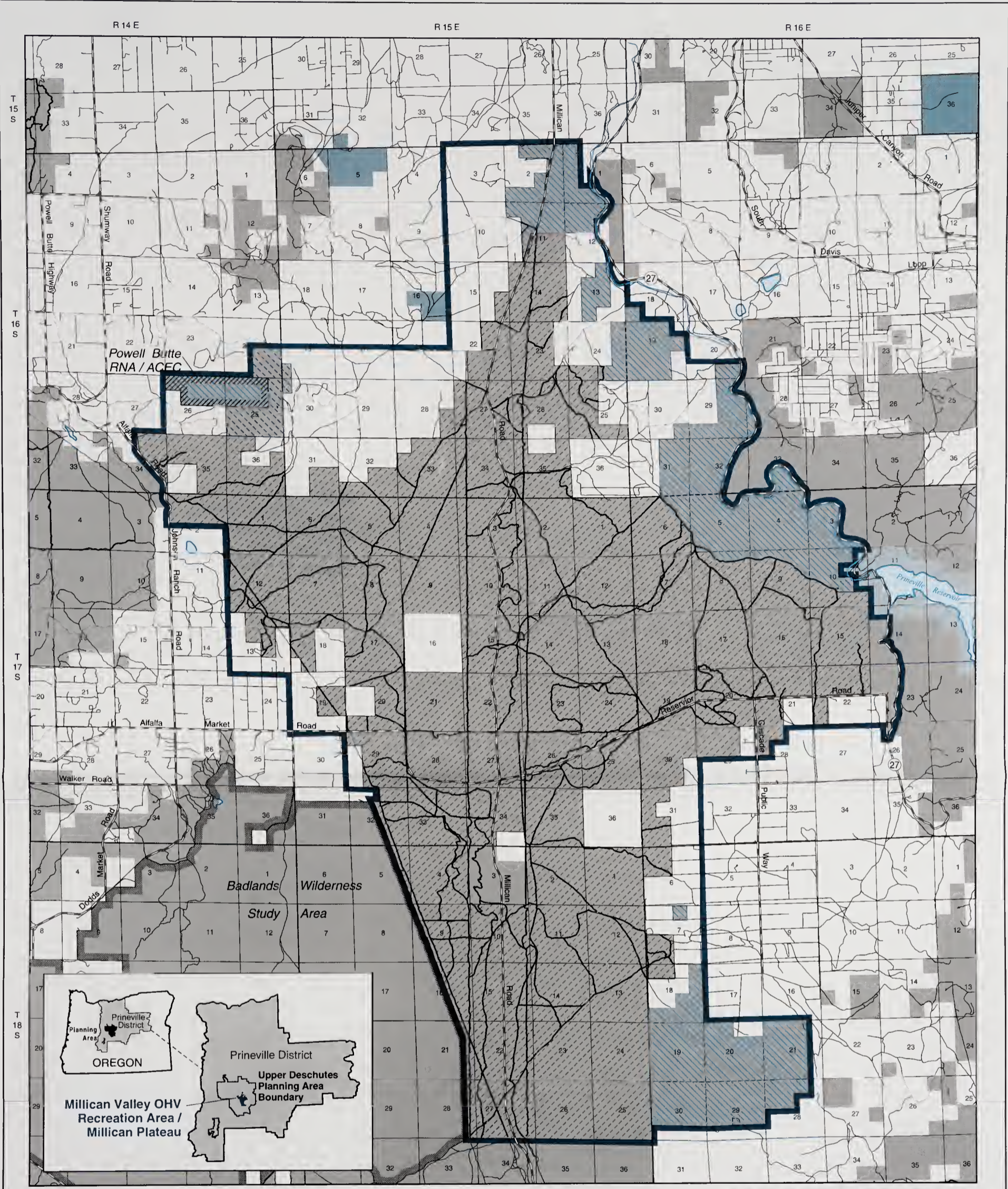
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Interim Guidance for Motorized Use of Existing Roads and Trails *

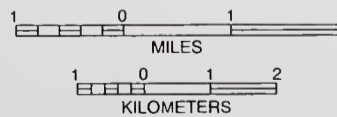
- BLM Routes Available for Motorized Travel
- ▨ Closed Year Round
- ▨ Limited to Designated Roads and Trails Year Round
- ▨ Limited to Designated Roads Only Year Round

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- ▬ Recreation Area
- ▬ Highway or County Route
- ▬ Road
- ▨ Wilderness Study Area
- ▨ Resource Natural Area (RNA) / Area of Critical Environmental Concern (ACEC)

Administered Lands

- ▨ Bureau of Land Management
- ▨ Bureau of Reclamation
- ▨ State Land
- ▨ Private / Other



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RMP Map 17: Interim Guidance for Motorized Use of Existing Roads and Trails for the Millican Valley Off Highway Vehicle Recreation Area / Millican Plateau

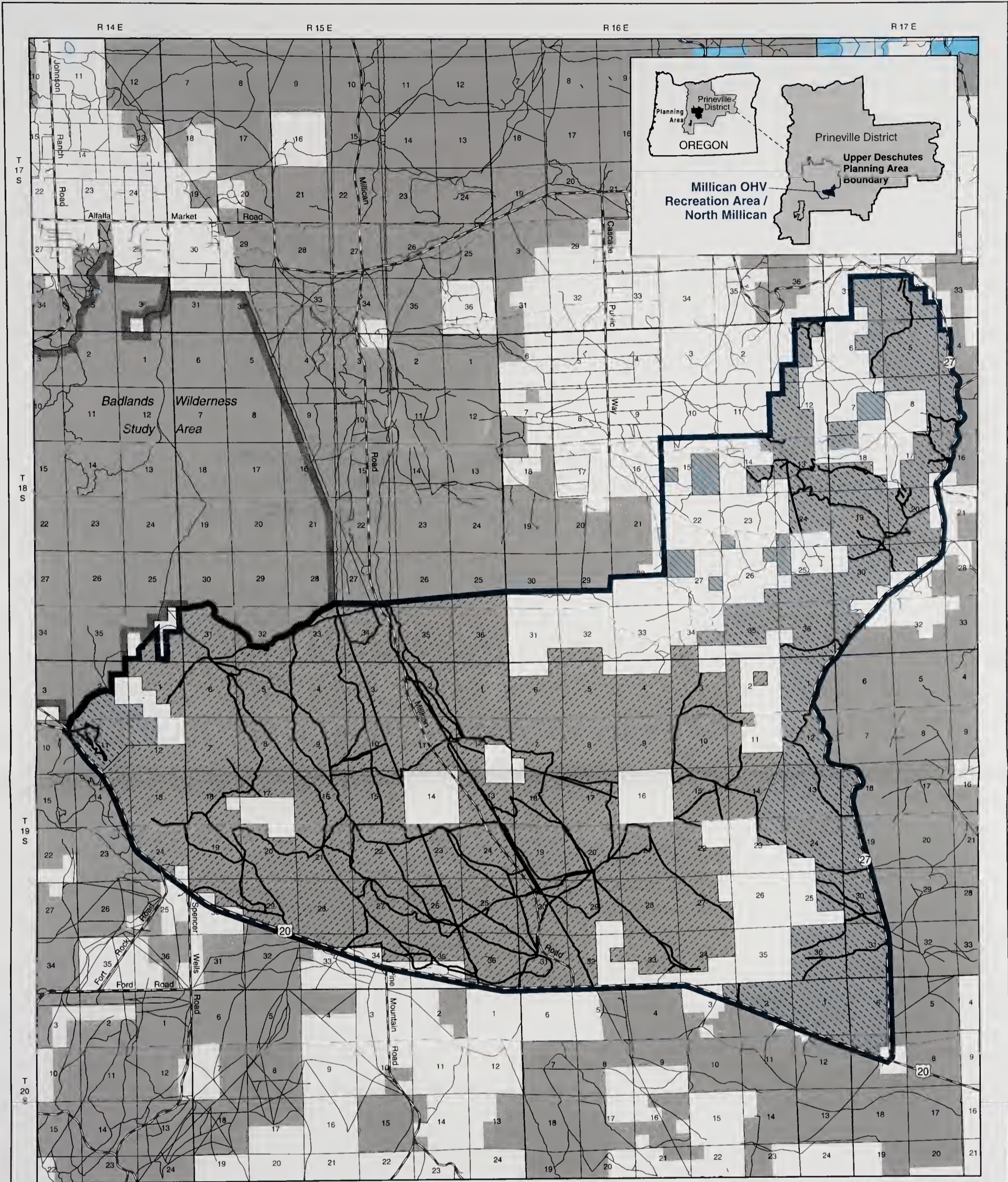
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Interim Guidance for Motorized Use of Existing Roads and Trails *

- BLM Routes Available for Motorized Travel
- Closed Year Round
- Limited to Designated Roads and Trails Year Round
- Limited to Designated Roads Only Year Round

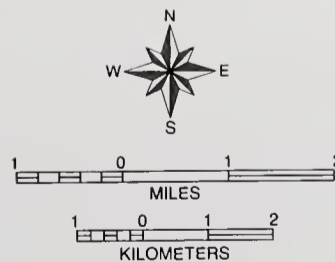
* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- Recreation Area
- Highway or Primary Route
- Road
- Wilderness Study Area

Administered Lands

- Bureau of Land Management
- Bureau of Reclamation
- Private / Other

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RMP Map 18: Interim Guidance for Motorized Use of Existing Roads and Trail for the Millican Valley Off Highway Vehicle Recreation Area / North Millican

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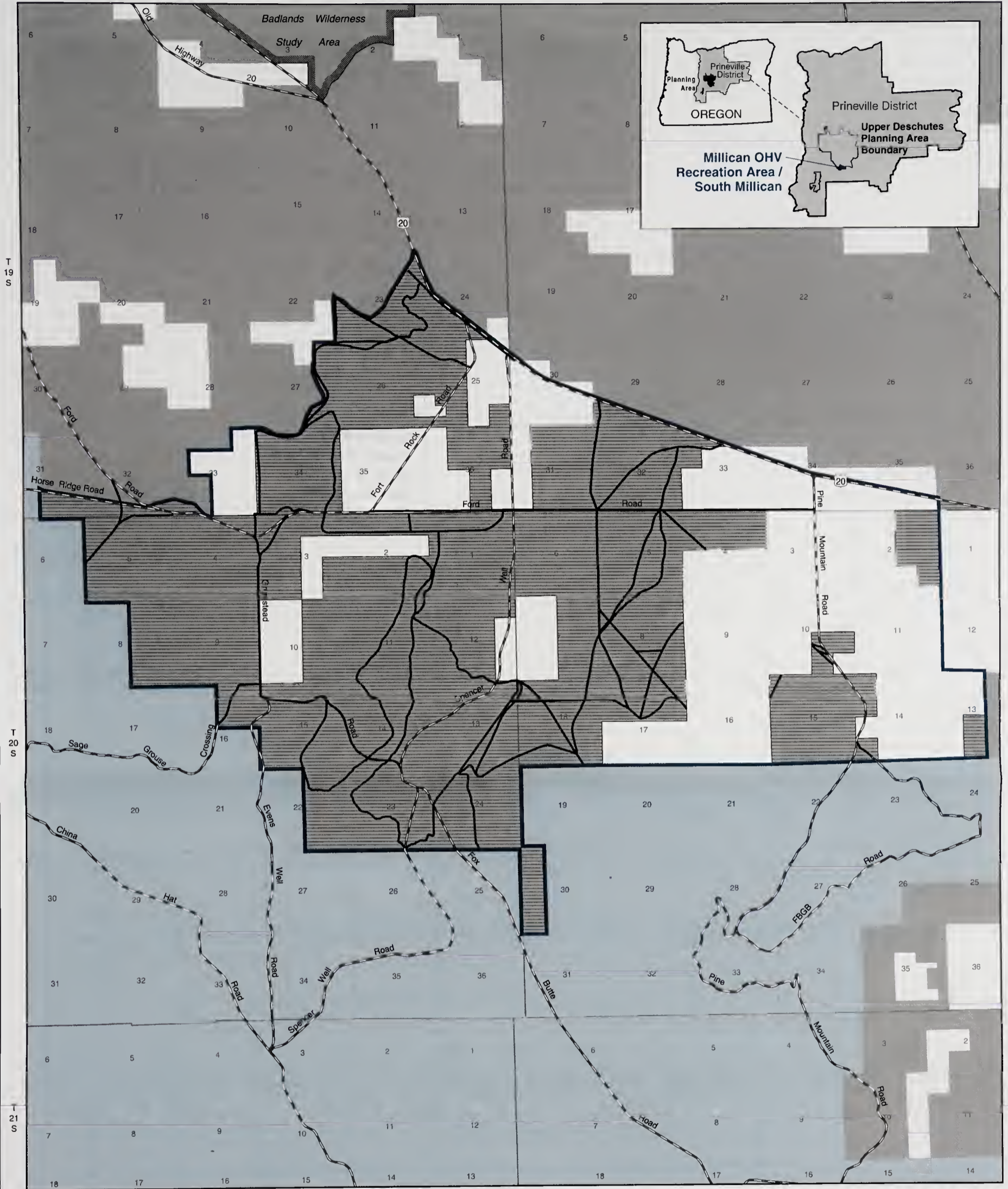
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Interim Guidance for Motorized Use of Existing Roads and Trails *

- BLM Routes Available for Motorized Travel
- Motorized Use Limited to Designated Roads and Trails Seasonally

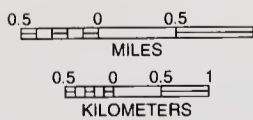
* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- Recreation Area
- Highway or County Route
- Road
- Wilderness Study Area

Administered Lands

- Bureau of Land Management
- National Forest
- Private / Other

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RMP Map 19: Interim Guidance for Motorized Use of Existing Roads and Trails for the Millican Valley Off Highway Vehicle Recreation Area / South Millican

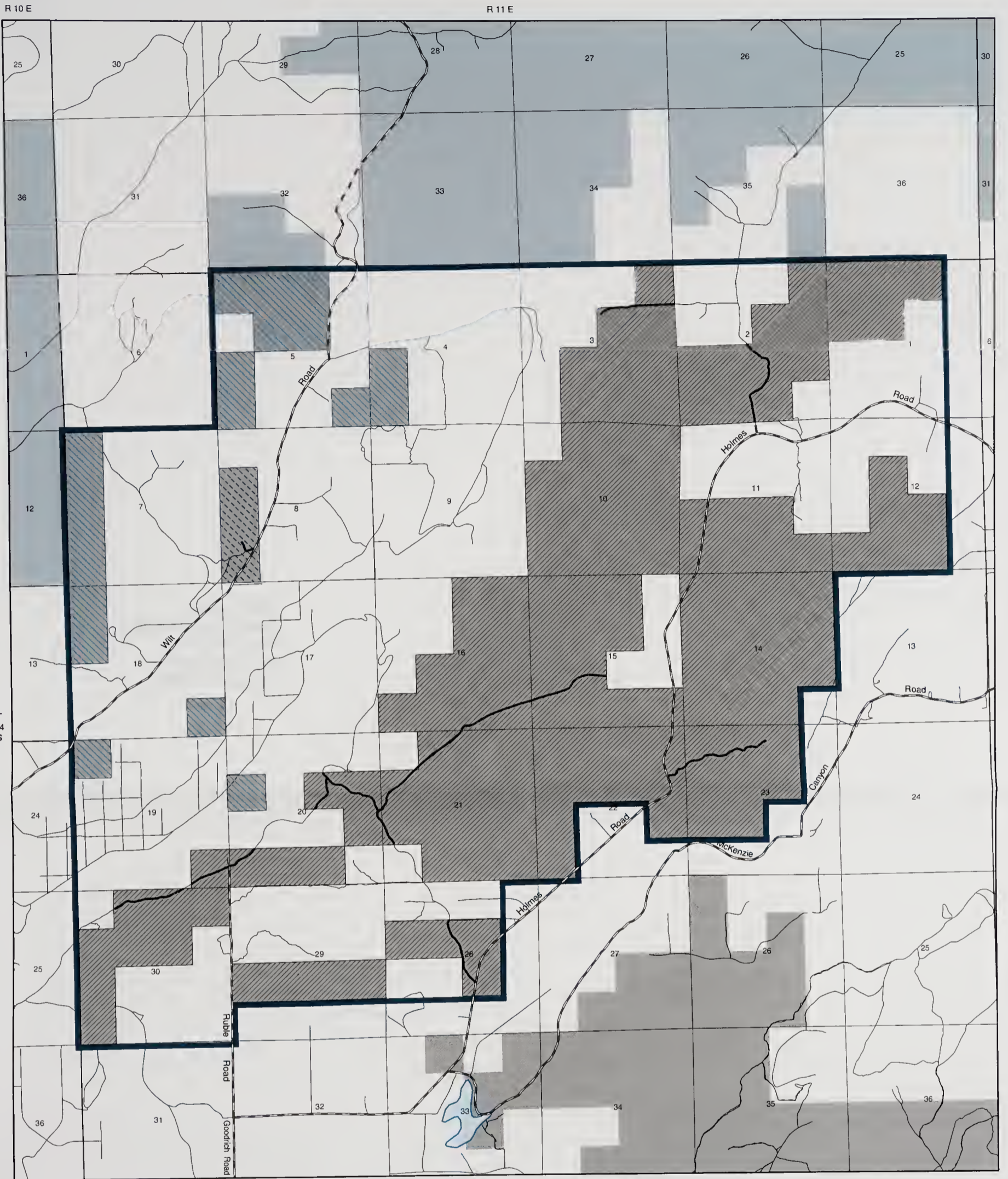
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Interim Guidance for Motorized Use of Existing Roads and Trails *

— BLM Routes Available for Motorized Travel

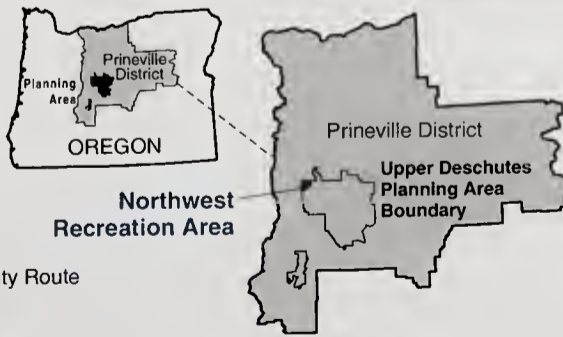
- Closed Year Round
- Limited to Designated Roads Only Year Round
- Limited to Designated Roads Seasonally

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

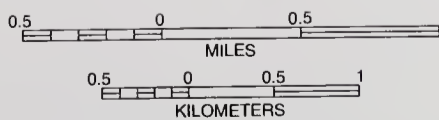
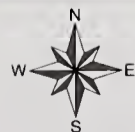
- Recreation Area
- Highway or County Route
- Road

Administered Lands

- Bureau of Land Management
- Other Federal
- Private / Other



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RMP Map 20: Interim Guidance for Motorized Use of Existing Roads and Trails for the Northwest Recreation Area

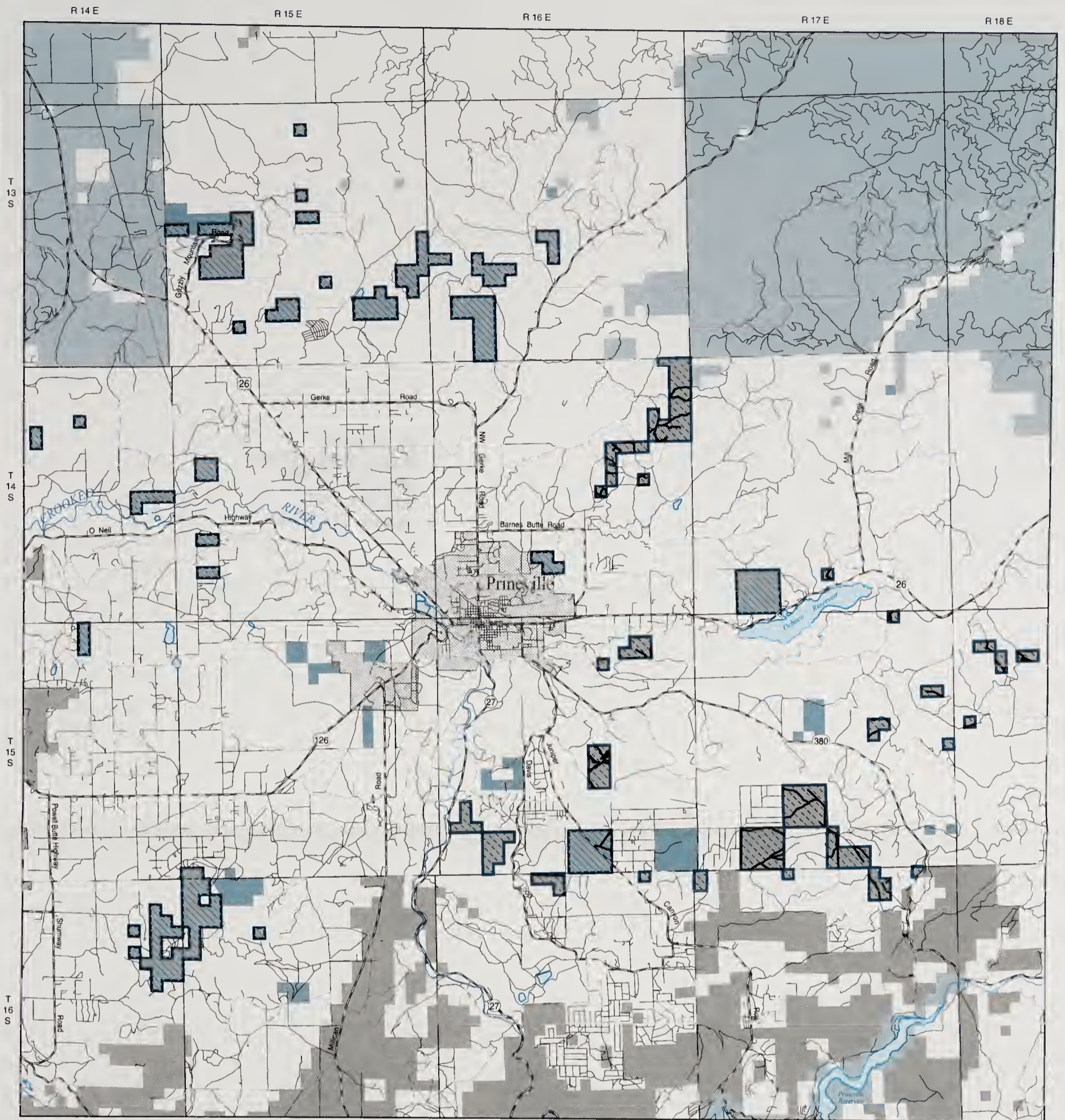
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Interim Guidance for Motorized Use of Existing Roads and Trails *

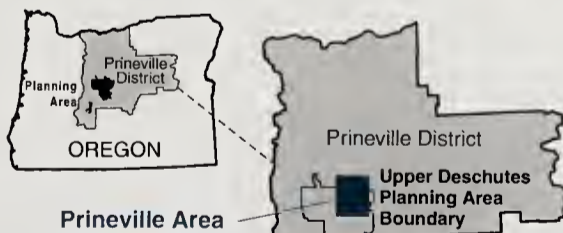
- BLM Routes Available for Motorized Travel
- Closed Year Round
- Limited to Designated Roads and Trails Year Round
- Limited to Designated Roads Only Year Round

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- BLM Administered Lands within the Prineville Area
- Highway or County Route
- Road
- Urban Area

Administered Lands

- Bureau of Land Management
- Other Federal
- State Land
- Private / Other



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RMP Map 21: Interim Guidance for Motorized Use of Existing Roads and Trails for the Prineville Area

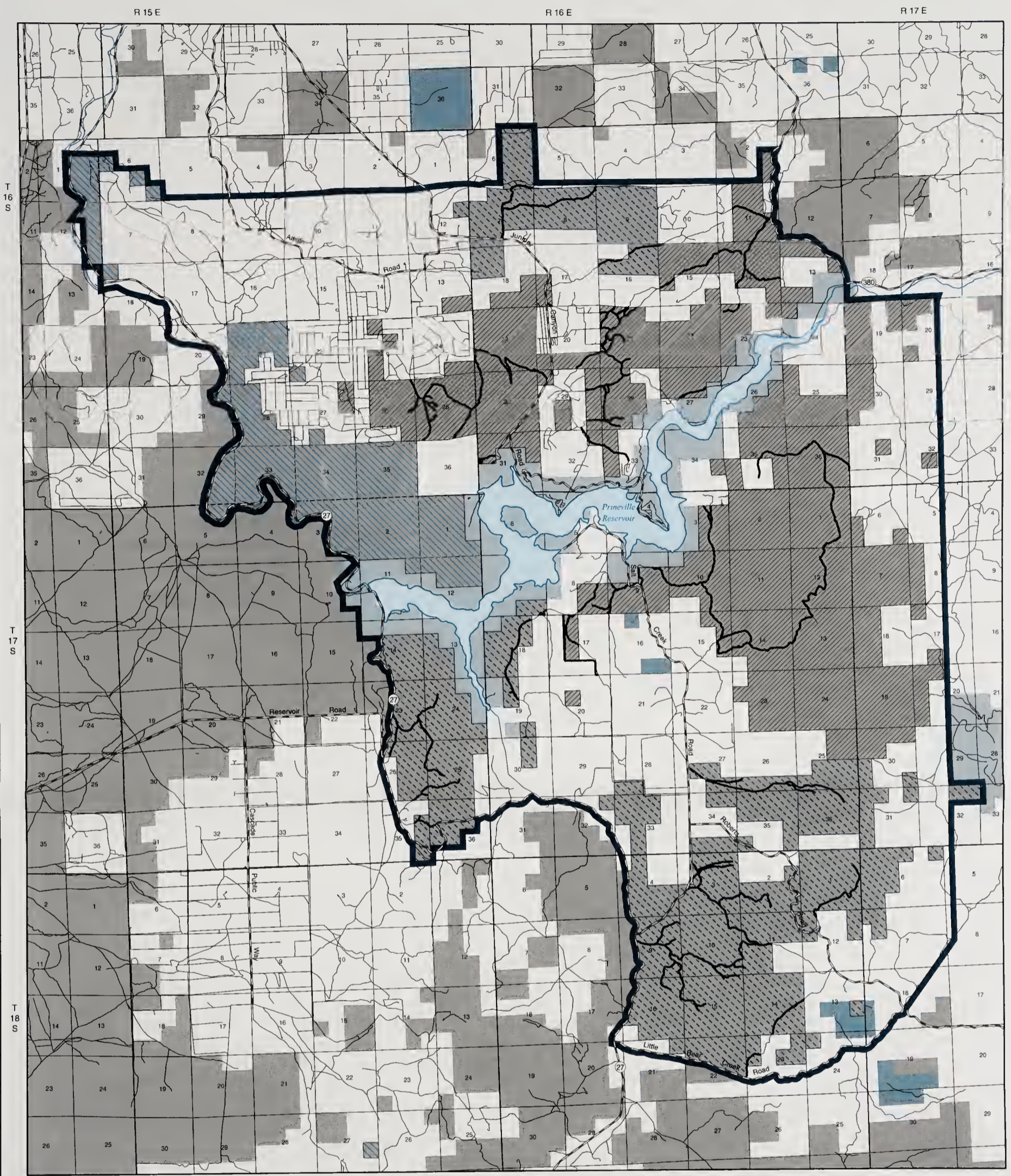
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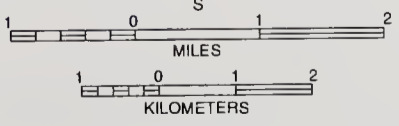
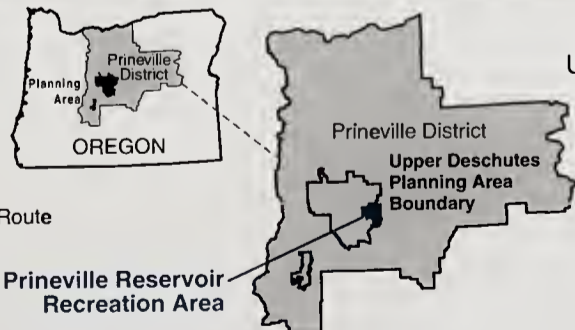
Interim Guidance for Motorized Use of Existing Roads and Trails *

- BLM Routes Available for Motorized Travel
- Closed Year Round
- Limited to Designated Roads Only Year Round
- Limited to Designated Roads Seasonally

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- Recreation Area
- Highway or County Route
- Road

- Administered Lands**
- Bureau of Land Management
 - Other Federal
 - State Land
 - Private / Other



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RMP Map 22: Interim Guidance for Motorized Use of Existing Roads and Trails for the Prineville Reservoir Recreation Area

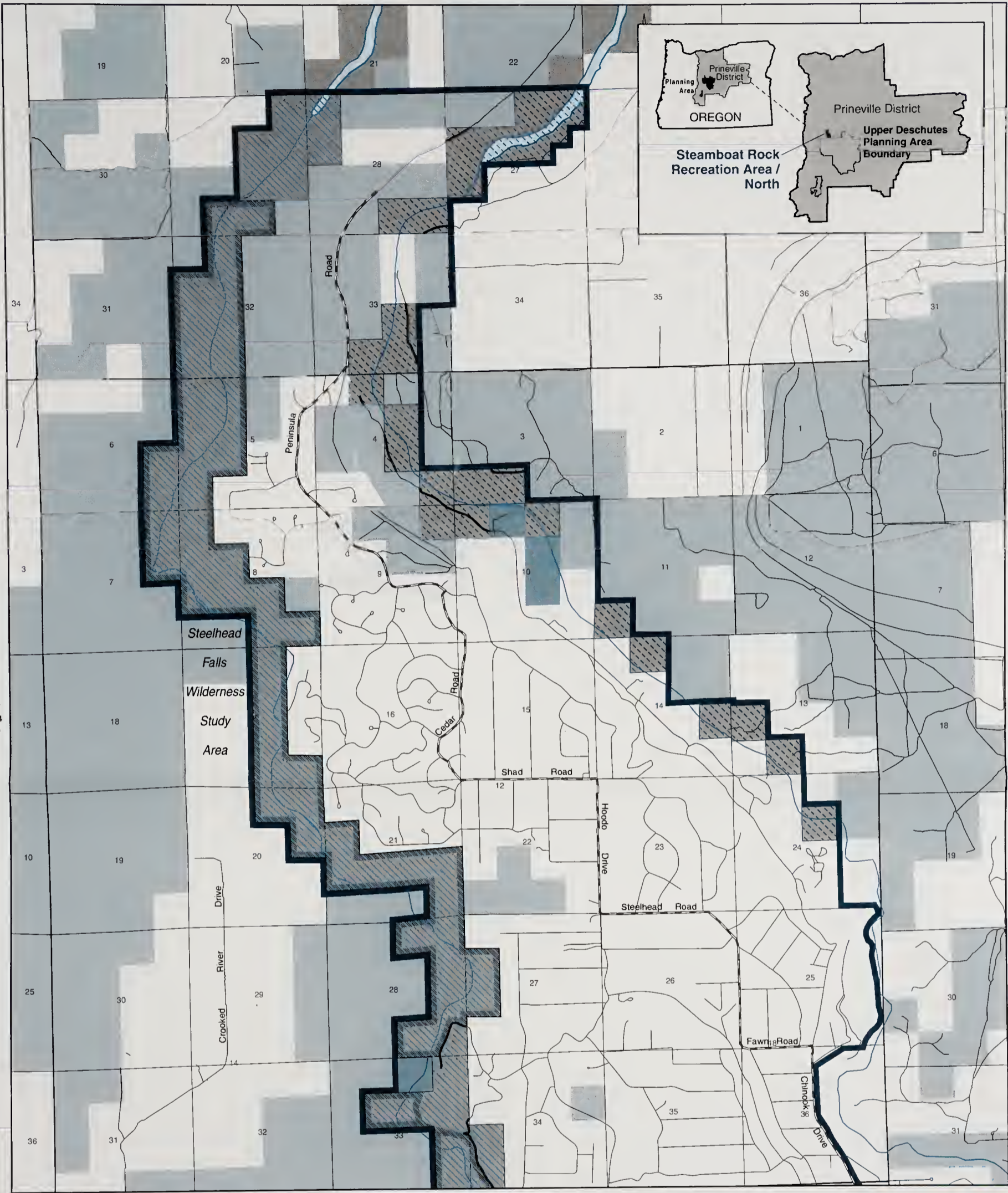
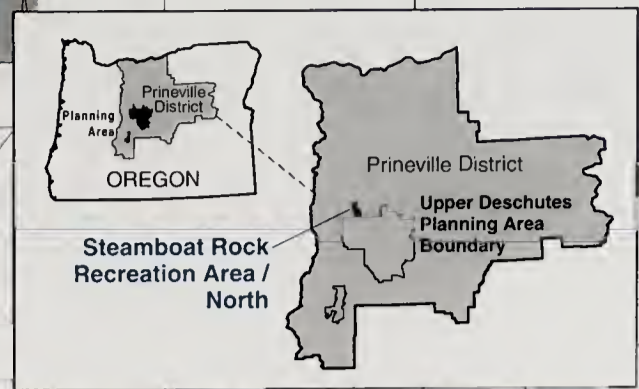
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Interim Guidance for Motorized Use of Existing Roads and Trails *

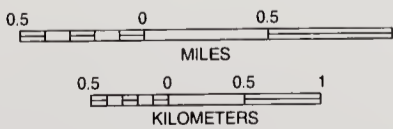
- BLM Routes Available for Motorized Travel
- Closed Year Round
- Limited to Designated Roads Only Year Round

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- Recreation Area
- Highway or County Route
- Road
- Wilderness Study Area (WSA)

Administered Lands

- Bureau of Land Management
- National Grassland
- State Land
- Private / Other



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RMP Map 23A: Interim Guidance for Motorized Use of Existing Roads and Trails for the Steamboat Rock Recreation Area / North

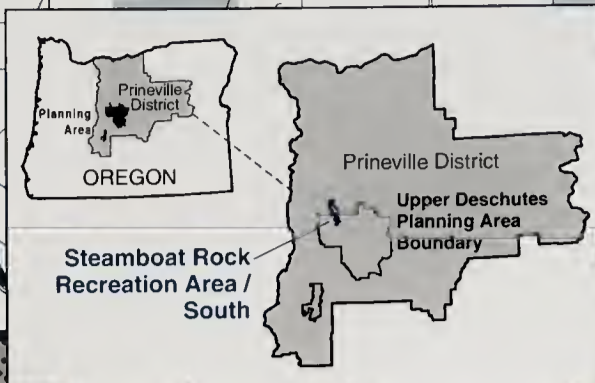
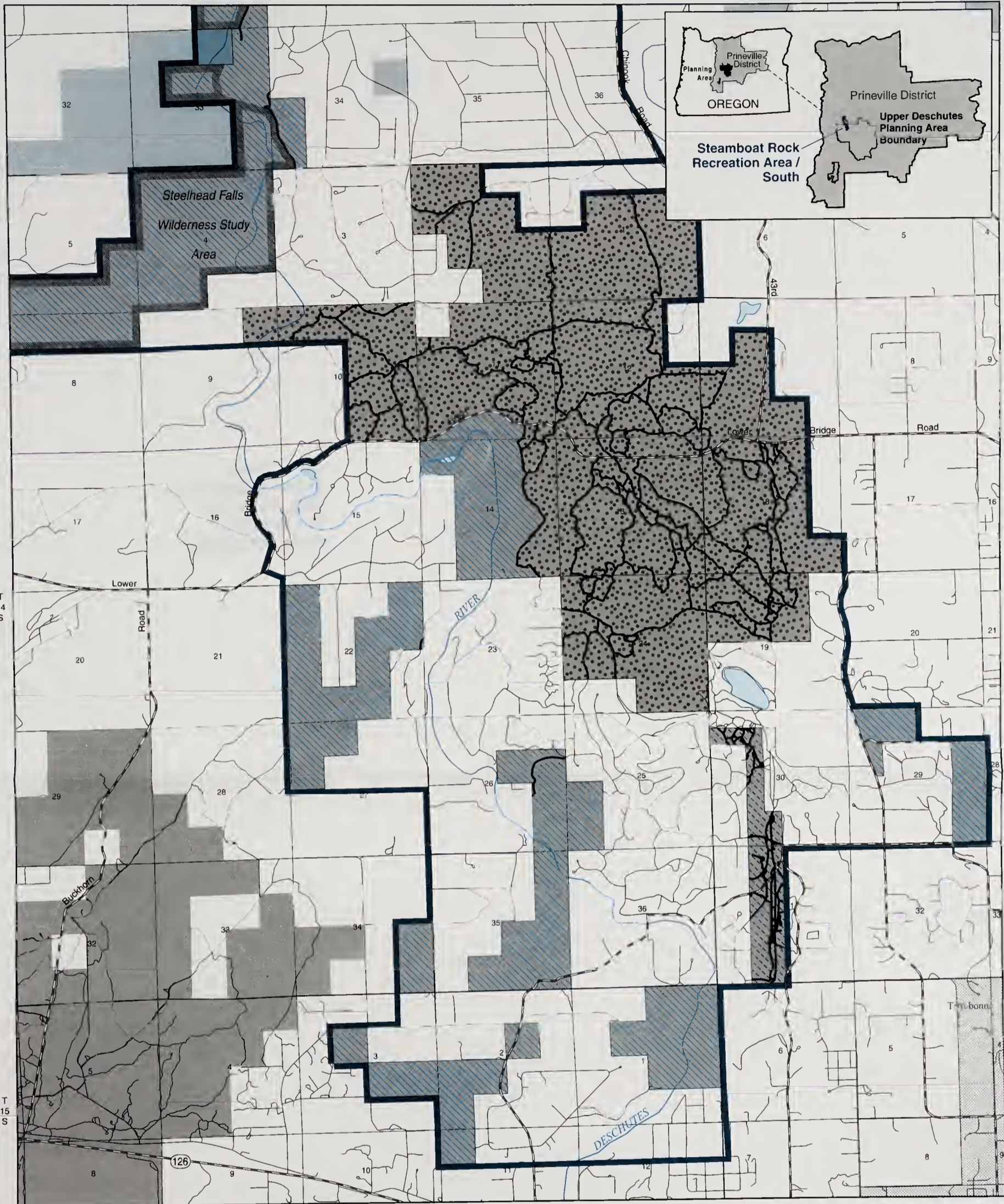
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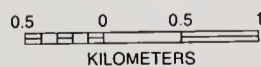
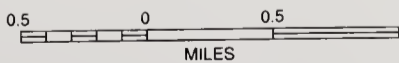
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Interim Guidance for Motorized Use of Existing Roads and Trails *

- BLM Routes Available for Motorized Travel
- Limited to Class 1 and Class 3 Vehicles on Designated Routes
- Closed Year Round
- Limited to Designated Roads Only Year Round

* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.

- Recreation Area
- Highway or County Route
- Road
- Wilderness Study Area
- Urban Area
- Administered Lands**
- Bureau of Land Management
- National Grassland
- State Land
- Private / Other



**Upper Deschutes
Resource Management Plan**

RMP Map 23B: Interim Guidance for Motorized Use of Existing Roads and Trails for the Steamboat Rock Recreation Area / South

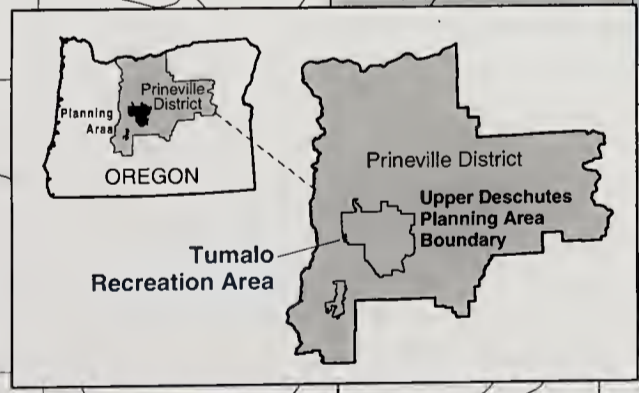
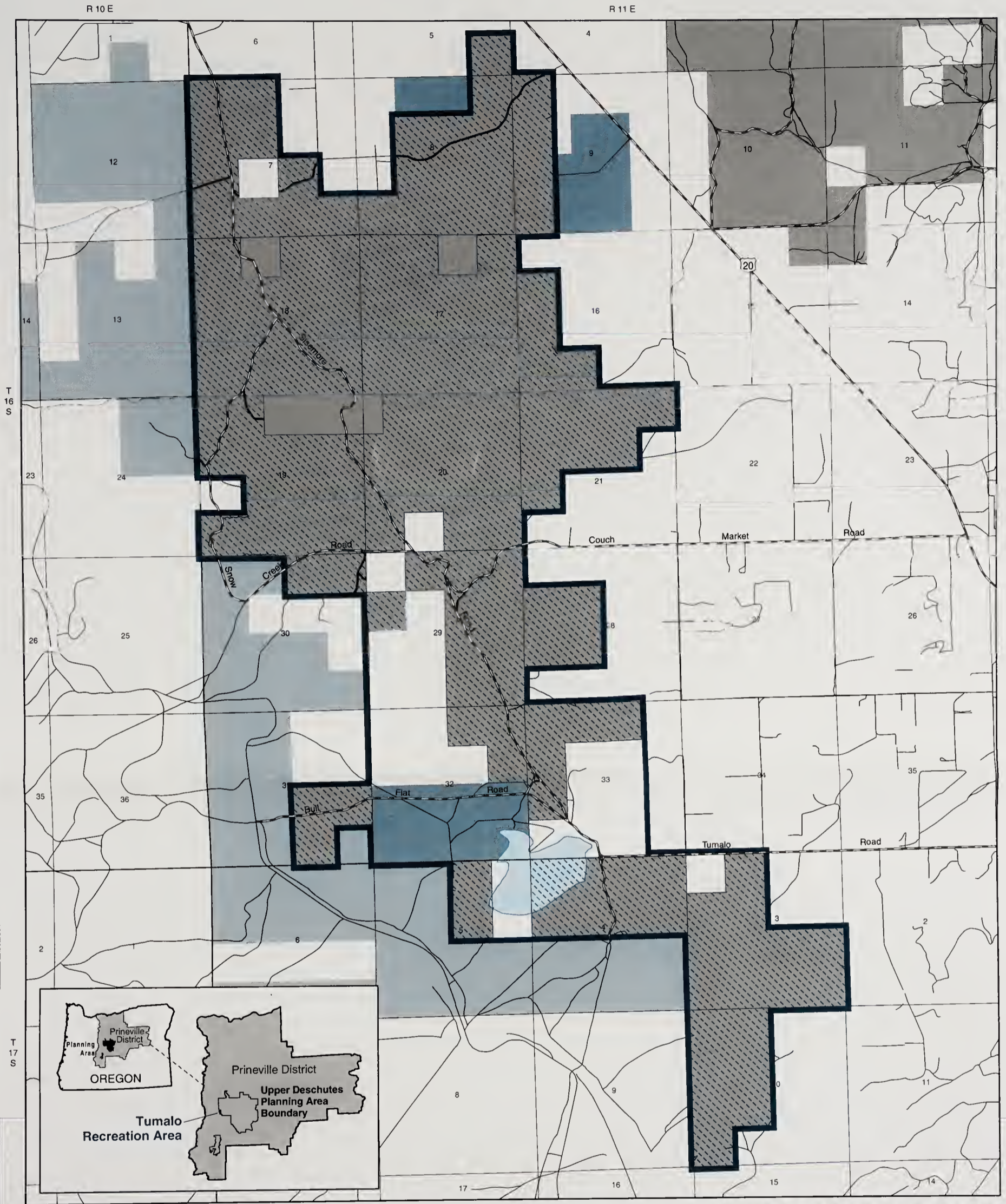
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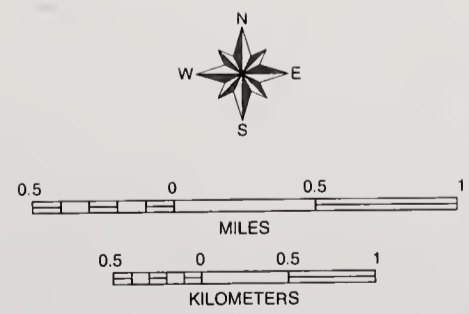
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| <p>Interim Guidance for Motorized Use of Existing Roads and Trails *</p> <p>— BLM Routes Available for Motorized Travel</p> <p>▨ Closed Year Round</p> <p><small>* Management of the land applies only to BLM Administered Lands within the recreation area boundary. This map does not distinguish between OHV specific routes and routes open to passenger vehicles.</small></p> | <p>▬ Recreation Area</p> <p>▬ Highway or County Road</p> <p>▬ Other Road</p> <p>Administered Lands</p> <p>▨ Bureau of Land Management</p> <p>▨ National Forest</p> <p>▨ State Land</p> <p>▨ Private / Other</p> |
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Resource Management Plan**

RMP Map 24: Interim Guidance for Motorized Use of Existing Roads and Trails for the Tumalo Recreation Area

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