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July 2000



Summary of the Analysis of the Management Situation

Lakeview Resource Area Resource Management Plan



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**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAKEVIEW DISTRICT
LAKEVIEW RESOURCE AREA**

**SUMMARY OF THE
ANALYSIS OF THE MANAGEMENT SITUATION
FOR THE
LAKEVIEW RESOURCE AREA
RESOURCE MANAGEMENT PLAN**

**Prepared by the
Lakeview Field Office
July 2000**



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Lakeview District Office
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Lakeview, Oregon 97630
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July, 2000

Dear Interested Party:

This document is a summary of the analysis of the management situation (AMS) and the subbasin review (SBR) for the Lakeview Resource Management Plan. The AMS/SBR compiles in one place important information about existing resource conditions, uses, and demands, as well as existing management activities and opportunities to resolve issues and concerns that have been identified to date. It provides the basis for subsequent steps in the planning process such as the design of alternatives and the analysis of environmental consequences that will be displayed in the Resource Management Plan and Environmental Impact Statement (RMP/EIS). This document also provides the data that will be summarized in the Affected Environment chapter of the RMP/EIS. This summary highlights the information contained in the full AMS/SBR document available at the Lakeview Field Office. Pertinent maps are included to show locations and relationships of the various projects and resource management programs.

In addition to the summary of the analysis of the management situation and the subbasin review, this publication contains a description of the planning criteria that will guide us in preparing the RMP/EIS. It also contains a description of the preliminary alternatives that are proposed to be analyzed in the RMP/EIS. These alternatives are preliminary at this point as they may change as we go forward in the planning process.

We are asking for your comments regarding the planning criteria and the preliminary alternatives. We have described general planning criteria, criteria for resolving the issues, and criteria for selecting a preferred alternative. We would like to know if any of these should be changed in any way, deleted or others added. We would also like to know if the alternatives are adequate, should they be changed or should other or additional alternatives be considered.

Thus far in the process, five major issues have been identified that need to be addressed in the RMP/EIS. These issues came out of internal meetings of BLM specialists and managers, meetings with local and tribal government representatives, and public scoping, including public meetings conducted in June and July, 1999. These issues are described fully in Chapter 5 of this document. Here again, if you have any further comments on the issues or feel that others should be considered please let us know.

Please send any comments you may have to the following address:

Bureau of Land Management
Lakeview District
Attn: Dwayne Sykes
HC 10 Box 337
Lakeview, Oregon 97630

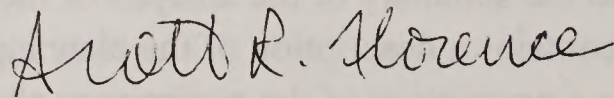
or e-mail to d1sykes@or.blm.gov.

Please send us your comments by 08/25/2000 so that we can consider them as we prepare the draft RMP/EIS.

We are not planning to hold public meetings at this time, however, we will hold public meetings or open houses if there is sufficient demand or request for them.

We appreciate your help in this planning effort and look forward to your continuing interest and participation. For additional information or clarification regarding this document or the RMP/EIS project, please contact Dwayne Sykes at (541) 947-6148.

Sincerely,



Scott R. Florence, Manager
Lakeview Resource Area

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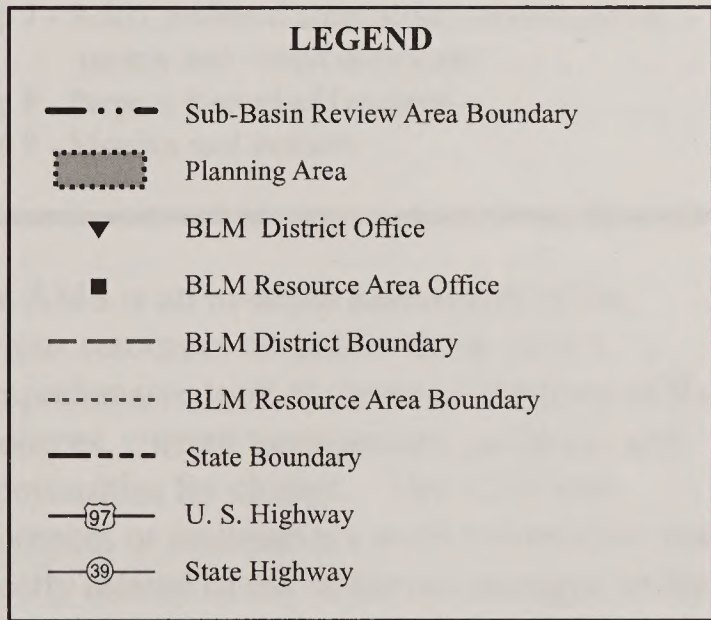
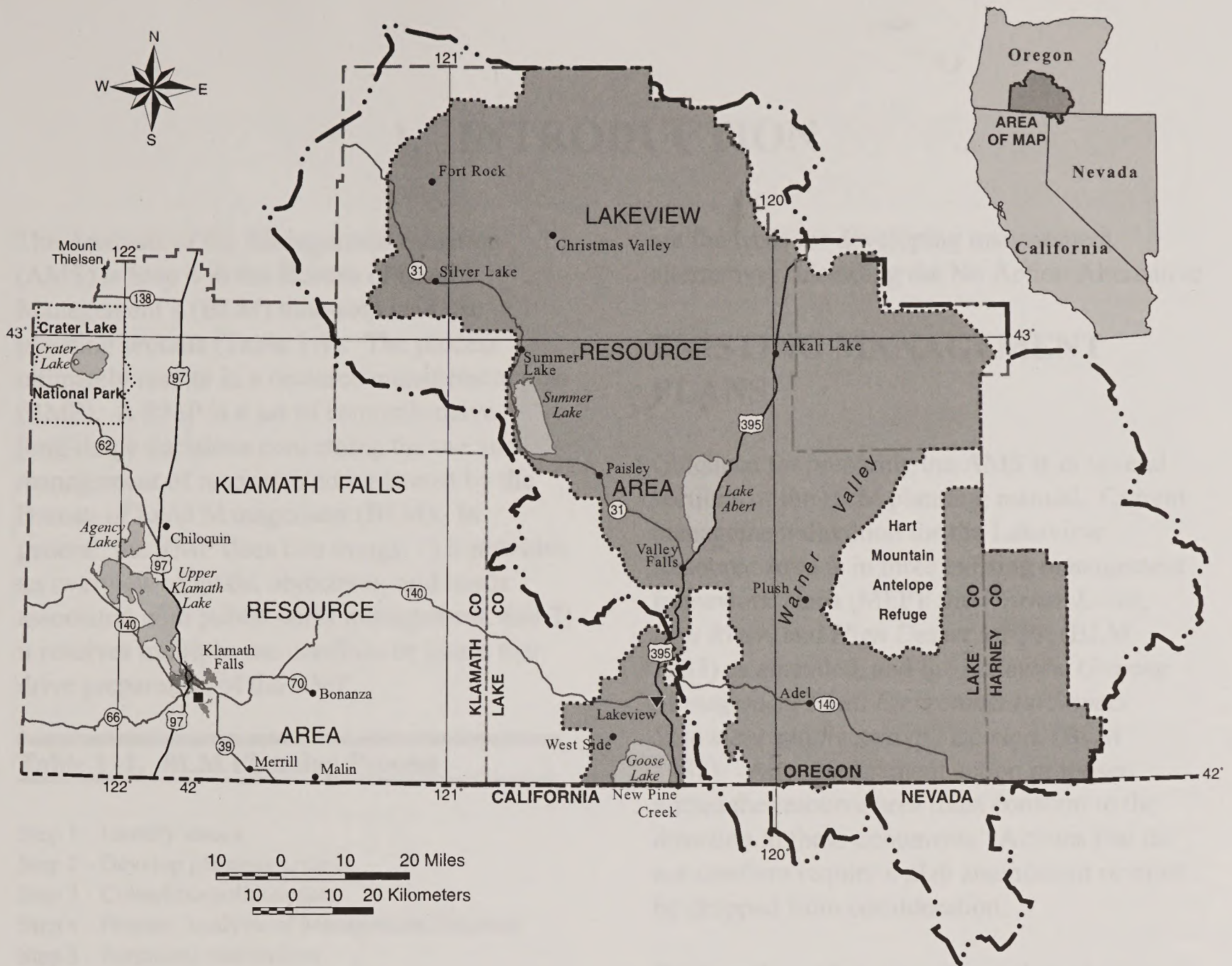
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U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Lakeview District
Lakeview Resource Area
Analysis of the Management Situation
and
Sub-Basin Review

2000



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Figure 1: Relationship Between the Sub-basin Review and Planning Area Boundaries

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Oregon State Office

1. INTRODUCTION

The Analysis of the Management Situation (AMS) is Step 4 in the Bureau of Land Management's (BLM) nine-step land use planning process (Table 1-1). The process ultimately results in a resource management plan (RMP). A RMP is a set of comprehensive, long-range decisions concerning the use and management of resources administered by the Bureau of Land Management (BLM). In general, the RMP does two things: 1) it provides an overview of goals, objectives, and needs associated with public lands management, and 2) it resolves multiple-use conflicts or issues that drive preparation of the RMP.

Table 1 -1. BLM Planning Process

- Step 1 - Identify issues
 - Step 2 - Develop planning criteria
 - Step 3 - Collect/consolidate data
 - Step 4 - Prepare Analysis of Management Situation
 - Step 5 - Formulate alternatives
 - Step 6 - Estimate effects
 - Step 7 - Select preferred alternative; conduct public review and obtain comments
 - Step 8 - Prepare Record of Decision
 - Step 9 - Monitor and evaluate
-

The AMS is an in-depth assessment of the various resources on public lands. It is a comprehensive look at present conditions of the resources, current management guidance, and opportunities for change. The AMS also references or summarizes some information not directly related to the resources managed or the management issues. Foremost, the AMS provides baseline information for the RMP/Environmental Impact Statement (RMP/EIS). For example, the Resource Area Profile (RAP) of the AMS is the basis for the Affected Environment chapter of the RMP/EIS, and the Existing Management Situation and Management Opportunities sections of the AMS

are the basis for developing management alternatives, including the No Action Alternative.

EXISTING MANAGEMENT PLANS

Guidance for preparing the AMS is in several sections of the BLM planning manual. Current management direction for the Lakeview Resource Area is in three existing management framework plans (MFP): the *Warner Lakes, Lost River, and High Desert MFPs*, (BLM 1983) as amended; and the *Lakeview Grazing Management Final Environmental Impact Statement and Record of Decision*. (BLM 1982). Any management action proposed within the resource area must conform to the direction in these documents. Actions that do not conform require a plan amendment or must be dropped from consideration.

To date, three plan amendments have been completed. The *Warner Lakes MFP* was amended in 1989 to officially designate the Warner Wetlands area as an Area of Critical Environmental Concern (ACEC) and to prescribe special management direction. The *High Desert MFP* was amended in 1996 to officially designate the Lake Abert area as an ACEC and to prescribe special management for the area. The *Warner Lakes MFP* was amended in December 1998 to adopt a proposal for exchange of land jurisdiction between the BLM, Lakeview Resource Area and the U.S. Fish and Wildlife Service, Hart Mountain National Wildlife Refuge. The two agencies initiated joint planning in 1997 to transfer some BLM-managed lands to the Refuge, and to transfer some lands managed by the Hart Mountain National Wildlife Refuge to the BLM Lakeview Resource Area. However, before the final plan amendment was completed, Congressional legislation authorizing the transfer

was signed by President Clinton in late 1998.

Management decisions from the three planning documents referenced above are summarized in the Existing Management Direction section of the AMS. Those decisions that are still valid and may be carried forward into the RMP/EIS are identified in the Management Opportunities section of the AMS.

SUBBASIN REVIEW AND AMS AREAS

This AMS is combined with a subbasin review (SBR), as outlined by the Interior Columbia Basin Ecosystem Management Project (ICBEMP), and as explained in the next section of this document. Although the ICBEMP has not yet resulted in a decision requiring agencies to conduct such reviews, this subbasin review was undertaken as a prototype effort in combination with the AMS since the two processes are similar. The subbasin review area encompasses all lands within four subbasins, totaling approximately 6.5 million acres. The four subbasins are wholly or partially within the Lakeview Resource Area (Figure 1).

Ownership or administration of lands in the subbasin review area is shown on Map 1. The review area includes lands in the Fremont National Forest, BLM's Lakeview Resource Area, and the Sheldon and Hart Mountain Wildlife Refuges, as well as small acreages in

the Modoc and Deschutes National Forests and some lands owned by the State of Oregon. The resource management plan (RMP) will make decisions only for the public land administered by BLM within the Lakeview Resource Area.

Public lands in the Lakeview BLM District administered by the Lakeview Resource Area (LRA) are located in Lake and Harney counties. A reorganization in 1984 combined the former High Desert Resource Area, Warner Lakes Resource Area and the Lakeview Planning Unit of the Lost River Resource Area into the present Lakeview Resource Area. Within the Lakeview Resource Area are 3,204,273 acres of public land (surface estate) administered by BLM. In addition BLM administers 3,238,810 acres of reserved federal minerals (subsurface estate). Table 1-2 shows acres of land administered by BLM and other government agencies or owned by private individuals within the boundary of the Lakeview Resource Area. Public land in most of the Resource Area is generally well-blocked into large continuous tracts, but is more broken up and scattered in the north end of the county. Large private land blocks are located in the valleys where land is more fertile and water is available for agricultural production.

TABLE 1-2. LAND OWNERSHIP/ADMINISTRATION BY COUNTY WITHIN THE LAKEVIEW RESOURCE AREA (IN ACRES)

AGENCY	LAKE COUNTY	HARNEY COUNTY	TOTAL
Bureau of Land Management (Public Domain)	2,324,461	788,376	3,112,837
Bureau of Land Management (Acquired Lands)	91,536	0	91,536
BLM Totals	2,415,997	788,376	3,204,373
U.S. Fish & Wildlife Service	269,028	103	269,131
Department of Defense	2,622	0	2,622
Oregon State Lands	121,163	32,307	153,470
Private	851,764	40,014	891,778
Unknown*	39,085	0	39,085
TOTAL ACRES	3,699,695	860,800	4,560,459

* Constitutes meander-surveyed lake beds and acres of unknown ownership.

A large section of the subbasin review area addressed in this AMS lies in the Northern Great Basin, which is characterized by north-trending, fault-block mountains and internal lakes and valleys. Many of these undrained basins contain saline or playa lakes and large accumulations of alkali deposits. Elevations in the area range from 4,103 feet at Summer Lake to 8,456 feet at Crane Mountain on the adjacent Fremont National Forest. The area's average annual precipitation is between 8 and 18 inches, with the majority of moisture coming in the winter and spring.

Subbasin Review Process

As noted above, this AMS was combined with the subbasin review process because of their many similarities. Subbasin review and AMS processes are compared in Appendix B.

Subbasin review (SBR) is one step in a hierarchical assessment process that applies science findings and decisions of the broad-scale

(such as the Interior Columbia Basin scale) to finer-scale areas. It is an inter governmental process tiering mid-and fine-scale information to ICBEMP findings, goals, objectives and standards. It is also a mid-scale look at ecosystem processes and functions at the subbasin level. The review is designed to "step-down" the region-wide, broad-scale information and findings derived from ICBEMP and to apply them, where appropriate, to actual on-the-ground management directions and actions at the project or watershed level.

The subbasin review area consists of four 4th field subbasins, as described by the U.S. Geological Survey, and which are entirely or partially within the BLM's Lakeview Resource Area: 1) Summer Lake, 2) Lake Abert, 3) Warner Lakes, and 4) Guano. It also contains small portions wholly within the resource area of other subbasins. The SBR area contains approximately 6.5 million acres including Federal, State of Oregon, and private lands.

The subbasin review was conducted by an interdisciplinary, interagency group led by the Lakeview RA staff. Five meetings were held over a period of six months to complete the first four steps of the subbasin review process. About 55 federal offices (including BLM, Forest Service, and Fish and Wildlife Service; State government; local government; and Indian tribes) were contacted and invited to participate in the process. Attendance varied between 15 and 20 people representing various agencies and government offices. Appendix B contains a summary of the subbasin review. The complete Analysis of the Management Situation, available at the Lakeview Field Office, also serves as the Subbasin Review Report.

The group began the review by examining the "Key Broad-Scale Findings in Issue Identification," contained in the *Subbasin Review Guide* (BLM and USFS, 1999). These findings were derived from the ICBEMP Scientific Assessment. Most of these findings were determined to apply to the Lakeview SBR area, others were refined to fit the SBR situation, and a few new ones were added. From these findings, issues and management concerns were developed. The SBR area was then characterized or described in relation to the findings. These characterizations were primarily for the biological and economic resources addressed in ICBEMP findings. Based on the findings and the mid-scale characterizations, the SBR team made recommendations and prioritized opportunities for actions to address the findings. This set the stage for further planning to implement the recommendations and management opportunities. Recommendations applicable to BLM land within the LRA, which was almost all of them, were carried forward as management opportunities in the AMS to be used in developing action alternatives for the RMP/EIS.

Issues and ICBEMP Findings

The BLM planning regulations equate land-use

planning with problem solving and issue resolution. An *issue* is an opportunity, conflict, or problem about use or management of public land resources. *Management concerns* are 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 decisions made regarding management direction. Generally, management concerns focus on use conflicts, requirements, or conditions that cannot be resolved administratively and that, during initial internal and public scoping, did not appear to meet the criteria of a planning issue but need to be addressed in the Lakeview RMP.

Preliminary internal scoping and public scoping in 1999 identified five issues, each of which can be subdivided to address numerous considerations in resolving the overall issue. See Chapter 5 for a complete description of the issues. The five main issues are:

1. What areas, if any, should be designated and managed as special management areas, such as Areas of Critical Environmental Concern or Wild and Scenic Rivers?
2. How can upland ecosystems be managed and restored to achieve desired future conditions?
3. How can riparian areas and wetlands be managed to protect and restore their natural functions?
4. How should recreation be managed to meet public demand while protecting natural values and the health and safety of the public?
5. How should public lands be managed to meet the needs of local communities and Native American Tribes?

The subbasin review process determined that

numerous findings from the ICBEMP Scientific Assessment apply to one or more of the subbasins in the SBR area. Most subbasin issues are components, or sub-issues, of the five identified above. A summary of the findings applicable to the subbasin review area is in the summary report in Appendix B. Some of the management concerns identified during preparation of the AMS may also be combined with the above five issues. Management concerns that cannot be combined, or do not fit with the above five, will be addressed in the RMP/EIS, along with any other issues that may be identified during the planning process.

available information on all subbasins and the sub-basin Review Process (Appendix B). However, the distribution of the sub-basin Review Process is being applied to the following: appropriate subbasins and sub-issues. Land use and wildlife, riparian resources, and cultural resources are not addressed in the RMP/EIS scientific assessment (USGS and BLM, 1995; Quigley et al., 1997).

DESCRIPTION OF THE RESOURCES

Sizes

Within the sub-basin review area are numerous very small and mostly developed sub-basins. Due to the distribution of the sub-basin Review Process, the review area will not include sub-basins with small sizes.

Sub-basins at varying stages of development are available on the South half of Lead County (OK), Brown County (OK), New York County (OK), North County (OK), and White County (OK). The information available will be a summary of the review area distribution, interpretation, and distribution of the review area.

Sub-basins in the North half of the review area are mostly undeveloped and are mostly in the Review Area and are mostly in the Review Area.

AREA PROFILE CHARACTERIZATION

The U.S. National Geographic Cooperative Service (NGS) Biological Site Inventory One-Step Review System, Appendix A, identifies all the resources that have been done. This survey was intended to be completed by the fall of 2002.

There is no data available for the State of Kentucky in southern Florida.

Some of the data are available for the review area, but the information is not available for the review area. Management concerns for the review area include soil erosion, sedimentation, and water quality. Management concerns for the review area include soil erosion, sedimentation, and water quality. Management concerns for the review area include soil erosion, sedimentation, and water quality.

In addition to water flowing by vegetation, the review area is also covered by vegetation. The vegetation is mostly in the review area. The vegetation is mostly in the review area. The vegetation is mostly in the review area.

Vegetation

The review area is mostly in the review area. The review area is mostly in the review area. The review area is mostly in the review area.

2. RESOURCE AREA PROFILE (SUBBASIN CHARACTERIZATION)

INTRODUCTION

The Resource Area Profile (RAP), step 3 of the AMS process, describes the current condition, amount, location, use, demands, etc. of each of the resources in the planning area. This is a summary of that information. The complete profiles will be used as the basis of the affected environment section of the RMP/EIS. This information also serves as the summary of the subbasin characterization which is Step 3 of the Sub-basin Review Process (Appendix B). However, the descriptions of the mid-scale character apply to findings related to watershed, renewable resources such as vegetation, forestry and wildlife, fire management, and human uses and values—resources addressed by the ICBEMP scientific assessments. (USFS and BLM, 1996; Quigley et al, 1996)

DESCRIPTION OF THE RESOURCES

Soils

Soils in the sub-basin review area are semiarid, very young, and poorly developed. Soils develop slowly in this environment. Likewise, soil recovery from disturbance is slow. Disturbance of soil can lead to long-term ecological changes and reduced productivity.

Soils data in varying stages of completeness are available for the South half of Lake County (OR), Harney County (OR), Deschutes County (OR), Modoc County (CA), and Washoe County (NV). This information contains soil series descriptions, mapping units descriptions, interpretations, and detailed soils maps.

Soils in the North Lake County portion of the Resource Area are currently being mapped by

the BLM/National Resource Conservation Service (NRCS) Ecological Site Inventory Crew out of Burns, Oregon. Approximately two-thirds of the resource area has been done. This survey is expected to be completed in the fall of 2002.

There is no soil data available for the Sheldon Antelope Refuge in northern Nevada.

Areas of bare soil occur in most of the vegetation types in the Resource Area which can be readily eroded by wind or water. Management regimes also affect the rate at which soil is eroded from a landscape. Any activities which remove vegetative cover increase the erosion rate and thus must be carefully managed. All project plans and EAs identify rehabilitation measures which must be followed to reduce erosion from the site. Areas with fragile soils that are highly susceptible to erosion are identified to be avoided during the planning of projects.

In addition to cover afforded by vegetation, soil cover is also provided by microbiotic crusts which consists of lichens, mosses, green algae, fungi, cyanobacteria, and bacteria growing on or just below the soil surface in a thin layer. These crusts are usually found in spaces between larger plants and appear to play a role in controlling soil erosion, filtering water, retaining soil moisture, and improving soil fertility. However, limited data currently exist on the exact extent, distribution and role of microbiotic crusts, especially in the Northern Great Basin.

Vegetation

The SBR area is located in three distinctly different provinces: High Desert, Klamath, and Mazama Provinces. About 75 percent of the SBR area is classified High Desert Province; 18

percent is classified as Klamath Province; 7 percent is classified Mazama Province. The physical characteristics of the different provinces of Oregon are based on geography, geology, and soil.

Table 2-1 describes the general vegetation types in the subbasin review area. Map 2 shows the extent and distribution of these vegetation types.

The High Desert Province is characterized by closed basins surrounded by extensive terraces that were formed by ancient lakes. Low basaltic ridges (formed by volcanos), hills, and buttes divide the basins. Average rainfall is approximately 10 inches. The sub-basin area is almost entirely a natural shrub-grassland steppe. Sagebrush species strongly dominate the province with other shrubs in lesser amounts. Major grasses include native wheat grass, fescue, needle grasses, bluegrass, and rye. Juniper woodlands are on the rocky or very stony uplands and ridges. Understory in these uplands is insufficient to carry fire which allows

the juniper to increase.

The Klamath Province abuts the High Desert Province along the southwest boundary of the High Desert. The division is based on soil change. The average annual precipitation is 14 inches with much higher amounts falling at higher elevations. Prior to extensive logging, most of this area was covered by trees, primarily ponderosa pine. Since then, juniper has significantly increased its coverage.

The Mazama province is represented in the northwest portion of the SBR area. It is characterized by a continuous mantle of aeolian or windblown deposits of pumice and other volcanic materials. Rainfall averages about 18 inches annually. Early vegetation was primarily mixed conifer forest with ponderosa pine predominating. Thick stands of bitterbrush also occur as understory or in isolated communities.

TABLE 2-1. GENERAL VEGETATION TYPES IN SUBBASIN REVIEW AREA.

VEGETATION TYPE	DESCRIPTION
Big sagebrush/shrub land	Most common vegetative cover in southeastern Oregon. Can occur with various understory plants.
Black sagebrush/grassland	Has limited distribution in the province. Usually grows in very shallow soils.
Silver sagebrush/grassland	Usually found in moist playas or on semi-alkaline flats and valley bottom lands.
Low sagebrush/grassland	Found sporadically throughout eastern Oregon, generally on areas with shallow basalt soils. Usually has sparse canopy cover.
Mountain big sagebrush/grassland	Occur at higher elevations on plateaus and rocky flats with minimal soil development.
Mountain shrub/grasslands	Includes sites dominated by mountain mahogany, bitterbrush, or snowberry in conjunction with other shrubs and native grasses at higher elevations or on slopes.
Juniper woodlands	Areas of open-canopy woodland. Western juniper is primary tree species. Understory vegetation usually dominated by sagebrush species. Juniper is often an invader into sagebrush grass community as a result of fire suppression.

TABLE 2-1. GENERAL VEGETATION TYPES IN SUBBASIN REVIEW AREA.

VEGETATION TYPE	DESCRIPTION
Ponderosa pine.	Widespread forest type in eastern Oregon. Usually found in the foothills margin bordering the upland conifer types on the national forests. Widely spaced, over-story pines often cover western juniper or other conifers. The shrub and herb layers form a diverse and prominent ground cover component in this forest type
Lodgepole pine	Common forest type found throughout the area on mid-slopes and ridges often mixed with ponderosa pine or other conifers.
Mixed conifer	A close-canopied, upper montane or mountain forest type that can be represented by several plant communities containing a number of pine and fir species and a variety of understory shrubs and herbaceous vegetation.
Quaking aspen	Widely scattered throughout the coniferous forest and sagebrush grasslands of eastern Oregon. Can be found in isolated pockets and may be mixed with western juniper which is replacing the aspen on many sites.
Salt desert shrub/grassland	Occurs in alkaline playa or dry lake basins of Great Basin ecoregion of the resource area. Especially prominent around Lake Abert, Summer Lake, Alkali Lake, and Warner Lakes Basin. Consists of salt-tolerant shrubs and grasses.
Riparian/wetland.	As in other areas of limited precipitation, riparian/wetland areas are extremely valuable far beyond their limited distribution. The variety of shrubs, grasses, and forbs present depends on the degree and duration of wetness and shade at each location
Lava flows	Large expanses of barren lava fields with occasional isolated patches of tall and low sagebrush communities occur throughout the SBR area.
Modified grassland	Extensive grasslands and shrub grasslands of southeastern Oregon that were formerly composed of native bunch grasses have been planted with crested wheatgrass and usually done after a fire. In some areas, cheatgrass has invaded and become well established.

Special Status Plants

There are several special status plant species known in the SBR area. Special status species include species that are federally listed as threatened or endangered, state listed threatened or endangered, or classified by BLM as sensitive species. A Conservation Agreement with the USFWS is in effect for the Columbia cress in the Lakeview RA. Agreements are being prepared for four other species, populations of which are being monitored. Table 2-2 lists the special status plants in the SBR area and their status on state or Federal lists.

Cultural Plants

The social and economic findings of the Interior Columbia Basin Ecosystem Management Project recognized that Indian nations have reserved rights and recognized interest to harvest a broad range of plant and animal species. Availability of these species is considered by Indian governments a trust responsibility of the Federal government. A number of "cultural plant" species occur in the review area. Cultural plants are defined as those plants which are used by Native Americans for subsistence, economic or ceremonial purposes.

Plant communities where these cultural plants can be found have been identified and rated for vulnerability. Many of the important Native American cultural plants are found in low sagebrush communities and wet meadows. Several of the Areas of Critical Environmental

Concern (ACECs) nominated for designation were done so partly because of the presence of plants that are culturally important to local tribes. Table 2-3 lists the cultural plants that occur in the SBR area and Table 2-4 shows the habitats in which many of these plants are found.

TABLE 2-2. SENSITIVE SPECIES PLANT LIST/SUB-BASIN REVIEW AREA			
LATIN NAME	STATUS	KNOWN LOCATIONS & OWNERSHIP	COMMON NAME
<i>Astragalus tegetariodes</i>	1 ONHP *	BLM LRA	Bastard kentrophyta
<i>Botrychium pumicola</i>	1 ONHP *	USFS W, D, & F	Pumice grape-fern
<i>Castilleja chlorotica</i>	1 ONHP	USFS Fremont	Green-tinged paintbrush
<i>Castilleja thompsonii</i>	2 ONHP	Hart Mt. NWR	Thompson's paintbrush
<i>Chaenactis xantiana</i>	1 ONHP	BLM LRA	Desert chaenactis
<i>Cordylanthus capitatus</i>	2 CNPS	BLM CRA	Clustered birdbeak
<i>Cymopterus nivalis</i>	2 ONHP *	BLM LRA **	Snowline cymopterus
<i>Cypripedium calceolus</i>	2X ONHP	Literature reference ONHP	Yellow ladys-slipper
<i>Eriogonum crosbyae</i>	1 ONHP *	BLM LRA/Oregon State Lands**	Crosby's buckwheat
<i>Eriogonum cusickii</i>	1 ONHP *	BLM LRA**	Cusick's buckwheat
<i>Eriogonum ochrocephalum</i>	2 CNPS	Sheldon NWR	Ocher-flowered buckwheat
<i>Eriogonum prociduum</i>	1 ONHP *	BLM LVRA**/Hart Mt/ Private/Fremont	Prostrate buckwheat
<i>Eriogonum rubicaule</i>	3C Federal	Sheldon NWR	Lahontan Basin buckwheat
<i>Galium glabrecens</i> var <i>modocens</i>	1 CNPS	BLM CRA	Bedstraw
<i>Galium serpenticum</i> var <i>warnerens</i>	1 ONHP *	BLM LRA/USFS Fremont	Warner Mt bedstraw
<i>Gratiola heterosepala</i>	1 ONHP	BLM LRA **	Boggs Lake hedge-hysop
<i>Hymenoxys cooperi</i>	2 ONHP	BLM LRA	Copper's goldflower
<i>Ivesia rhypara</i> var <i>rhypara</i>	1 ONHP/2Federal *	BLM LRA/Sheldon NWR**	Grimy ivesia
<i>Ivesia rhypara</i> var <i>shellyi</i>	1 ONHP *	BLM LRA**	Shelly's ivesia
<i>Ivesia shockleyi</i>	2 ONHP	USFS Fremont	Shockley's ivesia
<i>Lomatium roseanum</i>	Federal concern	Sheldon NWR	Rose's lomatium
<i>Mimulus evanescens</i>	1 ONHP	BLM LRA/USFS Fremont	Disappearing monkeyflower
<i>Mimulus latidens</i>	2 ONHP	BLM LRA	Broad-toothed monkeyflower
<i>Mimulus tricolor</i>	2 ONHP	USFS Fremont	Three colored monkeyflower
<i>Penstemon glaucinus</i>	1 ONHP	USFS Fremont	Blue-leaved penstemon
<i>Plagiobothrys salsus</i>	2 ONHP	Private	Desert allocarya
<i>Pleuropogon oregonus</i>	1 ONHP	Private ½ managed by TNC	Oregon semaphore grass
<i>Rorippa columbiae</i>	1 ONHP	BLM LRA**/Private/ Oregon State Lands	Columbia cress
<i>Sesuvium verrucosum</i>	2 ONHP	BLM LRA	Verrucose sea-phrslane
<i>Symphoricarpus longiflorus</i>	2 ONHP	BLM LRA/Hart Mt NWR	Long-flowered snowberry
<i>Thelypodium brachycarpum</i>	2 ONHP	ODFW Summer Lake	Short-podded thelypody

ONHP = Oregon Natural Heritage Program
 CNPS = California Native Plant Society
 BLM LRA = Lakeview Resource Area
 BLM CRA = Cedarville Resource Area
 USFS = United States Forest Service
 F = Fremont NF; W = Winnema NF; D = Deschutes NF
 NWR = National Wildlife Refuge
 TNC = The Nature Conservancy
 ODFW = Oregon Department of Fish and Wildlife
 * Ash or pumice physical habitat
 **Lakeview BLM monitoring studies in place

TABLE 2-3. CULTURAL PLANTS OF THE SUBBASIN REVIEW AREA

COMMON NAME	LATIN NAME	HABITAT
camas	<i>Camassia quamash</i>	wet meadow
biscuit root	<i>Lomatium</i> species	lithic soils
bitterroot	<i>Lewisia rediviva</i>	lithic soils
yampah, epos	<i>Perideridia</i> species	lithic soils
chokecherry	<i>Prunus</i> species	riparian
willow	<i>Salix</i> species	riparian
juniper	<i>Juniperus occidentalis</i>	hillsides, ridges, riparian
serviceberry	<i>Amelanchier alnifolia</i>	riparian
huckleberry	<i>Vaccinium</i> species	forested areas (Pines/ mixed conifers)
wocas, water lily	<i>Nuphar polysepalum</i>	lakes, wetlands
sego or mariposa lily	<i>Calochortus</i> species	sagebrush community, dry, open slopes/flats
elderberry	<i>Sambucus</i> species	riparian
cattail/tule	<i>Typha</i> species/ <i>Scirpus</i> species	marsh wetlands
wild onion	<i>Allium</i> species	dry hillsides; plains
wapato (arrowhead)	<i>Sagittaria</i> species	ponds, lakeshore, wet marsh
currant/gooseberry	<i>Ribes</i> species	riparian, meadow edges, talus
dogbane (Indian hemp)	<i>Apocynum cannabinum</i>	wet hillsides, riparian
balsamroot	<i>Balsamorhiza</i> species	dry hillsides

COMMON NAME	LATIN NAME	HABITAT
yellowbell	<i>Fritillaria pucida</i>	lithic soils
cow parsnip	<i>Heracleum lanatum</i>	moist meadows, woodland edges
sedge	<i>Carex</i> species	wet meadows, riparian
hyacinth	<i>Brodiaea hyacinthina</i> (<i>Triteleia hyacinthina</i>)	open grasslands to rocky open flats
western spring beauty	<i>Claytonia lanceolata</i>	wet woodlands, meadows
red osier dogwood	<i>Cornus stolonifera</i>	riparian

HABITAT	PLANTS
1. Lithic soils*	<i>Artemisia rigida</i> , <i>A. arbuscula</i> , geophytes (Lomatium, Bitterroot)
2. Wet meadows*	Camas, bistort, sedge, tobacco root
3. Riparian areas*	Willow, osier dogwood, currant, rose
4. Marsh/ponds*	Palustrine: sedges, rushes, tule, wapato Lacustrine: wocas
5. Sand dunes	Indian ricegrass, other grasses
6. Sagebrush	With bunchgrasses; with mountain mahogany
7. Woodlands	Juniper with bitterbrush, sagebrush, manzanita, aspen, grasses, Ponderosa pine
8. Colluvium, alluvium, talus slopes	<i>Ribes</i> spp., serviceberry
9. Desert saltbrush	<i>Atriplex</i> spp., <i>Sarcobatus vermiculatus</i>
10. Saltflats/playas	Waada, saltgrasses
11. Dry meadows	Grasses, surrounding shrubs
12. Vernal pools	Onions, camas
13. Disturbed areas (road sides, flooded areas, landslides)	Weedy species
*Plant communities "at risk" with decreases in area size (Croft/Helliwell).	

Watershed

Four sub-basins--Summer Lake, Lake Abert, Warner Lakes, and Guano--composed of internally drained watersheds, comprise the sub-basin review (SBR) area. See Figure 1 for the boundary lines of the subbasins. Currently there is no outflow from the sub-basins. The Lakeview Resource Area is almost entirely within these four sub-basins. Major water bodies in these sub-basins are as follows:

- Summer Lake sub-basin: Summer Lake, Silver Lake, Thompson Reservoir, and Duncan Reservoir
- Lake Abert sub-basin: Lake Abert, Chewaucan River, and Chewaucan Marsh
- Warner Lakes sub-basin: Crump, Hart, Andersen, Swamp, Flagstaff, Upper Campbell, Campbell, Turpin, Stone Corral, Blue Joint Lakes and Deep Creek, Honey Creek, Twelvemile Creek, and Twentymile Creek
- Guano sub-basin: Guano Creek, Rock Creek, and Skull Creek

Projects for irrigation, livestock, roads, and flood control have significantly altered natural flow regimes. This has changed habitat conditions, channel stability, and timing of sediment and organic material transport.

The Environmental Protection Agency (EPA) has delegated authority to implement the Federal Water Pollution Control Act of 1972 and amendments (Clean Water Act, 1977) to the State of Oregon. The Oregon Department of Environmental Quality administers and regulates this part of the state's water resources. State environmental agencies and Federal land management agencies have agreed through a memorandum of understanding (MOU) that the combined Federal agencies would be the designated management entity.

They are charged to do the following: 1) implement and enforce natural resource management programs for the protection of water quality on federal lands under its jurisdiction; 2) meet water quality standards, monitor activities to assure that they meet standards, and report the results to the State of Oregon; and 3) meet periodically to recertify water quality Best Management Practices (BMP). Best Management Practices are methods, measures, or practices to prevent or reduce water pollution, including but not limited to structural and nonstructural controls and operation and maintenance procedures.

The State of Oregon has established primary surface water beneficial uses such as domestic water supply, salmonid and resident fish habitat, irrigation, livestock watering, wildlife and hunting, fishing, water contact recreation, and aesthetic quality in the sub-basin review area. Most streams on the Lakeview Resource Area support State designated beneficial uses. Elevated stream temperatures are the primary water quality problem identified for streams in the RA. Causes of stream degradation include removal of riparian vegetation and destabilization of streambanks. Land uses associated with degraded streams include livestock grazing, roads, trails, water withdrawal, reservoir storage and release, altered stream channels, and alteration of wetlands.

The State of Oregon is also required by the Clean Water Act [Section 303(d)] to identify waters which are quality impaired. Elevated temperatures and increased sediment loads are the primary limiting factors in most stream reaches in the SBR. Listed streams are shown on Map 3.

Groundwater is particularly valuable in the SBR area because of the limited surface water available. Groundwater is used for irrigation, domestic use, and livestock. Groundwater occurs as both confined and unconfined aquifer systems.

Springs and seeps occur in areas where water from aquifers reaches the surface. Springs have been disturbed by management activities which affect the condition of the springs. Activities such as livestock or wild horse grazing and watering, recreation use, and road construction have directly affected spring systems.

Riparian Vegetation

Riparian vegetation is dependent on the channel type, duration of water availability, soil type and depth, climate, and management history. Sedges, rushes, and in some cases, willow and alder dominate streams with deeper soils and longer lasting water. Boulder-dominated streams will have pockets of vegetation that may be grass and shrub dominated. As water availability decreases, herbaceous vegetation will shift from sedges to grasses. Lower elevation sites often have alder and dogwood along with willow as predominant woody vegetation. Higher sites are dominated by willow. There are several species of willow in the resource area, some more dependent on moisture than others. Canyon-confined streams in lower reaches of the area often have Ponderosa pine as a dominant structural feature.

The role vegetation plays in stream condition is dependent on channel type. Certain channel types are dependent on vegetation to protect the stream banks in high flow events. The structure and type of vegetation are also critical to wildlife and fish. Trees such as aspen, cottonwoods, and some taller willows supply vertical structure for neo-tropical birds. As trees become old and decay, they provide habitat for cavity nesters. The structure also supplies shade to the stream which helps to cool the water. Leaves from deciduous species supply nutrients to the riparian and aquatic system as a food source for aquatic macro invertebrates and therefore for the fish.

Many cottonwood and aspen stands have declined in the RA due to a number of factors including changes in stream channel morphology,

lack of fire or other disturbance to rejuvenate stands, and invasion by western juniper. Aspen need regular, periodic disturbance in order to regenerate and maintain their stands. Remnant stands can be found that are dying and have little or no regeneration. Cottonwoods need flood events with the deposition of seeds in silt in order to regenerate. After establishment, seedlings of cottonwood and aspen need protection from grazing for several years in order to survive.

Riparian communities are more diverse than surrounding upland communities and support a greater variety of wildlife species. The habitat islands provided by springs are especially important since they often provide the only habitat diversity in an otherwise uniform high desert ecosystem.

Livestock grazing is managed in riparian areas by controlling season of use, amount of use or by exclusion. Controlling season of use usually involves grazing riparian areas in the spring and then removing the livestock so that the vegetation has enough soil moisture to regrow through the summer. This allows the vegetation to develop adequate cover to protect the banks from flooding the following spring. If vegetation that controls floods is removed too late in the year, subsequent floods may erode stream banks. Late season grazing not only removes bank cover which increases erosion, but it often leads to extensive browsing of willows, cottonwoods, and aspen as grazing shifts from the drying herbaceous to the remaining green, woody vegetation. Late season grazing should be limited to light or moderate use of riparian vegetation, especially willows. The critical element of management being to reserve enough bank cover to protect them from flood flows. Exclusion of grazing allows full protection of banks by vegetation as limited only by site potential.

BLM biologists and watershed specialists conducted Proper Functioning Condition (PFC)

assessments to categorize streams in the RA. A stream in PFC is one that 1) dissipates stream energy associated with high water flow; 2) filters sediment, captures bed load, and aids in flood plain development; 3) improves flood-water retention and groundwater recharge; 4) develops root masses of plants that stabilize streambanks; 5) develops diverse ponding and channel characteristics to provide the habitat, water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and 6) supports greater biodiversity. Streams in PFC are more resilient to change than streams that have been degraded and are in less than PFC.

A total of 113 miles of stream in the Lakeview Resource Area were assessed for PFC in 1996 and 1997. Of the miles surveyed, 75 percent were in PFC, 18 percent were functioning at risk with either an upward or no apparent trend toward proper functioning condition and 7 percent were nonfunctional. On the Fremont National Forest segments of the Chewaucan and Deep Creek watersheds were rated. In the Deep Creek Watershed 23 segments were rated as PFC and 17 as functioning at risk with an upward trend. In the Chewaucan Watershed, 10 segments were rated as PFC and 3 were rated as functioning at risk with an upward trend.

Rangeland/Grazing

Grazing in the RA is administered on 120 allotments with 69 permittees. Total use in 1999 was 113,938 AUMs. Approximately 225,500 acres of public land in the RA are not allocated to grazing and are therefore excluded from livestock use. Another 472,890 acres are grazed on a limited basis by prior agreement or decision to protect other resources such as riparian communities, streams, reservoirs or wetlands; special status plant or animal habitats; research plots, recreation sites, etc. Map 4 shows the grazing allotments in the subbasin review, including the Lakeview Resource Area. It also

shows the areas that are excluded from grazing.

The *Rangeland Standards and Guidelines for Livestock Grazing* (BLM, 1997) are the basis for assessing and monitoring rangeland conditions and trend toward or away from improved range conditions. Assessments have been completed on 10 allotments encompassing 668,620 acres through the end of fiscal year 1999. Standards were met in all 10 allotments. The BLM has set a general goal of completing all assessments by 2008.

Projects such as brush control and seedings or structural projects (fences, water developments, and others) have been implemented throughout the RA. Approximately 300,000 acres planted to non-native grasses as a result of sagebrush eradication, wild fires or prescribed burns. Grazing systems have been implemented on all allotments through agreements, annual authorizations, and allotment management plans (AMPs). Twenty-eight allotments are managed under AMPS.

Weeds

“Noxious” is a legal term defined as any plant that interferes with management objectives. It is legal in the sense that federal, state, and local governments identify and publish lists of plants they feel warrant the status of “noxious” based on the extent the plant compromises commerce in a particular area. Plants considered noxious nationwide are on the Federal Noxious Weed List. The Lakeview RA used the State of Oregon list, which has 93 plants on it, to determine which plants are deemed noxious on BLM lands. Many weeds on the State list are not, and never will be, present in the resource area due to climatic differences.

Invasion of noxious weeds has many detrimental effects including the loss of rangeland productivity, increased soil erosion, reduced

species, and structural diversity as well as loss of wildlife habitat. Economic losses from noxious weed infestations are considerable and often not fully recognized.

Noxious weeds are present throughout the planning area. Approximately 20 different species of noxious weeds occur in the planning area. Changes in distribution and new introductions are monitored annually. Grazing, fire management, chemical, mechanical, and biological control methods are used as part of an integrated weed management program. However, noxious weeds cannot be controlled unless federal, state, county, and private interests work together.

Table 2-5 lists those noxious weed species that are considered to be high priority for control and management because of their undesirable characteristics.

TABLE 2-5. PRIORITY SPECIES OF NOXIOUS WEEDS PRESENT IN THE SUBBASIN REVIEW AREA	
COMMON NAME	SCIENTIFIC NAME
Russian knapweed	<i>Acroptilon repens</i>
Hoary cress	<i>Cardaria spp.</i>
Perennial pepperweed	<i>Lepidium latifolium</i>
Spotted knapweed	<i>Centaurea biebersteinni</i>
Canada thistle	<i>Cirsium arvense</i>
Halogeton	<i>Halogeton glomeratus</i>
Scotch thistle	<i>Onopordum acanthium</i>
Mediterranean sage	<i>Salvia aethiopsis</i>
Medusahead rye	<i>Taeniatherum caput-medusae</i>

Perennial pepperweed, hoary cress and Russian knapweed are rhizomatous perennial plants

which makes them very difficult to control by mechanical means. Because of a court injunction, BLM is unable to use the herbicide of choice on public land in Oregon to aid in control of pepperweed and hoary cress. Many of these priority species form dense monocultures which crowd out native vegetation and are formidable to control. Most are unpalatable to grazing animals, and some are poisonous to livestock. Many of these are annual species which produce large numbers of seeds which readily germinate in the spring. Many are pioneers on disturbed lands such as bladed roadsides or other cleared lands and once established they can easily spread to other areas.

The Warner Basin Weed Management Area is a 500,000-acre basin consisting of private land; federal lands managed by the Forest Service, BLM, and USFWS; and Oregon Division of State Lands. In 1998, a Warner Basin Working Group comprised of representatives from public and private lands was formed to develop a weed management plan (BLM, 1998) for the watershed employing integrated weed management techniques. Three goals have been developed: 1) coordinate management and inventory of noxious weeds, 2) protect land and resources from noxious weeds, 3) and educate resource users and the general public.

Fisheries

Fisheries habitat includes perennial and intermittent streams, springs, lakes and reservoirs that support fish through at least a portion of the year.

The condition of fisheries habitat is related to riparian habitat and stream channel characteristics. Riparian vegetation moderates water temperatures, adds structure to the banks to reduce erosion, and provides overhead cover for fish. Intact vegetated flood plains dissipate stream energy, store water for later release, and provide rearing areas for juvenile fish. Water quality, especially in regard to factors such as

temperature, sediment, and dissolved oxygen, also greatly affects fisheries habitat.

Public land provides habitat for nine native fish species. Three species are Federally Listed and one (with four sub-populations in the resource area) was recently considered for listing. Amphibians and aquatic invertebrates are integral components of the aquatic community. One amphibian is a candidate for listing under the Endangered Species Act.

Several non-native fish have been introduced. ODFW periodically stocks a strain of hatchery rainbow trout in ten reservoirs. In most of these reservoirs, spawning habitat is lacking and natural reproduction does not occur. In the past, cut-throat trout were planted in one stream. Currently, all stream stocking with hatchery trout has been discontinued by ODFW.

ODFW no longer routinely stocks warm-water fish species, but largemouth bass, black and white crappie, and brown bullhead have become established from previous introduction in the Warner Lakes and some smaller reservoirs. Anglers illegally introduced these species in other reservoirs of the area.

Redband trout is the native trout of the area and was recently petitioned for listing as a federal threatened or endangered species throughout all or portions of its current range. Subsequent studies indicated that the species and its habitat were healthy and did not warrant listing at this time. However, the introduction of rainbow trout has altered many of the unique characteristics of the native redband; the extent of the loss of its genetic purity is not known. Warner suckers are endemic to the Warner Valley and were listed as a Threatened Species in 1985. There are 43 miles of critical habitat for Warner suckers in the SBR area and 13.5 miles on BLM lands. Biological Evaluations and Consultations have been completed on all federal actions taken by the BLM and Fremont NF to protect sucker habitat in the Warner watershed

south of Bluejoint Lake.

Several isolated populations of tui chub occur at various springs, lakes, and streams in the RA. One species, the Hutton tui chub has been listed as threatened and some others are of concern because of limited habitat and range. One species of speckled dace in the Coleman Valley has also been listed as threatened. The U.S. Fish and Wildlife Service (USFWS) has prepared a recovery plan for the Warner Sucker, Hutton Tui Chub, and the speckled dace. (USFWS, 1998). BLM and the Fremont NF are following the management guidelines of this plan.

Human activities such as livestock grazing, road building, logging, recreation, agricultural development, and irrigation have degraded fish habitat conditions. These activities have altered stream channels, blocked flood plains, reduced bank stabilization, changed flow regimes, and increased water temperatures.

The BLM has initiated active riparian management on nearly all perennial and many intermittent streams in the RA. Our primary objective in initiating grazing management on 14 pastures is to improve riparian conditions, and as a result, improve stream conditions and habitat.

Wildlife

BLM and the FS are responsible for the management of a wide array of both native and introduced wildlife habitats. In general, the state wildlife agencies are responsible for managing animal populations. However, an animal is inseparable from its habitat and any management strategies must consider both the animal and its habitat. Within the sub-basin review area, the BLM and FS together manage

some 4,660,000 acres of wildlife habitat. The U.S. Fish and Wildlife Service (USFWS) manages 473,000 acres on the Hart Mountain and Sheldon National Wildlife Refuges within the SBR area.

The SBR area includes a number of priority habitats where the BLM and FS generally focus most management efforts. These habitats are major plant communities or terrestrial features within the review area that are important to wildlife. Priority wildlife habitats include stream side riparian, springs, seeps, seasonal wetlands, playas and lakebeds; cliffs, caves, talus slopes, wet meadows, dry meadows, dryland shrubs, juniper woodlands, ponderosa pine forests, mixed conifer forests, and aspen groves.

Ongoing changes to these important plant communities, many of them caused by humans, have resulted in alterations to the animal habitat within the resource area. For example, wet meadows are converting to dry meadows as a result of lowering water tables that has been caused by irrigation pumping and diversion of surface water. The encroachment of juniper is converting shrublands to woodlands, primarily because of changes in natural fire regimes. Aspen stands are not regenerating themselves and are diminishing in numbers.

Priority animal taxa include the bald eagle, which is expected to be removed from the Federal endangered species list sometime in 2000. Nesting surveys in the SBR area have found one nest on BLM administered land and one on FS administered land. Wintering bald eagles forage in Fort Rock, Warner, Goose Lake, Crooked Creek valleys, and in the Chewaucan Marsh. A large communal roost is located in North Lake County on the boundary of BLM and FS lands.

Golden eagles are a year-round resident of the SBR area. Although these eagles are not in the resource area in large numbers, there are plenty of nesting sites such as cliffs and large conifers. Golden eagle prey is generally plentiful and

includes rabbits and hares, marmots, squirrels, deer and antelope fawns, and other medium-sized animals.

The Peregrine falcon was taken off the T&E list in 1999 after the species reached the goals set forth in the 1982 Pacific Coast Recovery Plan. The primary Peregrine habitats in the Lakeview Resource Area are along Fish Creek Rim and Abert Rims, but no nests have been found. One pair of falcons has been observed successfully nesting on Winter Rim. Two hawk sites, one in Warner Valley and one in Summer Lake Basin, have been used successfully to reintroduce 15-20 peregrines in the last several years.

Throughout its range, sage grouse is of high public interest and may be petitioned for federal listing as either a threatened or endangered species. Sage grouse populations have declined an average of 30 percent in the last 30-40 years in states where it still exists. Populations in the SBR area reflect this broad based decline. Sage grouse depend on sagebrush-grassland communities and are most frequently found in sage-covered flat lands or gently rolling hills. The greatest negative impact on sage grouse is the destruction or adverse modification of their habitat. Map 5 shows the current, known habitat of sage grouse in the subbasin review area.

Townsend's big-eared bat is a BLM sensitive species that occurs in a wide variety of habitat types. This species uses caves and cave-like structures, including abandoned mine shafts and tunnels for roosts and hibernating or wintering habitat. They also require wet meadows and riparian areas where they can forage for flying insects. Bat surveys have been conducted in the RA, and a few Townsend's big-eared bats have been found. All abandoned mines on the RA are surveyed for bats before the mines are permanently closed.

Waterfowl and shorebirds are seasonally abundant in the RA. Several species that are not federally listed but are considered sensitive

species by BLM occur in the RA. These include the long-billed curlew, western snowy plover, greater sandhill crane, and the white-faced ibis. Many of these birds successfully nest in Warner Valley, Summer Lake Basin, the Chewaucan Marsh, and in isolated potholes throughout the area. Early nesting species rely on residual cover for concealment and are reluctant to use an area without the previous year's growth. Grazing or mowing of hay can reduce or eliminate this cover. If the birds do use an area of sparse growth, nesting success is greatly reduced.

Rocky Mountain elk numbers in Lake County and the SBR area have been increasing for the past 20 years. Populations are expanding toward the management objectives of Oregon Department of Fish and Wildlife's Elk Management Plan. Habitat on BLM administered lands is primarily winter range while summer and transitional range is on FS lands.

Mule deer are the most numerous, adaptable, and widely distributed big game species in the RA. There is a high level of public interest in this species for hunting and for viewing. Current management on the RA has focused on improvement and maintenance of transition and crucial winter range, development of water sources (primarily springs) and installation of guzzlers or man-made water collection and storage units, modification of livestock grazing systems to reduce competition with domestic livestock for winter browse and early green-up grasses, fencing riparian areas, closing roads seasonally, and conducting prescribed burns.

Pronghorn antelope are the second most abundant big game species in the RA. Pronghorn habitat consists primarily of Wyoming big sage and low sagebrush lands. The RA contains crucial winter range as well as summer and year-long habitats for pronghorn antelope. Water is sparsely distributed in the RA. Approximately 3,000 to 5,000 antelope currently

use the RA throughout the year. However, ODFW indicate that pronghorn populations throughout Oregon, including the RA, have declined 20 to 30 percent since 1991.

There are approximately 500-600 California bighorn sheep at various locations throughout the RA. These locations are used year round. Habitat is composed of sagebrush-grassland, escape areas, lambing areas, thermal protection, rutting areas, and foraging areas. The locations are characterized by rugged mountains, canyons, and escarpments. Water is a limiting factor and is supplied by big game guzzlers, natural seeps and springs, and water holes.

Map 6 shows the big game habitats in the subbasin review area.

Wild Horses

In the last 120 years wild horse numbers in the LRA have varied widely. In the 1950s and 1960s the horses were heavily hunted and their numbers were drastically reduced. With the passage of the Wild Free-Roaming Horse and Burro Act in 1971, those horses left in the LRA became protected, as did all horses and burros on public land in the west.

Wild horses are present in the resource area in two herd management areas: Paisley Desert and Beaty Butte. Map 7 shows the location and extent of the herd areas. The appropriate management level (AML) for the Paisley herd is 60 to 110 horses and the AML for the Beaty Butte herd is 100 to 250 horses. Table 2-6 shows the herd AML range, herd area size and the forage allocated for wild horse use in the two herd areas. Horses have been gathered five times from the Paisley herd for a total of 843 horses removed and six times from the Beaty Butte herd for a total of 1937 horses removed since 1977. Herd areas are monitored each year through aerial and/or ground census. Utilization data is collected annually. These surveys are used to determination when to

gather the herds and the number of horses that should be removed to bring the herds within their AMLs. Herds are usually gathered every three to four years on average.

TABLE 2-6. HERD MANAGEMENT AREAS IN THE LAKEVIEW RESOURCE AREA

HMA	Public Acres	AML Range	Forage Allocation *(Aums)
Paisley Desert	324,600* *	60-110	1020
Beatys Butte	397,520	100-250	2400

*Animal Unit Months
 **Approximately 24,000 acres of the original herd area became inaccessible to horses through restrictive fencing and livestock grazing agreements implemented as a result of the 1986 Paisley Agreement. Currently, horses are managed in approximately 301,000 acres.

Herds in both management areas are in good condition and don't exhibit any health problems. Except in drought years there is sufficient forage and water within the herd areas to support the herds. There are a wide variety of genetic backgrounds among the horses in both the Paisley Desert herd and the Beatys Butte herd resulting in a wide variety of size, conformation, and color.

Fire

The Lakeview Resource Area Fire Management Program focuses on wildland fire and prescribed fire. The wildland fire season generally runs from mid-May through mid-September. Prescribed fires are usually planned for periods before and after the wildland fire season, depending on weather conditions. The LRA averages about 65 wildfires per year, encompassing approximately 21,000 acres per year. About 90% of the fires that occur are caused by lightning; 10% of the fires are caused

by humans. Maps 8 and 9 show the historical occurrence of wildfires and prescribed fires, respectively, in the resource area.

The 1998 Lakeview District Fire Management Plan (FMP) (BLM, 1998e) and the 1996 Fort Rock Area FMP (BLM, 1996g) provide wildland fire management direction for specific geographic areas and outline preferred suppression actions. The FMPs describe suppression action constraints (i.e., avoiding use of heavy equipment during initial attack) and defines the numbers of personnel and equipment required for efficient suppression actions. Map 10 shows the existing FMPs and the various fire suppression zones in the planning area prescribed in those plans.

Rangeland health, wildlife habitat, and air quality are the primary values at risk on BLM lands from fire activities in the SBR area. On FS lands, timber would be added to this list. Light surface fires, whether prescribed or naturally-ignited, often benefit rangeland health, forest health, and wildlife habitat, and in the long run, reduce erosion potential. On the other hand, high intensity fires may have negative short- and long-term impacts to forest, rangeland, and wildlife habitat.

Past management actions in the SBR area have increased fire hazards in some areas and decreased it in others. The Lakeview Resource Area has had a prescribed fire program since 1981. In the first 3 years of the program, approximately 100 acres per year were burned. Since 1984, prescribed burns have averaged about 3,000 acres per year. In 1999, approximately 17,000 acres were burned. The purpose of the prescribed fire program includes reintroducing fire into the ecosystem, improving

ecological condition, and reducing fuel loads.

Fire exclusion has altered vegetation composition and fire regimes. Fire suppression has allowed sagebrush and juniper to dominate some sites, resulting in reduced grass and forb production. In the forest, suppression activities have resulted in increased fuel buildup and an increase in saplings and small, early seral stage trees, which makes these areas more prone to catastrophic fires.

Juniper woodlands are the most widely distributed forest type in the RA and continue to encroach into ponderosa pine forests and shrublands. Prescribed fire seems to be the most efficient and economical means to control such invasions if fire is applied while there are still adequate surface fuels to carry the fire.

Air Quality

As a result of the Clean Air Act, as amended, the State of Oregon has developed and administered the State Implementation Plan (SIP). The plan specifies a 22 percent reduction in emission levels statewide (from the baseline of 1982-1984) by the end of the year 2001. The Oregon Smoke Management Plan (OSMP), companion to the SIP, requires that prescribed burning be done only when atmospheric conditions prevent smoke from deteriorating air quality. The SIP also substantially constrains burning from July 4 through Labor Day in order to maintain visibility in Class I areas.

Map 3 shows areas of "non-attainment." Lakeview is a non-attainment area (areas not in compliance with air quality standards) which may be affected by prescribed burning activities.

A non-attainment designation means that previously within the Lakeview urban growth boundary, air quality exceeded one or more of the National Ambient Air Quality Standards. A 20-mile radius Special Protection Zone around Lakeview has been designated which restricts

burning within this area to help mitigate smoke impacts. The only air quality monitoring station in the SBR area is in Lakeview.

The South Central Oregon Fire Management Partnership has developed a smoke management plan to help limit smoke impacts into "designated areas or smoke sensitive areas." It was implemented and was effective during the 1999 spring burn season.

Forest and Woodlands

Forested land comprises 986,135 acres, or 15 percent of the sub-basin review area, and extends from the Warner Mountains on the south end, around Crooked Creek Valley and the Chewaucan River drainage, above Winter Rim and Thompson Reservoir, to the drier pine forest along the "desert edge" north of Ft. Rock and Christmas Valley. Most of these lands are managed by the U.S. Forest Service, primarily the Fremont National Forest. Other national forests which manage lands in the planning area are the Deschutes, Winema, and Modoc. The Lakeview District Bureau of Land Management (BLM) manages 14,455 acres of commercial forest land, mostly in relatively small, scattered tracts adjacent to national forest lands. Map 2 shows the extent and distribution of forest land in the subbasin review area, and Map 11 shows the distribution of western juniper woodland in the same area.

The Fremont National Forest, manages the largest area of commercial forest lands in the subbasin review area. Additional withdrawals and administrative changes since the forest was established have resulted in today's forest boundaries. After World War II, strong housing demand for timber resulted in steadily increasing timber harvests through the 1970's. In 1950, the Lakeview Federal Sustained Yield Unit (SYU) was created to help stabilize the economies of Lakeview and Paisley. About half the area of the Fremont National Forest is included in the Lakeview SYU (aka the Lakeview Working

Circle). All Forest Service timber originating within the SYU boundaries must be offered first to firms within the SYU, with the timber being processed in Lakeview or Paisley, before the Paisley mill closed.

Previous management of the forest, including that within the subbasin review area, focused on removing overstory trees to release residual smaller trees underneath. The present land and resource management plan (USFS, 1989) which prescribed both even-aged and uneven-aged management systems. The forest-wide annual allowable sale quantity (ASQ) for commercial timber production was determined to be 136 million board feet (24.7 million cubic feet). In

1992, the Forest Service's regional office required all Eastside forests, including the Fremont, to limit cutting of live (green) trees to trees below 21" in diameter. The effect of this restriction has been a reduced timber harvest, mostly of salvaged dead material, totaling only 20-40 million board feet per year (Bob Peterson, Fremont N.F., personal communication, 11-99).

Table 2-7 shows the average annual timber harvest in Lake County for three different time blocks since 1984. This shows how harvest has declined dramatically on USFS lands during that time, and that there has not been other harvest from other lands to offset that decline.

Years Averaged	Forest Industry	Other Private	State Land	USFS	Other Federal	Total
1984-1989	31,352	862	0	135,714	397	168,325
1990-1995	42,474	8,174	1	62,935	55	113,639
1996-1998	28,099	3,390	0	27,966	0	59,455

* thousand board feet
 Source: State of Oregon, Department of Forestry, Various Annual Reports

Suppression of wildfires continues to be a priority on the Fremont National Forest. In the late 1970's, an extensive prescribed burning program began, with the intent of reintroducing fire to the forest ecosystem and reduce fuel hazards, especially in the lower elevation ponderosa pine forests. This program has been successful thus far, but much work remains to be done.

East of the commercial forest lands is the drier High Desert Province. Precipitation is lower here than in the mountains, but is adequate for western juniper on many sites and ponderosa pine on a few scattered isolated sites.

Lakeview BLM's commercial forest lands,

consisting primarily of ponderosa pine, total 14,455 acres, which is just 1.6 percent of the commercial forest land in the planning area. The two most extensive BLM commercial forest areas are the isolated stands at Lost Forest (4,153 acres) and Colvin Timbers (591 acres). Since the Lost Forest was established as a research natural area in 1973, commercial pine forest lands there are not available for timber harvest or development treatments. The remaining 10,302 acres of commercial forest are widely scattered, and have relatively low stand volume. The natural fire regime, which previously prevented wide-scale juniper establishment, has been altered over the past century due primarily to fire suppression. This has allowed juniper to spread from less fire-

prone, rocky ridges, to sagebrush and riparian communities including aspen stands. Juniper has also invaded the dry fringes of the ponderosa pine stands, where it competes well with the pine. Western juniper woodlands now cover 372,218 acres, which is 5.6% of the planning area. The Lakeview District BLM manages the largest portion of these lands (219,471 acres). Large expanses of juniper woodlands are found in northern Lake County, from the Fort Rock-Christmas Valley area, to Frederick Butte and Wagontire Mountain. Other extensive areas of juniper woodlands are in the hills west of Warner Valley, on Juniper Mountain, and the hills east of Catlow Valley.

There are several forest and woodland community types in the SBR area. Table 2-8 shows the acreage by forest type in the SBR area. Western juniper is the most common and is typified by open canopy and short stature trees. It is often treated as an invasive pest, although some old growth sites are of research interest.

Ponderosa pine is usually found in the foothills margins bordering the upland conifer types of the Fremont and Deschutes National Forest. On BLM administered land, this plant community occurs in the Mazama Physiographic area in open stands.

Lodgepole pine is a common cover type is found throughout the area on mid-slopes and ridges on the national forests. In many places, it is a forest type responding to wild fires, not soil conditions. This cover type appears as a mosaic within the larger, regionally important cover types.

The mixed conifer community is a closed canopy forest found on the upper elevations of the national forests in the SBR area. This community is usually composed of a variety of conifer species as well as understory shrub and herbaceous species. Aspen communities are

scattered throughout the coniferous forests and sagebrush/grasslands of eastern Oregon in clonal clumps that are too small to map in most cases. On the Lakeview BLM administered lands, these communities occur in isolated pockets (snow drifts), in sagebrush areas, and can be found mixed with western juniper. In many places, western juniper is out-competing the aspen and some type of juniper management should be considered in order to maintain the aspen.

The sale of woodland products such as firewood, boughs, fence posts have increased in the last five years (Table 2-9). However, in relation to the resource, there is an opportunity to greatly increase these sales. At least one entrepreneur in Lake County is trying to develop a market for juniper wood in the form of slabs, chips, and specialty wood.

The condition and trend of the forest and woodland in the SBR area for the past 50-100 years has been an increase of western juniper resulting in a decrease of understory shrubs and herbaceous species; an increase in stocking of the forest types making them more susceptible to disease, insects and catastrophic fire; and a decrease in cottonwood and aspen stands. Almost all old growth pine has been logged off resulting in multi-story, multi-seral stage forests.

TABLE 2-8. ACRES OF FOREST TYPES IN THE SUBBASIN REVIEW AREA

FOREST VEGETATION CLASS	OREGON PORTION	CALIFORNIA PORTION	NEVADA PORTION	TOTAL PLANNING AREA
Lodgepole Pine	97,882	230		98,112
Ponderosa Pine	745,814	1,189		747,003
Mixed Conifer**	30,632			30,632
Western Juniper	359,432	12,192	594	372,218
Quaking Aspen***	7,904			7,904
Brush/Clearings****	102,484			102,484
TOTAL	1,344,148	13,611	594	1,358,353

• Source: GAP Vegetation Classification Projects in Oregon, California, and Nevada

** Includes Mountain Hemlock/True Fir/Lodgepole Pine, Subalpine Fir/Engelmann Spruce, and True fir/Douglas Fir types.

***Since minimum resolution is 30 meters x 30 meters, and minimum map unit size is only 320 acres, aspen stands, which are typically smaller than this, are assumed to be underestimated here.

****Brush/Clearings from Recent Fires or Cutting: these are forest lands, but are not identified by species.

TABLE 2-9. SALES OF VEGETATIVE PRODUCTS, BLM LAKEVIEW RESOURCE AREA, 1986-1998

YEAR	FUELWOOD			BOUGHS			LINE/CORNER POSTS		
	Permits	Cords	Value	Permits	Tons	Value	Permits	Posts	Value
1986	3	18	\$49	3	7	\$980	3	1,200	\$240
1987	4	33	\$115	3	2.3	\$322	1	250	\$50
1988	6	20	\$76	3	22	\$1,320	3	350	\$90
1989	1	3	\$9						
1990	5	51	\$363	1	2	\$121	1	70	\$21
1991	6	24	\$96	1	14	\$1,350	1	200	\$60
1992	5	11	\$44	2	4	\$399	2	150	\$55
1993	5	46	\$334	2	3	\$260			
1994	15	59	\$361	3	28	\$2,799	5	324	\$140
1995	24	80	\$317	6	14	\$1,420	3	175	\$80
1996	9	26	\$408	1	1	\$100	1	43	\$24
1997	17	60	\$265	2	.5	\$50	5	277	\$145

TABLE 2-9. SALES OF VEGETATIVE PRODUCTS, BLM LAKEVIEW RESOURCE AREA, 1986-1998

1998	17	57	\$348	1	1	\$10			
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Special Management Areas

Areas of Critical Environmental Concern

Four ACEC/RNAs have been designated in previous planning documents:

<u>ACEC</u>	<u>Acres</u>
Devils Garden	29,640
Warner Wetlands	40,730
Lake Abert	49,900
Lost Forest(RNA)/Sand Dunes	
<u>/Fossil Lake</u>	<u>30,000</u>
TOTAL	150,270

Map 7 shows the location of existing and proposed ACECs.

In 1992, the BLM contracted with the Oregon Natural Heritage Program to conduct a survey to evaluate plant and animal community Natural Heritage Cells represented within the RA and to look at previous ACEC nominations. Over 20 sites were examined and 10 sites were recommended for designation for both ACEC and Research Natural Area (RNA) status (Vander Shchaff, 1992). In addition, the Oregon Natural Resources Council, various Native American tribes, BLM staff, and Dr. Rick Miller(Oregon State University) made other nominations. Of those sites nominated, 15 areas were evaluated in detail to determine if they met the relevance and importance criteria. Fourteen of the areas met

the criteria and will be evaluated for designation. The Alkali Lake site did not meet the criteria and will not be considered further. The evaluations of the proposed ACECs are contained in a report entitled *Lakeview Resource Area ACEC and RNA Nomination Analysis Report* (BLM, 1999) which is available from the Lakeview Field office.

Another ACEC, The Pronghorn ACEC, was nominated by Oregon Natural Desert Association (ONDA) in 1998 (ONDA, 1998). This proposal involved BLM in Oregon and Nevada and contained approximately 1.1 million acres. The proposal was evaluated by the BLM offices in those states and the evaluation was published in a report entitled *ACEC Nomination Analysis for the Proposed Pronghorn ACEC* (BLM, 1999). The evaluation concluded that most of the area did not require special management to protect pronghorn habitat or that of other wildlife in the area. Those areas that did warrant special management were already being managed under some special designation or were already included in other areas proposed for ACEC designation.

Most of the areas were nominated to protect unique vegetation types, special status plants, and research opportunities. Some areas were nominated to protect cultural resources, including traditional cultural plant gathering areas valued by Native Americans. Table 2-10 lists the areas and proposed acres nominated for designation as ACEC and the resources to be protected in each area.

**TABLE 2-10
AREAS NOMINATED FOR ACEC DESIGNATION**

NAME OF PROPOSED ACEC	ACREAGE	RESOURCE VALUES (RELEVANCE/IMPORTANCE)
Conley Hills	3,161	Botanical and ecological values: Essential habitat for species diversity. Unique plant communities limited to this site in Oregon.
Sink Lakes	2,320	Botanical and ecological values: Low elevation vernal pool and sagebrush/sandberg blue grass scabland. Fills ONHP cells for Basin and Range Province.
Guano Creek	1,640	Botanical and ecological values: Big sagebrush/needle-and-thread community fills ONHP cell. Two rare plants; one known only from this site.
Hawk Mountain I	1,920	Botanical and ecological values: Outstanding example of biodiversity of high desert grassland steppe. BLM sensitive plant species.
Hawk Mountain II	5,295	Botanical and ecological values: Outstanding example of biodiversity of high desert grassland steppe. BLM sensitive plant species.
High Lakes	37,112	Cultural and botanical values: High concentration of rock art sites up to 7,000 years old. Diversity of plants and animals. Evidence of long-term use by tribal people. May be eligible for Traditional Cultural Property (TCP) designation.
Fish Creek Rim	1,298	Cultural and botanical values: High density of significant cultural resource sites in upland environment. Significant plant species diversity which represent three ONHP cells found in Oregon only at this site; BLM sensitive plants.
Spanish Lake	2,579	Botanical values: Diversity of salt desert scrub communities with limited distribution in RA and northern Great Basin.
Rahilly-Gravelly	19,292	Cultural and botanical values: High density and variety of significant cultural sites. Plant gathering area for Northern Paiute. May qualify as TCP. Presence of BLM sensitive plant species.
Foley Lake	2,300	Cultural and botanical values: Significant cultural sites related to resource procurement, settlement patterns, and religious practices. Important species diversity and BLM sensitive species.
Table Rock	6,513	Cultural, botanical, and scenic values: High density of unique site types. Presence of BLM sensitive species. May qualify as TCP
Black Hills	1,920	Botanical values: Ash plant community; ecologically diverse juniper community, age classes, with disjunct pine community. Two BLM sensitive plants.
Tucker Hill	12,485	Cultural and geological values: High density and wide variety of sites important for research and traditional cultural values. Presence of ancient beach erosion terraces. Unique plant community containing BLM sensitive species.
Juniper Mountain	5,000	Botanical values: Old growth juniper and high species diversity. Site of ongoing research.

**TABLE 2-10
AREAS NOMINATED FOR ACEC DESIGNATION**

NAME OF PROPOSED ACEC	ACREAGE	RESOURCE VALUES (RELEVANCE/IMPORTANCE)
Alkali Lake	570	Human-caused hazard: Hazardous waste storage area on adjacent State land. Oregon DEQ is managing.
Total Acreage	103,405	

Wilderness Study Areas

Wilderness study was completed in the Lakeview planning area as part of the Statewide Oregon Wilderness EIS completed in December 1989. Twelve wilderness study areas totaling 423,270 acres were evaluated and all or parts of 9 totaling 278,790 acres were recommended suitable for wilderness designation. The remaining 144,480 acres were recommended not suitable for wilderness designation. However, the entire acreage in the 12 areas will be

managed under BLM's Interim Guidelines for Lands Under Wilderness Review (BLM, 1995), better known as the interim management policy (IMP), until Congress acts on Oregon BLM's recommendations. Only Congress can designate wilderness or release areas from interim management. The total acreage and amount recommended suitable and unsuitable for designation is shown for each WSA in Table 2-11. Map 12 shows the location of the WSAs in the Lakeview Resource Area.

Table 2-11. Wilderness Study Areas and Instant Study Areas

Name of Area (WSA Number)	Total Acres within WSA	Acres Recommended for Wilderness Designation	Acres Not Recommended for Wilderness Designation
Devils Garden Lava Bed (OR-1-2)	29,680	28,160	1,520
Squaw Ridge Lava Bed (OR-1-3)	28,340	21,010	7,330
Four Craters Lava Bed (OR-1-22)	12,600	9,100	3,500
Sand Dunes (OR-1-24)	16,440	-0-	16,440
Diablo Mountain (OR-1-58)	113,120	90,050	23,070
Orejana Canyon (OR-1-78)	24,600	14,800	9,800
Abert Rim (OR-1-101)	23,760	23,760	-0-

Table 2-11. Wilderness Study Areas and Instant Study Areas

Name of Area (WSA Number)	Total Acres within WSA	Acres Recommended for Wilderness Designation	Acres Not Recommended for Wilderness Designation
Fish Creek Rim (OR-1-117)	16,690	11,920	4,770
Guano Creek (OR-1-132)	10,350	10,350	-0-
Spaulding (OR-1-139)	69,530	-0-	69,530
Hawk Mountain (OR-1-146A)	69,640	69,640	-0-
Sage Hen Hills (OR-1-146B)	8,520	-0-	8,520
TOTALS	423,270	278,790	144,480

Wild and Scenic Rivers

BLM is an active participant in managing designated Wild, Scenic, and Recreation Rivers, and in studying the eligibility, classification, and suitability of rivers listed in the Nationwide Rivers Inventory (NRI). Other potential rivers are also studied which include those identified by Congressional bills, BLM, or the public.

To be eligible for inclusion in the National Wild and Scenic Rivers System (NWSRS), a river must be free flowing and have at least one outstandingly remarkable river-related value within its immediate environment (usually a 1/4-mile corridor along each side of the river).

Currently, there are no rivers within the LRA that are designated or listed in the Nationwide Rivers Inventory. Six rivers in adjacent BLM Districts or National Forests have been designated.

The BLM and the Fremont National Forest evaluated the Chewaucan River and determined it did not meet the eligibility criteria of having "outstandingly remarkable" values (USFS and BLM, undated). Mixed land ownership of the

river corridor would also make management difficult if not ineffective.

Another joint eligibility assessment between the two agencies occurred in 1989 as a result of an appeal of the Fremont National Forest's Forest Plan. In an effort to resolve the appeal, the U.S. Forest Service agreed to assess the eligibility of five streams: Deep Creek, Honey Creek, Little Honey Creek (all of which flowed through

Lakeview RA and FS land), Dairy Creek, and the South Fork of the Sprague River (which flow through FS land). In these coordinated efforts, the only BLM-administered stream reach found to be eligible was Honey Creek (USFS and BLM, 1995, 1996b).

An evaluation of the remaining streams in the LRA was conducted during 1997 and 1998. An interdisciplinary team evaluated all possible drainages which were known to be perennial or intermittent, along with many springs, lakes, and drainages whose character was unknown. The evaluation report (BLM, 1999c) is available from the Lakeview RA office or on the Lakeview District web site. From this list, it was

determined which streams were free-flowing and if they had any outstandingly remarkable values. Two streams were found to be eligible for further study, Guano Creek and Twelvemile Creek (map 7). These creeks were tentatively classified concerning their degree of naturalness.

Significant Caves

The Federal Cave Resources Protection Act (FCRPA) of 1988 directed Federal agencies to prepare and maintain a list of significant caves. For a cave on public lands to be nominated, it must possess one or more of the following values: biota, cultural, geologic/ mineralogic/ paleontologic, hydrologic, recreational, or educational. The listing of significant caves involves two separate processes. During 1995, the initial listing process was coordinated by a national interagency effort in consultation with individuals and organizations interested in cave resources. This process had three steps: 1) nomination, 2) evaluation, and 3) listing. The second, or subsequent listing provides a means for updating the initial list, and will continue indefinitely. BLM supplemental procedures allow for an abbreviated subsequent process where field managers may directly list significant caves without going through the nomination process. If any part of the cave is determined to be significant, all of it is determined to be significant and is protected as such. If a cave is found to be significant, it is given interim protection until it can be incorporated into a resource management plan.

During the initial listing in 1995, nine caves were nominated by the Willamette Valley Grotto. Seven of these caves were found to be significant and are protected under interim management of the FCRPA. A subsequent listing of 62 caves was received in late 1995. Seventeen of these were eliminated from further review because they were duplicates of the first list, they were on private land, or they don't meet the definition of a "cave." Forty-five

caves still need to be field checked to determine significance.

Recreation

State and county roads provide access to a number of roads on BLM and Forest Service lands. These roads were originally built to provide access to the areas for commodity production including timber harvesting and livestock grazing. However, recreationists are also a major user of these roads at the present time. The subbasin review area provides numerous opportunities for dispersed recreation such as hunting, fishing, hiking, primitive camping, back country sightseeing, photography, nature study, rock hounding, wildlife viewing, caving, picnicking, off-highway vehicle driving, and others. There is also opportunity for recreation at several developed or semi-developed sites.

Although the majority of visitors to the LRA are from Oregon, an increasing number are from out of state and abroad. BLM attractions featured on recent editions of Oregon Public Broadcasting's "Oregon Field Guide" have further piqued the interest of high-desert enthusiasts. As visitors have experienced for themselves, there are many and varied opportunities for self-reliant recreational pursuits in the "Oregon Outback."

The heaviest recreation use occurs on holiday week-ends during the summer. Most recreation use on the BLM lands occurs in North Lake County and the Warner Wetlands. Most recreation use on the Forest Service land in the SBR area is on the Warner Mountains and in the Chewaucan River drainage.

There are a number of recreation sites on FS and BLM lands within the SBR area. These include a variety of sites such as rental cabins, developed campgrounds, locations of scenic or geologic interest, Watchable Wildlife sites, and hang-gliding launch sites.

Visitor use at the developed sites on BLM land averages about 120,000 visitors a year. Visitor use on the FS sites within the SBR area averages about 450,000 visitors per year. Several Special Recreation Permits are issued each year for commercial uses such as guiding and outfitting, wilderness therapy schools, and natural history tours.

In 1995 Congress authorized the Fee Demonstration Program which allows participating agencies to retain fees locally that are collected at recreation sites. The fees are then used for management and maintenance of those sites. There are seven fee sites on the Fremont NF including six rental cabins and one campground. These are all under the fee demonstration program. There are no fee sites on the BLM land.

Recreation areas on BLM land are designated as either special recreation management areas (SRMA) or extensive recreation management areas (ERMA). Warner Lakes SRMA is the only SRMA currently designated (Map 12). Developed facilities in the SRMA include the Hart Bar Interpretive Site, the Warner Lakes Overlook, and a canoe trail through the lakes and channels in the north end of the wetlands. North Lake County is a potential SRMA and its suitability as such will be analyzed in the RMP/EIS. The Oregon Back Country Discovery Route, part of a off-highway-vehicle route from Mexico to Canada runs through the FNF and BLM, is also a potential SRMA.

The rest of the resource area is currently managed as an ERMA. In these areas, management actions to facilitate recreation opportunities are limited primarily to providing basic information and access. People visiting ERMAs are expected to rely heavily on their own equipment, knowledge, and skills while participating in recreation activities.

The Fremont National Forest lands within the subbasin area are categorized based on the

Recreation Opportunity Spectrum (ROS). The categories vary from primitive recreation in the Gearhart Mountain Wilderness area to roaded modified in the developed campgrounds. The majority of the forest is classified as roaded natural, i.e. there are roads providing access to the forest, but otherwise the area is essentially natural.

Most of the Lakeview Resource Area (2,607,664 acres) is designated as open to off-highway vehicle (OHV) travel. Through several planning amendments and emergency vehicle closures, areas have been designated as closed or limited to existing or designated roads and trails. OHV use in the Abert Lake ACEC and the WSAs is limited to existing roads and trails. OHV use in the Warners Lakes ACEC is limited to designated roads and trails. The Sand Dunes WSA is open to OHV use. Map 13 shows the existing OHV designations in the resource area. Some areas, especially on the forest are heavily roaded which is causing damage to other resources, primarily watershed and water quality Map 14 shows road densities in the subbasin review area.

The main workload for special recreation permits concerns use by wilderness therapy schools. Currently, three schools operate in northern Lake County and southern Deschutes County and one group operates in eastern Lake County and portions of western Harney County. These schools are designed to benefit adolescents aged 13-18 who are experiencing problems such as substance abuse, depression, oppositional and defiant behavior, and emotional problems. Generally, students are supervised in a remote, nomadic camp setting learning basic survival skills. The programs are designed to remove the student from their familiar settings and supports, and enable them to learn to accept accountability for their actions in an unfamiliar, harsh environment.

Due to the rapid increase in students participating in the programs, particularly in north

Lake County where three of the groups operate, conflicts have occurred concerning public safety, road conditions, runaways, wildlife, and use of resources. An incident involving two runaways in 1999 led to BLM instituting a moratorium on these schools, which prohibited any new schools operating in the LRA and limited the number of students participating in each school.

Visual Resource Management

Visual resources are the land, water, vegetation, structures, and other features that make up the scenery of BLM-administered lands. In order that scenic values can be considered when planning management activities, BLM-administered lands are classified according to their relative worth from a visual resource management (VRM) point of view. Because it is neither desirable nor practical to provide the same level of management for all visual resources, it is necessary to systematically identify and evaluate these values to determine

the appropriate level of management.

VRM classes specify management objectives to preserve scenic quality. The classes are based on scenic quality, sensitivity levels and distance zones. Class I is the most sensitive class and is applied generally to very high scenic quality or to Congressionally designated areas such as Wilderness areas and wild and scenic rivers. No change to the landscape is allowed. Class II includes areas with high to moderate scenic quality and allows for slight changes to the landscape. Class III includes areas of moderate to low scenic quality and allows for moderate changes in the landscape. Class IV is the least sensitive class and includes areas of low scenic quality and allows for high alterations to the scenic quality. Table 2-12 shows the acreage in the resource area in each VRM class and Map 14 shows the location and extent of each class.

TABLE 2-12. VISUAL RESOURCE MANAGEMENT CLASSES

VRM Class	Acres	Percentage of the BLM Land Base	Representative BLM Areas
I	493,889	15%	Wilderness Study Areas, Research Natural Areas, Abert Rim corridor.
II	141,429	5%	Deep Creek, Twentymile and Twelvemile Creeks, Fish Creek Rim, Table Rock
III	297,784	9%	Warner Wetlands ACEC, Highways 140 and 31 corridors, Lake Abert ACEC
IV	2,270,271	71%	Seldom seen areas of low visual quality and low sensitivity.

Sources: *Lakeview Grazing Management FEIS* (BLM, 1982), *High Desert MFP Amendment/FEIS* (BLM, 1996), *Oregon Wilderness FEIS* (BLM, 1989)

Human Uses and Values

The SBR area encompasses most of Lake

County and portions of Harney and Deschutes Counties in Oregon. Very small portions of Modoc County in California and Washoe and Humbolt Counties in Nevada are included. To

effectively compile an economic profile of the subbasin review area, Lake and Harney Counties were selected as the analysis unit.

The primary economic center of Lake County is the town of Lakeview. The major economic center of Harney County is the Burns/Hines area, about 50 miles northeast of the SBR area. Several smaller communities are located within the SBR area, but generally offer limited services.

ICBEMP examined the Lake and Harney County areas in general. Forest Service lands are 19.3 percent of the land base and BLM 48.7 percent. The ICBEMP findings reveal 1) the importance of public land timber and forage to the county, and 2) 20 percent of the county budget is derived from federal land payments. As a result, both Lake and Harney County are considered to be areas of low economic and social resiliency (USDA, 1996). Resiliency is defined as the ability of the communities to adapt

to change and is a function of economic structure, physical infrastructure, civic leadership, community cohesiveness, and amenities. (USDA, FS, 1996)

Lake County population is 7,400 (1998 est.) with a slightly higher percentage in the over-65 age group in comparison to the rest of the state. Ethnic diversity is limited and is represented primarily by Native Americans and Hispanics. Table 2-13 shows populations for the State of Oregon and Lake and Harney Counties since 1980. Populations in both counties have decreased slightly since 1980.

Native American residents often participate in unique cultural practices associated with reserved treaty rights such as hunting, fishing, and gathering plants for food or ceremony. No reservations are located in Lake County; however, the Klamath Tribes have reserved treaty rights.

TABLE 2-13. CENSUS POPULATION, STATE, COUNTY AND TOWNS,

LOCALITY	1980	1990	1998
Oregon	2,633,156	2,842,321	3,267,550
Lake County	7,532	7,186	7,400
Lakeview	2,770	2,526	2,640
Paisley	343	350	365
Uninc.	4,419	4,310	4,395
Harney County	8,314	7,060	7,600
Burns	3,579	2,913	3,015
Hines	1,632	1,452	1,550
Uninc.	3,103	2,695	3,035

Source: Edmunston, 1998 and Wineburg, 1998

The total employment in Lake County peaked in 1994 and has been declining with a loss of 360 jobs between 1994 and 1998. Most of the loss has been in the manufacturing sector, especially

in lumber and wood products manufacturing. In Harney County total employment over the past 20 years was lowest in 1980 and 1995. From 1995 to 1998 jobs increased by about 500 in Harney County. The trade and service sectors

employment has increased in both counties, but at much slower rates than statewide.

Personal per capita income is \$16,317 in Lake County and \$15,071 in Harney County in 1995. Both of these figures are substantially below the statewide per capita income of \$21,530 that same year.

From 1990 to 1997, payments in lieu of taxes to each county has averaged approximately \$310,000 a year.

Lands and Rights-of-Way

The majority of the public land in the Resource Area is generally well-blocked with the larger private land blocks occurring in the valleys where the land is more fertile and water available for agricultural production. Rural home sites also occur throughout the agricultural areas with large State Land blocks intermingled throughout the areas of well blocked public lands.

Approximately 41,380 acres of BLM administered lands were identified in the 3 MFPs for disposal. The primary means of disposal would be through exchange with emphasis on acquiring state and private land within or adjacent to special management areas such as wilderness study areas (WSAs) and ACECs. Any lands acquired would be only from willing sellers. BLM has acquired 10,340 acres in the Warner Wetlands since the area was designated an ACEC in 1989. Approximately 5,000 acres of BLM land has been sold in the Fort Rock/Christmas Valley area since 1994.

Several major rights-of-way (ROW) for electrical distribution lines run through the SBR area. All WSAs are managed as interim ROW exclusion areas under the IMP policy (BLM,

1995). Additional avoidance or exclusion areas may be identified relative to the designation of any proposed ACECs. There are a total of seven major communication sites on BLM lands and one on FS lands.

Approximately 21,000 acres of BLM-administered land have been withdrawn for specific uses including public water reserves, research natural area, U.S. Air Force radar site, and a wildlife reserve. These withdrawals are shown on Map 16.

Unauthorized use and occupancy is not a major problem on the BLM land. There are no known cases of unauthorized occupancy. Twenty-four cases of unauthorized use have been reviewed and all but three cases have been resolved.

Minerals

Past mineral activity in the Lakeview Resource Area (LRA) has included exploration for and production of sand, gravel, rock, cinders, decorative stone, sunstones (a semiprecious gemstone), and diatomaceous earth. Minor amounts of perlite, mercury, gold, lead, and zinc have been produced from scattered sources. Currently, the principal mineral activities in the resource area are the production of gravel and rock for the maintenance of county roads and state highways and the mining of sunstones in Rabbit Basin north of Plush, perlite on Tucker Hill, and diatomaceous earth in Christmas Valley.

The Lakeview Resource Area has responsibility for managing approximately 3,239,000 acres of mineral estate in the planning area (Table 2-14). Mineral estate ownership, federal vs non-federal, is shown on Map 15. Areas that are currently withdrawn from mineral entry are shown on Map 16.

TABLE 2-14. MINERAL ESTATE IN THE LAKEVIEW RESOURCE AREA

CATEGORY	ACRES
BLM Surface and Mineral Estate	3,043,900
Reserved Mineral Estate - no surface, all minerals	113,900
Reserved Mineral Estate - no surface, partial minerals	7,110
Reserved Mineral Estate - all surface, partial minerals	700
Acquired Minerals - (estimated)	73,200
TOTAL	3,238,810

In September 1999 there were 368 mining claims in the resource area. Most of these were in the Rabbit Basin sunstone area. The rest were associated with Tucker Hill perlite deposits and the diatomaceous earth deposits in Christmas Valley.

There are three designated Known Geothermal Resource Areas (KGRAs) within the LRA. Most of the LRA has potential for geothermal energy, as indicated by high heat flow. In addition to high heat flow, the Summer Lake/Paisley, south Warner Valley, and Lakeview areas contain hot springs and hot wells. Currently, geothermal energy is used only on private land for heating homes and greenhouses in the Lakeview area and for mineral baths in the Summer Lake area. With anticipated energy shortages in the Pacific Northwest and the focus on global warming, the clean geothermal energy resources that are present beneath the LRA could become more important. It is also anticipated that the demand for minerals for road construction and maintenance will increase. The demand for decorative stone is expected to increase significantly.

Potential for the occurrence of oil and gas is moderate in the south half and extreme northwest corner of the resource area. However, no areas are currently leased and no exploration is occurring. The potential for the occurrence of base and precious minerals is moderate to high in a number of areas that have been mined in the past such as Coyote Hills,

Paisley Hills and Horsehead Mountain. However, no active mining is occurring in these areas at present.

There is potential for sodium extraction at one or more of the alkaline lakes in the LRA. In the past there has been some interest, but nothing was ever fully developed.

Maps 17, 18, and 19 show the mineral potential for saleable (sand, gravel, building stone), locatable (precious and base metals), and leasable (oil, gas, geothermal, sodium) minerals, respectively, within the Lakeview Resource Area.

Cultural Resources

The archaeological record is extensive in terms of site numbers and age. Evidence exists in the Lakeview Resource Area for some of the earliest occupation in North America. This is shown by the presence of Clovis materials and sites. The Clovis Period is the earliest presently described cultural period for North America, dating from 12,000 to about 10,000 years ago. Following the Clovis Period, the Stemmed Point Period was present from about 10,000 to 7,500 years ago. Following this was the Archaic Period which lasted with some changes over time to the period of contact and the Historic Tribes of the area.

In 1840, when the first white men came through this part of Oregon, four Native American tribes were the primary occupiers or visitors of what is

now the BLM Lakeview Resource Area. The Northern Paiute occupied most of the area. The Yahuskin Band of the Northern Paiute occupied the north part of the resource area around Silver Lake, Christmas Valley, and Summer Lake while the Fort Bidwell Band and the Harney Valley Band lived in the eastern and southeastern portions. Indian people from the Warm Springs area to the north and Klamath and Modoc from the west would have also used portions of the resource area. In pre-contact periods (before European men), it is unclear what tribe or tribes held the territory on a consistent basis. What we do know is that Indian people have lived in the resource area for over 12,000 years.

Cultural resource sites in the resource area range from small lithic, or stone tool, scatters of only a few flakes to large lithic workshops at quarry locations which cover many square miles. There are village locations, small temporary campsites, hunting stations, hunting blinds, game drives, rock art, spiritual sites, burial and cremation sites, and collecting sites present within the resource area. Areas where water is located and where resources such as stone for tool making and food plants can be found are the main locations of these sites.

Several potential Traditional Cultural Properties (TCP) have been identified in the Lakeview Resource Area. A TCP is a place that is eligible for inclusion in the National Register of Historic Places because of association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b), are important to maintaining the continuing cultural identity of the community. These potential TCPs have been identified through consultation with tribal governments of the region. The majority of these are currently under consideration for designation as Areas of Critical Environmental Concern for future management and protection.

There are a few National Register sites in the

Lakeview Resource Area. National Register Sites are unique, provide information important to the study of history or prehistory, and are connected to important events or important persons. Those in the LRA are:

- Abert Rim National Register District
- Greaser Petroglyph National Register Site
- Picture Rock Pass National Register Site

Potential National Register sites, including TCPs, in the LRA are:

- High Lakes area
- Rahilley-Gravely TCP area
- Tucker Hill TCP area
- Table Rock TCP area

There are several important paleontological sites in the LRA including Fossil Lake, a fossil camel site, and the Rattlesnake Butte formation.

Within the Lakeview Resource Area, many locations contain remains from the history of Lake County. These include the remains of historic roads and trails, Civilian Conservation Corps camps and project locations, abandoned mines and mine processing locations, ranch houses, corrals, cemeteries, and abandoned logging/sawmill locations. Two important historical sites needing special management are the Shirk Ranch and the Oregon Central Military Road.

Hazmat

There is one known hazardous waste site adjacent to BLM land in the resource area. The 10.3 acre, Alkali Lake Chemical Waste Disposal Area (CWDA), Lake County, Oregon, is owned, operated and monitored by the Oregon Department of Environmental Quality. The CWDA is the storage site for approximately 25,000 fifty-five gallon drums of distillation residue from the manufacturing of herbicide during 1967 to 1971. The hazardous substances found in the soil and ground water near the

CWDA include chlorophenoxiphenols, chlorinated phenols, chlorinated dibenzodioxins, and chlorinated dibenzofurans. The contaminants are transported off site by wind and water. The CWDA has been fenced, however the lands surrounding the CWDA are Federally owned public lands. These lands are open to multiple use such as cattle grazing, hunting, hiking and general public recreation. The BLM and DEQ took additional steps to protect the public in 1990 by fencing out the area of known groundwater contamination. DEQ continues to monitor the site and surrounding area for groundwater contamination.

Roads

Approximately 2,500 miles of roads are on the resource area's road inventory (Map14). Many miles of roads not on the inventory also exist on the public land. These roads are used by BLM personnel for administrative access, ranchers and other permittees, and the general public seeking recreation opportunities.

The BLM maintains approximately 150 to 200 miles of roads each year. Roads are maintained at various levels, depending on maintenance needs and funding. The assigned maintenance level reflects the appropriate maintenance that best fits the Transportation Management Objectives for planned management activities. Roads are prioritized for maintenance needs as described in Table 2-15. The table shows the roads by maintenance level that are on the Lakeview Resource Area Transportation Plan.

Road construction and road densities are issues in the subbasin review area. (Appendix B). Findings from ICBEMP indicate that road-associated factors have had a generally negative affect on wildlife species and habitats. (Wisdom, et al. in press).

The Lakeview Ranger District of the Fremont National Forest has implemented a program of identifying unneeded roads and closing and rehabilitating them.

TABLE 2-15 MILES OF ROADS BY MAINTENANCE LEVEL ON THE LAKEVIEW RESOURCE AREA TRANSPORTATION PLAN

MAINTENANCE LEVEL	DESCRIPTION	MILES
Level 1	<ul style="list-style-type: none"> - Minimum maintenance to protect land and resources - Not needed; closed to traffic; remove from transportation system - Maintain drainage and runoff patterns to protect adjacent land and resources. 	0
Level 2	<ul style="list-style-type: none"> - Limited administrative traffic with high clearance vehicles - Maintenance only to correct drainage problems and to allow passage of high clearance vehicles. 	1,600
Level 3	<ul style="list-style-type: none"> - Open seasonally or year-round for all traffic - Natural or aggregate surface but may include low grade asphalt surface. - Defined cross sections with drainage structures which are inspected annually and maintained as needed. - Maintained to provide reasonable level of comfort and safety, with emphasis on maintaining drainage. 	550

TABLE 2-15 MILES OF ROADS BY MAINTENANCE LEVEL ON THE LAKEVIEW RESOURCE AREA TRANSPORTATION PLAN

<p>Level 4</p>	<ul style="list-style-type: none"> - Open year-round (depending on snow conditions) - Connect recreation sites, administrative sites, local roads to county, state or Federal roads - Single or double lane aggregate or asphalt surface with high volume of recreation and commercial traffic 	<p>385</p>
<p>Level 5</p>	<ul style="list-style-type: none"> - Open all year-round with highest traffic volume. - Asphalt surface - Maintained at least annually and have a preventive maintenance program 	<p>0</p>

3. EXISTING MANAGEMENT SITUATION

EXISTING MANAGEMENT DIRECTION

This section describes the existing management direction provided by the three existing land use plans and associated NEPA documents applicable to the Lakeview Resource Area. These documents include the Warner Lakes Management Framework Plan (MFP) (BLM 1983a), High Desert MFP (BLM 1983b), Lost River MFP (BLM 1983c), and Lakeview Grazing Management Final Environmental Impact Statement (FEIS) and Record of Decision (ROD)(BLM 1982a and 1982b). Since completion of these plans, three plan amendments have also been completed. Two amendments address designation and management of two Areas of Critical Environmental Concern (ACECs) (BLM 1989c, 1989b, 1990b, 1990c, 1990d, 1996c, and 1996d). The third amendment addresses a transfer of land management jurisdiction between the Hart Mountain National Antelope Refuge and the Lakeview District of BLM (U.S. Fish and Wildlife Service and BLM 1998a and 1998b).

In addition, a number of activity plans have been completed in recent years to provide site-specific resource management guidance. These have included ACEC management plans, resource area-wide fire management plan, OHV management plans, mining plans of operation, allotment management plans, habitat management plans, noxious weed management plans, and wild horse herd management area plans.

Management direction from the three MFPs and three plan amendments that is still valid will be carried forward in the RMP/EIS as direction common to all alternatives. Those management directions/actions from the three MFPs and plan amendments that are valid but need some modification in wording or intent will be incorporated into the alternatives of the RMP/EIS. The themes of the alternatives are described in Chapter 5 of this document. The complete description of the management direction from the RMPs is contained in the full Analysis of the Management Situation document at the Lakeview Field Office (BLM, 2000).

In addition to the direction in the MFPs and other documents described above, various resource programs are directed by laws such as the Clean Water Act, Endangered Species Act, National Heritage Preservation Act, Wild and Free-Roaming Horse and Burro Act, Taylor Grazing Act, and other legislation. The Federal Land Policy and Management Act (of 1976) provides the basic authority and management direction for all BLM programs. BLM Manuals, handbooks, and policy memos provide additional, specific guidance for the various programs. This direction is incorporated into the general and specific planning criteria for the RMP/EIS. These criteria are summarized in Chapter 5 of this document.

Table 3-1 shows those decision documents that have undergone NEPA analysis and are currently valid.

TABLE 3-1 EXISTING DECISIONS VALID WITHOUT FURTHER ANALYSIS		
RESOURCE	DECISION OR DOCUMENT NUMBER	SUMMARY
Wetland ecosystem	Decision Record for the Warner Lakes MFP Amendment for Wetlands and Associated Uplands. 1989	Designated the Warner Lakes ACEC and prescribed management for ACEC and adjacent allotments.
Vegetation	Oregon Noxious Weed Control Records of Decision (ROD) for the Northwest Area Noxious Weed Control Plan EIS and Supplemental EIS. 1984	Prescribe allowable noxious weed control activities on BLM-administered land in the state.
Vegetation	Decision Record for the Integrated Noxious Weed Control Plan in the Lakeview Resource Area, EA# OR-93-013-03-01. 1984	*Analyzed use of physical, chemical, biological, and cultural methods for controlling noxious weeds.
Lake and wetland ecosystem and upland habitat	ROD for the High Desert MFP Amendment for the Lake Abert ACEC. 1996	Designated Lake Abert ACEC and prescribed management direction and actions.
Rangeland and wildlife habitat	Finding of No Significant Impact, Draft Plan Amendment, Warner Lakes MFP, for Jurisdictional Land Exchange between Hart Mountain National Wildlife Refuge and Lakeview District, BLM. EA# OR-010-97-05. 1998	Transferred management of 12,880 acres of BLM-administered land to USFWS and 7,870 acres of USFWS-administered land to BLM.
Rangeland and wildlife habitat	ROD for the Beaty Butte Allotment Management Plan and EIS. 1998	Prescribed livestock grazing management on a 500,000 (approx.) acre allotment. Included specific prescribed fire.
* A court injunction in 1984 limited BLM to the use of four herbicides on public land in Oregon. This injunction is still in effect.		

EXISTING MANAGEMENT SITUATION BY RESOURCE

This section summarizes current management direction for each resource program in the Lakeview Resource Area. As noted above, this management direction is based on the existing MFPs, as amended, and the various activity or program-specific plans.

Soils

Soil protection stipulations are prescribed for surface-disturbing projects. An ecological site inventory (ESI), based on soil types and conditions, is being conducted in the Lakeview Resource Area. This inventory will enable soil characteristics and soil correlation data to be addressed on a project-specific basis, and appropriate mitigation measures will be developed to protect soils.

Vegetation

Special status plant species are protected from disturbance by various measures. Those protective measures include: restrict OHV use, avoid plant sites during project construction, and fence habitats and other management activities. Upland vegetation is managed to minimize soil erosion and improve ecological condition where necessary.

Watershed and Water Quality

Watersheds are managed to comply with the Clean Water Act. The ESI data being compiled will help the resource area determine watershed condition and develop appropriate measures to protect and enhance watersheds and improve water quality.

Riparian and Wetland Vegetation

In 14 pastures containing riparian areas, livestock grazing is managed with a primary focus to improve riparian vegetation in those pastures. A number of riparian areas have been fenced to control or exclude livestock. Most streams and associated riparian zones in the resource area are in proper functioning condition (PFC).

Rangeland/Grazing

Livestock grazing in the resource area is guided by the *Standards for Rangeland Health and Guidelines for Livestock Grazing Management* approved by the Oregon/Washington State Director. (BLM, 1997b). Allotments are managed based on three categories (Maintain, Improve, and Custodial). These categories determine priorities, need for range improvements, and other management actions.

Noxious Weeds

The noxious weed program is governed by protocols in various documents (see Table 3-1). The flexibility of the weed control program allows the resource area to address the spread of new weeds and ongoing implementation of different control methods. Annually, the BLM monitors changes in distribution and new introductions of noxious weeds. Weed control in the Warner Basin is guided by the Warner Basin Weed Management Area Plan (BLM, 1998).

Fisheries Habitat

Several miles of streams and adjacent riparian zones are fenced to protect and enhance fisheries and riparian habitats. In addition, five pastures containing stream habitat are managed under consultation with the USFWS to protect the endangered Warner sucker.

Wildlife Habitat

The wildlife program has developed numerous stipulations and management actions to mitigate for various disturbances, including livestock grazing, OHV use, mining, and road construction. Several habitat management plans (HMPs) have been developed to guide wildlife habitat management in specific areas and to benefit specific species.

Wild Horses

Wild horses in the resource area are grouped into two herd management areas, Paisley Desert and Beaty Butte, each of which have a herd management area plan to describe management for their respective herds (BLM, 1977, 1994g, 1995c). Horses in each area are gathered about every three to four years to maintain herd numbers at the appropriate management level. Horses removed from the herds are made available for public adoption.

Fire Management

The resource area has an active prescribed fire program that has resulted in burning about 3,000 acres per year since the mid-1980s. Due to the success of the program and increasing emphasis on the use of prescribed fire, the number of acres burned has grown in recent years. Prescribed fire and wildfire are both managed according to BLM policy and the resource area's existing fire management plans (BLM, 1996g and 1998e).

Air Quality

Management activities, including prescribed fires, are designed to minimize air pollution to meet State of Oregon DEQ standards. Prescribed burn plans consider generation and dispersal of smoke and other air pollutants and include specific measures to reduce or minimize air pollution.

Forest and Woodland

The commercial forest lands in the RA are being managed as protection sites. Timber harvest occurs only for forest health reasons. There has been no commercial timber harvest in the Lakeview Resource Area since before 1973. Juniper woodlands are managed for wildlife habitat and for commercial and general public use, including firewood and post cutting, and collection of boughs. Areas invaded by juniper are treated by cutting and/or prescribed burning to improve ecological site conditions. Areas where juniper has increased to the detriment of other vegetation are treated by cutting and/or prescribed burning to improve ecological site conditions.

Special Management Areas

Four designated ACECs exist in the resource area. The Devil's Garden and Lost Forest/Sand Dunes/Fossil Lake ACECs were designated by the High Desert MFP (BLM, 1985) and are

managed according to its direction. The Warner Lakes and Lake Abert ACECs are managed according to management plans developed with the MFP amendments (see Table 3-1). A total of 15 other areas have been nominated and found eligible for designation. Twelve Wilderness Study Areas are managed under the Interim Management Policy for Areas Under Wilderness Review (BLM, 1995)

Recreation

Outdoor recreation in the resource area is managed to meet public demand for recreation opportunities, to the extent possible, while providing for public health and safety. Recreation use is increasing in north Lake County. One special recreation management area (SRMA) in the resource area has developed sites. The rest of the area is an extensive recreation management area (ERMA).

Visual Resource Management

High-quality scenic areas are protected from degradation, and existing visual intrusions in high and medium-quality scenic areas or high visitor use areas are mitigated on a case-by case basis. The Wilderness Study Areas and the Abert Rim are managed as VRM Class I. VRM classes for the rest of the resource area are shown in Table 2-12 and Map 15.

Human Uses and Values

Commodity production from the public lands is provided to the extent possible within sustained yield capabilities of the resources and while complying with legal mandates for protecting resources such as threatened/endangered species, water quality, and cultural reasons. BLM closely coordinates with local and tribal governments on major actions.

Lands and Rights-of-Way

Some BLM-administered land may be disposed to meet BLM or public needs. Most lands are retained to protect resource values. Other land may be acquired to meet the needs of other resource programs, such as for wildlife habitat or ACEC management. Rights-of-way are provided to meet public or commercial demands.

Minerals

Exploration, development, and production of locatable minerals in the resource area are governed by the Mining Law of 1872. Notices and plans of operations are processed according to regulations. Currently, interest in leasable energy minerals such as oil, gas, and geothermal in the resource area is low, but any lease applications would be processed according to current BLM procedures. Salable minerals are available as needed for public and commercial use.

Cultural/Paleontological Resources and Native American Values

Emphasis is on protecting cultural resource sites that are, or may be, potentially eligible for nomination to the National Register of Historic

Places. Close coordination is maintained with local Native American Tribes concerning use and protection of traditional use areas. The program also protects significant paleontological sites, such as Fossil Lake.

Hazardous Materials

All incidences of hazardous materials on BLM-administered land in the resource area are handled per the Lakeview District contingency plan. (BLM, 1999). BLM will continue to coordinate with Oregon DEQ with respect to monitoring and managing the Alkali Lake site. Under current BLM policy, no public lands will be leased or permitted for storage, treatment, or disposal of hazardous waste. Also, public land will not be leased for sanitary landfills.

Roads

Approximately 2,500 miles of roads are on the resource area's road inventory. These roads are used primarily by grazing allottees, BLM personnel for administrative access, and the general public for recreation access. The BLM maintains approximately 150 to 200 miles of roads each year depending on funding and priorities.

4. MANAGEMENT OPPORTUNITIES (RECOMMENDATIONS AND INTEGRATED PRIORITIES)

INTRODUCTION

Identification of potential management opportunities is step 5 in developing the AMS. Management opportunities are actions or management direction that could be taken to resolve the issues and management concerns identified in Chapter 1 of this document. Management opportunities include those that would maintain or enhance resources, increase or decrease production or use, and minimize depletion of or improve conditions of resources that BLM or other agencies manage. The management opportunities are the basis for developing action alternatives in the RMP/EIS.

Management opportunities and the resulting action alternatives must consider the capability of the land to achieve the desired objectives. Capability in resource management is the ability or potential of a unit of land to produce resources, supply goods and services, or allow resource uses under a set of management practices at a given level of management intensity without permanently impairing the resources involved. Capability usually depends on a fixed set of environmental conditions that are relatively stable over time. Most land has an inherent capability to produce one or more resources, or to allow resource uses, under natural conditions. Capability analysis allows the manager to identify specific uses or management practices that cannot be allowed on certain areas due to certain environmental conditions.

This section also serves as Step 4 of the subbasin review process, which is to develop recommendations and determine integrated priorities (see Appendix B). Management

opportunities serve as the recommendations for the subbasin review area. Priority setting was done for critical subbasin issues, including watershed and water quality, juniper woodlands, and noxious weeds. Additional priority setting can be done by the individual agencies participating in the subbasin review process. For the BLM-administered lands and resources considered in the subbasin review, priorities for the various management opportunities will be set during preparation of the RMP/EIS. These recommendations and their priorities will provide management direction to resolve issues and management concerns for the next 10 to 20 years.

The Interior Columbia Basin Ecosystem Management Project (ICBEMP) scientific assessments identified a number of findings that were determined by BLM staff to be applicable to the resource area and to this planning effort (FS and BLM, 1999). Those applicable findings will be addressed in the RMP/EIS.

MANAGEMENT OPPORTUNITIES BY RESOURCE

The following sections identify management opportunities for all or portions of the subbasin review area. Some opportunities—such as those for lands, minerals, and recreation—apply only to BLM-administered land.

Soils

Maintain watershed function by evaluating soil characteristics and soil correlation data from the ecological site inventory (ESI) on a project-specific basis and developing appropriate

mitigation measures to protect soils.

Limit soil erosion by specifying mitigating measures that protect or minimize loss of vegetative cover and minimize soil-disturbing activities during project implementation.

Develop appropriate mitigation measures to maintain or reduce impacts to microbiotic soil crusts where they exist. In areas where soil crusts occur, evaluate impacts before implementing projects.

Gain better knowledge and understanding of the ecology, floristics, and distribution of microbiotic crusts. Continue to document the presence of crusts wherever they are found.

Support research to increase understanding of relationships between microbiotic crusts and soil hydrology in the Northern Great Basin, as well as the effect of fire on microbiotic crusts.

Vegetation

Analyze actions for their effect on sustainability of vegetation/plant communities and overall biodiversity. This “screen” would be done during the planning process for on-the-ground actions.

Identify areas that are high potential for the presence of rare plants or plant communities. Where possible, include these areas in designated ACECs and develop management guidance and actions to protect these plants and plant communities.

Provide special management/protection for special status plant species and plant communities. As part of that protection, prepare and implement Conservation Agreements for sensitive plant species.

Protect plant communities important for traditional uses by area tribes. The protection would include identifying management actions

for ACECs that have plant communities of tribal value.

Develop policy for collecting vegetative products, including for both commercial and personal use, on a sustainable basis. Juniper woodland products are addressed in the Forest and Woodland section.

Rehabilitate areas having small amounts of herbaceous understory in shrub-grassland communities. Priority areas to be rehabilitated include closed roads, old mine sites, and other areas where vegetation has been removed.

Maintain or enhance herbaceous understory in shrub-grassland, wetland, riparian, juniper woodlands, etc.

Develop a strategy to maintain or enhance aspen stands. The strategy would include developing a priority process for treating aspen areas most at risk.

Watershed/Water Quality

Assess fifth and sixth field watersheds using the federal protocol “Ecosystem Analysis at the Watershed Scale” in the order developed by the Subbasin Review. Coordinate with other management agencies. High priority watersheds are:

- Honey Creek Watershed (1712000706)
- Twenty-Mile Watershed (1712000704)
- Bridge Creek Sub-watershed (171200052701)
- Buck Creek Watershed (1712000529)
- Guano Valley Watershed (1712000824)
- Alkali Lake Watershed (1712000510)

Coordinate with State of Oregon in managing water resources by reviewing water quality standards; listing water quality impaired waters; developing Total Maximum Daily Loads (TMDLs) for watersheds with 303(d) streams; and developing, implementing, monitoring and improving Best Management Practices (BMPs).

Develop water quality management plans with other agencies when appropriate.

Monitor and document stream/riparian conditions to demonstrate management is moving towards site potential. Inventory riparian areas to determine their current condition, potential natural condition, and desired condition. Complete the riparian inventory in Warner Basin by the year 2003, and the remainder of the resource area by 2007.

Consider watershed processes and water quality and quantity in program and resource decisions. Incorporate Best Management Practices into other projects and plans. Monitor projects to determine if watershed goals and water quality standards are being met.

Manage all watersheds to provide for capture, storage, and safe release of water.

Restore dimension, pattern, and profile of streams based on their potential natural condition.

Manage for stream and riparian conditions that meet State of Oregon water quality standards.

Prohibit management activities that would increase water temperature within a zone of influence around all 303(d) streams listed for temperature.

Designate undisturbed watersheds as control watersheds throughout the resource area for the purpose of study. Develop management strategies and actions to maintain these in undisturbed condition.

Riparian and Wetland Vegetation

Develop goals and objectives for managing riparian areas based on site potential.

At a minimum, maintain proper functioning condition (PFC) on those streams and wetlands

currently in PFC. Implement measures to move other areas towards PFC. Measures could include, but are not limited to, fencing to remove grazing or changing grazing management, such as season or length of use, near some streams.

Develop best management practices for new spring developments to protect existing riparian zone by keeping water at the spring source. Redesign or rehabilitate existing spring/seep developments to improve associated riparian zones.

Rangeland Management

Manage livestock grazing to maintain current forage production/condition or improve it where needed.

Allow increases in forage allocation only in areas where increases are compatible with other resource values and fully supported by monitoring data. Reevaluate current grazing utilization levels, by allotment, to determine if those levels are achieving sustainability of desired forage plants and other species in the long term.

Review the policy and process for granting temporary non-renewable grazing use. Ensure that all other resources are considered and no negative impacts are occurring from grazing.

Review and/or develop a process for addressing ways to grant suspended use. Suspended use is that which is no longer available due to lack of carrying capacity. Granting of suspended use would be based on monitoring data to verify that additional forage is permanently available.

Identify allotments or pastures where current data indicates increases or decreases in forage allocation are warranted. Ensure that studies are sufficient to fully support the action.

Identify areas where grazing is excluded to protect other resource values or the area is

unallotted. In conjunction with other resource programs, identify areas currently being grazed that may need to have grazing reduced or excluded to protect other resources.

In coordination with allottees, interested parties, and advisory groups, develop or modify Allotment Management Plans (AMPs), Coordinated Resource Management Plans, or other implementation plans that identify and address allotment-specific, multiple-use management objectives and grazing systems. Based on priorities to conduct rangeland health assessments, develop priorities for revising or completing and implementing these types of plans by 2008.

During the current planning process, develop allotment-specific (or allotment grouping) management direction, actions, or projects in sufficient detail to reduce the need to prepare future environmental assessments.

To maximize the opportunity for vegetation to become re-established and productive in the long term, develop resource area guidelines for managing livestock grazing before and after prescribed fire, wildfire, or other rehabilitation based on guidelines in the Beaty Butte Allotment Management Plan.

Develop Lakeview Resource Area policy for managing livestock numbers during drought conditions.

Follow interim, long-term, and/or conservation agreement strategies for sage grouse, as appropriate, pertinent to grazing and forage management.

Noxious Weeds

Conduct annual field searches and inventories for noxious weeds.

Protect areas from invasion by new noxious weeds using active approaches and measures.

Continue to implement the Warner Basin Weed Management Area Plan strategy, with the following objectives:

- Control noxious weeds that are present.
- Prevent noxious weeds from leaving the Warner Basin and spreading to other basins, and prevent new weeds from invading this area.
- Continue inventory and survey for new noxious weed populations and locations.
- Do public outreach/education about identifying and controlling noxious weeds.

Use Integrated Weed Management techniques. Emphasize mechanical control, but also use biological control and herbicides where such methods are effective. Use only those herbicides legally allowed on public land.

Continue to treat noxious weeds located along roads, rights-of-way, ditches, fence lines, shared property boundaries, and drainages where most treatments in Warner Basin have been done in the past.

Identify and develop management and control strategies for specific species of weeds. Prioritize treatments in the order listed below:

- Control new invaders.
- Control small populations of priority species as described in Section 2, Resource Area Profile.
- Control scattered populations of larger infestations, holding the boundary of the core infestation and reducing infestations over several years.
- Control widespread, common species.

Establish additional weed or watershed working groups/councils based on the Warner Basin Weed Management Area Plan. Make Abert Basin the first priority and coordinate the implementation of the Abert Rim Weed Management Plan with the Upper Chewaucan Watershed Council. In the Silver Lake basin

Coordinate with Silver Lake Ranger District regarding their active, ongoing program.

Begin weed treatments at the top of the watershed/drainage and work downstream to reduce the potential for weed seed sources upstream to reinfest areas being treated downstream.

Develop strategies and techniques to prevent mechanical spreading of weeds. Initiate a program of periodically cleaning field vehicles, including fire vehicles, to reduce the spreading of seeds from one area to another. Pursue getting a wash rack for all fleet vehicles at the BLM shop.

Partner with private landowners as much as possible to control weeds on private land.

Develop a policy for monitoring weed invasion following ground-disturbing activities, such as fire, fence building, and road maintenance.

Fisheries

Improve fisheries habitat where stream surveys have shown deficiencies, such as a lack of pools, in-stream cobble, clean gravel, large woody debris, etc.

To preserve quality aquatic habitats and to maintain habitat management consistency, seek to acquire high value habitats from private landowners willing to sell the land or exchange for other BLM land.

Implement recovery actions for the three native fish species in the Lakeview Resource Area that are Federally listed as Threatened: Foskett Dace, Warner Sucker, and tai chub. Conduct the recovery as provided in the recovery plan for the native fishes of the warner basin and alkali subbasin. (U.S. Fish and Wildlife Service 1998).

Manage redband trout and its habitat according to consultation guidelines, applicable interim

strategy, conservation agreement, or similar guidelines developed to ensure continued existence of the species.

Wildlife

Incorporate and implement interim and long-term management plans, conservation agreements, consultation requirements, and other strategies for sage grouse.

Maintain and/or enhance crucial habitat for deer, elk, and antelope (including birthing areas and winter range) in consultation with Oregon Department of Fish and Wildlife and coordination with resource specialists of the interested tribes.

Allocate forage, where appropriate, for expanding elk herds to meet management objectives of the Oregon Department of Fish and Wildlife.

Manage to protect and enhance sensitive species habitat, including that for threatened or endangered species. Continue to manage areas near the Fremont National Forest bald eagle management area (BEMA) in the north end of the Lakeview Resource Area under an existing agreement. Consider officially designating the part on adjacent Lakeview Resource Area land as a BEMA also.

To minimize the spread of disease to bighorn sheep, allow only cattle grazing, to the exclusion of domestic sheep, in bighorn sheep habitat. Also, exclude domestic sheep use from a minimum buffer of 20 miles around bighorn sheep habitat.

Wild Horses

Reevaluate herd numbers to ensure they are appropriate for the herd management area. Establish new appropriate management levels, if necessary.

Allocate forage for the upper end of the herd management levels.

Maintain healthy populations within the range of appropriate herd management levels.

Revise official boundaries of wild horse management areas (active versus inactive), considering the placement of existing fences.

Remove/gather horses outside of designated herd management areas, including Hart Mountain Refuge.

Identify range improvement projects that may be needed to keep horses inside their HMA.

Improve the quality and conformation of horses in the herds and enhance their special characteristics and genetic variability by introducing bloodlines from other wild horse herds and using selective criteria in gathers to leave better quality horses in the herds.

Use fertility control measures, where practical and feasible, to manage herd numbers and to increase the time period between gathers.

Improve educational outreach of the adoption program.

Fire Management

Use conditional suppression on more of the Lakeview Resource Area once fuel loads have been reduced to an acceptable level.

Reevaluate the existing fire management plan (suppression zones), in consideration of the sage grouse interim management strategy and other resource values.

In addition to WSAs and ACECs, identify areas needing restrictions on the types of suppression tactics used such as no retardant on occupied stream buffers, live water areas, and cultural plant sites; no use of heavy equipment on

cultural or special status species sites, etc. Transfer information to or create a GIS data base map for use by fire dispatch.

Develop guidelines for seed mixtures according to various soil and environmental conditions pertinent to rehabilitation after fires and other surface-disturbing activities. Consider wildlife habitat needs, as well as other resources such as watershed protection, grazing, etc. Consider Fremont NF native species policy.

Build a normal-year or generic wildfire rehabilitation plan as a component of the RMP, to assist in preparation of future emergency fire rehabilitation projects.

Develop criteria, including fire-return interval and post-fire management, for determining priorities in selecting areas to conduct prescribed fire.

Air Quality

Mitigate impacts of smoke from prescribed fire and conform to the Oregon Smoke Management Plan.

Observe the 20-mile radius Special Protection Zone around Lakeview to mitigate smoke impacts. (Oregon Department of Environmental Quality has designated Lakeview a particulate non-attainment area).

Design projects to conform to Oregon state air quality standards.

Coordinate with southern Oregon fire partnership partners on smoke emission during prescribed burning.

Conduct aerial monitoring of smoke emissions from prescribed fires.

Forest and Woodland Management

On BLM administered land in the Lakeview

Resource Area, ponderosa pine forests will *not* be managed for commercial purposes. On the National Forests, timber will continue to be harvested, with management of commercial forests subject to guidance of the appropriate forest plan, policy, and regulations.

Management opportunities for commercial forests on the Lakeview Resource Area are as follows:

- Continue to manage commercial forests on BLM land as forest protection zones, with emphasis on maintaining old-growth values.
- Allow selective cutting only for forest health reasons, not for purposes of producing timber volume. Forests on BLM land in the Lakeview Resource Area do not, and will continue to not have, an ASQ (allowable sale quantity).
- Continue managing forest stands to allow treatment by prescribed fire, mechanical and chemical means to control competing vegetation and to improve the health of the stands. Continue to suppress wildfires. Address the potential for using more prescribed fire or for conditional suppression, contingent on fuel loadings being reduced.

Compare the expansion of juniper woodland in the last 100 years to historic range of variability using available historical data and other information,

Relying on existing and ongoing research and using GIS, map and quantify juniper stands throughout the subbasin review area. Map and delineate woodlands by stand age class, and manage juniper woodlands based on these age classes.

Identify high priority areas of juniper (such as the recent invasion to aspen stands, sage grouse leks, springs, riparian areas, etc.) for treatment using selective cutting, prescribed fire, or other

means. Identify priority areas (such as deer winter range, areas with high wildlife habitat values, and old-growth stands) for preservation and management. (Note: Treatment is defined as a reduction in cover, but not elimination of all trees from any given site or area.) Prioritize areas for treatment based on the anticipated response of other resources to juniper removal. Give priority to areas that have not reached closed canopy stage, since these areas are difficult to burn and require large effort/energy to change. Define desired future condition and the role of juniper control in attaining it.

Identify areas where fire or mechanical treatments would be appropriate for managing juniper depending on stand age class, soil types, aspect, current vegetation, weeds, etc. Evaluate impacts of treatment methods on other resources. Develop criteria for treating and managing juniper woodlands including mitigation measures, best management practices, etc.

Identify juniper woodland areas for firewood and post cutting, both public and commercial, and areas for gathering secondary woodland products, such as boughs. In identifying such areas, consider the need for treatment as described above and the secondary benefits that would result from commercial or public harvest of junipers.

Consider Native American values when planning juniper management projects. In preliminary planning efforts for projects, consult and coordinate with the appropriate tribe(s).

Special Management Areas

Designate Areas of Critical Environmental Concern (ACECs) to protect important resources needing special management.

- Develop management guidelines for all existing and new ACECs. Determine the types of management needed to protect the relevant and important resources.

- Review existing designations to determine if they should be maintained or expanded.
- Consider alternative boundaries and management actions for all proposed ACECs.

Continue interim management of all wilderness study areas (WSAs) in Lakeview Resource Area. Develop policy and guidelines for managing any areas that are released from wilderness study in the future.

- Determine wilderness eligibility for lands recently acquired within or adjacent to existing WSAs.
- Develop wildfire suppression guidelines for WSAs.

Make a determination of suitability for designation as Wild and Scenic Rivers three streams that have been found eligible for designation. Develop interim management for any streams determined to be suitable for Wild and Scenic River designation. The intent of the interim management is to protect the streams' outstandingly remarkable values pending designation action by Congress.

Develop a management plan for Derrick Cave and one for the other significant caves in the resource area. Continue the ongoing cave inventory and evaluate the significance of any caves found.

Recreation and Visual Resources

Conduct a comprehensive evaluation of current motorized recreational use and restrictions. Update OHV designations to reflect current and future OHV management issues. Prepare informational brochures to educate the public of the closures/restrictions. Determine what types of restrictions, if any, need to be placed on OHV use in special management areas.

Maintain or enhance existing recreational facilities at existing developed sites. Ensure that

existing sites conform with the Americans With Disabilities Act.

Develop new facilities, as needed, such as boat ramps, water/fishing access, campgrounds, trails, picnic tables, and toilets. Ensure that all new facilities conform with the Americans with Disabilities Act.

Evaluate appropriateness of all commercial or educational, permitted, and authorized recreational activities. Support and authorize group or commercial activities based on the following criteria:

- Provide a needed service.
- Support tourism and economic development.
- Ensure compatibility of activities with other resources.
- Maintain public health and safety.

Establish additional Special Recreation Management Areas as needed, such as in north Lake County, to address increasing recreational use. Encourage partnerships with other agencies, local government, and private organizations to meet the needs and demands of recreating public.

Review and revise Visual Resource Management (VRM) class, where needed, such as in special management areas, scenic byways, and recently acquired lands. Determine process for assigning VRM class for future acquired lands.

Human Uses and Values

Target the use and development of public land goods and services to benefit local communities, businesses, and individuals.

Support diversification of local economies.

Support meeting the cultural and economic needs of Native Americans.

Focus restoration activities to benefit commodity-dependent local communities and businesses.

Lands and Rights-of-Way

Determine if and where Desert Land Entry (DLE) (for agricultural purposes) may be appropriate. Develop a resource area policy to address DLE inquiries or applications.

Identify three land use zone classes, as described below, and develop policy for land tenure adjustments for each zone.

- Zone 1 - Retain all public lands. Most Zone 1 lands are identified for retention to benefit other resource values such as areas of critical environmental concern (ACEC), crucial wildlife habitat, and cultural resource sites. Zone 1 would also include private lands that might be desired for acquisition from willing sellers to benefit other resources such as wildlife habitat, WSAs or ACECs.
- Zone 2 - Allow exchanges of public land for other land having equal or better resource values.
- Zone 3 - Dispose of lands that meet the FLPMA criteria for disposal. The means of disposal could include sale, exchange, or Recreation and Public Purposes lease. Criteria for disposal are 1) lands, because of their location, are difficult or uneconomical to manage and are not suitable for another Federal agency to manage; 2) land was acquired for a specific purpose and the land is no longer required for that or other Federal purpose; or 3) disposal of land will serve important public objectives such as community expansion.

Identify rights-of-way avoidance/exclusion areas; provide guidance for addressing rights-of-way in WSAs released from wilderness study.

Identify areas where acquisition of public easements is needed across private lands to provide access to public lands. Due to the potential large workload, prioritize areas based on problem areas and access needs. Identify additional staff needs for survey and easement processing.

Complete the water well inventory on Bankhead-Jones lands. Rehabilitate hazardous wells or preserve historically important wells.

Geology and Minerals

Keep as much area as possible open to mineral exploration and development and minimize restrictions on exploration and development.

Coordinate with state and county road departments to locate rock sources that would meet the demand for public projects such as roads, as well as mineral material sale to private parties. When impracticable to do this, consider establishing community pits where warranted. Possible locations include:

- Cougar Mountain pit
- Paisley area
- North Summer Lake pit
- Westside pit

Establish common use areas for sale or free use of decorative stone and cinders in the Devil's Garden, Squaw Ridge, and Four Craters Lava Flow, if these areas are not designated as Wilderness Areas. This measure would provide the public with the opportunity to acquire the highest quality decorative stone known in the District, and also provide cinders for local roads.

Revoke the Classification and Multiple Use Act classification of the sunstone public use area to open an additional 2,440 acres of sunstone-bearing land to mining claim location.

Revoke public water reserve withdrawals to

open an additional 1,900 acres to non-metalliferous mineral exploration and mining. Where possible and necessary, acquire water rights and right-of-way reservations at these withdrawals.

Abate and rehabilitate hazardous abandoned mines and associated facilities. Conduct all required clearances and surveys before backfilling or closing any shafts or adits.

Cultural and Paleontological Resources

Develop management plans and actions to protect and preserve existing National Register sites, register-eligible properties in Areas of Critical Environmental Concern, and areas eligible for listing as Traditional Cultural Properties.

Maintain Native American/Tribal uses of cultural properties on public land in consultation with Tribes and individuals.

Evaluate and/or nominate significant cultural and paleontological sites to the National Register of Historic Places, as funding and time permit.

Develop, or adopt existing, research strategy for guiding use of cultural sites in ongoing and future proposed research.

Develop planning for long-term use of cultural/paleontological properties for recreational/educational purposes (example: tours of rock art sites).

Acquire significant cultural sites from willing sellers, as the need and opportunity arises. No specific sites are identified due to the sensitive nature of the resources. Coordinate with outside groups, including tribes, to facilitate this process. Develop a relationship with the Archaeological Survey or other groups for assistance.

Hazardous Materials

Investigate and respond to illegal dumping and emergency response situations. Activate state cleanup contract, when needed.

Continue to cooperate and coordinate with the Oregon Department of Environmental Quality related to monitoring and identifying and implementing long-term remediation of the Alkali Lake site.

Educate the public and agency employees about the need to follow laws and regulations about hazardous materials in the workplace and in the field.

Implement and follow Compliance Assessment Safety, Health, and the Environment (CASHE) recommendations regarding facility maintenance.

Roads

Maintain roads identified in the transportation plan that are still needed for administrative or public access to public land or other federal land.

To protect other resource values, close and rehabilitate roads, wherever it is feasible, that are no longer needed for access to public or other Federal land.

Construct new roads, only where needed and using Best Management Practices and appropriate mitigation, to reduce impacts to other resources. Use minimum road construction standards or stipulations appropriate to the situation.

Update the transportation management plan by conducting an inventory of the existing roads. This information is necessary to determine which roads may or may not be needed, to determine cumulative impacts to watersheds, and to provide information for weed inventory and assessing risk of weed invasion.

5. LEGAL MANDATES, PLANNING CRITERIA AND PROPOSED ALTERNATIVES - LAKEVIEW RMP/EIS

INTRODUCTION

This section briefly describes the legal authorities pertaining to BLM Land use planning, the planning criteria to be used in preparing the Lakeview RMP/EIS, and the proposed alternatives to be addressed in the RMP/EIS.

Principle of ecosystem management, as well as a continuing commitment to multiple-use and sustained yield, will guide land use decisions in the planning area. The commitment to multiple-use will not mean that all land will be open for all uses. Some uses may be excluded on some land to protect specific resource values or uses. Any such exclusion, however, will be based on laws or regulations or be determined through a planning process subject to public involvement.

The National Environmental Policy Act requires that an EIS examine a range of alternatives, including a No Action Alternative, to resolve the issues in question. Each alternative, except the no action alternative, should represent a complete, but alternate means of satisfying the identified purpose and need of the EIS and of resolving the issues. New alternatives may be developed and defined as needed during the preparation of the EIS. A range of alternatives has been identified for this RMP/EIS. These will be refined as the process goes forward.

The Lakeview RMP/EIS is being prepared using the best available information. Limited inventories were conducted to gather additional data for some resources.

LEGAL AUTHORITIES

A number of Federal statutes have been enacted over time to establish and define the authority of BLM to make decisions on the management and

use of resources on public land. Following is a list of major legal authorities relevant to BLM land use planning.

1. The Federal Land Policy and Management Act of 1976 (FLPMA), as amended, 43 U.S.C. 1701 *et seq.*, provides the authority for BLM land use planning.

a. Sec. 102 (a) (7) and (8) sets forth the policy of the United States concerning the management of BLM lands.

b. Sec. 201 requires the Secretary of the Interior to prepare and maintain an inventory of all BLM lands and their resource and other values, giving priority to areas of critical environmental concern (ACECs); and, as funding and workforce are available, to determine the boundaries of the public lands, provide signs and maps to the public, and provide inventory data to State and local governments.

c. Sec. 202 (a) requires the Secretary, with public involvement, to develop, maintain, and when appropriate, revise land use plans that provide by tracts or areas for the use of the BLM lands.

d. Sec. 202 (c) (9) requires that land use plans for BLM lands be consistent with tribal plans and, to the maximum extent consistent with applicable Federal laws, with State and local plans.

e. Sec. 202 (d) provides that all public lands, regardless of classification, are subject to inclusion in land use plans, and that the Secretary may modify or terminate classifications consistent with land use plans.

f. Sec. 202 (f) and Sec. 309 (e) provide that Federal, State, and local governments and the public be given adequate notice and an opportunity to comment on the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for the management of the public lands.

g. Sec. 302 (a) requires the Secretary to

manage the BLM lands under the principles of multiple use and sustained yield, in accordance with, when available, land use plans developed under Sec. 202 of FLPMA, except that where a tract of BLM lands has been dedicated to specific uses according to any other provisions of law, it shall be managed in accordance with such laws.

h. Sec. 302 (b) recognizes the entry and development rights of mining claimants, while directing the Secretary to prevent unnecessary or undue degradation of the public lands.

2. The National Environment Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321 *et seq.*, requires the consideration and public availability of information regarding the environmental impacts of major Federal actions significantly affecting the quality of the human environment. This includes the consideration of alternatives and mitigation of impacts.

3. The Clean Air Act of 1990, as amended, 42 U.S.C. 7418, requires Federal agencies to comply with all Federal, State and local requirements regarding the control and abatement of air pollution. This includes abiding by the requirements of State Implementation Plans.

4. The Clean Water Act of 1987, as amended, 33 U.S.C. 1251, establishes objectives to restore and maintain the chemical, physical, and biological integrity of the Nation's water.

5. The Federal Water Pollution Control Act, 33 U.S.C. 1323, requires the Federal land manager to comply with all Federal, State, and local requirements, administrative authority, process, and sanctions regarding the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity.

6. The Colorado River Basin Salinity Control Act, 43 U.S.C. 1593, requires a comprehensive program for minimizing salt contributions to the Colorado River from BLM lands.

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

8. The Endangered Species Act (ESA) of 1973, as amended, 16 U.S.C. 1531 *et seq.*:

a. Provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved and to provide a program for the conservation of such endangered and threatened species (Sec. 1531 (b), Purposes).

b. Requires all Federal agencies to seek to conserve endangered and threatened species and utilize applicable authorities in furtherance of the purposes of the Endangered Species Act (Sec. 1531 (c) (1), Policy).

c. Requires all Federal agencies to avoid jeopardizing the continued existence of any species that is listed or proposed for listing as threatened or endangered or destroying or adversely modifying its designated or proposed critical habitat (Sec. 1536 (a), Interagency Cooperation).

d. Requires all Federal agencies to consult (or confer) in accordance with Sec. 7 of the ESA with the Secretary of the Interior, through the Fish and Wildlife Service and/or the National Marine Fisheries Service, to ensure that any Federal action (including land use plans) or activity is not likely to jeopardize the continued existence of any species listed or proposed to be listed under the provisions of the ESA, or result in the destruction or adverse modification of designated or proposed critical habitat (Sec. 1536 (a), Interagency Cooperation, and 50 CFR 402).

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

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

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

12. The National Historic Preservation Act (NHPA), as amended, 16 U.S.C. 470, expands protection of historic and archaeological properties to include those of national, State, and local significance and directs Federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register of Historic Places.

13. The American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996, establishes a national policy to protect and preserve the right of American Indians to exercise traditional Indian religious beliefs or practices.

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

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

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

17. The Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181 *et seq.*, authorizes the development and conservation of oil and gas resources.

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

- a. Potential oil and gas resources be adequately addressed in planning documents;
- b. The social, economic, and environmental consequences of exploration and development of oil and gas resources be determined; and
- c. Any stipulations to be applied to oil and gas leases be clearly identified.

19. The General Mining Law of 1872, as amended, 30 U.S.C. 21 *et seq.*, allows the location, use, and patenting of mining claims on sites on public domain lands of the United States.

20. The Mining and Mineral Policy Act of 1970, 30 U.S.C. 21a, establishes a policy of fostering development of economically stable mining and minerals industries, their orderly and economic development, and studying methods for disposal of waste and reclamation.

21. The Taylor Grazing Act of 1934, 43 U.S.C. 315, “[T]he Secretary of the Interior is authorized, in his discretion, by order to establish grazing districts or additions thereto... of vacant unappropriated and unreserved lands from any part of the public domain...which in his opinion are chiefly valuable for grazing and raising forage crops[.]...” The Act also provides for the classification of lands for particular uses.

22. The Public Rangelands Improvement Act of 1978, 43 U.S.C. 1901, provides that the public rangelands be managed so that they become as productive as feasible in accordance with management objectives and the land use planning process established pursuant to 43 U.S.C. 1712.

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

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

- a. Accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and
- b. Avoid adversely affecting the physical integrity of such sacred sites.

25. Executive Order 13084 (consultation and Coordination with Indian Tribal Governments) provides, in part, that each Federal agency shall establish regular and meaningful consultation and collaboration with Indian tribal governments in the development of regulatory practices on Federal matters that significantly or uniquely affect their communities.

26. 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.

27. Secretarial Order 3175 (incorporated into the Departmental Manual at 512 DM 2) requires that if Department of the Interior (DOI) agency actions might impact Indian trust resources, the agency explicitly address those potential impacts in planning and decision documents, and the agency consult with the tribal government whose trust resources are potentially affected by the Federal action.

28. 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.

PLANNING CRITERIA

Planning criteria are the standards, rules, and measures used for data collection and alternative formulation which will guide final plan selection. Planning criteria are developed from appropriate laws and regulations, BLM manual sections, policy directives, as well as from concerns expressed by the public and other agencies. They provide a basis for judging the responsiveness of the planning decisions and the planning process to law, guidance, the results of public participation, and consultation with other agencies.

Planning criteria influence all aspects of the planning process, including inventory and data collection, development of issues to be addressed, formulation of alternatives, estimation of effects, and selection of the preferred alternative.

Planning criteria help to:

- Streamline the plan's preparation and focus.
- Establish standards, analytical techniques, and measures to be used in the process.
- Guide development of the RMP.
- Guide and direct issue resolution.
- Identify factors and data to consider in making decisions.

General Planning Criteria

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

- Apply the principles of multiple use and sustained yield as set forth in the Federal Land Policy and Management Act and

other applicable laws.

- Use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, social, and environmental aspects of public land management.
- Give priority to identification, designation, protection and special management of areas of critical environmental concern (ACECs) and wild and scenic rivers.
- Give consideration to the relative significance of the public land products, services, and uses to local economies.
- Rely on available inventories of the public lands, their resources, and other values with updating to the extent necessary to reach sound management decision.
- Give consideration to present and potential uses of the public lands.
- Consider impacts of uses on adjacent or nearby non-Federal lands and on non-public land surface over federally-owned minerals.
- Consider the relative scarcity of the values involved and the availability of alternative means (including recycling) and sites for realization of those values.
- Weigh long-term benefits and detriments against short-term benefits and detriments.
- Comply fully with applicable pollution control laws, regulations and policies, including State and Federal air, water, noise, or other pollution standards or implementation plans.
- Coordinate BLM resource inventory, planning, and management activities with the resource planning and management programs of other Federal departments and agencies, State and local governments, and Native American tribes to the extent

consistent with the laws governing the administration of the public lands.

- Provide for public involvement including early notice and frequent opportunity for citizens and interested groups and others including Native American tribes to participate in and comment on the preparation of plans and related guidance.
- Apply Standards for Rangeland Health and Guidelines for Grazing Management for public land administered by the BLM in Oregon and Washington, as approved by the BLM State Director on August, 12, 1997.
- Consider the large scale ecological context provided by the Interior Columbia Basin Ecosystem Management Project (ICBEMP) scientific findings and EIS Record of Decision (ROD) (currently expected sometime in 2001).
- Comply fully with all federal laws that guide management of specific resources such as the Endangered Species Act, the Clean Water Act, the National Historic Preservation Act, the Taylor Grazing Act, and others.
- Reflect federal land management agency obligations under applicable tribal treaties and laws or executive orders relating to Native American reserved rights, religious freedoms, traditional use areas, etc.

Planning Criteria Specific to Resolving the Issues

As noted in chapter 1 of this document, five issues have been identified that need to be resolved through the planning process. In addition to the general planning criteria identified above, other specific planning criteria to aid in resolving the issues have been developed. These criteria are those standards that BLM will consider in developing resolutions to the issues.

Issue 1. What areas, if any, should be

designated and managed as special management areas including ACEC designations, Wild and Scenic Rivers, or other?

To resolve this issue, BLM will consider:

- Resource to be managed
- Manageability of the areas
- Existing ACEC representation
- Current and potential land uses
- Effects of designation on other resources and use
- Effects of nondesignation on resources
- Social and economic effects
- Public interests and attitudes
- Consistency of designation with resource plans of other agencies, local government, or tribes.
- Long-term vs. short-term benefit
- Public health and safety

Issue 2: How can upland ecosystems be managed and restored to achieve desired future conditions?

To resolve this issue, BLM will consider:

- Resource Values
- Current and potential land uses
- Social and economic effects
- Public interests and attitudes
- Condition and trend of native plant communities
- Presence of special status species, both plants and animals
- Suitability of natural vs artificial revegetation techniques
- Need for increased vegetation cover to reduce soil erosion, increase livestock forage, improve wildlife habitat and improve water quality.
- Areas chiefly valuable for livestock grazing
- Effects on other resources
- Use of land treatments to maintain or improve plant communities
- Use of fire, both natural and prescribed, in vegetation management
- Maintenance or enhancement of biological

diversity

- Presence of noxious weeds and conflicts between exotics and native species
- Input from the scientific community
- Watershed condition and trend
- Watershed productivity potential

Issue 3: How should riparian areas and wetlands be managed to protect and restore their natural functions?

To resolve this issue, BLM will consider:

- Condition and trend of riparian vegetation
- Resource values
- Watershed condition and trend
- Current and potential land uses
- Effects on other resources and uses
- Potential for improvement
- Presence of special status species, plants, animals, or fish
- Social and economic effects
- Current and future demands for surface water, including need for instream flows
- T/E species population goals and habitat requirements including current range, key areas, and potential habitats
- Conflicts with other uses
- Water quality standards

Issue 4: How should recreation be managed to meet public demand while protecting natural resources and health and safety of the public?

To resolve this issue, BLM will consider:

- Existing recreation uses, use areas, and facilities
- Public demand for additional recreation activities, settings, and experiences
- Compatibility with adjacent land uses and resources
- Effects of recreation uses on other resources and uses
- Public health and safety
- Planned or projected recreation developments
- Public interests and attitudes

- Social and economic effects
- Public access to public land

Issue 5: How should the public lands be managed to meet the needs of local communities and Native American Tribes?

To resolve this issue, BLM will consider:

- Historical, present and potential economic uses of the public land
- Economic condition of the local communities
- Effects of environmental protection stipulations on local communities
- Effects of public land management on adjacent private landowners
- Service to the public
- Public interests and attitudes
- Relative importance and sensitivity of known and anticipated cultural resources
- Historical use of the resource area by local tribes
- Threats to cultural resources and traditional use areas
- Tribal needs, interests and attitudes

Planning Criteria for Selecting an Alternative

In selecting the preferred alternative and the resource management plan, BLM will consider:

- The degree of accomplishment of the identified management goals and resolution of issues.
- The discretionary limits established through applicable laws, regulations, and agency policies.
- Reasonable, feasible and practical guidance for managing public lands and resources through a full range of options.
- Adequacy for a complete land use plan.

DESCRIPTION OF PROPOSED ALTERNATIVES

Five preliminary alternatives to be addressed in

the Lakeview RMP/EIS have been identified thus far in the process. The purpose of alternatives is to identify a range of reasonable combinations of resource uses and management practices that respond to planning issues and provide management direction for all resources. The themes of the alternative are described in the following section. These alternatives will be developed in greater detail and analyzed thoroughly in the RMP/EIS which is the next step in the planning process.

Alternative A - No Action

Under this alternative current management direction would continue. Management direction would be from the existing MFPs, as amended. It would also include the management direction and protections provided by Warner Sucker biological opinion/agreements, the *Recovery Plan for the Threatened and Rare Fishes of the Warner Basin and Alkali Subbasin*, and *Standards for Rangeland Health and Guidelines for Livestock Grazing Management* and any currently approved activity plans such as allotment management plans or habitat management plans. This alternative is described in the "Existing Management Direction" section of the AMS document. Wilderness study areas (WSAs) would continue to be managed under the "Interim Management Policy for Areas Under Wilderness Review" (IMP) until Congress makes a final decision on designation of these areas as wilderness or no wilderness.

Alternative B - Commodity Production Emphasis

Commodity production and production of public goods and services (mining, grazing, commercial recreation, commercial woodland products cutting, etc) would be emphasized with minimum level of resource protection, as required by law, including compliance with the Endangered Species Act, (ESA), cultural protection laws, wetland preservation, etc. Wild horses numbers would be managed near the lower end of the

appropriate (population) management level (AML) for the herd areas. WSAs would continue to be managed under the IMP until Congress makes a decision on designation of these areas.

Alternative C - Resource Protection Emphasis

Under this alternative, emphasis would be on managing for maximum protection of resource with limited commodity production and public goods and services provided within the limits of the ecosystem. Constraints would be implemented to protect sensitive resources. In some cases and in some areas, commodity production may be excluded to protect sensitive resources. This alternative could possibly include the largest number and size of ACECs and the most restrictive/protective ACEC management actions. Livestock grazing would occur in limited areas such as crested wheatgrass seedings.

Wild horse populations would be managed towards the lower end of the appropriate (population) management level. WSA's would continue to be managed under the IMP until Congress makes a decision on designation of these areas.

Alternative D - Balanced Management

Under this alternative, emphasis would be on managing for a balance of resource protection and commodity production and public services within the limits of the system's ability to provide these on a sustainable basis and within the constraints of various laws and regulations. This alternative would allow for a high level of natural resource protection and improvement in ecological conditions while providing for commodity production. ACEC's would be designated and special management actions prescribed. WSA's would continue to be managed under the IMP until Congress makes a decision on designation of these areas.

Alternative E - Minimal Management - Allow Natural Processes to Regulate Resource Conditions

Under this alternative there would be little or no active resource management or permitted uses of the public lands. There would be no livestock grazing, additional rights-of-ways granted, or new land disposal or acquisition actions. There would be no mineral leasing, mineral material sale or other mining actions (The entire resource area would be proposed for withdrawal from mineral entry. Congress would have to approve the withdrawal.) Recreation management would be limited to that necessary to provide for public health and safety. Existing developed sites would be maintained, but no new ones developed. Most of the resource area would be closed to OHVs or their use limited to designated major roads. There would be no special recreation permits issued. Wild horses would be managed to maintain numbers within balance of the resources in the herd areas. Prescribed fire would not be used and wildfire suppression would be only to protect human health and safety and private property (wildfire would be the only form of allowable vegetation/juniper/weed control involving fire). Existing ACECs would not be retained and no new ACECs would be designated. WSAs would continue to be managed under IMP until such time as Congress makes a final decision on designation of these areas.

6. LIST OF PREPARERS

The list below includes the primary members of the Lakeview District Inter-Disciplinary (ID) Team who were responsible for the preparation of this document.

Name	Title	Area of Expertise
Scott Florence	Field Manager	Document Review
Dwayne Sykes	Interdisciplinary Planner	Team Leader
Bill Cannon	Archaeologist	Cultural Resources/Native American Concerns
Dennis Simontacchi	Geologist	Geology/Minerals
Robert Hopper	Supervisory Range Management Specialist	Rangeland Vegetation/Livestock Grazing
Dan Hollenkamp	Outdoor Recreation Planner	Recreation/Wilderness/Visual/Off-Highway Vehicles
Trish Lindaman	Recreation Technician	Wilderness/Wild & Scenic Rivers
Paul Whitman	Planning & Environmental Coordinator	Document Review/Map Production
Lucile Housley	Botanist	Vegetation/Special Status & Cultural Plants
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Leah Stewart/Jim Thompson	Geographic Information System Coordinators	Map Production/Analytical Support
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Erin McConnell	Noxious Weed Specialist	Noxious Weeds
Theresa Romasko	Range Management Specialist	Wild Horses

APPENDIX A - BLM PLANNING PROCESS AND PUBLIC INVOLVEMENT

BLM PLANNING PROCESS

The resource management plan (RMP) is a land use plan as prescribed by the Federal Land Policy and Management Act of 1976. The RMP establishes in a written document:

- Land areas for limited, restricted, or exclusive resource uses or for transfer from BLM administration;
- Allowable resource uses and related levels of production or use to be maintained;
- Resource condition goals and objectives to be reached;
- Program constraints and general management practices;

- Identification of specific activity plans required;
- Support actions required to achieve the above;
- General implementation schedule or sequences; and
- Intervals and standards for monitoring the plan to determine its effectiveness.

The underlying goal of the RMP is to provide efficient on-the-ground management of public lands and associated resources over a period of time, usually up to 20 years. The procedure for preparing a RMP involves nine interrelated actions as shown in Table A-1.

TABLE A - 1. STEPS IN THE BLM PLANNING PROCESS

PLANNING STEP	DEFINITION/PURPOSE	STATUS
1. Identification of Issues	Orients the planning process to the significant resource management problems and land use conflicts in the area covered by the plan.	Completed July 1999
2. Development of Planning Criteria	The standards or rules developed by the manager and interdisciplinary team to focus the planning process on the issues and management concerns.	Ongoing
3. Inventory and Data Collection	Baseline information is collected on an ongoing basis in support of resource management. Information about all ecosystem components including human uses, is necessary to prepare a plan that meets requirements and is legally defensible.	Ongoing

TABLE A - 1. STEPS IN THE BLM PLANNING PROCESS

PLANNING STEP	DEFINITION/PURPOSE	STATUS
4. Analysis of the Management Situation	The study and assessment of public land resources data for the area covered by the plan; completes the information base for formulating reasonable alternatives.	Completed May 2000
5. Formulation of Alternatives	The development, analysis, and documentation of a reasonable range of multiple-use management options that resolves conflicts and issues and provides a basis for future management.	July 2000
6. Estimation of the effects of the Alternatives	The consequences of the resource management alternatives are analyzed and documented	October 2000
7. Selection of Preferred Alternative	Based on a comparison of the estimated effects and tradeoffs associated the alternatives, a preferred alternative is identified in the draft RMP/EIS.	October 2000
- Public Review and Comment on Draft RMP/EIS	After selection of preferred alternative the draft RMP/EIS is distributed for 90-day public review and comment.	Fall 2000 - Winter 2001
8. Selection of the Resource Management Plan	Selecting the proposed plan and preparing the final EIS based on evaluation of public comments of the draft RMP/EIS.	Summer 2001
- Public Protest Period on Published Proposed RMP and Final EIS.	Publication of the proposed RMP/Final EIS initiates a 30-day public protest period. Following resolution of any protests, the plan is approved and a Record of Decision (ROD) issued.	Fall 2001
9. Monitoring and Evaluation	Indicates the effectiveness of plan decisions and related management prescriptions. May go on for the life of the plan. Results are used to determine if the plan needs amending or revising.	Ongoing after plan approval

PUBLIC INVOLVEMENT IN THE PLANNING PROCESS

Public involvement is an integral part of BLM's resource management planning process. Thus far, public involvement activities have included a mass mailing of a scoping brochure, holding public meetings, meeting with local government and tribal government officials, and conducting a sub-basin review (see Appendix B).

The Lakeview RA began its public involvement in June 1999 with the mailing of a brochure that briefly described the RMP/EIS process, outlined the planning schedule, and requested comments on the first major planning step: identification of issues. BLM invited the public to identify issues or concerns they believed should be addressed in the RMP process. A notice of intent to prepare the RMP was published in the Federal Register at the same time. This notice also announced the dates and locations of two public meetings that would be held. A news release with the same information was published in the *Lake County Examiner* and in the *Klamath Falls Herald and News*. BLM representatives attended meetings with the Lake County Commissioners and the Harney County Court to inform them of the RMP and to encourage them

to make comments, request information and generally be involved in the process. The same information was distributed to the governing bodies of the Klamath Tribes, Burns Paiute Tribe and the Fort Bidwell Tribe. Other meetings with the tribes have also taken place at key steps in the planning process.

As explained in Appendix B, BLM conducted a subbasin review which involved other federal land managing agencies, state agencies, and local and tribal governments. This review resulted in the identification of a number of issues and management concerns to be addressed in the RMP/EIS.

Members of the public, local and tribal governments, other federal agencies and state agencies have received copies of this document *Summary of the Analysis of the Management Situation* and have been asked to comment, particularly on the planning criteria and proposed RMP/EIS alternatives.

Other opportunities for public involvement will occur throughout the rest of this planning effort.

APPENDIX B - SUBBASIN REVIEW REPORT

INTRODUCTION

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

The ICBEMP area was divided for analysis and review into four geographic scales: broad-scale (interior Columbia Basin), mid-scale (subbasins or groups of subbasins), fine-scale (watershed), and site scale (project). The mid-scale or subbasin level is the level at which field offices would do long range planning for all resources within their respective administrative boundaries. This scaled analysis is summarized in Table B-1.

The subbasins are based on the U.S. Geological Survey 4th field hydrologic unit codes (HUCs). On average these 4th field HUCs comprise an area of 500,000 to 1,000,000 acres. The Lakeview SBR area included four subbasins identified in the ICBEMP scientific assessment: Summer Lake, Lake Abert, Warner Valley, and Guano comprising an area of approximately 6.5 million acres. Land ownership and administrative responsibilities included private, State of Oregon, FS, BLM, U.S. Fish and

Wildlife Service and Department of Defense. The majority of the land in the SBR area is administered by BLM, Lakeview Field Office.

The resource area staff identified a list of approximately 55 offices, agencies, Tribal groups, and individuals who were thought to have an interest in resource management in the SBR area. These included representatives from other BLM offices, FS offices, USFWS, Oregon Department of Wildlife, Oregon State Lands Dept., Oregon Dept. of Agriculture, County and City Government, and several Tribal groups. Private landowners were not asked to participate since this was to be a collaborative interagency and intergovernmental process.

In anticipation of preparing a comprehensive Resource Management Plan (RMP), the Lakeview Field Office had collected a considerable amount of data and information about the resources on BLM lands. Much of this information was in a GIS format. Kinds of information needed for the resources in the SBR area and from other agencies were identified prior to the first meeting.

A BLM team was assembled to be the core group responsible for gathering data and putting it into a written or GIS format. This team was composed of planning and NEPA specialists, wildlife biologist, fisheries biologist, hydrologist, botanist, weeds specialists, fire ecologist, forester, and range management specialist. The SBR team would deal primarily with health-of-the-land issues.

ISSUES AND FINDINGS

Broad-scale information from ICBEMP provides a general characterization of the Lakeview SBR area relative to the rest of the Interior Columbia

River Basin. The broad-scale information indicates that about 20 percent of this SBR area is forest and 80 percent rangeland.

Forests in the SBR area are described as being dominated by dry forests with approximately 60 percent of the area showing changes in fire frequency. Mid-seral structure has increased with a decline in early and late seral stages. Most of the area is classified as low forest integrity and low to moderate hydrologic integrity.

Rangeland in the SBR area is also classified as low integrity. The rangeland is described as being dominated by dry shrubland vegetation which is highly sensitive to overgrazing and susceptible to invasion by noxious weeds. Hydrologic integrity is low to moderate and the integrity of riparian environments is commonly low. Native fish species generally occur in highly fragmented habitat.

The conditions described above significantly increase the subbasins' susceptibility to wildfire, insects and disease, soil erosion, loss of native species and other problems that threaten ecological integrity, water quality, species recovery, timber and forage production and other uses of public lands. (Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin, USFS and BLM, 1996). The SBR team agreed that these findings were generally accurate in describing conditions in the Lakeview SBR area.

The following potential issues were identified by the Lakeview RA prior to the beginning of the SBR process. These would be addressed in the RMP/EIS pending any changes.

Issue 1. What areas, if any, should be designated and managed as special management areas including ACECs, Wild and Scenic Rivers, or other?

- Which areas should be designated as special management areas?
- Which designations are most appropriate?
- How should designated areas be managed?
- How should the Lost Forest/Sand Dunes/Fossil Lake existing ACEC be managed?
- Should boundaries or management of existing special management areas be changed, and if so, how?

Issue 2. How can upland ecosystems be managed and restored to achieve desired future conditions?

- What is the current condition of the various ecosystems and plant communities in the resource area, and how can their conditions be improved or maintained?
- How should the public lands in the resource area be managed to improve and maintain water quantity and quality and to promote hydrologic recovery?
- How should the public lands be managed to maintain the existence, and also promote recovery, of threatened and endangered species?
- What sensitive species occur in the resource area, and how should the lands be managed to avoid listing of these species as threatened or endangered?
- Where are noxious weeds located in the resource area, and how can their spread be controlled?
- What is the fire history in the resource area, and what is the appropriate role of fire in the management of vegetation resources on the public lands?

Issue 3. How can riparian areas and wetlands be managed to protect and restore their natural functions?

- How should riparian vegetation

- communities be managed to improve or maintain proper functioning condition while providing for resource uses such as livestock grazing, recreation, and mineral exploration and development?
- How should riparian systems be managed to improve or maintain habitat quality for fish, wildlife, plants, and invertebrates?
- How should riparian and wetland areas be managed to incorporate State of Oregon water quality standards and approved management plans addressing water quality concerns?
- How should management actions in upland ecosystems be developed or designed to be compatible with the needs of riparian communities?

Issue 4. How should recreation be managed to meet public demand while protecting natural values and health and safety of the public?

- Which, if any, roads within the existing transportation system should be closed to protect resource values?
- Is there a need for any additional roads to provide access to areas currently inaccessible to BLM, commercial interests, or the public?
- Which areas should be designated open, limited, or closed to motorized vehicle use?
- How should wilderness therapy groups be managed to meet the needs of these groups while ensuring safety of the public and adjacent property owners?
- Should other recreation sites be developed to provide for public use?

Issue 5. How should public lands be managed to meet the needs of local communities and Native American Tribes?

- What is an appropriate role for BLM in providing support to local communities?

- How should the public lands be managed to provide economic support to local communities?
- How should the public lands be managed to meet the needs of tribal self-sufficiency and traditions?
- How can conflicts between agency actions and tribal needs and expectations be minimized or avoided?

These mid-scale issues generally reflect many of the broad-scale findings of the ICBEMP scientific assessment.

At the first meeting the group was introduced to the subbasin review process and the objectives and expectations. The above issues were introduced and briefly discussed.

At the second meeting, the similarities between the subbasin review process and the analysis of the management situation was discussed. These similarities are shown in Table B-2. In addition, the group examined the list of broad scale findings documented in the ICBEMP Scientific Assessment (FS and BLM 1996) and EIS. The meeting participants determined that most of the findings applied to the Lakeview SBR area. Some of the findings were rewritten slightly to fit the Lakeview SBR. Other findings were added that were applicable to the local situation. Of the approximately 60 findings or conditions listed, only seven were considered not to be applicable to the Lakeview SBR. Either the resource(s) do not occur in the area, or conditions are known to be better than indicated by the findings.

The findings dealt primarily with terrestrial and aquatic habitat, water quality, riparian health, landscape health, and social and economic concerns including tribal rights.

At the third meeting the refined list of broad scale findings was presented and small changes were made. A complete description of the individual findings follows. Several findings dealt with what were determined to be priority issues

including noxious weed expansion, juniper expansion, water quality, T/E species management, aquatic habitat, and riparian and wetland vegetation. Those findings that the group felt did not apply to the Lakeview SBR are also listed at the end of this section.

Revised List of Key Broad-Scale Findings Used in Issue Identification for the Lake County Sub-basin Review Area

(From *Draft Subbasin Review Guide*, Appendix A. "Using Key Broad-Scale Findings in Issue Identification." FS and BLM 1999)

(Shaded text is a change or addition pertinent to the Lakeview sub-basin review area)

Terrestrial Habitat/Landscape Health

Rangelands:

- * Noxious weeds are spreading rapidly, and in some cases exponentially, on rangelands in every range cluster as well as in most dry forest types.
- * Woody species (sagebrush, juniper, ponderosa pine, lodgepole pine, and Douglas-fir) encroachment and increasing density especially on dry grasslands and cool shrublands, have reduced herbaceous understory and biodiversity.
- * Cheatgrass has taken over many dry shrublands, with the potential to increase soil erosion and fire frequency and reduce biodiversity and wildlife habitat. Cheatgrass and other exotic plant infestations have simplified species composition, reduced biodiversity, changed species interactions and forage availability, and reduced the systems' ability to buffer against changes.
- * Expansion of agricultural and urban areas on none federal lands has reduced the extent of some rangeland vegetation types compared to historic conditions. However, this trend does not

continue today, due to limitations placed on water use for agricultural irrigation. These changes may have contributed to loss of native species diversity and some wildlife species population declines, some to the point of special concern (such as sage grouse and pygmy rabbit).

- * Increased fragmentation and loss of connectivity within and between blocks of habitat, especially in shrub steppe and riparian areas, have isolated some habitats and wildlife populations (sage grouse, neo-tropical migrant birds, big game species, and other wide-ranging species). In turn, this has reduced the ability of populations to move across the landscape, resulting in potential long-term loss of genetic interchange.

- * Fire frequency has decreased in many range habitats resulting in an increase in juniper encroachment into sagebrush/grass shrub steppe; an increase in tree density in formerly open, savanna-like stands of juniper and ponderosa pine; and increased density and/or coverage of big sagebrush and other shrubs, with an accompanying loss of herbaceous vegetation.

Forests:

- * Old multi-story and old single story ponderosa pine have decreased significantly across its range. The primary transition is from ponderosa pine dominant stands to white fir becoming a significant stand component. The loss of the large trees (live and dead) within roaded/harvested areas has affected terrestrial wildlife species closely associated with these old forest structures.
- * Mid-seral forest structures have increased and current communities have more dense stands of trees, have higher fuel loadings with a resultant higher susceptibility to catastrophic crown fires than did historical communities.

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

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

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

* **Late seral lodgepole pine types are at risk of shifting to early seral shrubland types primarily as a result of high intensity wildfires.**

* **There is interest in protecting and managing juniper woodland including old-growth woodlands on the landscape. In addition, there is increased interest in juniper woodlands for consumptive uses such as firewood, posts, boughs, berries, and tribal medicine, while maintaining non-consumptive uses such as deer winter range.**

Aquatic Habitat/Landscape Health

Hydrology and Watershed Processes and Streams, Rivers, and Lakes:

* **Management activities in watersheds throughout the sub-basin review area have affected the quantity, flow rate, and quality of water. These activities have also negatively affected sedimentation and erosion; production and distribution of organic material; and physical structure of banks, stream beds and lake shores; thereby reducing hydrologic conditions.**

* **Many streams on Forest Service and BLM administered lands are "water quality limited" as defined by the Clean Water Act, primarily due to high temperatures and, to a lesser extent, sedimentation.**

* Streams are highly variable across the sub-basin review area, reflecting diverse physical settings and disturbance histories. Nevertheless, important aspects of fish habitat, such as pool frequency and large woody debris abundance on forested portions of the subbasin review area, have decreased throughout much of the area.

Riparian Areas and Wetlands:

* The overall extent and continuity of riparian/wetland areas have decreased **from historic conditions.** Riparian ecosystem function, as determined by the amount and type of vegetation cover, has decreased in the subbasins compared to historic conditions. **However, on most BLM-administered riparian areas, conditions and trends have improved significantly in the last 20 years due to changes in livestock grazing and other management practices.**

* A majority of riparian areas on Forest Service lands are either "not meeting objectives," are "non-functioning," or are "functioning at risk." However, the rate has slowed and a few areas show increases in riparian cover and large trees.

* Within riparian woodlands, the abundance of mid-seral vegetation has increased, whereas the abundance of late and early seral structural stages have decreased. There is an overall decrease in large trees and late seral vegetation in riparian areas, **primarily on FS lands in the subbasin review area.**

* Within riparian shrublands **and aspen stands,** there has been extensive spread of western juniper and introduction of exotic grasses and forbs. **Within aspen stands, there has been a**

decrease in early and mid-seral vegetation.

* The frequency and extent of seasonal flood plain and wetland inundation have been altered by changes in flow regime, and by changes in channel morphology.

* There is an overall decrease in large trees, particularly cottonwoods, and late seral vegetation in riparian areas.

* Riparian areas are important for three quarters of the terrestrial wildlife species (neotropical migrant birds in particular). Riparian dependent wildlife numbers have declined in proportion to the decline in riparian habitat conditions.

* In general, spring developments have altered the surrounding riparian zone and overall spring function. In those areas where springs have been fenced and livestock grazing have been removed from the spring source, the riparian zone and spring function have been restored to some extent.

Fish:

* The composition, distribution, and status of fishes within the planning area are substantially different from what they were historically. Some native fishes have been eliminated from large portions of their historical ranges.

* Many native non-game fish are vulnerable because of their restricted distribution or fragile or unique habitats.

* Although several of the key salmonids are still broadly distributed (notably the cutthroat trouts and redband trout), declines in abundance, loss of life history patterns, local extinctions, and fragmentation and isolation in smaller blocks of high quality habitat are apparent.

* Core areas for rebuilding and maintaining biological diversity associated with native fishes still exist within the planning area.

Landscape Health

Air Quality:

* The current condition of air quality in the project area is considered good, relative to other areas of the country. There is no major industrial source of air pollution, but wood burning in winter for home heating combined with local industrial sources is a fairly major EPA/DEQ air quality issue (non-attainment area) around Lakeview and possibly other population centers which may or may not fall within the sub-basin area.

* Wildfires can significantly affect air quality. However, current numbers of wildfires and total numbers of acres burned is probably lower than historic levels due to increased fire suppression activities. For this reason, total smoke emissions from wildfires are probably lower than they were historically.

* Within the project area, the current trend in prescribed fire use is expected to result in increased smoke emissions during certain times of the year.

Social/Economic

Human Uses and Values:

* Recreation is an important use of agency lands in the sub-basin review area in terms of economic value and amount of use. Most recreation use is tied to roads and accessible water bodies, though primitive and semi-primitive recreation is also important. Recreation use is increasing, though not as much as in other places

within the interior Columbia Basin closer to large population centers. Increases in OHV use, wilderness therapy groups, fishing, hunting, camping, and other activities are expected. This can result in long term cumulative effects.

* Industries served by agency land uses, such as logging, wood products manufacturing, mining, and livestock grazing, no longer dictate the economic prosperity of the sub-basin area, but remain economically and culturally important. The economic dependence of local communities on these industries is high due to geographic isolation and lack of alternative employment opportunities.

* The public has invested substantial land and capital to develop road systems on agency lands, primarily to serve commodity uses. On Forest Service lands, commercial timber harvest has financed most of the construction cost and maintenance cost. On BLM lands most roads are for access to grazing allotments and range projects. However, recreation now accounts for the majority of the use of the roads of both agencies. Trends in timber harvesting and new road management objectives make the cost of managing these road systems as well as those on BLM land an issue of concern. There is also a need to determine which roads should be left open for public access, versus which should be seasonally or permanently closed and rehabilitated for resource protection purposes.

* For those counties that have benefitted from Federal sharing of gross receipts from commodity sales on agency lands, changing levels of commodity outputs affect county budgets. Lake and surrounding counties are concerned over the potential loss of Payment in Lieu of Taxes (PILT) funds from BLM lands which have been an important component of funding county services such as road maintenance.

* Agency social and economic policy has

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

* The factors that appear to help make communities resilient to economic and social change include population size and growth rate, economic diversity, social and cultural attributes, amenity setting, and quality of life. The agencies need to develop management strategies to positively influence these factors.

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

American Indian Rights and Interests:

* In some cases there are low confidence and trust among tribes that American Indian rights and interests are considered when decisions are proposed and made for actions to be taken on BLM-or Forest Service-administered lands. In some instances Indian tribes do not feel that they are involved

in the decision-making process commensurate with their legal status. They may not feel that government-to-government consultation is taking place in all situations or for all projects.

* American Indian values on Federal lands may be affected by proposed actions on forest lands and rangelands because of changes in vegetation

structure, composition, and density; existing roads; and watershed conditions.

* Culturally significant species (such as anadromous fish, mule deer, and cultural plants) and the habitat necessary to support healthy, sustainable, and harvestable populations constitute a major, but not the only, concern. The local tribal groups including the Klamath Tribes and the Burns Paiute Tribe have a number of concerns about ecosystem management issues within the sub-basin review area.

Findings from the ICBEMP Scientific Assessment Not Applicable to the Lakeview SBR Area

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

Finding: Slow-to-recover rangelands (in general, rangelands that receive less than 12 inches of precipitation per year) are not recovering naturally at a pace that is acceptable to the general public, and are either highly susceptible to degradation or already dominated by cheatgrass and noxious weeds.

Response: The rangelands in the SBR area are generally in acceptable condition. The presence of cheatgrass is limited to a few isolated areas. Noxious weeds occur in several locations, however the Lakeview Field Office and the Silver Lake Ranger District have a pro-active and aggressive weed containment and management program. There are no large areas (000's of acres) dominated by noxious weeds or annual grasses.

Finding: Fire frequency has increased in some areas, particularly in dryer locations where exotic annual grasses have become established. Increased fire frequency has caused a loss of shrub cover and reduction in bunch grasses.

Response: In general, in the SBR area fire frequency has decreased. There are no widespread stands or infestations of exotic annual grasses susceptible to frequent fires in the SBR area.

Findings: Western larch has decreased across its range. The primary transitions were to interior Douglas-fir, lodgepole pine, or grand fir/white fir. Western white pine has decreased by 95 percent across its range. The primary transitions were to grand fir/white fir, western larch, and shrub/herb/tree regeneration. The whitebark pine/alpine larch potential vegetation type has decreased by 95 percent across its range, primarily through transition to the whitebark pine cover. Over all, the whitebark pine cover type has also decreased, with compensating increases in Engelmann spruce/subalpine fir.

Response: Western larch and whitebark pine/alpine larch vegetation types have not occurred historically and do not presently occur within the SBR area. Western white pine are widely scattered individual trees or small groups of trees. Western white pine was never abundant historically.

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

Response: Chinook salmon and steelhead do not occur in the Lakeview SBR area. No anadromous fish occur in the SBR area since none of the streams in the review area are tributaries to the Columbia River or any other stream system connecting to the Pacific Ocean.

All streams flow into internal basins.

Finding: The planning area is sparsely populated and rural, especially in areas with a large amount of agency lands. Some rural areas are experiencing rapid population growth, especially those areas offering high quality recreation and scenery.

Response: The Lakeview SBR area is sparsely populated and rural. However, it is not experiencing any rapid population growth. Populations are either stable or declining. The nearest growing population area is Bend, OR. This population growth is increasing recreation use in North Lake County, but the rural character of the SBR area is not changing.

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

Response: There are no rapidly growing areas in or near the Lakeview SBR area. There are only minor problems associated with the urban/wildland interface on either Forest Service or BLM administered lands.

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

Response: Over the last several years the Lakeview District, BLM, has continually improved its relationship with the local tribes. The staff has worked diligently to put a process in place that allows open communication

regarding any major project or planning effort the office undertakes. Relationships with the tribes are generally quite good. The tribes feel that we are doing what we are mandated to do and that the office is conducting government-to-government consultation as it should.

MID-SCALE CHARACTER DESCRIPTION (RESOURCE AREA PROFILE)

The Description of the Mid-scale Character, Step 3 of the SBR process, was combined with the Resource Area Profile (RAP) of the Analysis of the Management Situation (AMS). Both the RAP and the Mid-scale Character is a description of the existing resources in the SBR area as well as their condition and use. The only difference is that the RAP covers all resources in the Lakeview Resource Area, whereas the Description of the Mid-scale Character is tied to the ICBEMP findings for issue identification. Resources addressed by the findings are described for the SBR area as a whole. These included rangelands, forests, vegetation, fish and wildlife habitat, water quality, riparian habitats, and human uses and values. Those resources not addressed by the findings are described for the Lakeview Resource Area only.

Prior to the third meeting of the SBR team, the Lakeview Resource Area staff had begun to prepare mid-scale characterization by resource as they pertained to the mid-scale findings and issues for the sub-basin review area. This was the next step in the sub-basin review process. At the meeting, the group went over the draft characterizations and suggested changes and additions. The current status of each resource pertaining to the findings was described, as well as any management concerns for that resource. These management concerns will be used in developing the Management Opportunities section of the Analysis of the Management Situation and will also be used in setting priorities

and making recommendations as the final step in the sub-basin review process. Eventually, this information will feed into the development of alternatives for the Resource Management Plan/Environmental Impact Statement.

The complete descriptions of the mid-scale character are in Section 2 of the Analysis of the Management Situation located in the Lakeview Field Office.

PRIORITIES AND RECOMMENDATIONS (MANAGEMENT OPPORTUNITIES)

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

At the fourth meeting the group examined the mid-scale descriptions of three resources of priority concern: watershed and water quality management, juniper management, and noxious weeds. The team discussed the management concerns pertaining to these three resources and "brainstormed" management opportunities and recommendations to address these concerns. This set the stage for the BLM staff to go into their meeting the following week to identify management opportunities for all resources to be

addressed in the RMP/EIS.

At the fifth meeting the recommendations or management opportunities that BLM staff had developed were presented. Those that were applicable to the subbasin review area were identified and discussed. Some minor changes were made to these recommendations. During the resource management planning process, BLM will set priorities for acting on these recommendations and opportunities. Emphasis will be placed on those opportunities for protecting and managing special areas such as areas of critical environmental concern; on opportunities for managing resources across administrative boundaries such as watersheds and noxious weeds; and on opportunities for controlling juniper expansion. The Forest Service and US Fish and Wildlife Service will develop priorities through their respective project planning.

Chronology and Summary of Meetings

Meeting #1 - August 5, 1999

The SBR process was discussed including objectives of process and benefits to agencies and participants. Regional Implementation Support Team gave a presentation on their role. RMP issues were introduced. Nineteen people attended representing BLM Lakeview Office; BLM Oregon/Washington State Office; Winema and Fremont National Forests; Forest Service Region 6 Office; Lake County Commissioners; Oregon Dept. of Agriculture; Oregon Dept. of Water Resources; Oregon Dept. of Environmental Quality; ICBEMP Team; and the Southeast Oregon Resource Advisory Council.

Meeting #2 - Sept. 8, 1999

The relationship between subbasin review and analysis of the management

situation was presented. The SBR area was described. The findings from the ICBEMP scientific assessment were discussed and refined. Data needs for the SBR process were identified. Fifteen people attended representing BLM Lakeview Office; BLM Oregon/Washington State Office; Lake County; Oregon Dept. of Agriculture; Burns Paiute Tribe; Oregon Dept. of Fish and Wildlife (ODF&W); Fremont National Forest; and U.S. Fish and Wildlife Service (USFWS).

Meeting #3 - Nov. 9, 1999

The refined list of findings and issues as applicable to SBR area were presented. Data and information needs for the SBR area were discussed. Sub-basin characterizations were discussed. Eleven people attended representing BLM Lakeview Office; Oregon Dept. of Agriculture; U.S. FWS; Fremont National Forest.

Meeting #4 - Jan. 4, 2000

The data thus acquired was discussed. Maps showing ICBEMP, broad-scale classification of SBR area were distributed. Three priority management concerns were identified in the SBR area: water quality, juniper expansion,

and noxious weeds. Some management opportunities for these three were identified. Fifteen people attended representing BLM Lakeview Office, ODFW, and Fremont National Forest.

Meeting #5 - Feb. 9, 2000

Management Opportunities previously identified by BLM staff and which applied to SBR were presented and discussed. The group also discussed work with USGS regarding watershed boundaries. Thirteen people attended representing BLM Lakeview Office, ODFW, and USFWS.

BLM staff incorporated the descriptions of the mid-scale character and the recommendations into the resource area profile (RAP) and management opportunities sections, respectively, of the Analysis of the Management Situation (AMS). The similarities between the SBR process and the AMS process are shown in the following table.

The integrated priority setting described in the SBR was not done in the meetings. For BLM actions, this will be done through the resource management plan. On the Fremont National Forest, this is being done through their watershed assessment and restoration process.

Table B-1. Concept of Scaled Analysis

<u>Scale</u>	<u>Type of Analysis</u>
Broad-scale (Region)	Interior Columbia Basin Ecosystem Management Project
Addresses issues that can only be seen or analyzed at a broad-scale (example: decline of sage grouse in the shrub-steppe ecosystem). Does not address or make decisions for issues that can only be addressed at a more local level.	
Mid-scale (BLM resource area, National Forest, subbasin, or group of subbasins)	Resource Management Plan, Forest Plan, or Subbasin Review

Addresses issues more appropriately addressed at the mid-scale level, such as land use allocations within a BLM resource area or national forest. Provides a means to “step down” broad-scale decisions and direction to the local level.

Fine-scale (watershed, allotment, or project area)

Watershed Analysis, Allotment Management Plan, or Project Plan

Addresses issues and decisions that are site-specific, such as individual projects or objectives for an allotment or watershed.

Source: BLM. *Ecosystem Review at the Subbasin Scale (Subbasin Review)* FS and BLM 1999

Table B-2. Steps in the Subbasin Review and Analysis of Management Situation

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

Abstract: This paper discusses the importance of the mid-level level of management in the organization. It is argued that the mid-level manager is the key to the success of the organization. The paper discusses the role of the mid-level manager in the organization and the importance of the mid-level manager in the organization. The paper also discusses the importance of the mid-level manager in the organization and the importance of the mid-level manager in the organization.

Table 1: Steps in the Strategic Planning and Analysis of Management Situation

Step	Description
1	Identify the organization's mission and vision.
2	Identify the organization's strengths and weaknesses.
3	Identify the organization's opportunities and threats.
4	Develop strategic alternatives.
5	Evaluate strategic alternatives.
6	Select a strategic alternative.
7	Implement the strategic alternative.
8	Evaluate the results of the strategic alternative.

The mid-level manager is the key to the success of the organization. The mid-level manager is the link between the top management and the front-line employees. The mid-level manager is responsible for the day-to-day operations of the organization. The mid-level manager is also responsible for the implementation of the organization's strategy. The mid-level manager is the one who makes the decisions that affect the organization's performance. The mid-level manager is the one who is responsible for the success or failure of the organization.

GLOSSARY

ACEC - Area of Critical Environmental Concern; 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.

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

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.

Appropriate (Fire) Management Response - Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

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

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

BMPs - Best Management Practices; 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.

Bureau Sensitive Species - Species eligible as Federally listed or candidate, state listed or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Database, or otherwise approved for this category by the State Director.

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.

Cultural Plants - plants traditionally used by Native Americans for subsistence, economic, or ceremonial purposes.

Diatomite - An accumulation of microscopic siliceous skeletons of aquatic plants (diatoms).

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

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

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

ESI - Ecological site inventory; 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.

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

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

EMS - Existing Management Situation; a component

of the Analysis of the Management Situation; a description of the existing management direction governing resource management programs of a planning area.

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

Fine Scale - A single landscape, such as a watershed or subwatershed.

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

Fire Preparedness - Activities that lead to a safe, efficient, and cost effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

HMA - (Wild Horse) Herd Management Area; public land under the jurisdiction of the Bureau of Land Management that has been designated for special management emphasizing the maintenance of an established wild horse herd.

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

Initial (Fire) Attack - An aggressive fire suppression action consistent with fire fighter and public safety and values to be protected.

Interdisciplinary - Involving more than one discipline or resource management program. Promotes resource management at a plant community, landscape, or ecosystem level.

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.

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

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

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.

MFP - Management Framework Plan; older generation of land use plans developed by the Bureau of Land Management. This generation of planning has been replaced by the Resource Management Plan (RMP).

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.

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

NWR - National Wildlife Refuge; an area administered by the U.S. Fish and Wildlife Service for

the purpose of managing certain fish or wildlife species.

NEPA - National Environmental Policy Act of 1969; 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.

Perlite - A siliceous volcanic glass having numerous concentric spherical cracks that give rise to an onion-skin structure. The material can be heated and "expanded" to form a solid, foam-like material used in ceiling tiles, potting soil, and other applications.

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

Preferred Alternative or Plan - The alternative plan, in the Draft EIS, which 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).

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.

RAP - Resource Area Profile; a component of the analysis of the management situations; a description of the current condition, amount, location, use and demands of the natural resources in a planning area.

RNA - Research Natural Area; an area where natural processes predominate and which is preserved for research and education. Under current BLM policy, these areas must meet the relevance and importance criteria of ACECs and are designated as ACECs.

Resource Area - the "on-the-ground" management unit of the Bureau of Land Management comprised of

BLM-administered land within a specific geographic area.

RMP - Resource Management Plan; current generation of land use plans developed by the Bureau of Land Management 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.

RNA - Research Natural Area. An area of significant scientific interest that is designated to protect its resource values for scientific research and study.

Right-of-Way - A permit or easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, and reservoirs.

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

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

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

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.

Special Status Species - 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.

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

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

Subbasin Review - an interagency, collaborative consideration of resources, resource management issues, and management recommendations for one or more subbasins or watershed drainages approximately 800,000 to 1,000,000 acres in size.

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.

TNC - The Nature Conservancy; private national organization dedicated to the preservation of biological diversity.

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.

USDI - U.S. Department of Interior; government department which oversees the Bureau of Land Management and many other agencies.

USFWS - U.S. Fish and Wildlife Service; government agency responsible for managing fish and wildlife and their habitats.

Visual Resource - The visible physical features of a

landscape.

Visual Resource Management Classes - Class ratings of scenery based on visual quality, visual sensitivity, (i.e. how much is seen by the public and how often), and distance zones. These classes guide management activities that may contrast with the existing landscape character.

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.

Wilderness - An area that is essentially natural in character that has been designated by Congressional action in order to preserve that naturalness.

WSA - Wilderness Study Area; 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.

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.

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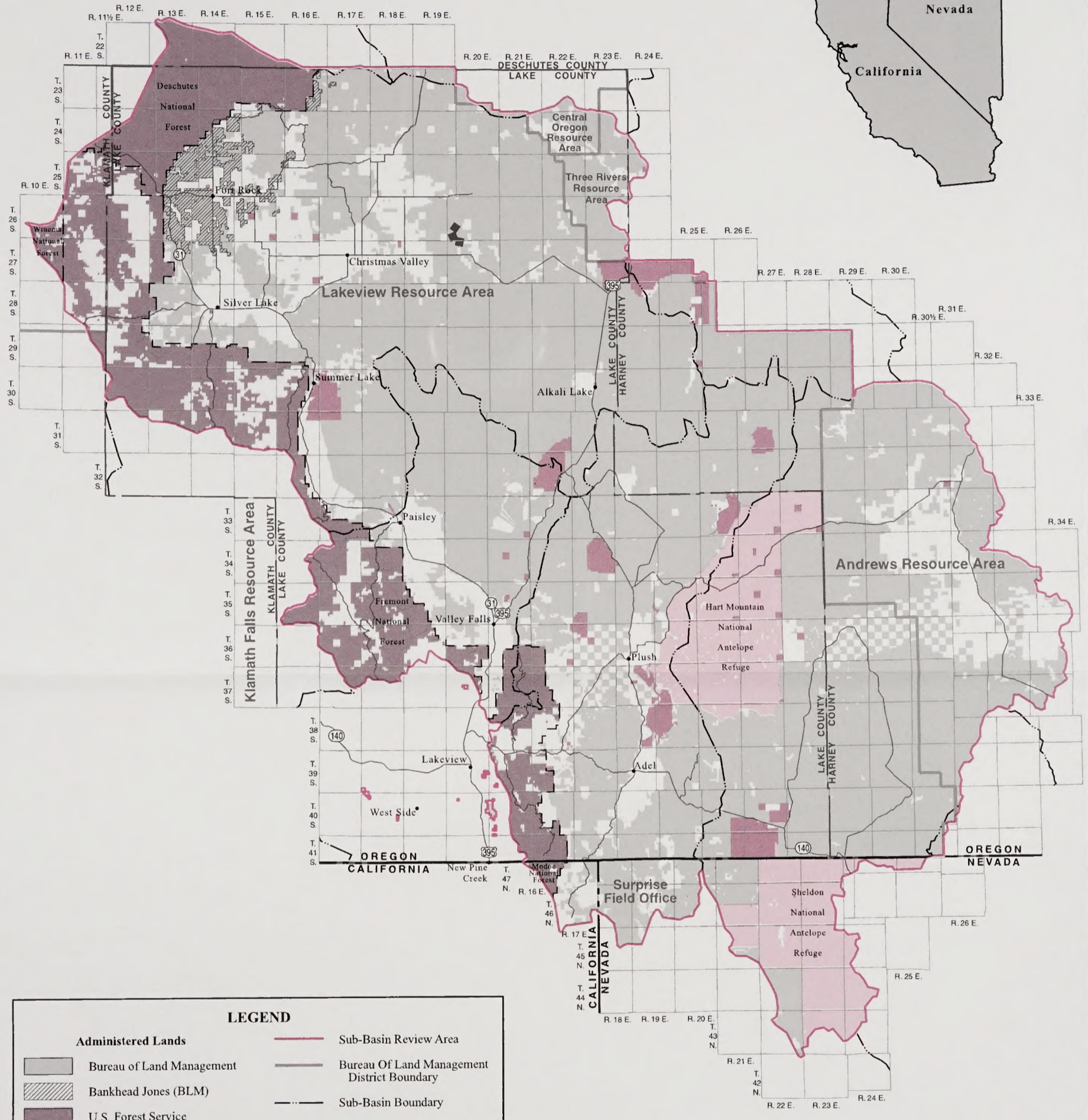
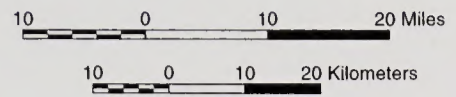
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**Lakeview District
Lakeview Resource Area
Analysis of the Management Situation
and
Sub-Basin Review**

Spring 2000



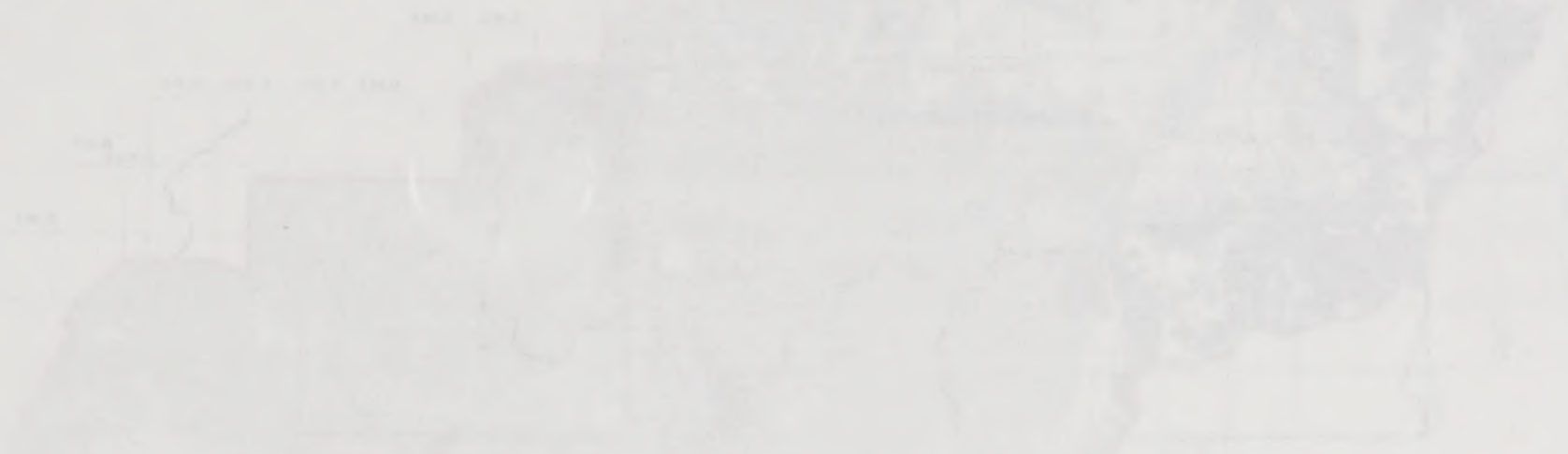
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Map 1: Land Status within the Sub-Basin Review Area

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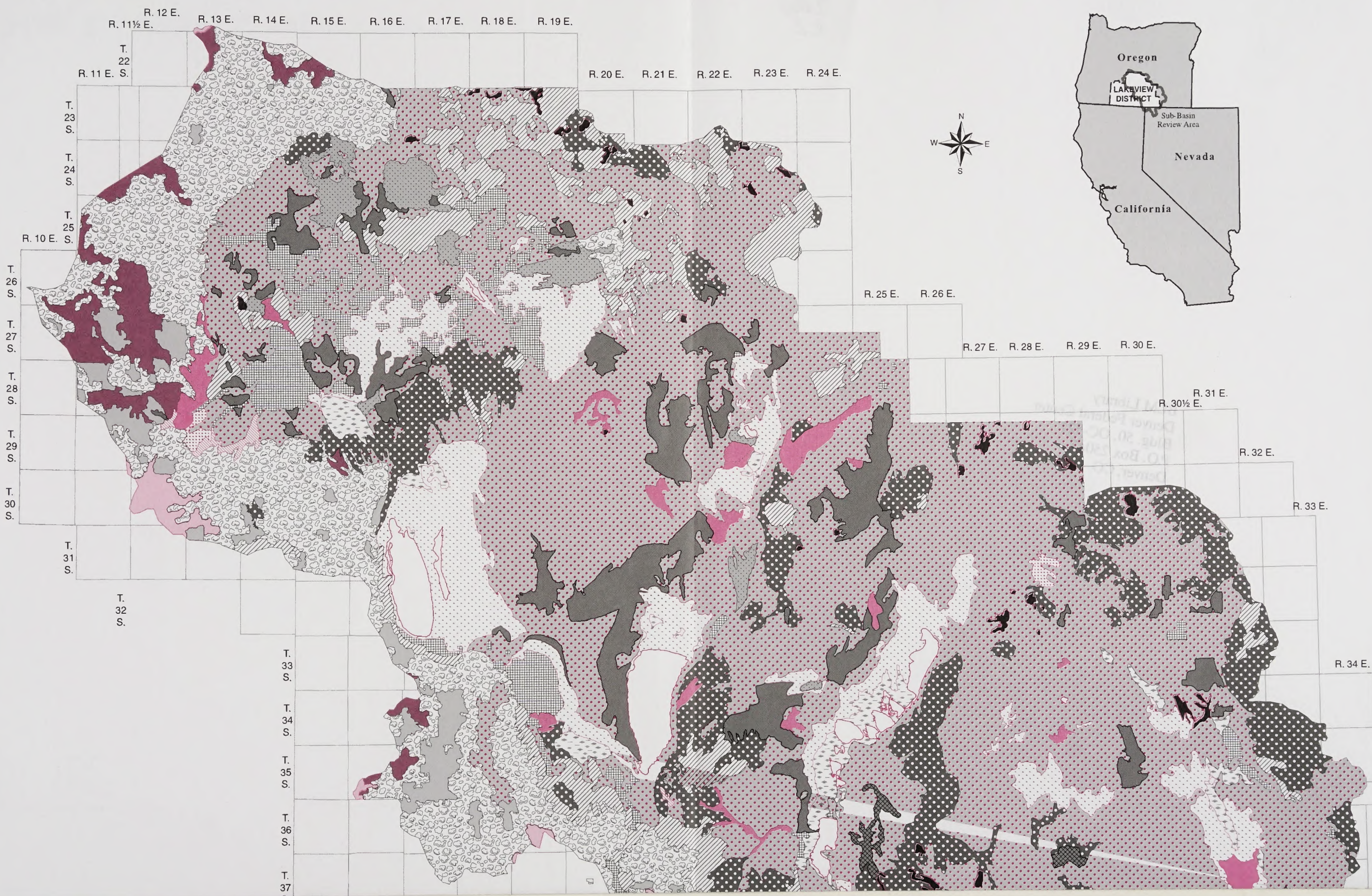


LEGEND	
[Symbol]	Public Lands
[Symbol]	Private Lands
[Symbol]	Water
[Symbol]	Other

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Map 1: Land Status within
the Sub-Basin Review Area



R. 12 E. R. 13 E. R. 14 E. R. 15 E. R. 16 E. R. 17 E. R. 18 E. R. 19 E.
R. 11½ E. R. 20 E. R. 21 E. R. 22 E. R. 23 E. R. 24 E.

R. 25 E. R. 26 E.
R. 27 E. R. 28 E. R. 29 E. R. 30 E.

R. 31 E. R. 30½ E.
R. 32 E.

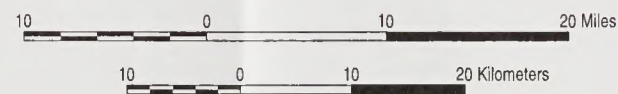
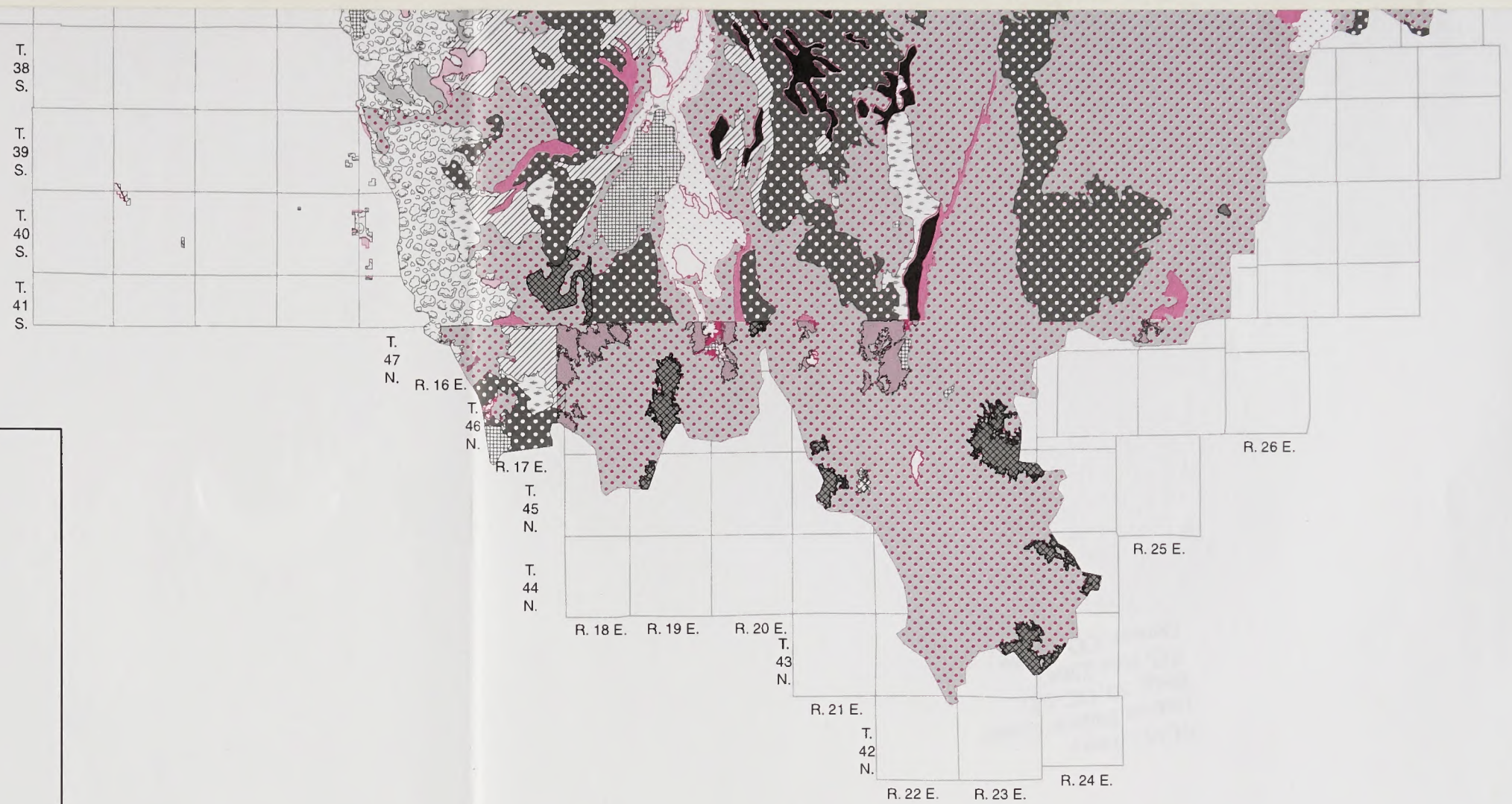
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T. 37 S.

LEGEND

	Agriculture
	Big Sagebrush Shrub/Grassland
	Black Sagebrush/Grassland
	Lodgepole Pine Forest
	Low Sagebrush Shrub/Grassland
	Miscellaneous Shrub/Grassland
	Mixed Conifer Forest
	Modified grassland
	Mountain Big Sagebrush/Grassland
	Ponderosa Pine Forest
	Quaking Aspen
	Regenerating Forest
	Riparian and Wetlands
	Salt Desert Shrub/Grassland
	Silver Sagebrush Shrub/Grassland
	Unvegetated
	Vegetated Lava Flow/Sand Dune
	Western Juniper Woodland
	Big and Low Sagebrush/Grassland
	Modified and Miscellaneous Shrub/Grassland



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**Map 2: General Vegetation Classes
within the Sub-Basin Review Area**

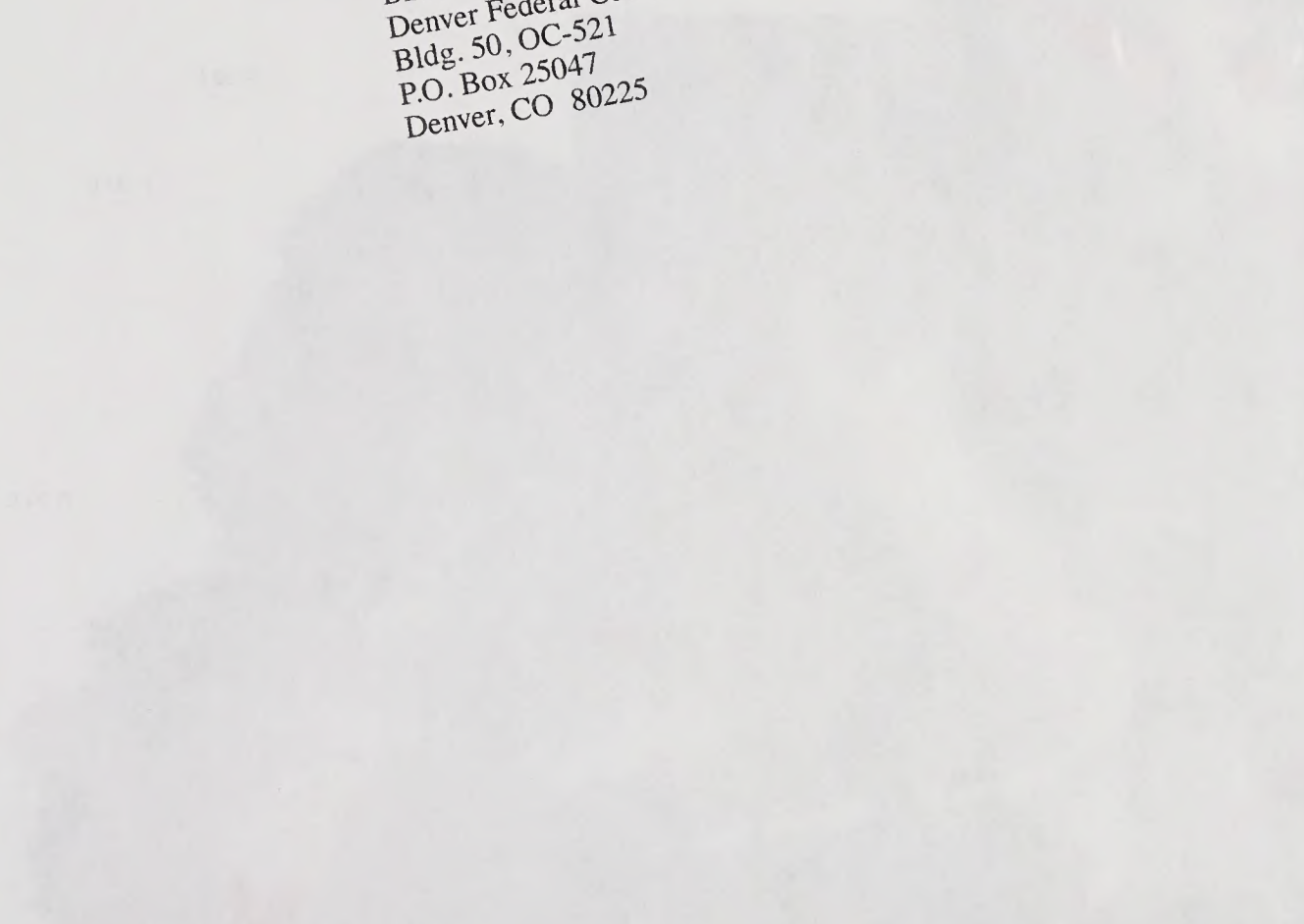
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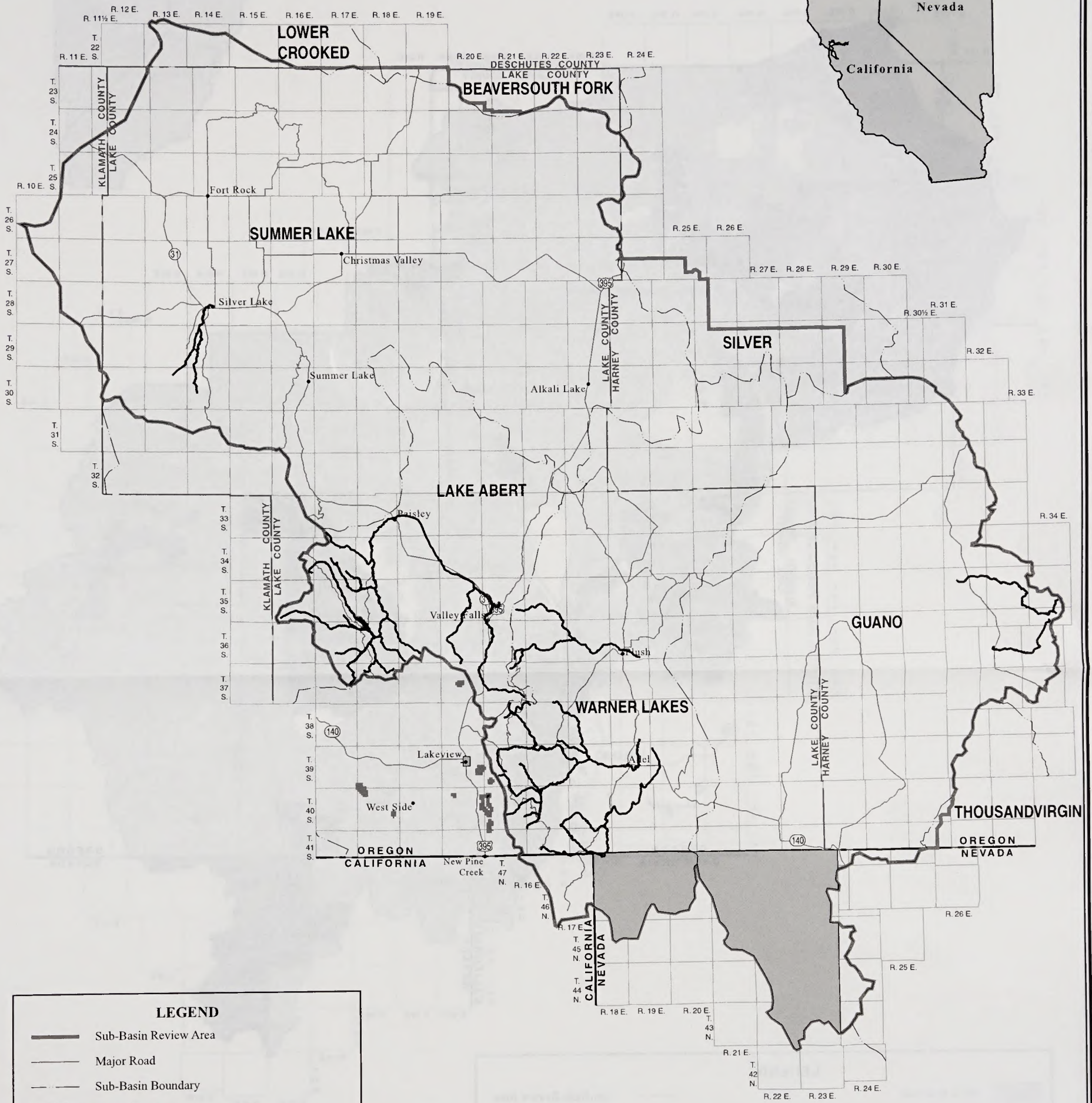
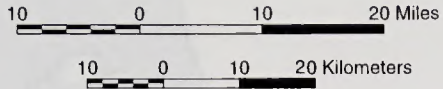
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LEGEND	
[Symbol]	100-foot contour interval
[Symbol]	50-foot contour interval
[Symbol]	25-foot contour interval
[Symbol]	10-foot contour interval
[Symbol]	5-foot contour interval
[Symbol]	1-foot contour interval
[Symbol]	Spot elevation
[Symbol]	Water
[Symbol]	Highway
[Symbol]	Road
[Symbol]	Trail
[Symbol]	Boundary
[Symbol]	Section corner
[Symbol]	Well
[Symbol]	Structure
[Symbol]	Other



LEGEND

- Sub-Basin Review Area
- Major Road
- Sub-Basin Boundary
- GUANO** Sub-Basin Name
- 303(d) Stream
- Area Of Non-Attainment of Air Quality Standards

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Map 3: Air Quality Non-Attainment Areas and Section 303(d) Listed Streams within the Sub-Basin Review Area

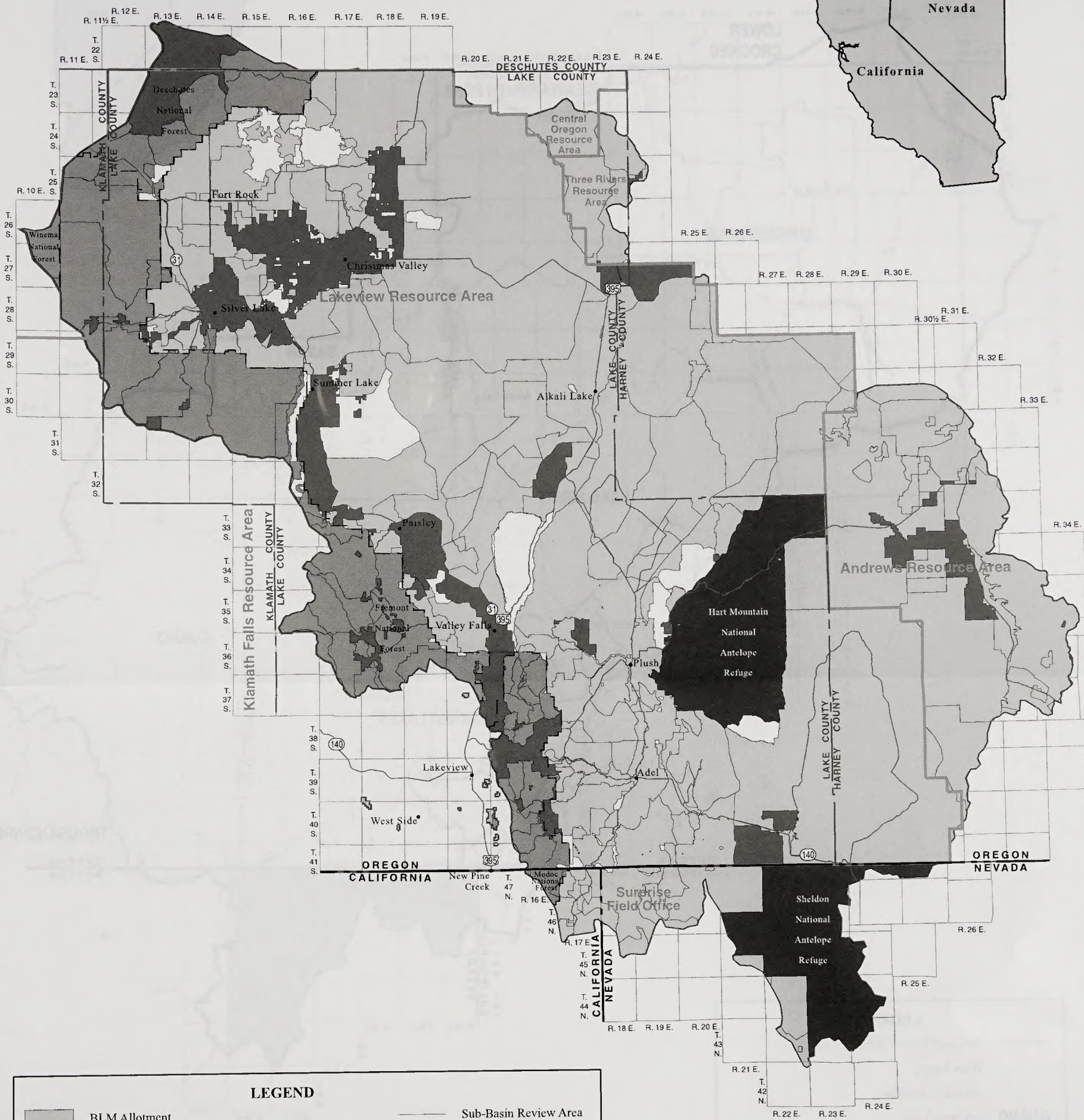


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






10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND

	BLM Allotment		Sub-Basin Review Area
	Forest Service Allotment		Major Road
	Area Outside of Federal Allotment (Private/State Lands)		Allotment Boundary
	Ungrazed Area		National Forest Boundary
	U.S. Fish and Wildlife Service Refuge (No Grazing)		

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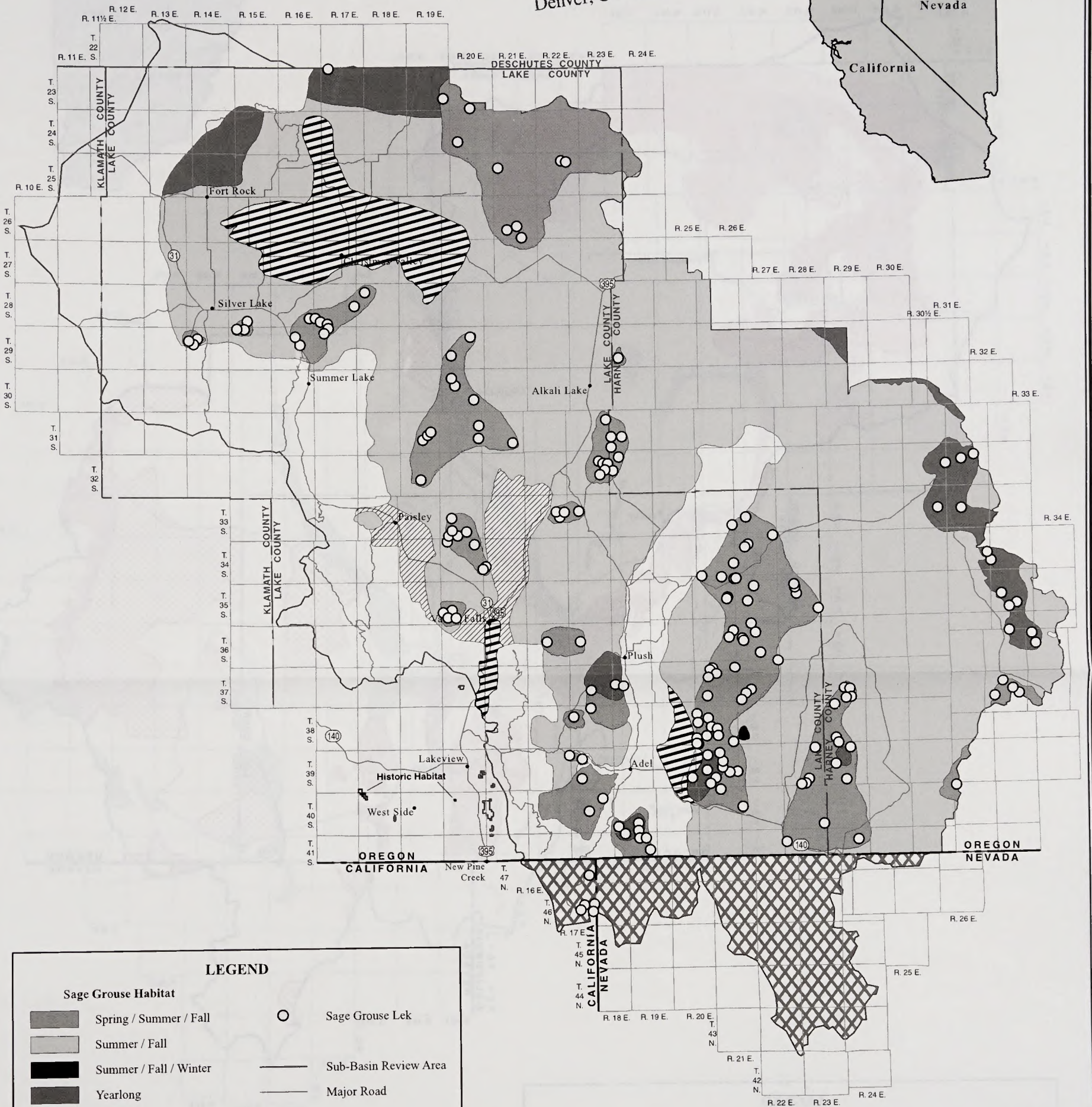
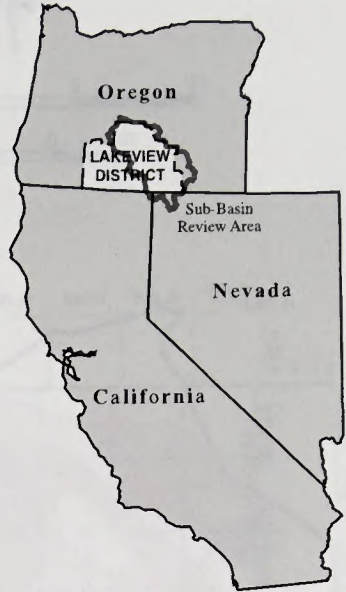
**Map 4: Grazing Allotments within
the Sub-Basin Review Area**



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LEGEND

Spring / Summer / Fall	Sage Grouse Lek
Summer / Fall	Sub-Basin Review Area
Summer / Fall / Winter	Major Road
Yearlong	
Suspected	
Historic	
Non-Habitat	
Data Unavailable	

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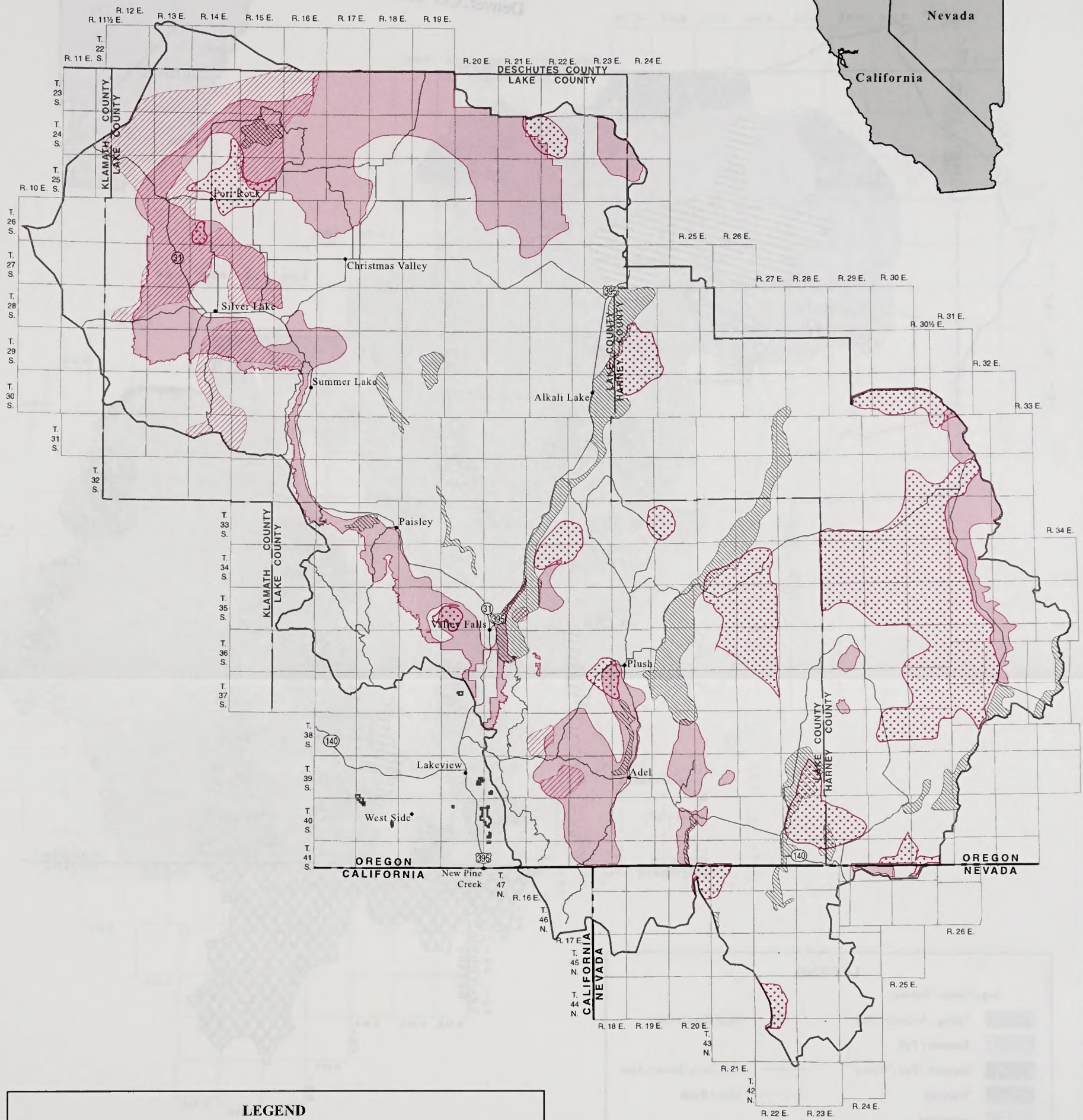
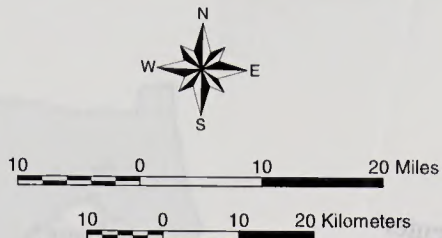
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Map 5: Sage Grouse Habitat within the Sub-Basin Review Area

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LEGEND

	Bighorn Sheep Yearlong Range		Sub-Basin Review Area
	Pronghorn Winter Range		Major Road
	Elk Winter Range		
	Mule Deer Winter Range		

Note: Data for Prineville District, Surprise Field Office, and Modoc National Forest is unavailable in digital format.

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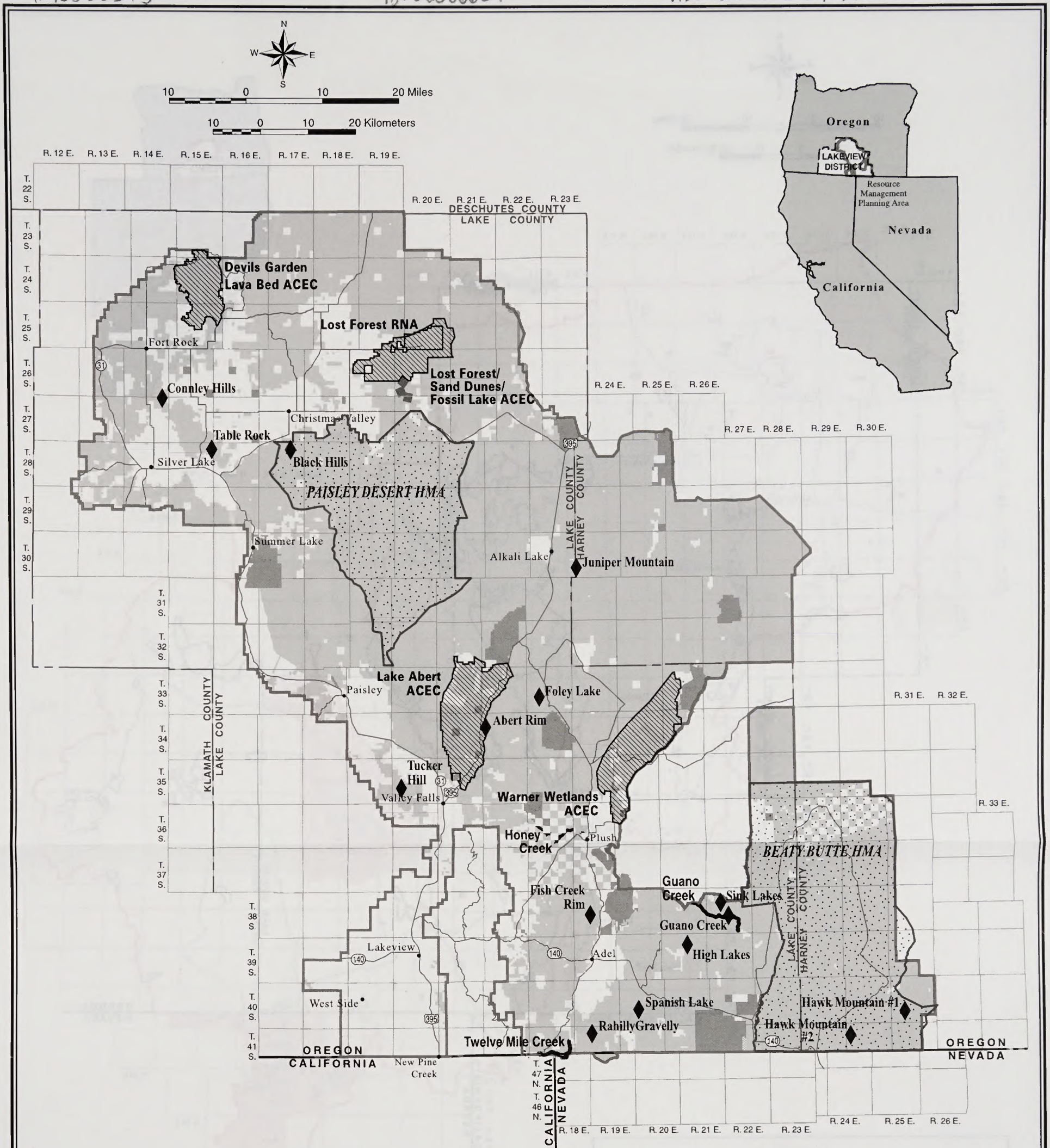
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**Map 6: Big Game Winter Range
within the Sub-Basin Review Area**



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LEGEND

Administered Lands	Planning Area Boundary
Bureau of Land Management	Major Road
U.S. Fish and Wildlife Service	Wild Horse Herd Management Area (HMA)
Department of Defense	Eligible Wild/Scenic River Corridor
State	Special Management Area (ACEC/RNA)
Private or Local Government	Proposed Special Management Area (ACEC/RNA)

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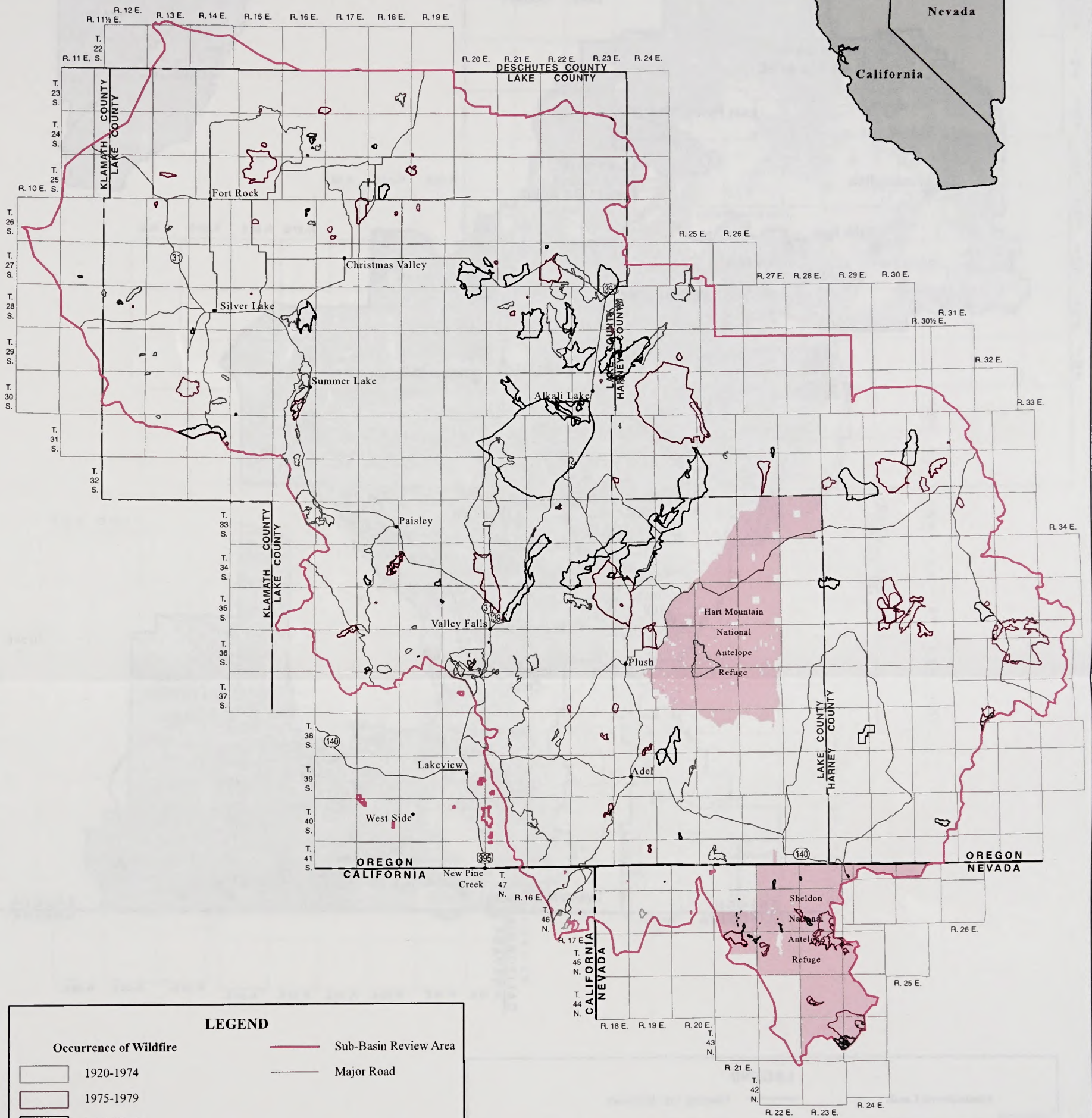
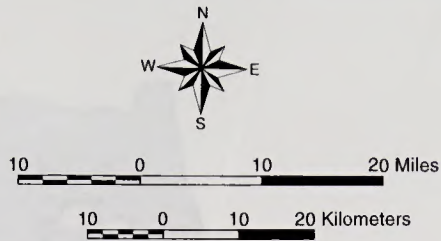
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Map 7: Existing and Proposed Special Management Areas within the Planning Area

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LEGEND	
Occurrence of Wildfire	
	1920-1974
	1975-1979
	1980-1984
	1985-1989
	1990-1994
	1995-1999
	Sub-Basin Review Area
	Major Road

Note: Wildfire digital data was not available from Hart Mountain National Antelope Refuge or Prineville District BLM. No fires large enough to map as polygons occurred on the Winema National Forest.

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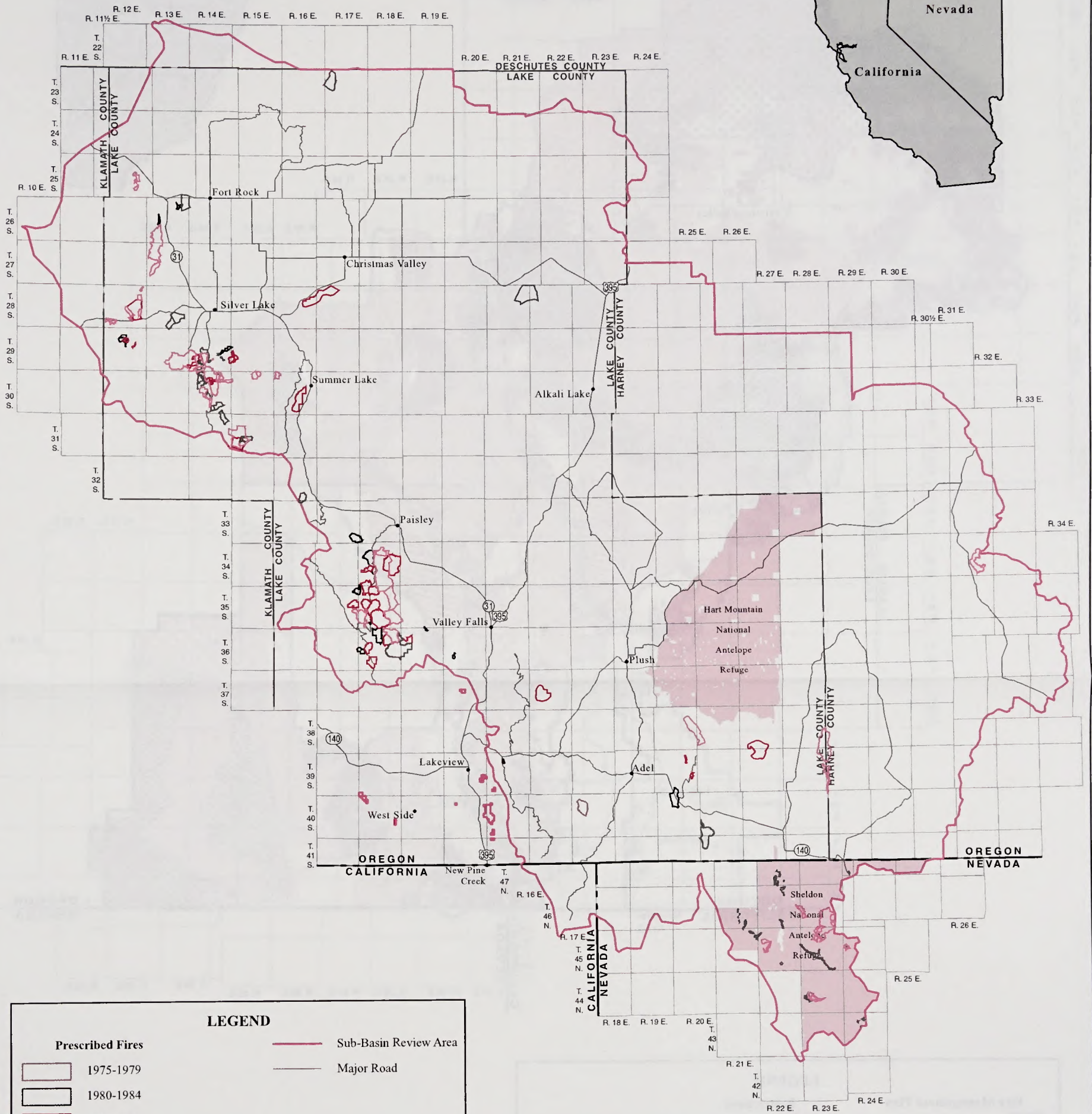
Map 8: Wildfire History within
the Sub-Basin Review Area

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10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND	
Prescribed Fires	— Sub-Basin Review Area
1975-1979	— Major Road
1980-1984	
1985-1989	
1990-1994	
1995-1999	

Note: Prescribed fire digital data was not available from Hart Mountain National Antelope Refuge, Prineville District or Surprise Field Office BLM, nor Deschutes or Winema National Forests. No fires have occurred on the Modoc National Forest.

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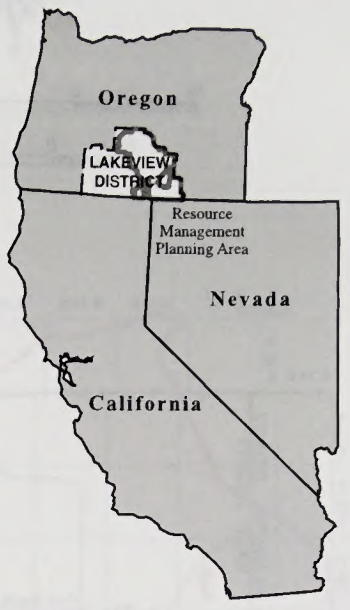
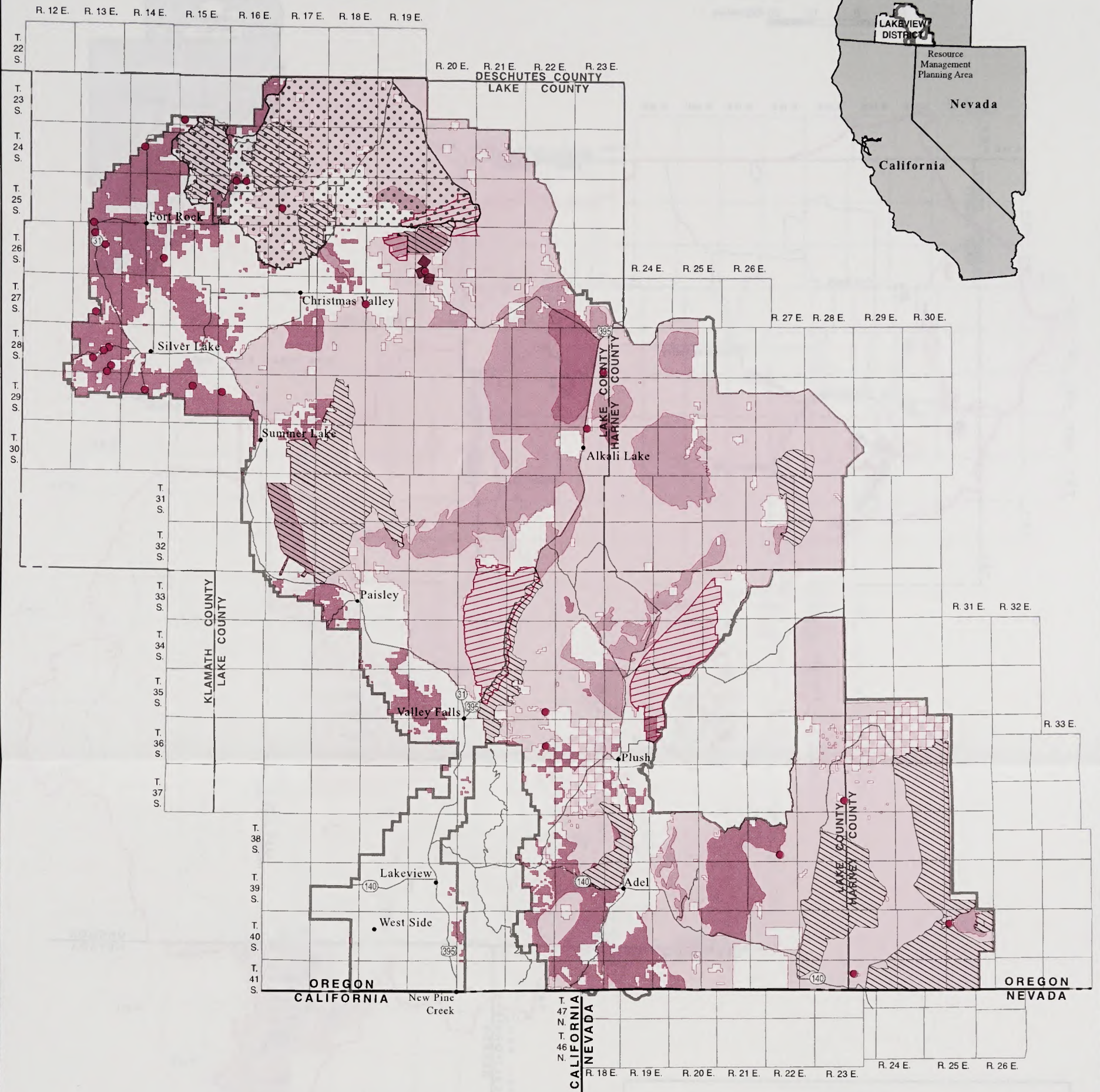
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Map 9: Prescribed Fire History within the Sub-Basin Review Area



10 0 10 20 Miles

10 0 10 20 Kilometers



Fire Management Plan		Restrictions	
	Critical		Area of Critical Environmental Concern
	Full		Wilderness Study Area
	Limited		Conditional Suppression Area
	Modified		Planning Area Boundary
	Non-BLM Land		Major Road
	Critical FMP Point		

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and
Sub-Basin Review**

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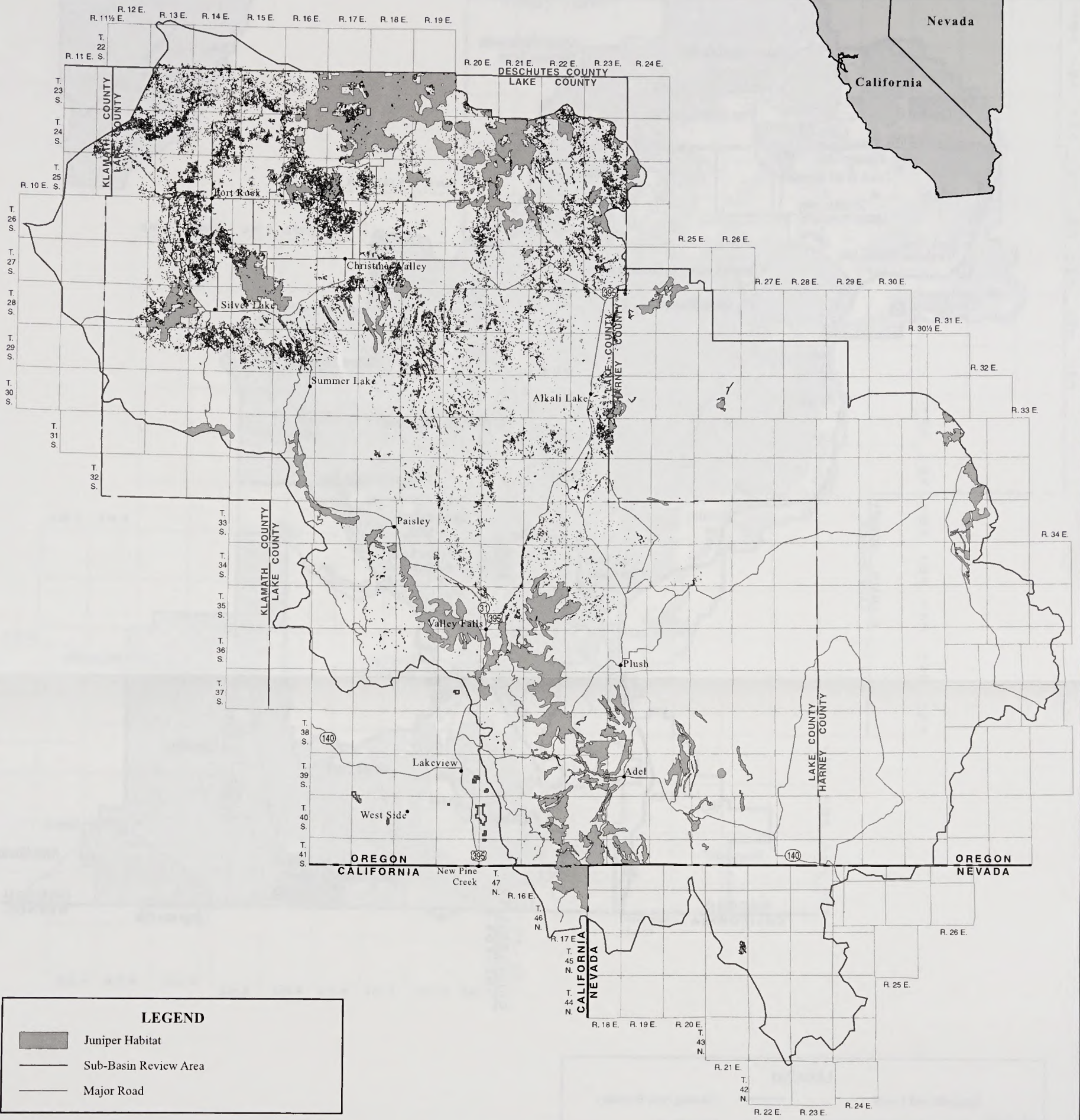
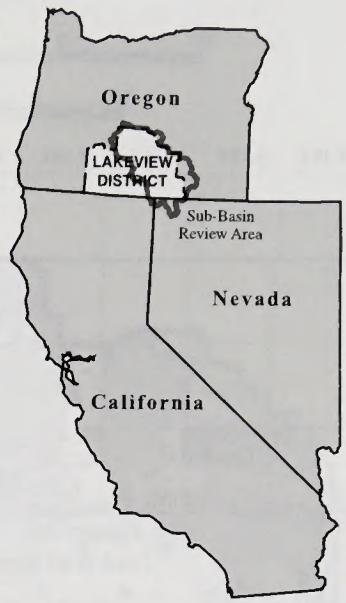
Map 10: Existing Fire Management Plan within the Planning Area

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10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND

- Juniper Habitat
- Sub-Basin Review Area
- Major Road

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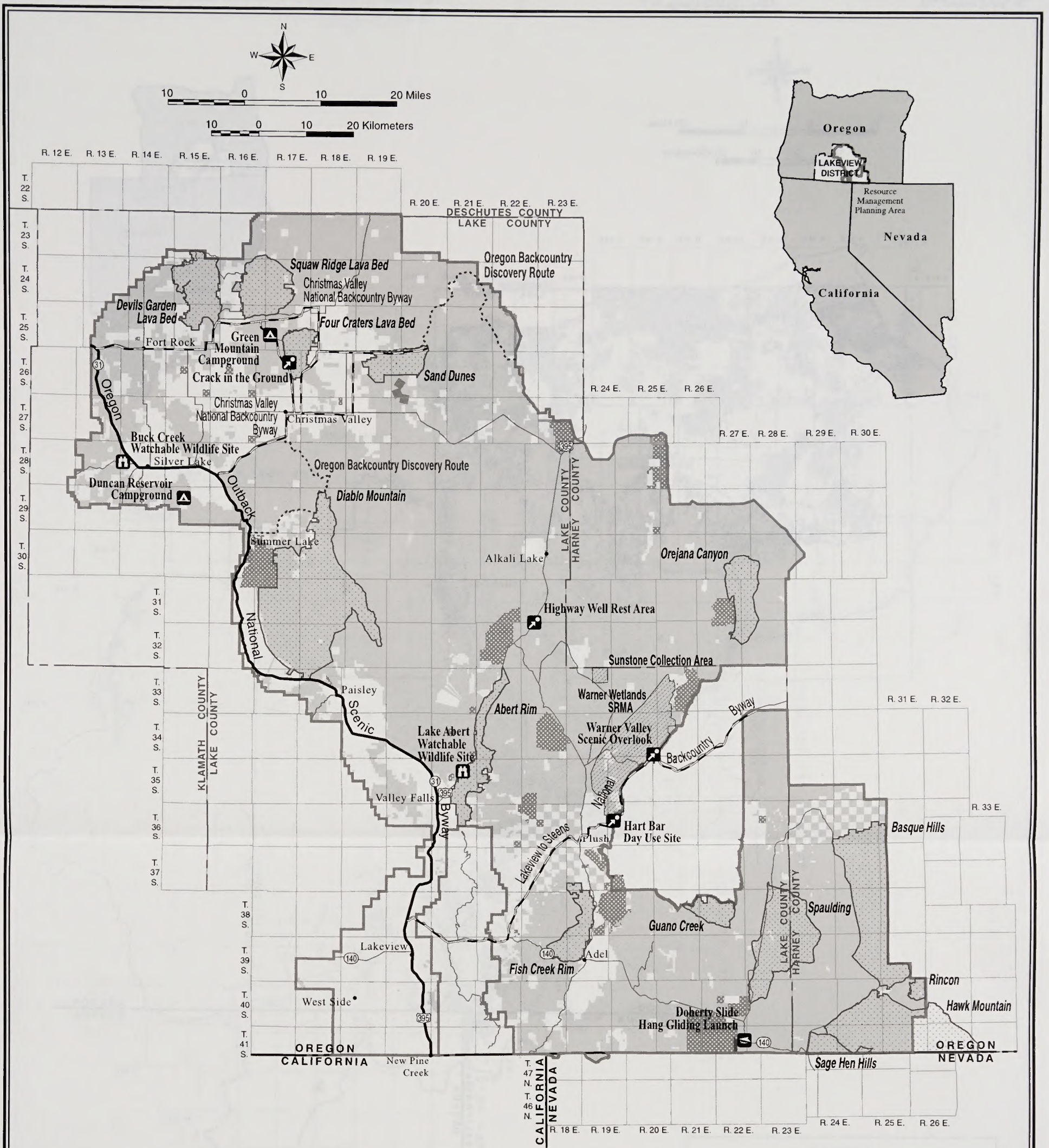
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Map 11: Juniper Habitat within the Sub-Basin Review Area



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LEGEND

Administered Lands	— Planning Area Boundary
Bureau of Land Management	— Major Road
U.S. Fish and Wildlife Service	Name — National Scenic Byway
Department of Defense	Name - - - National Backcountry Byway
State	Name - · - · - Discovery Route
Private or Local Government	Name · · · · · Wilderness Study Area
	Designated Recreation Sites
	Recreation Site
	Campground
	Point of Interest
	Hang Gliding Site
	Watchable Wildlife Site

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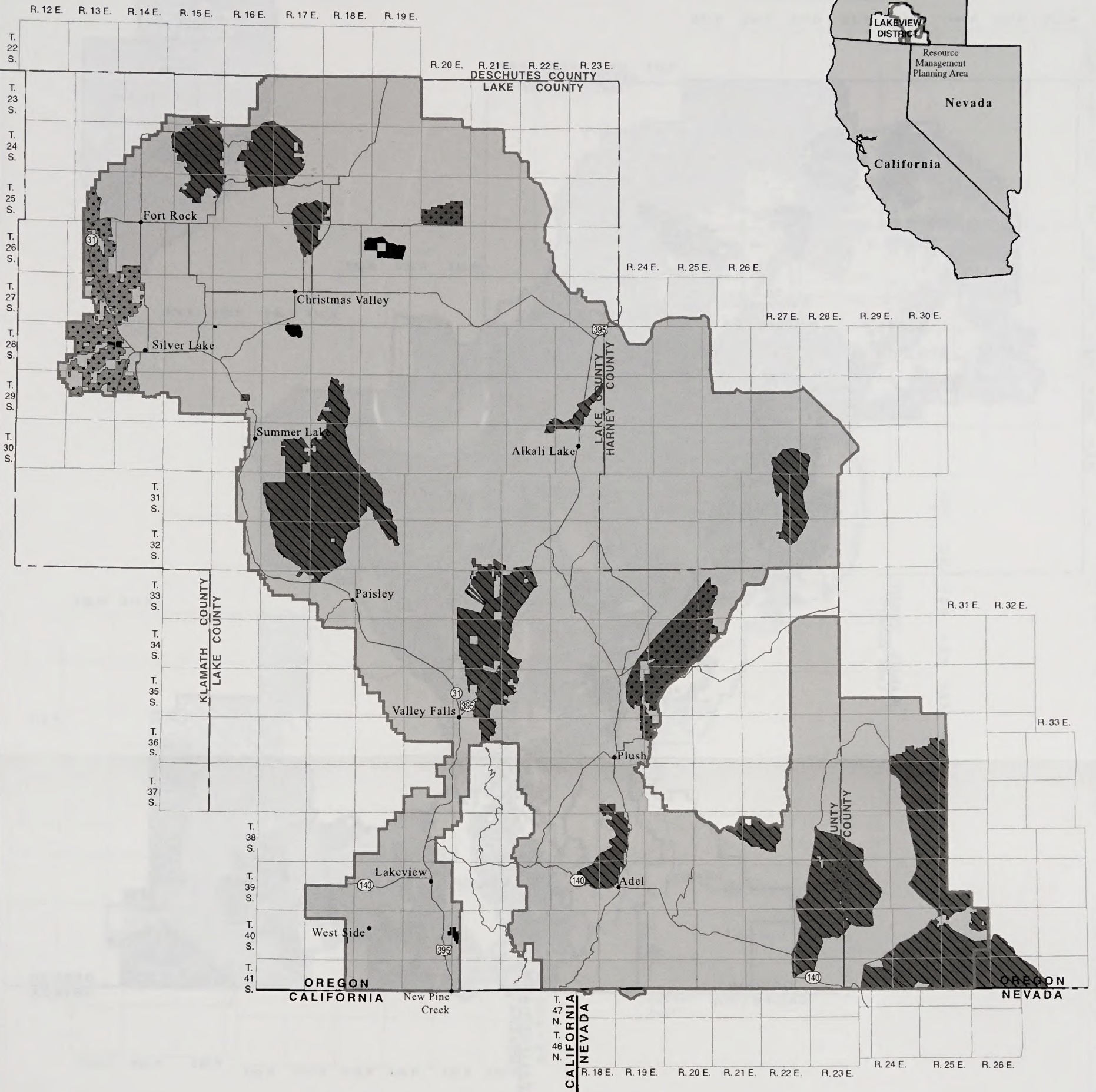
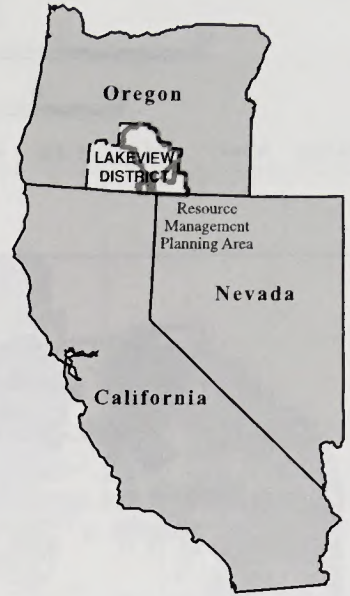
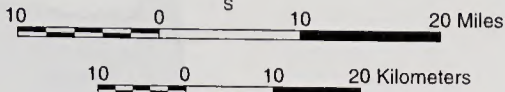
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Map 12: Recreation and Wilderness Study Areas within the Planning Area

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LEGEND

	Limited to Designated Roads and Trails		Planning Area Boundary
	Limited to Existing Roads and Trails		Major Road
	Closed		
	Limited		
	Open		
	Seasonally Closed		

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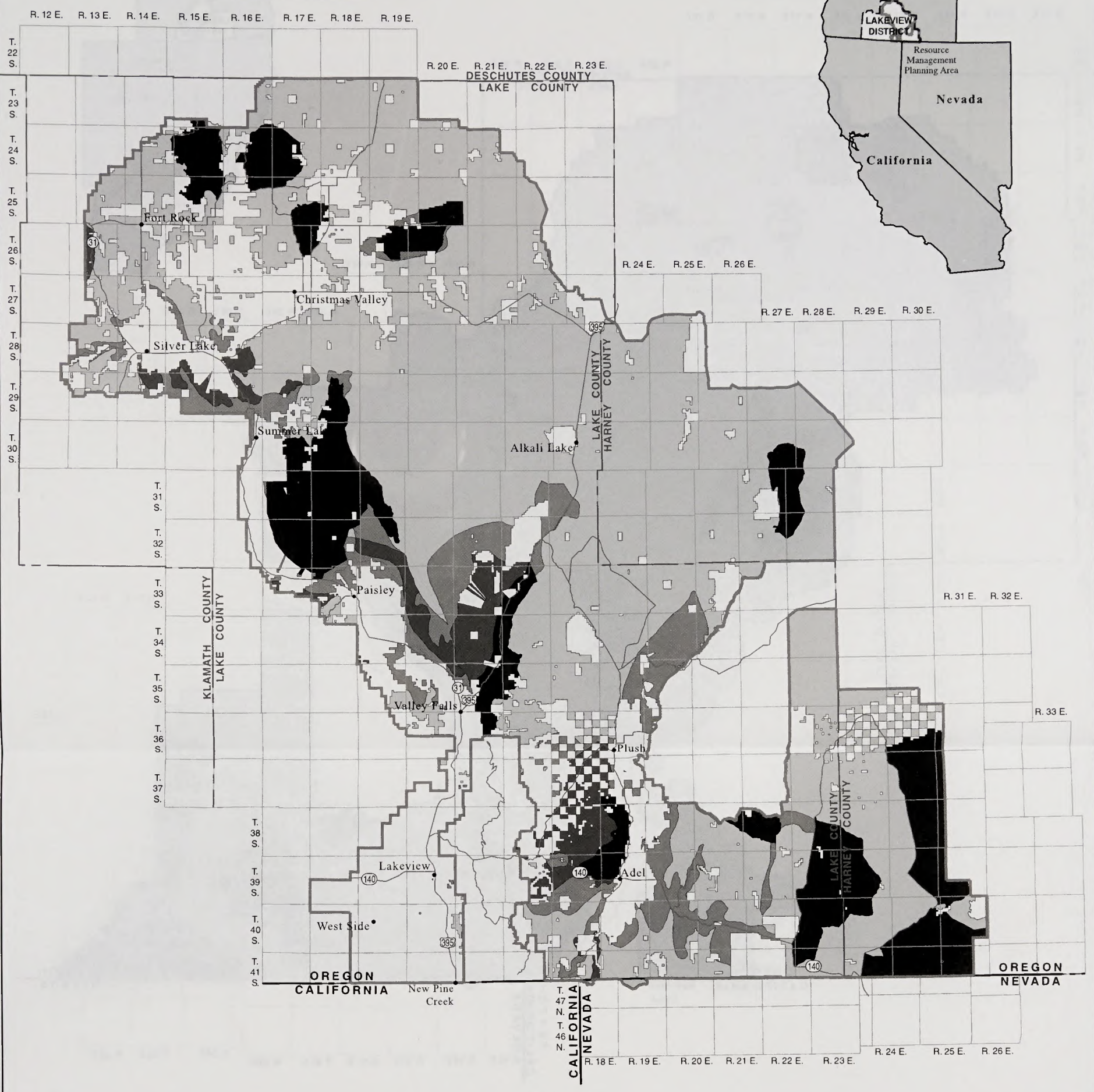
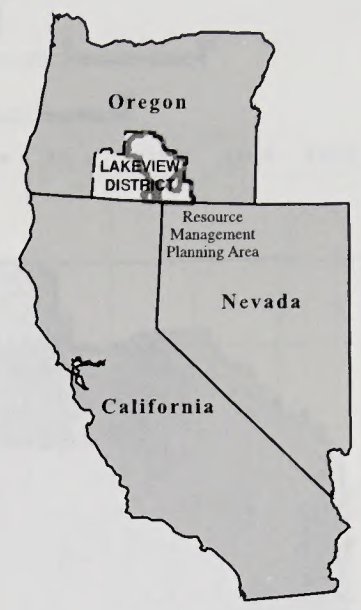
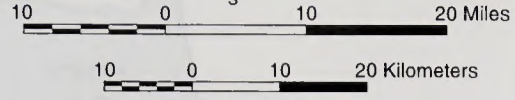
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**Map 13: Existing Off-Highway Vehicle Plan
within the Planning Area**

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LEGEND			
	Class 1		Planning Area Boundary
	Class 2		Major Road
	Class 3		
	Class 4		
	Non-BLM		

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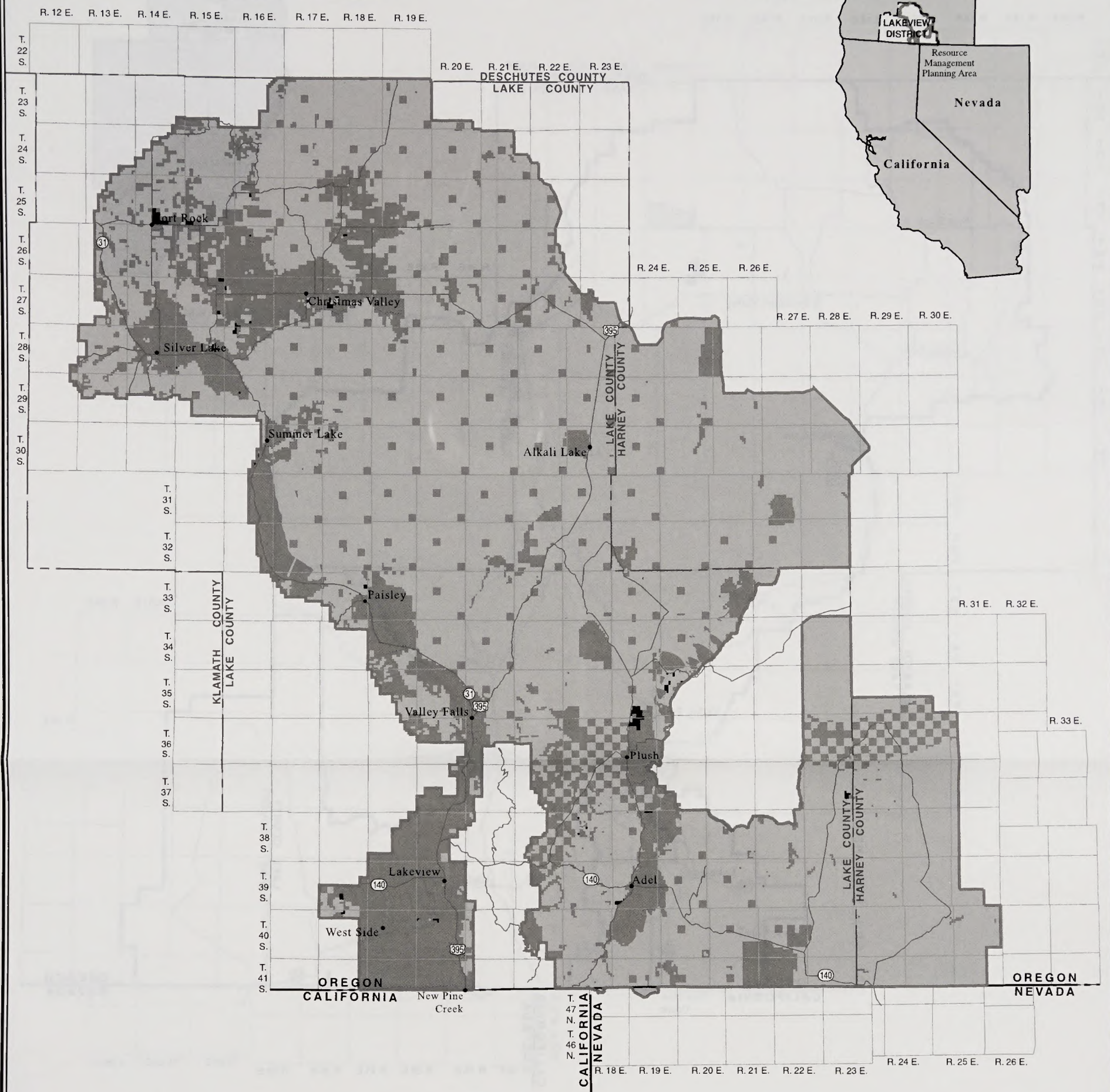
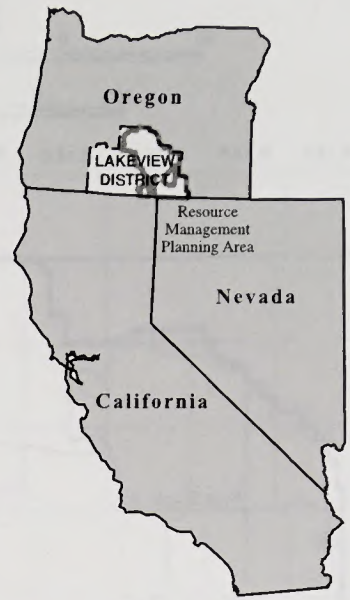
**Map 14: Existing Visual Resource Management
Classes within the Planning Area**

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







10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND

 Subsurface Mineral Estate	 Planning Area Boundary
 All Federal Minerals	 Major Road
 No Federal Minerals	
 Other	

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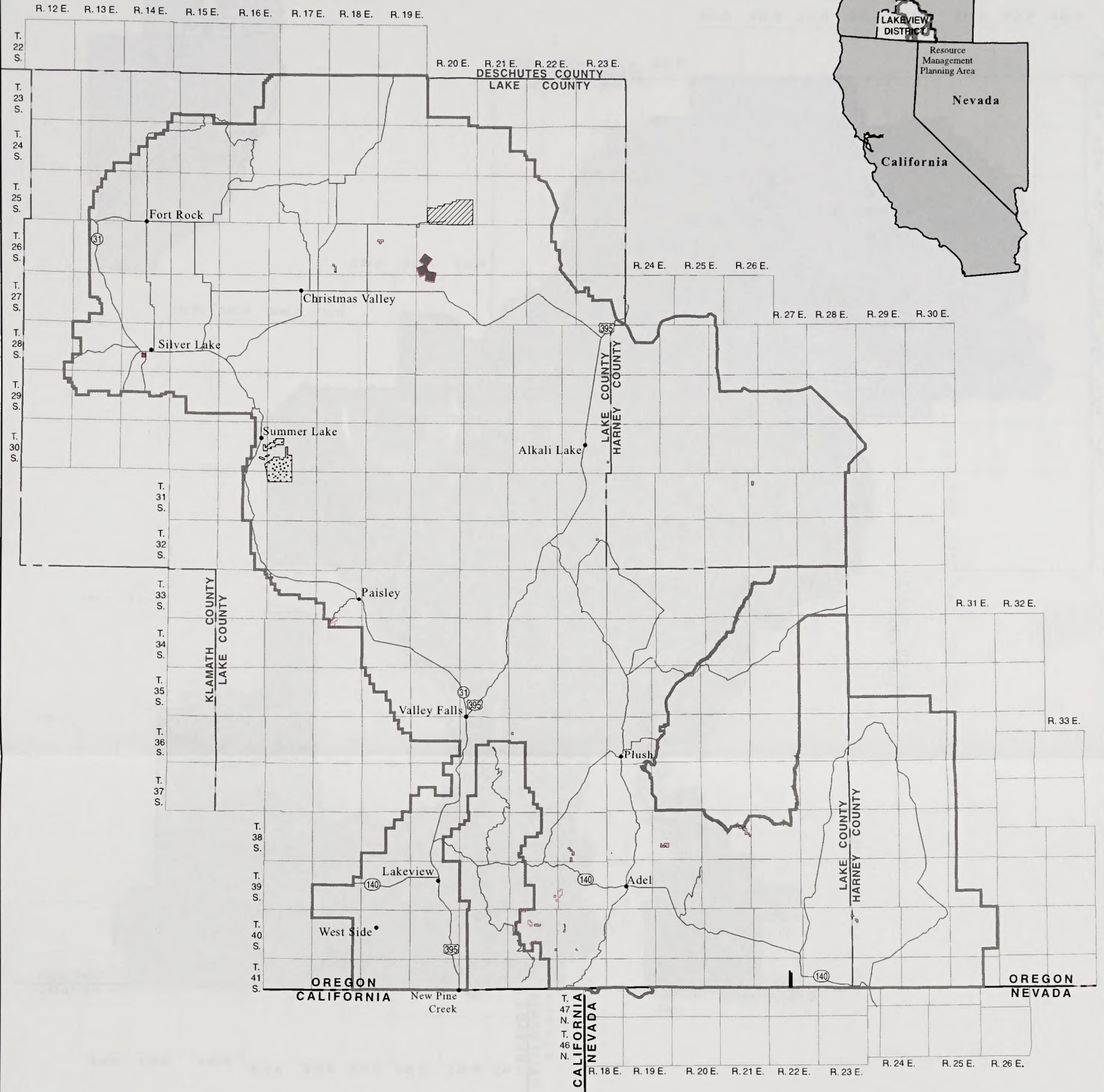
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Map 15: Mineral Estate Ownership within the Planning Area



10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND

- Planning Area Boundary
- Major Road
- Withdrawals**
 - National Wildlife Refuge
 - Power Site Reserve
 - Public Water Reserve
 - State Wildlife Refuge
 - Forest Service Administrative Site
 - Department of Defense Administrative Site
 - BLM Protective

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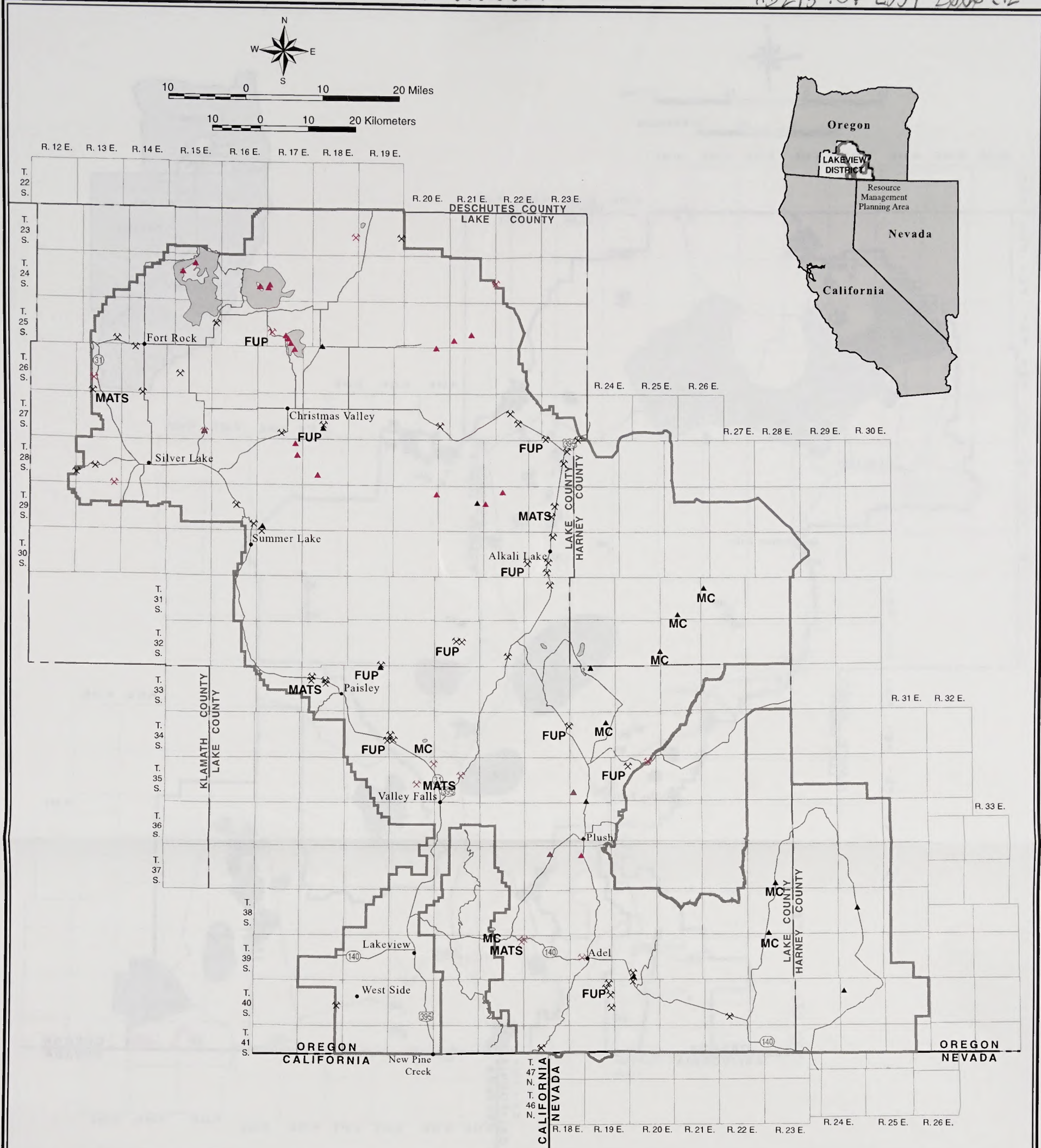
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Map 16: Existing Withdrawals within the Planning Area



LEGEND	
Salable Mineral Potential	Existing Mineral Pits
▲ Cinders	× Cinders
▲ Quarry Rock	× Quarry Rock
▲ Sand/Gravel	× Sand/Gravel
■ Decorative Stone	FUP Free Use Permit
— Planning Area Boundary	MATS Material Site ROW
	— Major Road

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Level of Potential:

- 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.

Level of Certainty:

- 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.

NOTE: All sites have a level of potential/certainty of HD unless otherwise noted.
 Level of potential/certainty for the remainder of the planning area is undetermined.



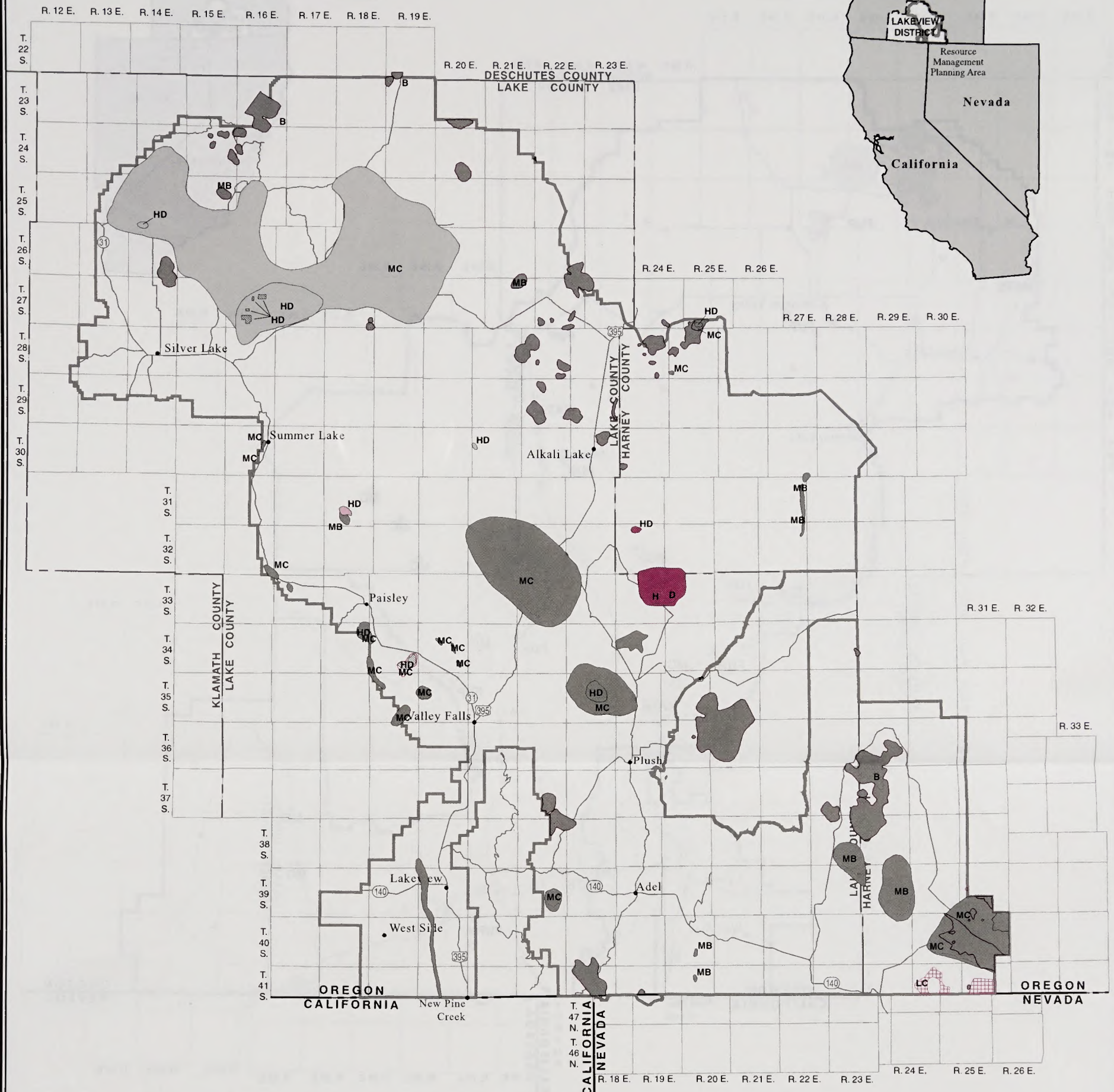
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Map 17: Salable Mineral Potential within the Planning Area



10 0 10 20 Miles

10 0 10 20 Kilometers



LEGEND	
	Base and Precious Metals
	Diatomite
	Dolomitic Limestone
	Sunstones
	Uranium
	Perlite
	Mining Claim
	Planning Area Boundary
	Major Road

Level of Potential:

- 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.

Level of Certainty:

- 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.

NOTE: All sites have a level of potential/certainty of LB unless otherwise noted. Level of potential/certainty for the remainder of the planning area is undetermined.

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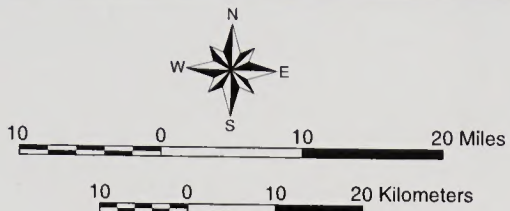
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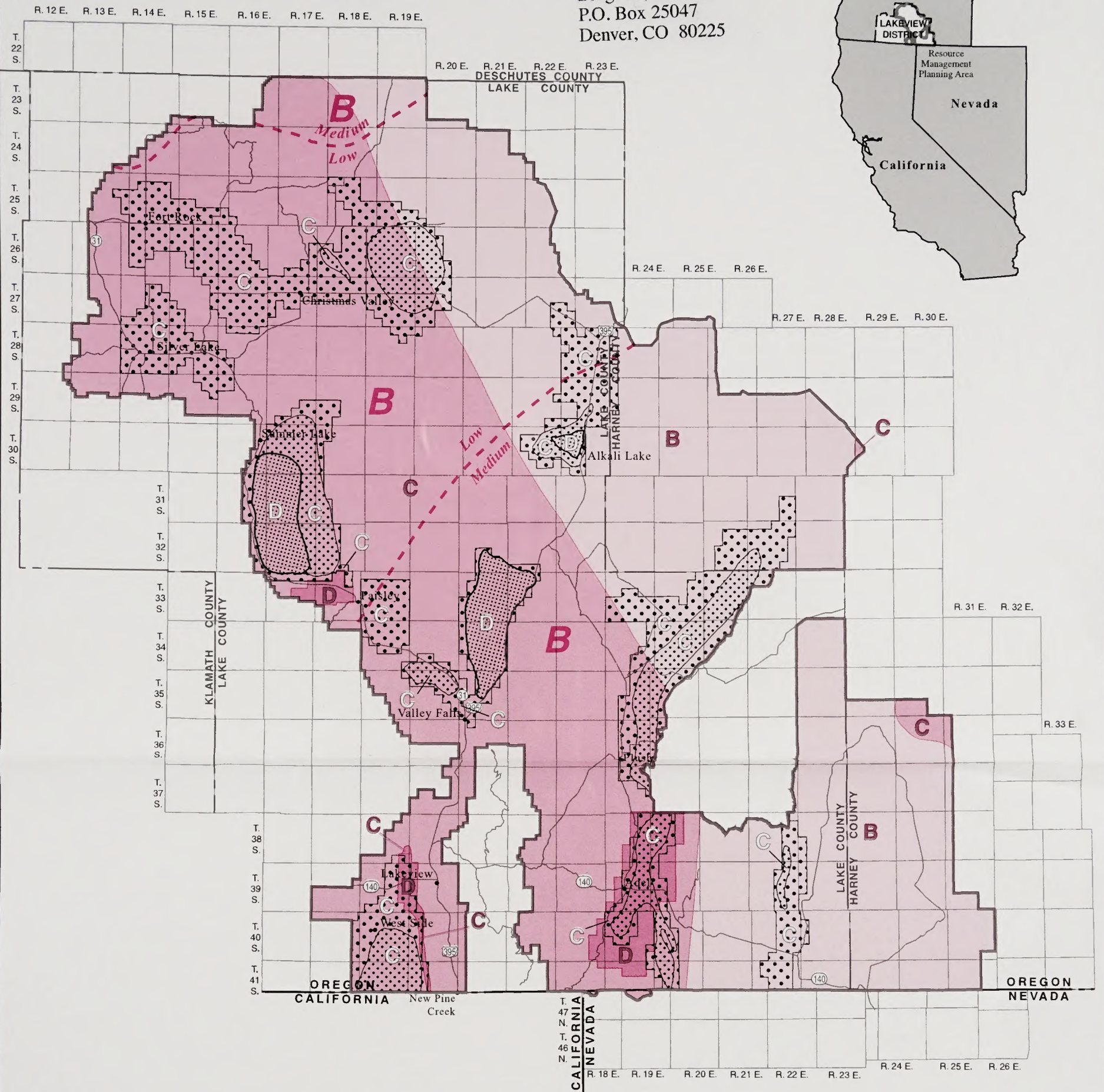


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Map 18: Locatable Mineral Potential within the Planning Area



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LEGEND	
Oil and Gas Potential	Geothermal Potential
- - - B - - - Low/Medium Potential boundary	Light Pink Low
B Level of Certainty	Medium Pink Medium
Lakebed Evaporite Potential	Dark Pink High
Low (Dotted)	D Level of Certainty
Medium (Cross-hatched)	— Planning Area Boundary
High (Stippled)	— Major Road
C Level of Certainty	

- Level of Certainty:**
- 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.

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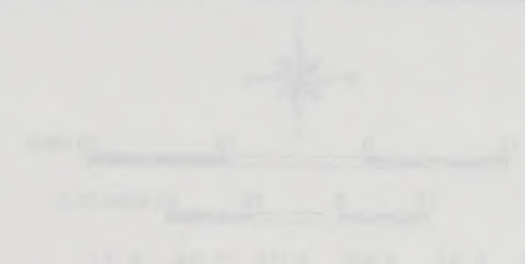


**Map 19: Leasable Mineral Potential
 within the Planning Area**

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LEGEND	
Shaded Area	Leasable Mineral Potential
Line	County Boundary
Line	Section Boundary
Line	Water Feature
Line	Other Boundary

Level of Contour
 1. The shaded area indicates potential mineral resources that are quantitatively estimated to support or enhance the production of mineral resources.
 2. The shaded area indicates potential mineral resources that are qualitatively estimated to support or enhance the production of mineral resources.
 3. The shaded area indicates potential mineral resources that are qualitatively estimated to support or enhance the production of mineral resources.

Map 19: Leasable Mineral Potential within the Planning Area

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 Planning Section
 Analysis of the Management Alternatives and Sub-Basin Review
 Lakewash District
 Lakewash Resource Area



Map 19 was prepared by the Planning Section, Bureau of Land Management, Lakewash District, Lakewash Resource Area, as part of the Lakewash Resource Area Management Plan. The map is based on data provided by the Lakewash District, Lakewash Resource Area, and the Lakewash District, Lakewash Resource Area.



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