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United States Department of the Interior
Bureau of Land Management
Caliente Resource Area

December 1996



Caliente RMP


Final Environmental Impact Statement



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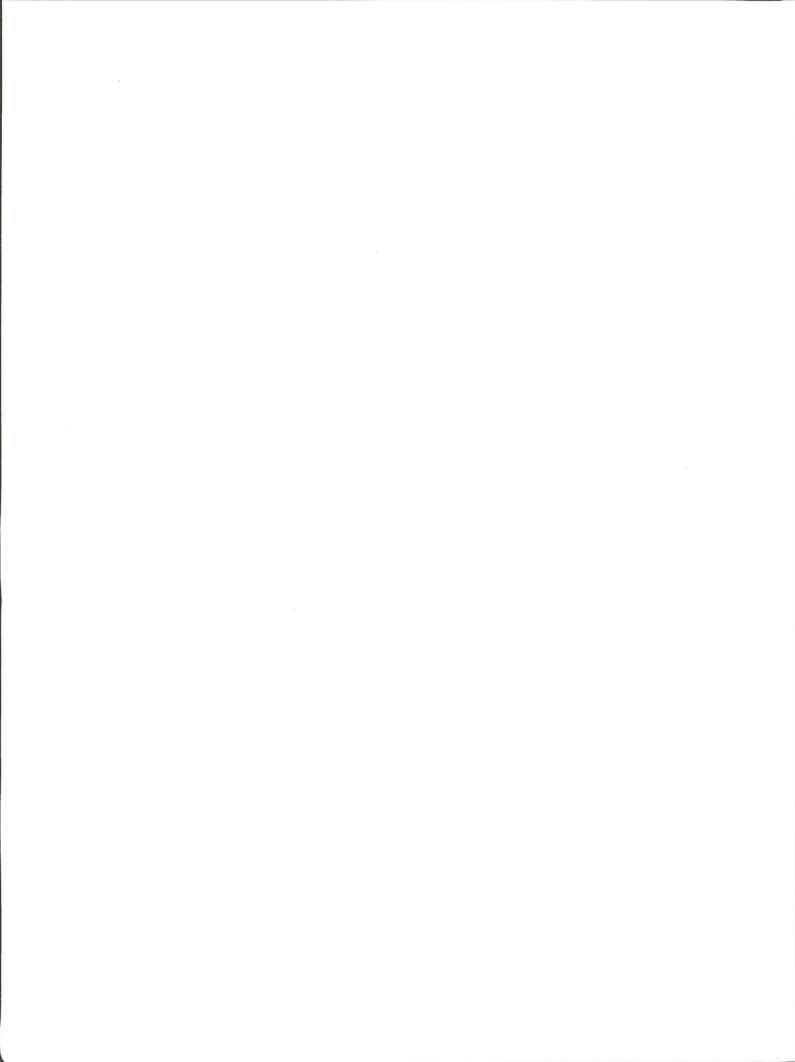
FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE
PROPOSED
CALIENTE RESOURCE MANAGEMENT PLAN

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

Ed Hartley

STATE DIRECTOR
CALIFORNIA

Date 12/3/96



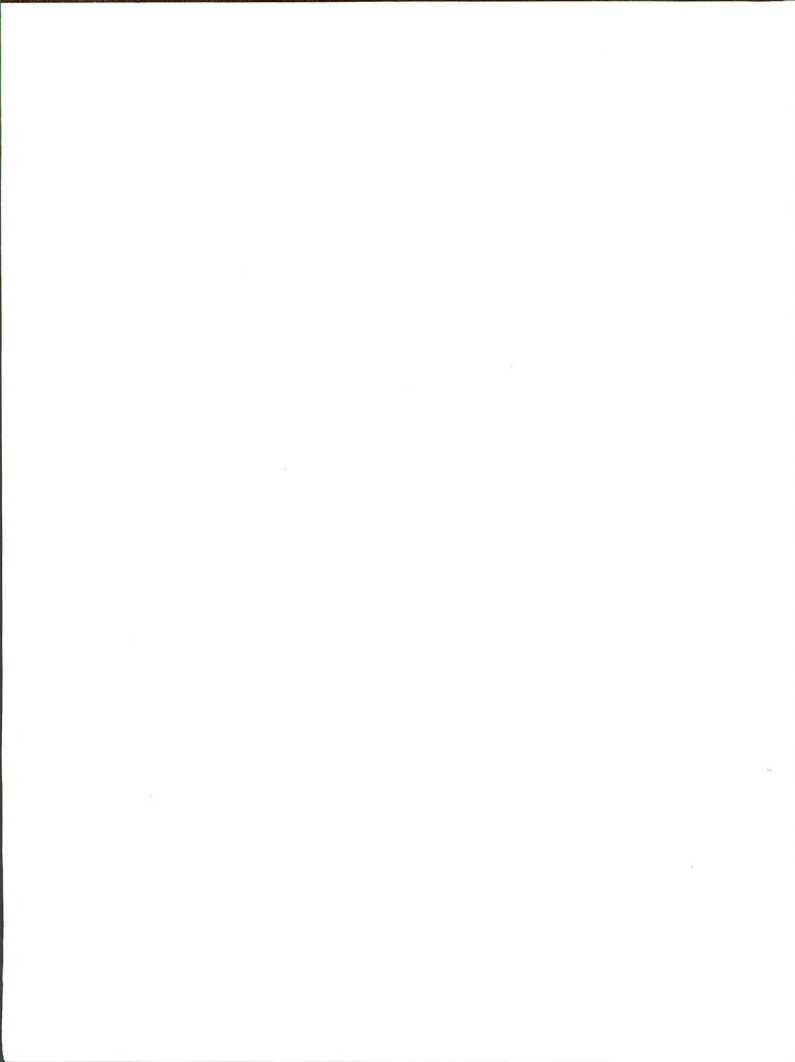
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Bureau of Land Management
**Caliente Resource Area
Management Area Boundaries**





Preface

This Proposed Resource Management Plan and Final Environmental Impact Statement are being prepared to guide the BLM in its management of approximately 590,000 acres of public land and 450,000 acres of federal subsurface mineral rights under the administration of the Caliente Resource Area. The Resource Area encompasses all or portions of six south central California counties: Kern, Tulare, Kings, San Luis Obispo, Santa Barbara and Ventura.

The Draft Resource Management Plan (RMP) and Environmental Impact Statement were made available as a single document for public review in July of 1994. Both the draft and final EIS address a range of five proposed management alternatives to present the results of the environmental analysis for the public and decision maker. The Final EIS and the Proposed RMP are being distributed as separate documents in an effort to more clearly state the proposed action and environmental analysis for the reader.

The Proposed Action described in the final EIS and the Proposed RMP are based on the Preferred Alternative analyzed in the draft, with changes based on information and suggestions raised through public comment and internal review. The modifications included in the Proposed Action neither significantly change the scope of the final EIS nor alter the analysis of environmental impacts. The final EIS is comprised of this document combined with the draft EIS which is incorporated by reference, in accordance with the 40 CFR 1500.4(j) and (o), 1502.21 and 1506.4.

Following release of the Final EIS and a 30 day protest period, the BLM will issue a Record of Decision. It is anticipated that the Proposed RMP will be adopted as the Resource Management Plan.

Summary

The Proposed Action would establish management objectives applicable on a resource area-wide basis, as well as for each of the three management areas. It also identifies use allocations for special area designations, oil and gas leasing, livestock grazing leasing, and proposals to adjust scattered public land ownership patterns. It would also adopt the management guidelines found in the RMP in Chapters 4 - 12 as the means of accomplishing objectives and implementing allocations.

In all three management areas objectives call for increased collaboration with county, state governments and other federal agencies as well as for continued public involvement in the implementation of the plan. Additional detail on the proposed action is summarized below by management area.

Coast Management Area

Emphasis in this management area would include seeking local management cooperators to enhance on-the-ground management activities and repositioning isolated parcels of public land to locations where they compliment open space and resource management objectives. This includes targeting some lands for transfer to or cooperative management with the National Forest Service.

Point Sal and the California Rocks and Islands Areas of Critical Environmental Concern (ACECs) would be retained and Cypress Mountain, Tierra Redonda and Salinas River would be designated as additional ACECs. Special Management Areas may include Frog Pond, Irish Hills, Rusty Peak, Huasna Peak, and Hopper Mountain. Livestock grazing could be authorized on approximately 6,000 acres of public land. Approximately 67,000 acres of public land and 69,700 acres on military bases would be open to oil and gas leasing.

Valley Management Area

Continued emphasis would be placed on making land available for oil and gas leasing and development with the identification of approximately 367,000 acres of public land or mineral estate available for oil and gas leasing.

BLM land would also be managed to make a significant contribution to sensitive species recovery and management. BLM land would be managed in-place or repositioned to locations that assists the BLM and local county governments in meeting species conservation needs.

Livestock grazing may be authorized on approximately 275,000 acres recognizing the positive contribution range lands play in meeting overall conservation needs within the San Joaquin Valley.

ACECs would include Carrizo Plain, Lokern, Alkali Sink, Goose Lake, Kettleman Hills and Chico Martinez. Bittercreek would be identified as a Special Management Area.

South Sierra Management Area

Land in the South Sierra Management Area would be managed to provide a range of dispersed recreational opportunities, meet rural community economic, lifestyle and infrastructure needs, and to contribute to the conservation of rare plant communities and cultural resources.

Livestock grazing may be authorized on approximately 220,800 acres recognizing the contribution this industry makes toward balancing the economic stability of rural communities and providing a means to continue the traditional life styles valued in this area.

The Blue Ridge and Piute Cypress ACECs would be retained and Case Mountain and Horse Canyon ACECs would be added. Special Management Areas would include Keyesville, Erskine Creek, Deer Spring, Granite Cave, KER 311, Walker Pass National Historic Landmark, the Pacific Crest National Scenic Trail and North Fork of the Kaweah.

Additional emphasis would be placed on cooperative management for public lands adjacent to the National Forest Service and National Park Service.

Differences Between the Draft and Final EIS

The proposed action described in the Final EIS is the preferred action (Alternative 5) presented in the Draft EIS with modifications as summarized below. Chapters 3 and 5 of this document contain changes to the text of the draft EIS made in response to public comments and internal review. They do not significantly alter the analysis of the environmental consequences in the Draft EIS.

New Look and Organizational Changes

The Draft RMP/EIS contained a large amount of background information to assist the reader in better understanding the management programs and guidelines of the Bureau. A large amount of that information was contained in the appendices of the draft. Much of that information has not been reproduced in the final. Public comments on the Appendix sections of the draft are addressed in Chapter 5. The Final EIS and the Proposed RMP have been issued as separate documents to improve clarity and minimize reproduction costs in adopting a Resource Management Plan.

The format of the document and especially the Proposed Action has been modified as a result of numerous comments concerning the difficulty of determining proposed decisions, or following analysis discussions. The revised format and the way the Proposed Action is now structured is intended to alleviate those concerns.

The Draft RMP/EIS also contained two draft activity level plans, the Carrizo Plain Natural Area Management Plan (Appendix J) and the Walker Pass Cooperative Resource Management Plan (Appendix K). Both activity plans are being completed separately from the RMP/EIS.

The Carrizo Plain Natural Area Plan is nearing completion having been released as a final for public review in the fall of 1995. The Walker Pass CRMP covers an area affected by the passage of the California Desert Protection Act of 1994 (PL 103-433, 10/31/94). That Act resulted in designation of 5 wilderness areas containing approximately 109,000 acres in the Walker Pass Area. Many of the issues addressed in the draft Walker Pass CRMP will be carried forward to activity level planning currently underway to replace the draft CRMP for the lands covered by wilderness designation. The Proposed RMP also reflects other updates and references to the changes to the proposed action as a result of the California Desert Protection Act.

Management Objectives and Guidelines

Management Objectives developed for the Resource Area have been consolidated into Resource Area-Wide Objectives, and those pertaining to specific Management Areas have been relocated to the appropriate management area narrative. Additionally, management objectives have been developed for proposed ACECs and SMAs to serve to guide management in those areas.

New grazing regulations called for the formulation of standards and guidelines for rangeland health. Since these standards and specific guidelines for livestock grazing management complemented our overall objectives so closely, they were adopted and incorporated into this planning effort. These standards for rangeland or ecosystem health are incorporated in the Resource Area-Wide Objectives and are discussed in detail in Chapter 6 of the RMP.

Affected Environment - EIS Chapter 2

In an effort to reduce confusion, Chapter 2 has been reorganized and described by management area to correspond with the organization of Chapters 3 and 4 of the EIS. Additionally, a brief discussion of local and county land use planning objectives has been added to Chapter 2.

Chapter 2 has also been updated and edited in response to public comment to insure that discussion was limited to a description of the affected environment. Analytical or impact related discussions were considered more appropriately placed in Chapters 4 Environmental Consequences and relevant procedural discussions were moved to the appropriate Management Guideline Chapters of the RMP.

Areas of Critical Environmental Concern

The following ACECs proposed in the draft have been dropped from further consideration as ACECs; in the Coast Management Area -- Frog Pond Mountain, in the Valley Management Area --Blue Stone Ridge, and in the South Sierra Management Area -- Erskine Creek and Walker Pass ACECs.

Additional acreage has been added to the following proposed ACECs: The Chico Martinez ACEC in the Valley Management Area and to the Blue Ridge, Case Mountain and Horse Canyon ACECs in the South Sierra Management Area.

Special Management Areas

In response to comments related to management concerns for resources outside of ACECs and/or comments related to the objections to including some of the proposed ACECs, the final includes a new locally developed identifier for a category of lands that need special attention but do not warrant ACEC designation. The following Special Management Areas (SMAs) are identified: Frog Pond Mountain, Hutasna Peak and Hopper Mountain in the Coast Management Area; Bittercreek National Wildlife Refuge in the Valley Management Area; and Erskine Creek, Keyesville, North Fork of the Kaweah River, Deer Spring, Granite Cave, Walker Pass National Historical Land Mark, and the Pacific Crest National Scenic Trail in the South Sierra Management Area.

Wild and Scenic Rivers

Six river corridor segments identified in the draft EIS/RMP as eligible were reevaluated and dropped from the list of eligible river segments, as they now fall in other "special management designation areas" that adequately protect the free flowing nature of the river segments. The South Fork Kern River, Canebrake, Chimney, and Spanish Needle Creeks are located within lands designated as wilderness under the *California Desert Protection Act of 1994*. Soda Lake is within the Carrizo Plain Natural Area ACEC and the BLM portion of Salinas River (1 mile of the 40 mile segment) is within the Salinas River ACEC.

The remaining eligible candidates on the Kern and Kaweah Rivers would be given a priority for suitability study when such study is appropriate in conjunction with the U.S. Forest Service, the National Park Service, and private concerns (See RMP Chapter 7 for river segment descriptions).

Oil and Gas Lease Stipulations

As a result of numerous comments related to the confusing interpretations of the stipulations, the stipulations have been consolidated and reworded. The updated stipulation section of the document (see RMP Chapter 5) presents additional clarity with the inclusion of detailed information on how the stipulations would be applied at both the time of lease sale and when applications to develop leases are received.

Land Tenure Adjustments

As a result of numerous comments suggesting concern and confusion about the reference to the disposal of lands in the land tenure adjustment process, the final contains a rewritten land tenure adjustment section. Clarification has been added and guidelines have been provided on how and where the process of land tenure adjustments would occur. The final identifies three land tenure adjustment classes: Reposition, New Manager, and Cooperative Management.

Reposition: BLM lands in this management class will be considered for repositioning for greater management efficiencies, better service to the public, and to meet the overall objectives of this plan. The primary method will be through the land exchange process.

New Manager: BLM lands in this management class have been determined to be more suitable for management by an agency or organization other than BLM. A "New Manager" will be sought for these lands in order to increase management efficiency.

Cooperative Management: BLM lands in this management class have been determined to be valuable as public lands, and will remain under BLM jurisdiction. However, due to their location and the local land pattern, it is possible to maximize management efficiency by cooperatively managing these areas with adjacent agencies or other BLM offices.

Livestock Grazing

After much discussion with species experts and the U.S. Fish and Wildlife Service, several restrictions on livestock grazing identified in the Draft RMP were either reduced or eliminated. The changes affected the proposed season of use restrictions for high potential habitat of special status plants and giant kangaroo rats. Many seasonal restrictions were also modified to reflect new species information and an increased comfort with the BLM's overall rangeland management guidelines, making the more restrictive seasons unnecessary.

Cultural Resources/Native American Traditional Lifeway Values

In response to public comments and concerns regarding how cultural resources were covered within the Draft EIS, the discussion on BLM's responsibilities regarding cultural resources and Native American traditional lifeway values has been revised to more clearly state BLM's treatment of these unique resources. Additionally, the discussion of impacts to these resources in Chapter 4 of the draft EIS has been reorganized into a separate impact topic in the Final EIS to assist the reader in locating discussions on potential impacts and mitigation measures designed to protect these resources.

Chapter 1 - Purpose and Need For Proposed Action

The Bureau of Land Management's (BLM) Caliente Resource Area encompasses approximately 13.8 million acres of land in central California. The Caliente Resource Management Plan (RMP) will guide management of the 590,000 acres of public land and an additional 450,000 acres of Federal reserved mineral estate (split estate) in the region for the next 15 years.

The RMP will adopt management objectives, allocate land uses (the "where things may happen"), and provide the direction and guidance needed to manage the resources. It identifies levels and types of uses that may occur, conditions to be maintained, limitations on uses, and management guidelines. Decisions will be implemented either directly, or through site specific activity plans supported by an Environmental Assessment or Environmental Impact Statement (EIS) with continued opportunities for public involvement.

The purpose of this planning effort is to update and integrate the BLM's land use planning for the Caliente Resource Area into one comprehensive land use plan. The RMP will replace the Coast/Valley Resource Management Plan (September 1985) and the South Sierra Management Framework Plan (August 1983).

Since these last land use plans were prepared, Bureau policy has evolved to comply with recent court decisions, as well as to reflect new public concerns. In addition, the BLM developed new standards for the analysis of oil and gas leasing, which required decisions not made in the previous plans. The Caliente RMP addresses these new requirements, as well as public and management issues identified in a number of public scoping meetings and public comments on the draft EIS.

Sections 102 and 202 of the Federal Land Policy and Management Act (FLPMA) of 1976 (as amended) require the Secretary of the Interior to develop land use plans for all public land under the administration of the BLM. This proposed RMP conforms to FLPMA and the Code of Federal Regulations, including the planning regulations found in Title 43, Part 1600 of the Code of Federal Regulations (43 CFR 1600).

A final environmental impact statement has been prepared for the Proposed RMP and alternatives in response to the regulations of the Council on Environmental Quality found in 40 CFR 1500, which, in conformance with the National Environmental Policy Act (NEPA) of 1969, require Federal agencies to prepare statements documenting environmental consequences of Federal actions significantly affecting the human environment. Resource Management Plans qualify as significant actions and thus require the preparation of an Environmental Impact Statement.

Planning Area Description

The Caliente Resource Area, includes portions of Kern, Kings, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties. Major cities include Bakersfield, Santa Barbara, and San Luis Obispo. Stretching from the Pacific Ocean across the southern Central Valley and through the Sierra Nevada Mountains, public lands are scattered across the planning area in numerous small parcels. The larger blocks of public land lie in the Carrizo Plain of eastern San Luis Obispo County, in the Lake Isabella - Walker Pass regions in Kern County and in the Chimney Peak - Three Rivers regions in Tulare County. To facilitate the planning process, the planning area has been divided into three separate analysis units referred to as management areas. The management areas consist of the Coast, Valley and South Sierra and are briefly described below. (Refer to Chapters 2 and 3 for more specific detail.)

Management Areas

Coast Management Area

The Coast Management Area includes 20,400 acres of public land in San Luis Obispo, Santa Barbara, and Ventura Counties. Most of the public land, including the largest parcels, is in mountainous terrain between Nacimiento and Twitchell reservoirs. Public lands contain several sensitive plant species and habitats. The Sespe area includes some concentrated oil and gas development, although there are few public lands in the area. The California Condor is the only federally listed threatened or endangered species known from public lands in the area. There are also 48,600 acres of Federal subsurface mineral rights managed by BLM. This plan also addresses fluid mineral leasing on 69,700 acres of Federal mineral estate on military installations.

Valley Management Area

The Valley Management Area includes the southern San Joaquin Valley and the Carrizo Plain. There are approximately 293,000 acres of public land, and an additional 205,300 acres of Federal subsurface mineral rights managed by BLM. Private lands in the management area are predominantly devoted to agriculture, livestock grazing and oil and gas development. Gypsum and diatomaceous earth are actively mined with claims that overlap producing oil fields. Most of the public land is found in the area of the Tehlomb Mountains-Carrizo Plain-Caliente Range. This management area contains several of nation's largest oil and gas production fields. A large number of public land parcels provide habitat for five plant species and up to six animals that are Federally listed as threatened or endangered. The RMP also addresses fluid mineral leasing on 16,600 acres of Federal mineral estate on military installations.

South Sierra Management Area

The South Sierra Management Area includes 276,000 acres of public land. In addition, there are approximately 196,000 acres of Federal subsurface mineral rights managed by BLM. The larger blocks of public land lie near Lake Isabella, Walker Pass, Chimney Peak, and Three Rivers. The lands have value for watershed and wildlife habitat, unique plant communities and also have potential to provide for a variety of recreational use. The management area includes 5 designated wilderness units containing approximately 109,000 acres.

Goals

The goals that were developed for the Caliente RMP are as follows:

1. The plan will clearly and adequately outline managerial direction and land use allocations for the variety of resource values and uses of the public land in the Resource Area.
2. Provide a planning framework for evaluating the compatibility of unanticipated public needs and future demands for public lands and to address changing situations resulting from new laws, new Departmental regulations, or Bureau policy.
3. The EIS prepared for the plan will fully meet the requirements of NEPA.
4. Reflect the desires and concerns of the public by providing the opportunity for their participation in the planning process and plan implementation.

Planning Process

BLM's resource management planning process consists of nine steps:

1. Identification of Issues
2. Development of Planning Criteria
3. Inventory Data and Information Collection
4. Analysis of the Management Situation
5. Formulation of Alternatives
6. Estimation of Effects of Alternatives
7. Selection of the Preferred Alternative
8. Selection of the Resource Management Plan
9. Monitoring and Evaluation

The nine planning steps are described in more detail in Chapter 1 (pages 39 & 40) of the Draft Caliente RMP and EIS.

Issues Selected for Analysis

Oil and Gas Leasing and Development and Administrative Adjustment and Use Authorizations were the two planning issues originally identified for examination in the Caliente RMP. These issues were identified during the initial public scoping phase of the planning effort. A third issue, livestock grazing, was later identified during the Analysis of the Management Situation. A description of public involvement in the planning process, including public scoping, consultation, and coordination, is presented in Chapter 5 (pages 407 - 410) of the draft RMP and EIS.

Planning Criteria

In addition to all applicable Federal laws, regulations, executive orders and policies which BLM is required to follow, some additional planning criteria were specifically developed to guide the Caliente planning effort and were reviewed by the public earlier in the planning process. For interested individuals the planning criteria is located in Chapter 1 (pages 41 - 43) of the Draft Caliente RMP and EIS.

Major Resources And Topics Addressed In The Plan

Following is a list of resources and topics addressed in this plan. The effects on these values had the potential to be significant, so a detailed analysis was considered appropriate.

Oil & Gas Development Opportunities & Operations	Cultural Resources & Native American Traditional
Other Mineral Development Opportunities & Operations	Lifeway Values
Livestock Grazing Operations and Opportunities	Biological Resources
Recreation	Air Quality

Chapter 4, Environmental Consequences, addresses the beneficial and detrimental effects to these resources that would result from the proposed action. Additional details on effects of all five alternatives are described in Chapter 4 (pages 221 - 406) of the Draft Caliente RMP/EIS.

Resources And Topics Considered But Dropped From Further Analysis

A variety of natural and social resource values were evaluated for this plan. However it was determined that there was little potential for significant effects to many of them. The reader is directed to pages 43 to 47 of the Draft RMP and EIS for a discussion of topics considered but dropped from further analysis.

Chapter 2 - Affected Environment

Introduction

Chapter 2 describes the physical and biological environment that would be affected by implementing the Proposed Action. Within each of the three management areas a description is provided of the local land use planning objectives, air quality, cultural resources, lands, livestock grazing, minerals, paleontological resources, recreation, vegetation, water resources, and wildlife.

The Draft RMP and EIS, Chapter 2 (pages 51-99) is incorporated by reference. Information on the Affected Environment included in the draft is summarized on the following pages. Review of the public comments concluded the draft adequately described the affected environment. Where comments indicated the need to update information presented in the document, those updates have been included in summary. The information has been reformatted to be presented by management area rather than by resource to improve the consistency of information presented within the document.

Coast Management Area

The Coast Management Area includes 20,400 acres of public land in San Luis Obispo, Santa Barbara, and Ventura Counties. Most of the public land, including the largest parcels, are in mountainous terrain between Nacimiento and Twitchell reservoirs. Lands within the management area contain several sensitive plant species and habitats, and also have potential for recreational use. The Sespe area includes some concentrated oil and gas development, although there are few public lands in the area. The California Condor is the only federally listed threatened or endangered species known from public lands in the area. In addition to the acreage mentioned above, there are also 48,600 acres of Federal subsurface mineral rights managed by BLM.

Approximate Acreage in Coast Management Areas as of 8/95

COUNTY	SLO	SANTA BARBARA	VENTURA	MONTEREY	TOTALS
BLM Surface/Minerals	15,800	2,400	2,200	0	20,400
BLM Surface Only	0	0	0	0	0
BLM Minerals Only ¹	38,500	1,300	8,800	0	48,600
Federal Minerals on Military Installations	18,800	15,000	18,900	17,000	69,700

¹ Privately-owned surface with Federally-owned minerals, commonly referred to as "split estate" lands.

Local Government Land Use Planning Objectives

San Luis Obispo County: The leading economic values in SLO county are agriculture and tourism. Recognizing the importance of these values SLO County's General plan strives to balance increasing demand for new development with the need to preserve the environment upon which the population depends; and to prevent urban sprawl, discourage premature, unnecessary conversion of agricultural, rural and open space lands, and maintain the agricultural land base of the county. Decisions to establish new land uses must consider the needs of a particular use as well as the characteristics of the development site and its surroundings.

Santa Barbara County: County wide, high tech industry, tourism and agriculture are of major economic values to Santa Barbara County. In the northern portions of the county, where most public land managed by BLM is located, agriculture and open space are important economic values. Santa Barbara County's General Plan recognizes the importance of agriculture and open space and includes policies to balance the need for continued growth and development with the continued need for a strong agricultural base and open space. In addition, Santa Barbara's Land Use Element includes policies and guidance to discourage premature, unnecessary conversion of agricultural, rural and open space lands, and maintain the existing agricultural land base. Public lands managed by BLM in Santa Barbara county consist of small parcels, either adjacent to Forest Service lands, or isolated parcels in large tracts of private land, and contribute to the county's open space values.

Ventura County: Agriculture and tourism are also important economic values to Ventura county. Ventura County General Plan goals include: the preservation, conservation, efficient use of and access to resources within the county for present and future generations. Preservation and protection of irrigated agricultural lands as a nonrenewable resource; and preservation and protection of the significant open views and visual resources of the county.

Palm Springs Resource Area Management Considerations for the South Coast Planning Area (Los Angeles County)

Public lands adjacent to the Caliente Resource Area boundary consist of scattered isolated parcels. Management direction calls for transfer and disposal to provide for consolidation of BLM public land ownership in other areas managed by the Palm Springs Resource Area. Management guidelines allow for oil and gas leasing while providing protection of sensitive resources; motorized vehicle use is limited to existing routes of travel; and management actions are to conform to VRM Class 3 objectives.

Hollister Resource Area Management Considerations for the Parkfield & Williams Hill Management Areas (Monterey County)

Management direction calls for land tenure adjustments to meet various management needs in the area; to utilize fire to provide a continuing program of fuel hazard reduction, watershed improvement, range and habitat improvement; and to manage oil, gas and mineral resources to meet the demand for increased energy and mineral production while protecting other resource values. Leasable minerals on Camp Roberts within Monterey County are a part of the Caliente Resource Area.

Air Quality

The Coast Management Area is located within the South Central Coast Air Basin (SCCAB). The SCCAB is comprised of three coastal counties (San Luis Obispo, Santa Barbara, and Ventura). The air basin extends from the crest of the Coast Mountain Range south and west to the Pacific. Air resource management of the basin is by county-based Air Pollution Control Districts (APCDs). Good air drainage, along with the influences of coastal meteorology, result in the SCCAB having significantly better air quality than the San Joaquin Air Basin, where much of the Caliente Resource Area is situated. The SCCAB is in attainment for carbon monoxide, lead, nitrogen dioxide and sulfur dioxide. However, the basin exceeds National and State Ambient Air Quality Standards for PM₁₀ and ozone. Major indirect emission coming from public land are actually in decline (See RMP Chapter 10 for a summary of the emission inventory completed in compliance with the Clean Air Act General Conformity Regulations [40 CFR 51.850 Parts 6, 51 & 93]).

Cultural Resources

Chumash and Salinan were the two Native Californian Indian tribal groups that occupied the management area prior to European contact. Prehistorically, the subsistence base of the indigenous groups was marine food specialization. They subsequently adapted to a more diversified subsistence pattern that included hunting and

gathering of land resources. A number of descendants of these cultures reside within the management area today. The area is believed to have high sociocultural values to contemporary Native Americans.

Lands

The management area extends from the La Panza Range and Sierra Madre Mountains to the Pacific Ocean. It is bordered at the northern end by Monterey County and at the southern end by Los Angeles County. The management area includes the Channel Islands National Monument, one national forest, four military installations, various state parks and several lakes and reservoirs.

Land use authorizations in the management area include over 70 rights-of-way for pipelines, roads, and utility lines, and Recreation & Public Purposes Act sales or leases. Approximately 20% of the rights-of-way are for oil or gas pipelines. Several land exchange actions have occurred to reduce the number of scattered parcels in the management area. Documented cases of unauthorized use include roads, pipelines and trash dumps. Withdrawals in the management area exist for the Los Padres National Forest, power sites, and water projects.

Livestock Grazing

There are seven grazing allotments in the management area, covering approximately 4,000 acres and providing 491 AUMs of forage (see RMP Chapter 6 for details). Most of the public lands in the management area are unsuitable for livestock. There is one Allotment Management Plan (AMP) in this management area (the Santa Teresa Ranch Plan), and it was developed in 1985 in coordination with the Soil Conservation Service (now the Natural Resources Conservation Service). The annual and perennial components of public lands in these allotments are generally maintaining their good condition rating.

Due to inaccessibility or low forage value, only 20% of the unallotted lands within the Management Area are available for new authorizations and only 30% of these are expected to be authorized to any extent within the life of the plan. The majority of new range improvements occur in the Valley and South Sierra Management Areas but a prescribed burning program to meet the objectives in the Santa Teresa AMP will continue on a regular basis. Other improvements, such as water developments, fences, and roads are expected occasionally.

Minerals

The three counties of the Coast Management Area (CMA) have been producing oil and gas from three geologic basins since the late 1800s. The Ventura Basin in Ventura County and the Santa Maria Basin in Santa Barbara County are located on the coast. Because each basin extends offshore, only the onshore portions are part of this analysis. Peak oil production in the coast basins occurred in the late 1920s through the 40s and the area is now described as fully mature - all of the known onshore structures having been tested. The increasingly urban nature of the southern California coast, an increasing population base, and a poor success rate for exploration activities suggest that new activities related to oil and gas would be focused outside the Coast Management Area.

Less than 2% of federal oil activity in the Caliente Resource Area occurs in the Coast Management Area. Oil production in the Santa Maria and Ventura Basins consists of heavy crude production with high recovery costs related to low production rates, enhanced recovery and high drilling and completion costs. Production rates are low, averaging a daily rate of fourteen barrels of oil and about one hundred and twenty five barrels of water per well. 4,400 acres under the administration of the BLM are currently leased. 317 active oil wells produce from public lands. A total of 64,500 acres of BLM and 69,700 acres of Department of Defense (DOD) mineral estate remain unleased.

Although the Coast Management Area contains a wide variety of metallic and non-metallic minerals, no large hard-rock mining projects are occurring on BLM-managed lands. Alabaster is being removed in minor quantities from one claim in Santa Barbara County. Mercury, manganese, copper and placer gold have been mined in the past, but new development would not be anticipated. Five mercury claims exist in San Luis Obispo

County. In recent years, basalt has been quarried from BLM lands for road surfacing. One salable contract for sand and gravel is in effect in San Luis Obispo County. Phosphate, a solid leasable mineral, has been prospected within the Coast Management Area. There are no current mining claims in Ventura County.

Paleontological Resources

The key paleontological resource identified on public land in the Coast Management Area is at Tierra Redonda Mountain. This locality includes the type locality of the Tierra Redonda Formation, and outcrops of the Vaqueros Formation. The Vaqueros Formation is locally fossiliferous and contains marine vertebrate and invertebrates of Miocene Age. The area is regarded as important for both its scientific and recreational education values.

Recreation

Public lands in the Coast Management Area received an average recreation use over 1994 & 1995 of 15,000 visitors per year. Although the steep terrain, scattered public land pattern, and lack of public access influence recreational activity taking place, this management area provides a diversity of dispersed recreational opportunities with overflow visitation from California State Parks and the Los Padres National Forest.

Public land near Lake Nacimiento and Santa Margarita receives the majority of Bureau-directed visitor use, but hiking is popular on BLM's Pt. Sal coastal parcel. In general, the Coast Management Area offers semi-primitive recreational opportunities. Moderate use activities are hunting, camping, hiking, horse-riding, target shooting and nature walking, while limited use is seen in fishing, trapping, mountain biking, OHV use, swimming, nature studies and picnicking. Isolated parcels and those adjoining Los Padres National Forest receive moderate hunting pressure with associated hiking, camping and equestrian use.

In conjunction with the USFS, a day-use hiker/equestrian trailhead facility was completed in 1990 on Bureau land at Rinconada Mine serving access routes into Los Padres National Forest. There are no other developed recreation facilities in the area. The Santa Lucia and Machesna Mountain wildernesses are managed in cooperation with the USFS. Two small wilderness study areas, Garcia Mountain and Machesna, border Los Padres National Forest.

Vegetation

The Coast Management Area has a large number of plant communities. Sensitive plant communities within this management area include northern interior cypress forest, serpentine chaparral, southern dune scrub, southern bishop pine forest, oak woodlands, and riparian communities.

No Federally listed plant species occur on public lands within the Coast Management Area, but there are 13 sensitive plant species known to occur on or adjacent to Bureau land. Another 31 sensitive plant species are suspected to occur on Bureau land. Little survey data is available for the presence of sensitive plants on public lands.

Many of the coastal parcels have outstanding botanical resources. Examples include Point Sal with coastal dune communities and several sensitive plant species; Salinas River with its riparian community; Tierra Redonda Mountain with unique sand dunes and sensitive plants; Frog Pond Mountain for its bay forest; Cypress Mountain for the Sargent cypress forest and several associated sensitive plant species; Irish Hills for the Bishop pine forest; and Rusty Peak for sensitive plant communities and species.

Water Resources

The scattered public lands in the area constitute small portions of the broad watersheds which provide runoff for drinking water, crop production, fisheries, wildlife, and recreation. Major hydrologic features are the man made reservoirs, including Nacimiento Reservoir, Lopez Lake, Santa Margarita Lake, and Twitchell Reservoir.

They were constructed to capture the winter storm runoff from the generally low flowing rivers and streams of the area.

The State Water Resources Control Board Water Quality Assessment Report for 1990 identified 84 out of 166 inventoried streams and rivers in Region 3 (central coast counties from Santa Cruz to the Ventura County line) as having nonpoint source pollution problems. The primary causes cited were low flows and sedimentation. Water from the Cuyama River has been found to contain elevated levels of nitrates, sulfates and total dissolved solids. An assessment of the Las Tablas Creek showed toxic discharges from mines causing drinking water impairment. Public lands make up only small portions of watersheds of these impaired rivers.

Wildlife

Public land in the Coast Management Area provides habitat for a wide variety of animal species, including numerous State listed, Federally listed and special status species.

Several species usually considered San Joaquin Valley species are found in a limited portion of this management area. The San Joaquin kit fox is found in the San Juan Creek drainage and a disjunct population also occurs at Camp Roberts. The blunt-nosed leopard lizard and giant kangaroo rat are also found in the San Juan Creek drainage.

Potential habitat for a number of special status species is restricted to the offshore rocks or waters adjacent to Point Sal. These include the California brown pelican, western snowy plover, California least tern, marbled murrelet, northern sea lion, southern sea otter, gray whale and humpback whale.

The interior portion of this management area is habitat for the California condor. Both essential and designated critical condor habitat occur in this management area. Some public land occurs in the San Juan Creek Essential Condor Area. Two other raptors of special interest are the peregrine falcon and the California spotted owl.

The Coast Management Area contains small to moderate numbers of game animals. A small herd of tule elk is resident within the borders of Camp Roberts. Deer and several species of upland game birds are also found in small to moderate numbers.

Besides those raptors already mentioned, this management area provides nesting habitat for golden eagle, red-tailed hawk, red-shouldered hawk, American kestrel, prairie falcon, Cooper's hawk, sharp-shinned hawk, turkey vulture, western screech-owl, burrowing owl, long-eared owl, great horned owl, northern pygmy-owl, northern saw-whet owl, and flammulated owl. The grass dominated areas provide important wintering habitat for ferruginous hawk, northern harrier, merlin, rough-legged hawk, and short-eared owl. Swainson's hawks also forage over grasslands during fall and spring migrations. In addition to raptors, these grasslands provide important habitat for long-billed curlew and mountain plover.

Known riparian habitat includes 3/4 mile of riparian forest along the Salinas River. Although water flow is controlled by Santa Margarita Dam, the area supports a riparian zone 80 to 130 feet wide with cottonwoods, sycamore and willows. Wildlife activity includes beaver dams, pond turtles, carp and nesting waterfowl. Due to the small size and scattered nature of public lands in this management area, additional stream-side riparian habitat may be limited. Scattered springs, however, are likely to occur on public lands. Most of these springs probably support an area of riparian vegetation around the source and many may support a linear riparian zone as their outflow travels downstream. One exceptional example is found at Frog Pond Spring which supports approximately 10 acres of California Bay Forest. This small patch of California Bay Forest may be one of the few locations on public lands, and one of the southernmost examples of this community type. Currently, one unauthorized water diversion occurs at the site. Freshwater springs are also known to occur at Pt. Sal.

Valley Management Area

The Valley Management Area includes the southern San Joaquin Valley and the Carrizo Plain. There are approximately 293,000 acres of public land, and an additional 205,300 acres of Federal subsurface mineral rights administered by the BLM. Private lands in the management area are predominantly agricultural. Most of the public land is found in the area of the Tehlbor Mountains-Carrizo Plain-Caliente Range. This management area is characterized by its extensive oil development. Large numbers of public land parcels also provide habitat for five plant species and up to six animals that are Federally listed as threatened or endangered.

Approximate Acreage in Valley Management Area as of 8/95

COUNTY	KERN ¹	SLO	SANTA BARBARA	VENTURA	KINGS	TULARE	TOTALS
BLM Surface + Minerals	69,000	106,000	5,800	100	11,000	100	192,000
BLM Surface Only	400	100,000	0	0	0	0	100,400
BLM Minerals Only ²	162,000	10,400	10,500	100	22,300	0	205,300
Federal Minerals on Military Installations					16,600		

¹ Only the portion of Kern Co. within Caliente Resource Area is represented by these figures, i.e. west of the crest of the Sierra Nevada.

² Privately-owned surface with Federally-owned minerals, commonly referred to as "split estate" lands.

Local Government Land Use Planning Objectives

Kings County: The leading economic activities in Kings county are derived from agricultural uses of the land such as field and row crops, trees and vines, livestock, and poultry. Recognizing the importance of agriculture, Kings County's General Plan strives to balance increasing demand for new development with the need to preserve the agricultural resources upon which the population depends. Kings County plans for continued growth, but directs the growth to cities and rural communities where it will least impair the economic strength derived from agriculture.

Kern County: Petroleum, mineral resources and agriculture are vital to the economy of Kern County. Therefore Kern County's General Plan Goals and policies are designed to ensure that the county can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and making efficient use of public services. Policies are designed to preserve and enhance existing development and to provide for orderly and appropriate new development to meet the needs of the area. Kern County plans to continue new development, but located where it will not impair economic strength derived from petroleum, agriculture, rangeland, or mineral resources.

San Luis Obispo County: Those portions of SLO county within the Valley Management Area commonly known as "Eastern County" are devoted almost exclusively to agricultural uses of dry-land farming and rangeland. The area is sparsely populated with a projected population of 2,000 by the year 2000. In addition to SLO County General Plan Goals (described in the Coast Management Area), the Land Use Element includes policies and guidance in the Shandon-Carrizo Planning Area document to discourage premature, unnecessary conversion of agricultural, rural and open space lands, and maintain the existing agricultural land base. Public lands make up a significant portion of the area, and SLO County's Agriculture and Open Space element has a number of

open space policies and implementation measures which will influence management of public lands in this area, including the continued identification and protection of ecosystems and environmentally sensitive resources, and close coordination of efforts to acquire and manage open space with public agencies and conservation organizations.

Tulare County: In addition to the general Goals for those portions of Tulare County in the Valley Management Areas, Tulare County has developed a Rural Valley Lands Plan (RVLP) for lands outside Urban Area Boundaries and generally west of the 600' elevation contour line as it occurs in Tulare County. Policies include:

Protect and maintain agricultural viability of rural valley areas through exclusive agricultural zones, containing minimum parcel sizes.

Restrain division and use of land which is harmful to continued agricultural use of nonreplaceable land resources.

Avoid unnecessary fragmentation of agricultural lands by planned, gradual outward expansion from nonagricultural areas.

Hollister Resource Area Management Considerations

For the Coalinga Management Area (Fresno County), management direction calls for land tenure adjustments through exchange to achieve management goals. Vehicle use in the management area is limited to designated routes; and oil, gas, and minerals exploration and development are to be encouraged with emphasis on protection of rare, threatened or endangered species (RTE) or habitat. Additionally, the Hollister RMP contains management direction for the Panoche-Coalinga ACEC for rare, threatened or endangered animals. This ACEC contains approximately 4,000 acres of RTE habitat and adjoins Caliente's proposed Kettleman Hills ACEC at the Kings County/Fresno County line.

Air Quality

The Valley Management Area lies primarily within portions of Kern, Kings, and Tulare Counties. These counties are in the San Joaquin Valley Air Basin (SJVAB) which contains 24,800 square miles, or approximately 16% of the total area of California. It extends from the northern boundary of San Joaquin County south through the valley to the southern edge of Kern County. Air resource management of the basin is by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). With the exception of lead, national and state air criteria pollutants are all at excess levels, and the levels and excesses are such that the basin is categorized as serious. In addition to pollutants produced locally, the basin is subject to pollutants generated in upwind air basins in the San Francisco Bay Area, which are transported southeast by the prevailing winds. Excesses often result when inversion layers restrict vertical mixing of trapped air. Indirect PM₁₀ emissions coming from public land are actually in decline, i.e. such as those from Oil and Gas sources (See RMP Chapter 10 for a summary of the emission inventory completed in compliance with the Clean Air Act General Conformity Regulations [40 CFR 51.850 Parts 6, 51 & 93]).

Cultural Resources

The earliest known presence of indigenous people in this management area was during the Paleo Indian period 12,000 to 8,000 years ago. The shorelines of ancient Tulare and Buena Vista Lakes have revealed fluted "clovis-like" projectile points of this period. The primary occupants of the management area ethnohistorically were the Yokuts and the Chumash.

Ninety-four archaeological sites on BLM lands have been identified within the management area. The most common types of prehistoric resources found in the management area are associated with habitation, ceremonial activities, and food processing. Although only limited base data is currently available, key areas

considered likely to be culturally sensitive on public land are in the Cuyama Valley, Caliente Range, Carneros Canyon area, and the San Emigdio Creek area. A number of sites on the Carrizo Plain have high interest to general visitors, educational groups, researchers, and the Native Americans.

Presently, several hundred people claim Chumash ancestry, most of whom live outside the management area at the Santa Ynez Indian Reservation and along the Central Coast. Several hundred Yokuts are currently living at the Santa Rosa Rancheria within the management area and the Tule River Reservation located adjacent to the management area. A number of Native Americans reside in the management area outside of formal reservations.

Historical resources on public land in the management area are primarily those associated with early exploration and development of oil resources. The exploitation of oil resources in the San Joaquin Valley began in the 1860's. The initial oil pit was dug in 1863 near Reward to a depth of ten feet. By the 1890's, refining oil near McKittrick became commercially productive. In 1899, the discovery well at Kern River Oilfield started the first major oil boom in the region. One of the most spectacular oil gushers in the valley was at the Lakeview Gusher Number 1 in the Midway Sunset Oilfield in 1910. Due to past reclamation practices, the integrity of these sites are typically severely degraded.

Cattle and sheep grazing were introduced in the management area in the mid 1800's. Stock raising soon spread throughout the area, becoming an important industry in the region, and a long lasting dominant economic pursuit in the Carrizo and Cuyama Valleys. By 1855 agriculture was on the increase as a major economic industry in the region.

Lands

The management area extends through the southern San Joaquin Valley with the Caliente Mountain Range bordering on the west, Fresno County bordering at the north, and the Tehachapi Mountains bordering the south.

More than 400 right-of-way authorizations exist in this management area. The majority of those are in support of oil and gas development, with approximately one-third being actual oil or gas pipelines, including the All American Pipeline and Mojave Pipeline. With the development of enhanced oil recovery methods, new gas lines are being built in the Kern County oilfields. Other land use authorizations include apiary sites and communication sites. There is a lack of access to most of the isolated BLM parcels, of which there are approximately 100 in this management area. Over 170 cases of unauthorized use include roads, pipelines, apiary sites, and trash dumps, which may include hazardous waste.

Livestock Grazing

There are currently fifty-four grazing allotments which fall entirely or partially within the Valley Management Area. These allotments encompass approximately 269,000 acres and provide 40,128 AUMs of forage (see RMP Chapter 6 for details). There are currently two Allotment Management Plans (AMPs) being implemented in the management area. The first is on the North Temblor allotment and the second is in the Carrizo Plain Natural Area (CPNA). There are eight allotments currently covered by the CPNA management plan: Carrizo Ranch, KCL Ranch, Washburn Ranch, Painted Rock Ranch, Goodwin Ranch, Saucito Ranch, Phelan, and the Temblor-Caliente allotment. Currently, the Valley Management Area is the only part of the resource area to have sheep grazing allotments. The Valley is used extensively for this type of livestock grazing due to the predominance of annual grassland, and also because of the scattered nature of the public lands which lend themselves to the herding of flocks of sheep, thus avoiding the need for fencing.

Forage production in the Valley Management Area is mostly from the California (Mediterranean) annual range type. Allotments within this annual range type are managed for specific residual dry matter (mulch) (see RMP Chapter 6).

Perennials in this management area are showing an apparent upward trend, improving their condition from poor-fair to fair-good, while annuals are maintaining their fair to good condition rating. This management area also contains the majority of the grazing allotments that are located within the range of the five Federally listed threatened and endangered plants found in the Caliente Resource Area.

Due to development for other uses which preclude livestock grazing, or the presence of sensitive plant and animal communities, only 30% of the unallotted lands within the management area are available for new authorizations and only 50% of these are expected to be authorized to any extent within the life of the plan.

The majority of range improvements occur in this Management Area with most activity occurring in the Carrizo Plain Natural Area. It is expected that new rangeland management practices will continue at the rate of 2 new water developments, 5 miles of new fence, and 1 mile of new road constructed per year.

Minerals

One deep basin, the San Joaquin Basin, underlies the surface valley known as the San Joaquin Valley and another small basin, the Cuyama basin, underlies the Carrizo Plain and Cuyama Valley, just west of the San Joaquin Valley. The San Joaquin Basin produces most of the oil in California from fields that range in size from the super-giant Midway-Sunset Field whose current production exceeds 60 million barrels of oil per year to the many less significant fields whose final production will be under one million barrels of oil. The oil varies greatly in quality but the overall quality continues to shift into the heavier crude oils with high viscosities and high refining costs. There are 395 federal leases in the management area covering 136,000 acres with 5,177 wells. Exploration success peaked in the 1950s and then began to steadily decline. The annual total of new wells within existing fields are roughly equal to the total number of wells being abandoned annually and is an indication that the current activity level may stabilize. Most development occurs within the boundaries of existing fields. All of the successful exploration activity within the Caliente Resource Area has occurred in the Valley Management Area.

Future exploration activity within the Resource Area would be expected to be focused in Kern County, within the Valley Management Area.

Gypsum, sodium sulphate, phosphate, sand and gravel, and siliceous shale for use as cat litter have been mined from BLM lands within the management area. Although no mining is occurring presently, deposits of these commodities do occur on BLM lands. One gypsum contract is in force in the Lost Hills area of Kern County.

There are 163 gypsum claims in the west half of Kern County. Based on increasing public inquiries, gypsum has the potential to be mined from deposits on BLM managed land during the plan life.

Paleontological Resources

The Kettleman Hills have yielded marine and non-marine vertebrate fossils as well as abundant invertebrate fossils. Woodring, Stewart and Richards (1940) recognized mastodon, beaver, peccary, horse, camel, deer, sea lion, seal, porpoise, whale, turtle, shark and cormorant remains.

The Tertiary sedimentary rocks of the Caliente Range are believed to include one of the most important fossil producing areas in the United States. Both marine and terrestrial fossils spanning nearly 20 million years are found in the same sequence of rocks; no such equal occurrence is known elsewhere. Four and possibly five "North American land mammal ages" are represented by fossils found in the Caliente Range (Wyss, 1992).

The Temblor Range constitutes a unique stratigraphic continuum of marine middle-tertiary strata in the California Coast Ranges. Tar pits, similar to the famous La Brea Tar Pits of southern California, are found near McKittrick and Maricopa. The Maricopa tar pits are considered one of the most important tar pits in California containing significant fossil remains (Dr. Lee A. Spencer, paleontologist, personal communication, 1990).

Paleontological resources in these areas have significant research and educational values as evident by past and present studies in this region.

Recreation

The Valley Management Area received an average recreation use over 1994 & 1995 of 55,000 visitors per year. The area offers semi-primitive, open space recreation within mostly flat to rolling lands. Users are attracted to the area's fauna and flora, geology, and cultural values. The area is most popular for recreation use in the spring and fall. Types of use include: hunting and target shooting, nature and cultural studies (including birdwatching, wildlife observation, wildflower viewing, and "spiritual enlightenment"), day hiking, horse-riding, bicycling, OHV use, general sightseeing, and camping associated with these activities.

Growing public interest in the Carrizo Plain Natural Area has stimulated many organized tours run by colleges and schools, birding, conservation and archaeological societies and commercial nature operations. Permits have been issued to Santa Barbara Museum and Ventura Tours. The Carrizo Plain provides opportunities to view wildlife (especially the migratory bird populations of Soda Lake), to experience the unique spring wildflower blooms, and to see the San Andreas Fault. Associated uses in the foothills include hunting, hiking and horseback riding.

There are no OHV open areas and OHV use in the management area is limited to designated roads and trails. However, these roads and trails are not signed and designated as such on the ground, a situation which presently applies throughout the Caliente Resource Area.

There is one wilderness study area in this management area, the 24,680 acre Caliente WSA. It is located entirely within the Caliente National Cooperative Land and Wildlife Management Area and proposed Carrizo Plain ACEC. Encompassing Caliente Mountain, the highest mountain in San Luis Obispo county (5104 feet), this area is popular for day hikes, hunting and wildflower-viewing.

Vegetation

Five Federally listed and four State listed plant species are found within the boundaries of the Valley Management Area. In addition, 22 sensitive species occur within this management area. Bureau lands are known to support at least 10 of these species with an additional 11 suspected to occur. Most of these species are associated with Valley Saltbush Scrub and Valley Sink Scrub.

Sensitive plant communities in the management area include Valley Saltbush Scrub and Valley Sink Scrub. Significant remnant samples of the Saltbush Scrub community are located at Lokern Road, Semitropic Ridge, Lost Hills and Buena Vista Valley. Valley Sink Scrub is restricted to valley bottoms near lake beds as exemplified by Kern, Tulare, and Goose Lakes. It is best developed in highly alkaline soils which have no external drainage such as at Goose Lake and Soda Lake. These sensitive communities are critical links for the recovery of listed species due to their size, diversity, condition and unique assemblages of endangered species.

At least six distinct communities occur on public lands on the Carrizo Plain: California Juniper association, Desert Scrub, Alkali Sink Scrub, Alkali Wetlands and two Grassland Communities. Elements of several major Floristic Provinces (Mojavean, Great Valley, and Inner Coast) are found within the Natural Area boundaries. In addition to the Federally listed California Jewelflower, San Joaquin woolly-threads, and the Hoover's woolly-star species, the Carrizo Plain Natural Area supports 12 other sensitive plant species.

The natural communities of the Caliente Mountain Range have generally been described as: Upper Sonoran Subshrub, Semi-desert Chaparral, and Interior Coast Range Saltbush Scrub. Several Federal candidates are documented from the Caliente Mountain Range, including oval-leaved snapdragon and stink bells.

The Lokern Road area supports essentially all of the total habitat and extant populations for the Federally endangered Kern mallow. Eighty-five percent of this area is privately owned.

Water Resources

The Valley Management Area consists primarily of the Tulare Lake Basin. This basin is the southern extension of the Central Valley and is bordered on the East by the Sierra Nevada Mountains, along the south by the Tehachapi and San Emigdio Mountains, and on the west by the Coast Range. The Carrizo Plain to the west, is rain-shadowed and typifies what the old San Joaquin Valley probably looked like some 200 years ago.

This portion of the San Joaquin Valley floor is primarily an unconfined aquifer. Some areas west of Interstate 5 are considered a confined aquifer, separated by an impervious clay(s) layer(s) from the deeper unconfined aquifer. Perched waters, which are separated from aquifers by various lenses of clay, are common throughout the basin.

Remnants of the ancient valley, which previously contained a large body of water, are present as dry lakes and interconnecting sloughs. The alluvial plains of the valley grade into foothills of the Sierra Nevada Mountains and the Coastal Range. The major drainages that feed into this management area are the Kern and Kaweah Rivers; the Kern River is the major hydrologic feature of the area. In most years, the river is completely consumed for irrigation before it reaches Bakersfield, only reaching the Buena Vista Lake Basin on very wet years. Precipitation in the area ranges from 5 inches in most of the valley bottom, to 8 inches along the foothills.

The only other principal river in the management area is the Kaweah River. This river likewise originates in the Sierras, and flows into the Kaweah Lake. The remaining natural surface water system of the valley is better described as consisting of intermittent and ephemeral drainages. These serve to carry and conduct storm water runoff. Overlaying the entire area is a network of irrigation ditches and canals serving one of the largest agricultural producing regions in the country. The California Aqueduct runs almost parallel to Interstate 5 in the western half of the Resource Area, from the Fresno County line south to Wheeler Ridge.

The groundwater basin in the Caliente Resource Area portion of the San Joaquin Valley has no outflow, except in extremely wet years. Therefore, new salts introduced into the basin with imported water supplies are retained in the basin. The groundwater is the recipient of these salts and other contaminants, in the form of recharge waters or return flows from irrigation, municipal use, and industrial uses.

Wildlife

Recent historic range of the California condor includes lands along the western, southern and eastern border of the management area. Several parcels of public land in this management area are included in the Carrizo and Elkhorn Plains, Southern San Joaquin, and the San Juan Creek Essential Condor Habitat Areas. Public land in this management area serves primarily as foraging habitat for California condors.

Blunt-nosed leopard lizards and San Joaquin kit fox are known to occur on public lands throughout the management area. Giant kangaroo rats are known to occur on public lands throughout the west half of the management area, and may occur on public lands in the Cuyama Valley. Tipton kangaroo rats occur on scattered tracts of public land east or adjacent to the California Aqueduct.

Notable concentrations of special status species occur at Goose Lake, Carrizo Plain, Lokern Road, Elkhorn Plain, and Soda Lake.

Several deer herd units touch on the borders of this management area: Avenal, Coalinga, Temblor, South Sierra, Shandon and Tejon Deer Herd Units. With the exception of the Avenal deer herd, there is a minimal amount of public land within these herd boundaries. The Avenal deer herd unit, however, includes approximately

21,000 acres of public land. These herds are primarily residential and do not make extensive seasonal migrations. Key habitat for these herds includes areas of riparian habitat and meadows. Shrubland areas that provide browse may also be considered key habitat.

Pronghorn have been released by the California Department of Fish and Game at various locations in this management area, including the Carrizo Plain and Antelope Valley. Pronghorn observations have been reported from Plieto Hills and Blackwells Corner in the north, through the foothills of the Temblors, and south to Camp Dix. Pronghorn have also been observed in the eastern portion of this management area near Arvin, Cottonwood Creek and northwest of Bena.

Tule elk have been observed near public land in the Caliente Mountain and Carrizo Plain areas.

Wild pigs are known to occur on public land along the north and west flank of the Caliente Range, adjacent to the Carrizo Plain. California quail, chukar and dove occur throughout the Temblor and Caliente Ranges.

When seasonally flooded, public lands near Soda Lake, Goose Lake and Copius Road provide wetland habitat for numerous water birds. At least 30 springs are known to occur on public lands, with most of these occurring in the Caliente Mountain range. Most of these springs support an area of riparian vegetation around the source, and many support a linear riparian zone as their outflow travels downstream.

South Sierra Management Area

The South Sierra Management Area includes 276,000 acres of public land. In addition, there are approximately 196,000 acres of Federal subsurface mineral rights administered by BLM. The larger blocks of public land lie near Lake Isabella, Walker Pass, Chimney Peak, and Three Rivers. The management area is devoid of oil and gas development, and provides significantly less threatened and endangered species habitat than does the Valley Management Area. The lands have value for watershed and wildlife habitat, and also have potential to provide for recreational use. Five wilderness areas are in this region and contain a variety of biological, scenic, geological, and recreational wilderness values.

Approximate Acreage in South Sierra Management Area as of 8/95

COUNTY	KERN ¹	TULARE	TOTALS
BLM Surface + Minerals	174,000	102,000	276,000
BLM Surface Only	0	0	0

BLM Minerals Only ²	153,000	43,000	196,000
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¹ Only the portion of Kern Co. within Caliente Resource Area is represented by these figures, i.e. west of the crest of the Sierra Nevada.

² Privately-owned surface with Federally-owned minerals, commonly referred to as "split estate" lands.

Local Government Land Use Planning Objectives

Tulare County: Tulare County's Comprehensive Policy Plan recognizes the importance of agriculture, natural resources and open space to the economy and to the well being of the people of the county. Plan objectives strive to protect the unique places of interest and beauty within the County, seek an optimum balance between the economic and social benefits to be derived, while maintaining the greatest possible range of use and enjoyment of these natural resources. Impacts of growth and industrial development on urban development patterns, agricultural production or the County's natural resources must be minimized. Open space goals recognize that preservation of open space lands is necessary for maintenance of the economy of the county, the assurance of the continued availability of land for the production of food and fiber, enjoyment of scenic beauty, recreation, and for the use of natural resources.

Kern County: Those portions of Kern county within the South Sierra Management Area are devoted to agricultural uses such as fruit and nut production, dry-land farming, and rangeland, as well as to natural resource uses such as timber, mineral extraction, wind energy development, recreational pursuits, watershed and open space. Rural residences for cottage industry/commuters, vacation homes, and retirement communities are playing a more significant role in this portion of the county. In addition to the Kern County General Plan Goals (described in the Valley Management Area), the Land Use Element includes policies and guidance in specific plans such as the Sand Canyon and Tehachapi specific plans which provide additional policy guidance to discourage premature, unnecessary conversion of agricultural, rural and open space lands. Public lands make up a significant portion of this management area, and although Kern County's Land Use element classifies public land as non-jurisdictional lands, it has a number of policies and implementation measures which need to be considered with management of public lands in this area.

Ridgecrest Resource Area Management Considerations

Public lands along the Caliente/Ridgecrest Resource Area boundary from Kelso Pass to the northeast corner of the resource area are within common wilderness areas. A management plan for the region is being developed

by the two resource areas and will provide guidance for the next ten years. The plan will address a variety of management issues through input supplied by affected parties, including Native American groups, grazing operators, private land owners, State officials, and other members of the public.

The public lands in Caliente's proposed Horse Canyon ACEC north of Highway 58 are adjacent to Ridgecrest's proposed 15,730 acres Middle Knob Specialty Reserve.

About 116 miles of the Pacific Crest National Scenic Trail is managed jointly between the Caliente and Ridgecrest resource areas through a memorandum of understanding. This portion of the trail extends from Tylerhorse Canyon south of Tehachapi to the National Forest boundary near Rockhouse Basin.

Ridgecrest Resource Area is conducting a wind energy study covering 66,000 acres adjacent to Caliente's Proposed Horse Canyon ACEC. The study will determine which lands will be leased for wind energy development and any special management restrictions that would be applied. The study includes 5,895 acres in the Caliente Resource Area.

Air Quality

Air quality information and management are similar to that described for the Valley Management Area. Primary differences are due to the fact that the South Sierra Management Area encompasses higher elevations. Depending on the elevations of inversion layers, when they occur, air quality above those layers can be markedly better. However, when atmospheric instability allows for the release of smog from the valley, pollutants waft over the Sierras into the Mojave Desert region, increasingly so towards the south. Monitoring of air and effects to vegetation has confirmed the transport of ozone and other pollutants at various elevations along the Sierra Mountain Range. (See RMP Chapter 10 for a summary of the PM₁₀ emissions inventory).

Cultural Resources

Ethnographically, the management area was used primarily by four indigenous groups: the Western Mono, the Yokuts, the Tubatulabal, and the Kawaiisu. Their subsistence pattern consisted of fishing, hunting, and gathering of plant resources. Other groups, such as the neighboring Paiutes, utilized the area in times of stress, or as part of a seasonal pattern. The principal prehistoric resources in the management area consist of habitation, ceremonial, burial, and procurement sites. One hundred twenty four (124) archaeological sites have been identified on BLM lands within the management area.

Some key cultural sites of significance are the Long Canyon Indian Village Site and sites along the South Fork of the Kern River, Canebrake Creek, Spanish Needle Creek, Three Rivers, Sand Canyon/Horse Canyon, and the Chimney Peak region. Contemporary Native Americans place high sociocultural values on several known cultural sites and locations in the vicinity of the South Fork of the Kern River, Spanish Needle Creek, Blue Ridge, Sand Canyon/Horse Canyon, and the Chimney Peak - Walker Pass traditional pinyon pine nut gathering region.

Historically, the focal areas or sites of primary importance include the Walker Pass National Historic Landmark, the Advance Colony site along the North Fork of the Kaweah River, and sites associated with gold mining in the Keyesville area.

Forestry

The only public lands in the resource area containing woodlands of commercial quality lie within the South Sierra Management Area. Commercial forest lands total 2,200 acres, all of which are located in the Case Mountain/Milk Ranch Peak area. Most of these lands are located in the Case Mountain Wilderness Study Area, therefore production of forest products is prohibited. Commercial forest lands totalling 480 acres of acquired lands containing giant sequoia groves are found on Case Mountain. Utilization of woodland products such

as Christmas trees, collecting cones, and fire wood is mostly satisfied from adjacent and near by forest lands, with little demand for them on BLM administered land.

Lands

The management area extends north to south from Kings Canyon National Park, along the Sierra Nevada Mountains, to the Tehachapi Mountains in the south. The management area includes the Sequoia National Forest, Sequoia National Park, Mountain Home State Forest, the Tule River Indian Reservation, and various lakes and reservoirs.

Land use authorizations include over 150 rights-of-way for pipelines, roads, and utility lines, as well as 4 communication site rights-of-way, and Recreation & Public Purposes Act sales and leases which include active leases for two sanitary landfills, one transfer station and an archery range. Other land use authorizations include apriary site permits, and two lifetime residential leases in the Keyesville area. Documented cases of unauthorized use include roads, pipelines and trash dumps. Various withdrawals in the management area exist for the Sequoia National Forest, power sites and water projects.

Livestock Grazing

Vegetation in this management area is quite diverse and lends itself to a variety of grazing management applications. The main limitations to livestock grazing throughout the management area continue to be steep slopes or rough terrain, water availability, and forage availability. There are currently fifty-three grazing allotments which fall entirely or partially in the South Sierra Management Area. These allotments include approximately 188,400 acres and 13,652 AUMs. (See RMP Chapter 6 for details.) Three allotments; Short Canyon, Cholla Canyon, and Waggy Flat, have existing Allotment Management Plans (AMPs) in effect.

The South Sierra Management Area is partially comprised of California (Mediterranean) annual range type which is typically managed for residual mulch levels (See RMP Chapter 6). Perennial ranges in this management area have been classified as maintaining their good condition. Annual ranges are mostly classified as being in fair condition with an apparent upward trend.

Generally, the higher elevations of this management area are used as summer and/or fall pastures, while the lower elevations are used mainly during the spring or early summer to take advantage of the high annual grass component. Many allotments are used in conjunction and coordination with Forest Service grazing permits.

Demand for new grazing allotments is greatest in this management area. Urban growth in this area is contributing to people/livestock conflicts. Due to these problems as well as inaccessibility and low forage value, only 30% of the unallotted lands in the management area are available for new authorizations and only 50% of these are expected to be authorized to any extent during the life of this plan.

Because of the increasing urban conflicts with past open grazing lands, the demand for more rangeland management practices within this management area is also increasing. It is anticipated that these practices will proceed at the rate of 2 new water developments, 3 miles of new fences, 1 mile of new road construction and support for at least one prescribed burn each year for the life of the plan. Prescribed burns for rangeland management purposes that affect BLM lands are usually initiated by neighboring private land owners.

Minerals

The granitic terrain underlying the South Sierra Management Area has low to no potential for the occurrence of hydrocarbons. No successful production has been established to date and the BLM is administering no active oil and gas leases. However, the deep structures below the surface metamorphic and igneous rocks are subject to re-interpretation and seismic evidence may support the possible presence of deeply-buried sedimentary rocks. No industry interest in oil and gas leasing is occurring now in the South Sierra Management Area.

Gold mining first occurred in 1854 and is continuing. Most gold mining is small-scale and recreational in nature. Bulk mining is not currently occurring in the area. There are 165 gold mining claims covering the east half of Kern County, seven in Tulare County and one in Kings County. Mineral materials such as sand and gravel continue to be extracted from lands in the management area. Although large deposits of limestone are known to occur on BLM-managed lands, none are currently being mined. In the past, tungsten, copper, silver, antimony and barite were mined, but no current industry activity is occurring on public lands.

Paleontological Resources

The key paleontological resources on public land in the management area are the terrestrial vertebrate fossils found in the Sand Canyon - Cache Peak area, northeast of Tehachapi. These fossiliferous Miocene sedimentary rocks contain fauna and flora remains. This area is considered important as evident by the scientific research and public interest in the area.

Recreation

The South Sierra Management Area received an average use in 1994 & 1995 of 147,000 visitors per year in Keyesville, 55,000 visitors in the Chimney Peak area, and 114,000 visitors along the North Fork of the Kaweah River. The South Sierra's diverse topography, proximity to Sequoia National Forest and Sequoia National Park, Lake Isabella USFS recreational complex, and the BLM's Desert District, along with 116 miles of BLM-managed Pacific Crest National Scenic Trail, the heavily-used North Fork of the Kaweah and Keyesville areas, the white-water river program on the Lower Kern, and approximately 109,000 acres of wilderness, all contribute to substantial recreation pressure in this area. Activities include hunting, fishing, dispersed camping, backpacking and day hiking, horse-riding, river rafting, river play, picnicking, gold panning, bicycling, OHV use, sightseeing, rockhounding, shooting, and snow play. Developed facilities, in addition to the Pacific Crest National Scenic Trail, include three campgrounds. The BLM also provides toilet and trash contracts for the river rafting program on the Kern and for visitor-use on the North Fork of the Kaweah River.

BLM has constructed 116 miles of the Pacific Crest National Scenic Trail (PCNST) in the southern Sierras in addition to two miles of the six mile Lamont Spur Trail which will connect Canebrake Road to the Spanish Needles saddle on the PCNST. Each year, at least 1,000 hikers and horse-riders use the BLM portion of the PCNST. Two of the three semi-developed campgrounds in this management area, Walker Pass and Chimney Creek, serve the PCNST as well as providing drive-in camping. The third BLM campground in the management area, Long Valley, serves as a trailhead to Domelands Wilderness Area (USFS) and the S. Fork of the Kern River.

The two most popular special recreation use activities in the South Sierra Management Area include an annual National Off Road Bicycle Association (NORBA) sponsored mountain bicycle race at Keyesville, and commercial river-rafting permits issued in conjunction with the USFS on the Kern River.

The South Sierra Management Area contains Caliente Resource Area's greatest concentration of wilderness areas. As part of the *California Desert Protection Act of 1994* (PL 103-433, 10/31/94), five wildernesses were designated and include Chimney Peak, Domeland (Additions), Kiavah, Owens Peak, and Sacatar Trail. In all, approximately 109,000 acres are part of wilderness in the Caliente Resource Area in the South Sierra. Wilderness Study Areas include Sheep Ridge (5,102), Moses (558 acres) and Milk Ranch/Case Mountain (8,970) near Sequoia National Park at Three Rivers, and Piute Cypress (3,453), Rockhouse (310), Owens Peak (310 acres), Domeland (40 acres), Sacatar Meadows (140) and Scodie (420 acres) bordering Sequoia National Forest near Bodfish.

The special recreation management areas in the South Sierra Management Area are: the North Fork of the Kaweah River, Keyesville/Lower Kern River Area, Chimney Peak Area, the corridor for the Pacific Crest Trail, and Case Mountain. All but the latter receive heavy visitor use, but law enforcement coverage is minimal and developed facilities are lacking. The Kern River/Keyesville Special Recreation Management Area is an area of

relatively high visitor use including: whitewater rafting on the lower Kern River, intense camping, recreational gold panning, fishing, target shooting and OHV use as well as the annual NORBA mountain bicycle race.

The Chimney Peak area is popular for hiking, horseback riding, OHV use, hunting and shooting, pinyon nut collecting, and as an access to the USFS's Domeland Wilderness Area. The Bureau provides two developed campgrounds: Long Valley with 12 sites and Chimney Peak with 37 sites. Both campgrounds provide water in season, designated sites with picnic tables and barbecue areas, and pit toilets, but no trash collection. A portion of the Pacific Crest National Scenic Trail traverses the management area. The Chimney Peak Fire Station situated in the northeast corner of the SRMA serves also as an information center.

The 2,240 acre North Fork of the Kaweah River area is located adjacent to Sequoia National Park. The majority of the area is accessed by the public at three high-use sites: Paradise, Advance site, and Cherry Falls site. These areas are popular for swimming and tubing, sunbathing, picnicking, fishing and viewing the scenery.

Case Mountain shares a common boundary with the Sequoia/Kings National Park and the Sequoia National Forest. At present, this area is used primarily by people looking for a wilderness experience: hikers, naturalists, and hunters. This area has unique recreation resources: giant sequoia groves; beautiful vistas of Mineral King valley, the back country of Sequoia National Park and the coastal ranges; cultural values; and the Mineral King deer herd.

Vegetation

The South Sierra Management Area is botanically one of the most diverse and unexplored areas within the Caliente Resource Area. It is known to contain at least 30 native plant communities. Several of these communities are considered to be rare including: Piute cypress forest, giant sequoia forest, Joshua tree woodland, and alkali meadows, along with several types of riparian woodlands and oak woodlands.

The management area abounds in rare herbaceous plant species, with 19 taxa known to occur on BLM lands and another 12 highly suspected of being found once adequate inventories are initiated. The Bakersfield cactus, a Federally endangered species, occurs in the western portion of this management area around Caliente Creek. No other Federally listed threatened or endangered plants occur in this unit, however three species proposed for listing as Federally threatened or endangered: Kelso Creek monkeyflower, Piute Mountains navaretia, and Springville darkia, have been documented on BLM-owned parcels. From Walker Pass to the Spanish Needle, along and near the Pacific Crest Trail can be found excellent examples of rare species such as: Spanish Needle onion, Nine Mile Canyon phacelia, the Needles buckwheat, Charlotte's phacelia, and Walker Pass milk vetch.

The management area also includes a number of sensitive or unique plant communities or habitats that support sensitive plant species. Marble outcrops that support limestone endemic species occur along Erskine Creek and at Comb Rocks near Milk Ranch Peak. Alkali meadow communities around Isabella Lake, South Lake, and hot springs areas support the alkali mariposa lily. Piute Cypress groves, rare communities in and of themselves, additionally support other rare plants such as the Piute Mountains jewelflower and Kern County larkspur.

Black stain root disease is a fungal disease that appears to have affected approximately 15,000 acres of singleleaf pinyon (*Pinus monophylla*) in the Chimney Peak region. At this time the disease has contributed to the mortality of thousands of trees in this extensive forest. Disease centers have also spread and new infection areas have become established since the first biological evaluation was done in 1983.

Water Resources

The major hydrologic features of this management area are associated with the principle rivers: the Kern, the Kaweah and the Tule; and their associated tributaries, reservoirs and lakes. Groundwaters are associated with the high water tables of these rivers.

Runoff from snowmelt in the Sierras combined with the higher precipitation of the foothills is the major source of peak flows in the area. Precipitation ranges from 10 to 50 inches annually. Watersheds on public lands provide runoff which feeds the various river systems, lakes and reservoirs. These water bodies are important for drinking water, irrigation, fisheries, wildlife, recreation and groundwater recharge of the great central valley toward which they flow.

The water quality assessment report for 1990 identifies the Kern River, Lake Isabella, the Kaweah River, and Kaweah Lake as impaired waterbodies. The North Fork of the Kaweah River, a source of urban drinking water, has been reported to have elevated levels of fecal coliform. Problems include fisheries habitat degradation, sedimentation build-up, and inadequate flows due to nonpoint source pollution as excessive sediment delivery. A number of projects have been completed on tributaries of the Kern River, specifically in the Long Valley watershed. Projects include rock check dams, grade stabilization structures, and fencing off of sensitive riparian zones.

Wildlife

Recent historic range of the California condor includes lands along the western edge of the management area east to the foothills of the Sierra Nevadas. Four of the nine Federally designated Critical Condor Habitat Areas occur within this management area: Kern County Rangelands, Tulare County Rangelands, Blue Ridge, and the Tejon Ranch Critical Habitat Areas. The Blue Ridge Critical Habitat Area includes 3,268 acres of public land and has been designated as an Area of Critical Environmental Concern. Essential habitat for the California condor occurs in the Woody-Glennville area of this management area and includes approximately 1,400 acres of public land.

The San Joaquin kit fox and the blunt-nosed leopard lizard have ranges that extend into the management area. Both of these species are predominately San Joaquin Valley floor species and typically do not occur above 2,500 to 3,000 feet in elevation. The bald eagle and the peregrine falcon have been observed within the management area.

California spotted owls have been documented on public lands in the Case Mountain area. California spotted owls are also suspected to occur on other forested lands or areas with dense stringers of riparian forest. Such habitat may exist on public land near Three Rivers, Milk Ranch Peak and Chimney Peak.

Public land provides important habitat for portions of seven deer herds: Kaweah Deer Herd Unit, Kern River Deer Herd, Monache Deer Herd, Tule River Deer Herd, Greenhorn Deer Herd, Piute Deer Herd, and Tejon Herd Unit. Resident deer also occur throughout the management area. For most of the resident deer, fawning habitat consists of meadows and riparian zones with dense cover.

Pronghorn have been sighted within the management area near Arvin and Tehachapi. All observations were on private land.

Extensive riparian inventories have been completed for 14 watersheds in this management area. Based on these inventories at least 20 miles of riparian forest, 40 miles of riparian scrub, 1 mile of marshland and 2 miles of strandland occurs on public lands. Vegetation series represented on public land includes Alder, Cottonwood-Willow, Oak, and Willow. Approximately 13 miles of inventoried stream were in excellent condition (functioning), 48.5 miles were in good to fair condition (functioning at risk) and 3.7 miles were in poor condition (non-functioning). Over 750 springs are known to occur on public lands in this management area. Most springs support an area of riparian vegetation around the source and many support a linear riparian zone as their outflow travels downstream. It is estimated that these springs support about 1,000 acres of riparian habitat, with 390 acres in functioning condition, 330 acres functioning at risk, and 280 acres in non-functioning condition.

Chapter 3 - Proposed Action and Management Guidelines

Introduction

The Proposed Action consists of a combination of management objectives, allocations, and guidelines that will direct where things may happen, the resource conditions to be maintained, and the use limitations expected to be necessary to meet management objectives.

The information presented is organized by management area. Each section is preceded by a brief summary of the characteristics of the management area and existing land use allocations. The summary has been provided to assist in determining how, where and to what extent the proposed action will affect public land management.

The proposed action also includes Resource Area-Wide allocations that are common to all three of the management areas. The Area-Wide allocations are presented at the conclusion of the chapter.

Additional detailed information related to management guidelines to be used in implementation of the Proposed Action are found in the Resource Management Plan Chapters 4 - 12.

Resource Area-Wide Management Objectives

Manage public lands to provide healthy, sustainable, biologically diverse ecosystems contributing goods, services and other social and cultural needs for local communities, the region and nation.

Manage public lands to meet the following minimum Standards of Ecosystem Health (see Chapter 6 of the RMP for further explanation and indicators used to determine whether or not these standards are being met):

- Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form.
- Healthy, productive and diverse populations of native species, including special status species (Federal T&E, Federal proposed, BLM sensitive, or Calif. State T&E) are maintained or enhanced where appropriate.
- Riparian/wetland vegetation, structure and diversity and stream channels and floodplains are functioning properly and achieving advanced ecological status.
- Surface and groundwater quality complies with California or other appropriate water quality standards.

Coast Management Area Proposed Action

Management Area Summary

Total Area 5,663,000 Acres, including portions of:

Kern County	77,000 Acres
Monterey County (Camp Roberts)	17,000 Acres
San Luis Obispo County	1,834,000 Acres
Santa Barbara County	2,322,000 Acres
Ventura County	1,413,000 Acres

Federal Lands 1,628,587 Surface Acres

BLM	69,000 Acres
Surface/minerals	20,400
Minerals only	48,600

US Forest Service	1,440,000 Acres
Los Padres National Forest	

U.S. Fish and Wildlife	2,060 Acres
Service (Wildlife Refuges)	
Hopper Mountain	1,900
Bittercreek (<i>extends into</i>	160
<i>Valley Management Area</i>)	

Military	152,700 Acres
Vandenberg	98,000 *
Pt. Hueneume	1,600
Pt. Mugu	4,500
San Nicholas Island	12,800
Camp Roberts	35,800

* only 12,000 acres of Federal minerals

BIA	127 Acres
Santa Ynez Reservation	

Bureau of Reclamation	9,000 Acres
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National Park Service	4,300 Acres
Channel Island National Park	

Existing Land Use Allocations	
Point Sal ACEC 77 acres Designated in 1984	Critical Condor Habitat 520 acres Public surface and subsurface.
California Offshore Rocks & Islands Withdrawal & ACEC Unknown acreage designated in 1983 & 1990	Monterey County - Camp Roberts No oil & gas leases
Santa Lucia Wilderness Area 18,630 acres Includes 1,735 acres BLM, designated by Public Law 95-237 (The Endangered American Wilderness Act) of February 24, 1978	San Luis Obispo County (See Valley Management Area) 5 grazing allotments covering 3,600 acres, supporting 452 AUMs.
Machnesna Mtn. Wilderness Area 20,000 acres Includes 120 acres BLM, designated by Public Law 98-425 (The California Wilderness Act) of October 1, 1984	Santa Barbara County About 50 leased BLM acres, with three producing federal oil wells. 1 grazing allotment covering 160 acres, supporting 16 AUMs.
Garcia Mountain Wilderness Study Area . . . 80 acres Designated in 1987	Ventura County 4,300 leased BLM acres, with 314 producing federal wells.
Machnesna Wilderness Study Area 70 acres Designated in 1987	1 grazing allotment covering 186 acres, supporting 23 AUMs.
Santa Margarita Lake Cooperative Management Area 1,800 acres Designated in 1993 for cooperative management with San Luis Obispo County	Kern County No oil & gas leases in Coast Management Area

Management Area Characteristics

These counties are expected to face growing pressures from increasing population growth with continuing trends in the exodus from city and suburban centers and the development of bedroom communities in proximity to the greater Los Angeles Basin area. Lands in the region have a relatively high percentage of rural residential inhabitants and small population centers. County governments and residents place a very high value on maintaining the semi-rural/pastoral and open space characteristics of this area. Additional factors that will continue to bring about conflict surrounding growth include limited water supplies and an extremely high wildfire danger associated with oak/chaparral vegetation communities.

Leasable mineral estate, specifically oil and gas, continues to be of industry interest. Annual onshore production is continuing its steady decline; the region can be characterized as fully mature. New exploration drilling on federal lands continues at very low levels of one well per year, and new development drilling within the boundaries of existing fields has all but stopped on federal leases.

Public Land Characteristics

Public lands are generally isolated parcels scattered throughout the management area that lack both administrative and public access. The parcels are often steep and densely vegetated, largely with chaparral and oak. By-and-large, specific information has not been collected on the resource character or conditions of these lands, as they have historically received little management attention based on the difficulty of access and their isolated locations. Some parcels are known to have plant communities, riparian habitat, or values unique to the small BLM percentage of land ownership in the management area. Several parcels have known significant reclamation needs primarily associated with inactive and historic mining sites.

Management Area Objectives

Increase management levels to enhance awareness of resource conditions and values in a landscape setting. Focus management on natural resource condition and health, particularly unique vegetative communities, riparian resources, landmark and coastal values.

Integrate management objectives with those of local county governments, coastal commission, state agencies and other federal agencies to contribute to regional conservation efforts.

Increase cooperation with management partners to integrate the isolated parcels with other natural resource and open space management programs.

Reposition properties that do not fit into an active Bureau or cooperator resource management program for lands in areas that do. Rely on county government land use controls to determine future use of those parcels transferred to private ownership.

Management Mechanisms, Allocations and Actions

Special Designations

Approximately 2,487 acres of Federal surface and subsurface and 915 acres of subsurface, in 5 areas would be identified for Area of Critical Environmental Concern designation. See Management prescriptions in RMP Chapter 11.

The existing California Rocks and Islands Wildlife ACEC with unknown acreage would retain its designation. It would be managed to reinforce or ensure the protection of wildlife, including populations of marine mammals and large populations of seabirds.

The existing Pt. Sal ACEC, encompassing 77 acres surface and subsurface, would also retain its ACEC designation and would be managed to provide protection to unique visual, cultural, geologic, and wildlife resources, as well as, rare, threatened, and endangered plant and animal species.

Cypress Mountain ACEC (1,090 acres surface and subsurface) would be managed to protect the rare and unique plant communities of serpentine chaparral and Northern Interior Cypress Forest, which is dominated by Sargent cypress.

Salinas River ACEC (1,000 acres surface and subsurface and 835 acres subsurface only) would be managed to protect diverse vegetative communities and the exemplary riparian area.

Tierra Redonda ACEC (320 acres surface and subsurface and 80 acres subsurface only) would be managed to protect the paleontological resources, the unique sand dune formation, coast live oak woodland, and scenic and geologic values.

Approximately 4,984 acres Federal surface and subsurface and 4,435 acres subsurface, in 5 areas would be identified for Special Management Area designation. See management prescriptions in RMP Chapter 12.

Frog Pond Mountain (53 acres surface and subsurface) would be managed for the protection of riparian resources and the California Bay Forest.

Huasna Peak (1,005 acres surface and subsurface) would be managed for the protection of Native American traditional values.

Irish Hills (1,104 acres surface and subsurface and 560 acres subsurface only) would be managed to protect diverse and coastal plant communities.

Rusty Peak (797 acres surface and subsurface and 635 acres subsurface only) would be managed to protect serpentine chaparral, coastal live oak woodland, perennial grassland, and sensitive plant species.

Hopper Mountain (2,025 acres surface and subsurface and 3,240 acres subsurface only) would be managed to support the California Condor Recovery Program and to complement management of the adjacent Sespe Condor Sanctuary, Hopper Mountain National Wildlife Refuge and Sespe-Piru Critical Condor Habitat Area.

Summary of ACEC/SMA Management Allocations and Management Guidelines

Coast Management Area

ACEC/Size	Management Prescription
California Rocks and Islands * exact size unknown.	Maintain the withdrawal from "settlement, sale, location, or entry, under the general land laws, including the mining laws". Continue protection of the wildlife resource in general by limiting human activities during the nesting season and prohibiting the removal of products which have commercial value.
Cypress Mountain 1,090 acres surface and minerals	Open for leasing of oil, gas, and geothermal resources subject to ISU - Coast ACEC/SMA stipulation. Unavailable for livestock grazing due to other resource concerns. Withdraw riparian zone (c. 10 acres) from mining laws.
Pt. Sal * 77 acres	Closed to oil, gas, and geothermal leasing. Manage as a Day Use Area All public lands within the ACEC are proposed for withdrawal from the mining laws. Unavailable for livestock grazing due to other resource concerns. Designated as closed to OHV use. Access is limited to pedestrian travel on designated trails within the ACEC.
Salinas River 1,000 acres and 835 acres minerals	Manage the riparian zone as a Day Use area. Withdraw riparian zone (c. 10 acres) from mining laws. Horse travel is limited to designated routes in the riparian zone. Unavailable for livestock grazing due to its unsuitability and other resource concerns.
Tierra Redonda 320 acres and 80 acres minerals	Open to leasing of oil, gas, and geothermal resources subject to NSU. Proposed for withdrawal from entry under the mining law. Unavailable for livestock grazing due to its unsuitability. Sand dunes are limited to pedestrian access only.

* existing ACEC

SMA/Size	Management Prescription
Frog Pond 53 acres	Open for the leasing of oil, gas and geothermal resources subject to ISU-Coast ACEC/SMA stipulation. Proposed for withdrawal from entry under the mining laws. Unavailable for livestock grazing due to its unsuitability. Travel in the riparian zone is limited to pedestrians. Terminate the Public Water Reserve and manage water resources for the benefit of the riparian system. Collection of vegetative materials within the SMA requires authorization.

SMA/Size	Management Prescription
Hopper Mountain 2,025 acres and 3,240 acres minerals	Open to the leasing of oil, gas and geothermal resources subject to the ISU - Protected Species stipulation. Proposed for withdrawal from entry under the mining laws. Portions of the SMA are available for livestock grazing if grazing operations complement management objectives, and portions are unavailable for livestock grazing due to their unsuitability.
Huasna Peak 1,005 acres	Open for the leasing of oil, gas and geothermal resources subject to NSU. Unavailable for livestock grazing due to its unsuitability.
Irish Hills 1,104 acres and 560 acres minerals	Open for the leasing of oil, gas and geothermal resources subject to ISU - Coast ACEC/SMA stipulation. Unavailable for livestock grazing due to its unsuitability.
Rusty Peak 797 acres and 635 acres minerals	Open for the leasing of oil, gas and geothermal resources subject to ISU - Coast ACEC/SMA stipulation. Unavailable for livestock grazing due to its unsuitability.

Land Tenure Adjustments

All BLM lands in the Coast Management Area would be identified as suitable for either New Managers or Repositioning. Refer to RMP Chapter 4 for more detail.

Approximately 13,200 acres would be identified as suitable for New Managers where the lands would be targeted for transfer to other parties as follows:

Approximately 4,200 acres would be identified for transfer to the U.S. Forest Service.

Approximately 600 surface acres in the Hopper Mountain Special Management Area would be targeted for transfer to the U.S. Fish and Wildlife Service and the U.S. Forest Service.

Approximately 8,400 acres would be identified for transfer to counties, land trusts, or non-profit organizations.

Approximately 7,200 acres (80 parcels) would be identified for local repositioning through land exchanges to consolidate natural resource values and meet the objectives in this plan.

Approximately 140 acres in the vicinity of the Klau Mine and Rinconada Mine would be identified as needing mine tailing restoration and inventory and assessment of historic resources and *Arctostaphylos luciana*, a sensitive plant species, prior to transfer or exchange.

Livestock Grazing

Approximately 6,100 of the 20,400 acres of public land in the Coast Management Area would be available for application for livestock grazing. Of this figure, 4,000 acres lie within existing allotments, and 2,100 acres are currently unallotted. The remainder of the Management Area, approximately 14,300 acres, would be classified as unavailable for livestock grazing. Authorizations will only be made on lands available for grazing. The following criteria are used to identify lands unavailable for grazing:

Unallotted lands which have known sensitive resource concerns would be considered closed to new grazing authorizations.

Unallotted lands which are inaccessible to livestock due to heavy brush, steep slopes, rough terrain, or are too far from water sources are considered unsuitable for new grazing authorizations.

Livestock grazing would continue to be authorized on about 4,000 acres of public land in seven allotments at levels shown in RMP Chapter 6.

New grazing applications may be authorized if residual impacts to sensitive resources are not significant. Applications for new grazing allotments would be evaluated on a case-by-case basis following the criteria listed in RMP Chapter 6. Mulch, utilization and seasonal use restrictions would be consistent with guidelines used for existing allotments found in RMP Chapter 6.

Minerals

Fluid Minerals

The Coast Management Area contains a total of 69,000 acres of mineral estate under the administration of the BLM, of which 4,400 acres are currently leased for oil and gas exploration and development. Public acreage that is currently leased will not be subject to additional stipulations; however, if leases expire, and new leasing occurs, special stipulations may be applied.

Approximately 1,900 acres are closed to leasing within designated Wilderness.

Approximately 100 acres in Point Sal ACEC are proposed to be closed to leasing.

Approximately 1,500 BLM acres are proposed to be open with a No Surface Use Stipulation (NSU). These areas include Tierra Redonda ACEC and Huasna Peak SMA.

Approximately 42,800 acres are proposed to be open to oil and gas leasing under standard terms and conditions; of that total 2,800 acres are currently leased.

Approximately 22,700 acres are proposed to be open to oil and gas leasing subject to a Limited Surface Use (LSU) stipulation. Of that total, 1,600 acres are currently leased.

Special categories of the LSU stipulation apply as follows:

- 16,500 acres open subject to the LSU-Protected Species stipulation.
- 1,600 acres are currently leased and would not have the stipulation applied to existing leases.
- 6,000 acres open subject to the LSU-Sensitive Species stipulation.
- 4,300 acres open subject to the LSU-Coast stipulation.

Both the LSU-Protected Species and the LSU-Sensitive Species stipulations would apply to one township and range (25S, 10E) immediately southwest of Camp Roberts in an area with limited oil exploration potential.

The 69,700 acres of mineral estate under the administration of the Department of Defense (DOD) would be open subject to the LSU-Defense stipulation.

Solid Minerals

Approximately 1,900 acres are in existing withdrawals from entry under the general mining laws within Wilderness Areas; approximately 10 acres within the Salinas River riparian zone would be newly withdrawn.

Approximately 5,800 acres in five areas are proposed for withdrawal from entry under the mining law. These areas would include the Pt. Sal, Tierra Redonda, and Salinas River (riparian portions.) ACECs and the Frog Pond and Hopper Mountain SMAs.

The remaining 63,100 acres within the Coast Management Area would remain open to solid and mineral material exploration. Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources.

Public law 103-23 requires submission of a Notice of Intent to locate a mining claim and a plan of operations on private lands under which the United States has retained the mineral estate.

Valley Management Area Proposed Action

Management Area Summary

Total Area 4,761,520 Acres including portions of:

Kern County	2,393,000 Acres
Tulare County	894,000 Acres
Kings County	890,600 Acres
San Luis Obispo County	480,000 Acres
Santa Barbara County	103,000 Acres
Ventura County	920 Acres

Federal Lands 385,570 Surface Acres

BLM	497,700 Acres
Surface/minerals	192,000
Minerals only	205,300
Surface only	100,400
US Forest Service	200 Acres
U.S. Fish and Wildlife Service (Wildlife Refuges)	28,200 Acres
Kern	10,200
Pixley	4,200
Bittercreek	13,800
Department Of Energy	47,500 Acres
Elk Hills NPR-1	
Buena Vista Valley NPR-2	
Military	16,600 Acres
Lemoore NAS	
BIA	170 Acres
Santa Rosa Rancheria	
Bureau of Reclamation	500 Acres

Existing Land Use Allocations

Reef Ridge ACEC	1,430 Acres	Santa Barbara County	6,500 leased acres, with 96 producing federal oil wells.
Elkhorn Plain ACEC	9,190 Acres		
San Andres Fault ACEC	1,350 Acres		
Soda Lake ACEC	2,970 Acres		
Goose Lake ACEC	40 Acres		3 grazing allotments covering 2,500 acres and supporting 260 AUMs.
All designated in 1984		Ventura County	See Coast Management Area.
Critical Condor Habitat		Kings County	
40 acres public surface and subsurface, 240 acres subsurface only.		16,200 leased acres with 11 producing federal oil wells.	
Caliente Mountain Wilderness Study Area		Portions of 7 grazing allotments covering 8,000 acres and supporting 2,000 AUMs.	
24,680 acres identified in 1988 (6,597 acres added in 1993)		Tulare County	
Caliente Mountain and Tumbler Range National Cooperative Land and Wildlife Management Areas		No oil and gas leases.	
114,000 Acres designated in 1961.		1 grazing allotment covering 80 acres and supporting 16 AUMs.	
San Luis Obispo County		Kern County	
11,000 leased acres, with 5 producing federal oil wells.		102,000 leased acres with 5,065 producing federal oil wells.	
Portions of 16 grazing allotments covering 190,000 acres and supporting 24,000 AUMs.		Portions of 31 grazing allotments covering 63,000 acres and supporting 12,000 AUMs.	

Management Area Characteristics

The management area encompasses the predominately private southern portion of the Central Valley. Land use in the Central Valley is largely dedicated to agriculture, oil and gas development and rapidly enlarging urban areas. The agriculture, both crop and grazing, and oil and gas industries are leading economic contributors at the local, state and national levels. These industries have been heavily affected in past years by market fluctuations, water supply and regulation.

Urban growth and expansion of the numerous north/south and east/west utility corridors crossing the valley have impacted the availability of lands for agricultural, oil and gas and natural land management purposes. Clovis and Bakersfield respectively are ranked as the fastest growing cities in the San Joaquin Valley; and for cities with populations of 50,000 or more, are ranked as first and second in California. They are representative of relative levels of urban growth occurring in the valley.

Poor air quality plagues the Central Valley. In the winter, unhealthy levels of PM₁₀ are commonplace and in the summer, unhealthy levels of ozone occur due to an abundance of the necessary reactive organic gases, nitrous oxides and intense sunlight.

Less than ten percent of the land within the management area retains natural land characteristics. As a result, the management area contains a high number of species protected under state and federal Endangered Species Laws. There is a high dependence on the BLM lands within the valley to support the species and habitat conservation needs, especially considering the BLM is the largest federal landowner in the management area.

Public Land Characteristics

Approximately 70% of the 293,000 acres of BLM land occurs in several large consolidated blocks of land, the bulk of which is found in the 200,000 acre Carrizo Plain Natural Area. The remainder of the lands area scattered throughout the valley as smaller isolated parcels.

A high percentage (136,300 acres) of federal mineral estate has been leased or is leased and developed with oil and gas production. Approximately 58,000 acres of federal land, or 15% of the land within the boundaries of the valley's oil and gas fields, are administered by the Bureau of Land Management. Production of oil and gas resources from Federal lands contribute toward meeting national energy demands and to the state and local economy. Federal production annually returns approximately 25 million dollars of royalty to the federal treasury.

Public lands constitute a high percent of the remaining natural lands in the valley under Federal ownership and play an important role in the conservation of Threatened and Endangered Species. The Carrizo Plain Natural Area serves as an important conservation management area for natural lands and may provide important foraging habitat for the California Condor.

Because of the high percent of private land in the management area and scattered nature of the public land ownership, the management area has a high number of rights-of-way. The Bureau is often involved with other third party actions where public land is within, adjacent to or in the path of developments occurring on private land. Scattered parcels are also highly susceptible to trespass based on their proximity to private lands.

Public recreation opportunities are concentrated in the Carrizo Plain Natural Area (CPNA) and surrounding Caliente and Temblor Ranges. Photography, sightseeing and nature study are the principal activities within the CPNA. Additionally, hunting for pigs, deer and small game is popular in the Temblor and Caliente Ranges. There are 12 miles of hiking trails, including the Caliente Mountain access and ridge trails. The KCL and Selby pad provide primitive camping areas. An administrative site is maintained at the Washburn Ranch, and BLM is a cooperative partner in the Goodwin Educational Center (Visitor Center).

The Carrizo region is recognized as highly sensitive for both cultural and Native American traditional lifeway values. Several regionally important paleontological localities and the highly visible San Andreas Fault scarp present opportunities for study and hobby activities.

Management Area Objectives

Provide a leadership role in developing and implementing regional conservation strategies. Dedicate or reposition public lands to meet San Joaquin Valley conservation goals.

Integrate management objectives with and assist local county governments, private organizations, and state agencies in the development and implementation of local management plans (e.g. Habitat Conservation Plans, mitigation banks, county general plans, air and water quality plans).

Collaborate with the oil and gas and livestock industries in meeting mutually beneficial management objectives.

Management Mechanisms, Allocations and Actions

Special Designations

Approximately 156,800 acres of Federal surface and subsurface; 55,700 acres of surface only; and 19,300 acres of subsurface, in 6 areas would be identified for Area of Critical Environmental Concern designation. See management prescriptions in RMP Chapter 11.

The Carrizo Plain Natural Area ACEC, encompassing 143,300 acres surface and subsurface, 10,880 acres subsurface only, and 55,730 acres surface only, would replace 3 existing ACECs. It would be managed for the protection of sensitive plant, animal, cultural, Native American traditional lifeway, and geologic resource values.

The Lokern ACEC (3,110 acres surface and subsurface and 3,420 acres subsurface only) would be managed for the protection of listed plant and animal species and oil and gas production.

The Alkali Sink ACEC (402 acres surface and subsurface) would be managed to protect the rare alkali sink plant community and habitat for state and federally listed plants and animals.

The Goose Lake ACEC (40 acres Federal surface and subsurface) is an existing ACEC, and it would continue to be managed for the protection of the rare alkali sink vegetation, habitat for numerous shorebirds and raptors, and cultural resource values.

The Kettleman Hills ACEC (6,730 acres Federal surface and subsurface and 3,765 acres subsurface only) would be managed to protect significant paleontological values and wildlife habitat for federally listed species and oil and gas production.

The Chico Martinez ACEC (3,240 acres surface and subsurface and 1,280 acres subsurface only) encompasses and replaces the existing Reef Ridge ACEC. It would be managed to protect significant paleontological resources, as well as geologic type formations.

Approximately 114,960 acres of Federal surface and subsurface and 4,840 acres of subsurface, would be identified for one new and two existing Special Management Areas. See management prescriptions in RMP Chapter 12.

The existing Temblor Mountain and Caliente National Cooperative Land and Wildlife Management Areas (NCLWMA) would be continued with the adoption of the following objectives.

Public land within the existing Temblor NCLWMA would be managed for improved wildlife habitat and recreation opportunities as well as soil stabilization.

Public land within the existing Caliente NCLWMA would be managed for improved vegetative communities and recreational opportunities.

Public land within the Bittercreek National Wildlife Refuge, encompassing 960 acres of Federal surface and subsurface and 4,840 acres of subsurface only, would be managed to serve as conserved lands. Management as a Special Management Area would provide the special attention required for management of the Bureau administered surface and subsurface to be compatible with the U.S. Fish and Wildlife Service's management of the surrounding Bittercreek National Wildlife Refuge.

Summary of ACEC/SMA Management Allocations and Management Guidelines

Valley Management Area

ACEC/Size	Management Prescription
Alkali Sinks 402 acres	Open for the leasing of oil, gas, and geothermal resources subject to NSU. Proposed for withdrawal from entry under the mining laws. Manage as a Day Use area Access off designated routes of travel is restricted to pedestrian travel. Water diversions are prohibited. Collection of vegetative materials within the ACEC requires authorization. Unavailable for livestock grazing due to other resource concerns.
Carrizo Plain * 199,030 acres	Open for the leasing of oil, gas, and geothermal resources subject to the following special stipulations: LSU - Protected Species, LSU - Sensitive Species and LSU - Raptors. Implement the Carrizo Plain Natural Area Management Plan. Soda Lake and the surrounding wetlands shall be proposed for withdrawal from entry under the mining laws. Camping is restricted to designated locations. Portions are available for livestock grazing.
Chico Martinez * 3,240 acres and 1,280 acres minerals.	Open for the leasing of oil, gas, and geothermal resources subject to the LSU - Protected Species stipulation. Access off designated routes of travel is limited to pedestrian and equestrian travel. Available for livestock grazing and is currently allotted and grazing will continue to be authorized.
Goose Lake 40 acres	Open for leasing of oil, gas, and geothermal resources subject to NSU. Proposed for withdrawal from entry under mining laws. Manage as a Day Use area Access off designated routes of travel is limited to pedestrian travel. Collection of vegetative materials within the ACEC requires authorization. Unavailable for livestock grazing.
Kettleman Hills 6,730 acres and 3,765 acres minerals.	Open for the leasing of oil, gas, and geothermal resources subject to the following stipulations: LSU - Protected Species and LSU - Raptors. Available for livestock grazing and is currently allotted and grazing will continue to be authorized.
Lokern 3,110 acres and 3,420 acres minerals	Open for leasing of oil, gas, and geothermal resources subject to the following stipulations: LSU - Protected Species, LSU - Sensitive Species. If a suitable mineral materials site cannot be found outside of the ACEC, sales of mineral materials may be authorized at the site of the old Elk Hill Community pit. Unavailable for livestock grazing due to other resource concerns, unless research shows grazing is necessary to meet management objectives.

* Includes existing ACEC.

SMA/Size	Management Prescription
Bittercreek 960 acres and 4,840 acres minerals	Closed to the leasing of oil, gas and geothermal resources. Available and currently allotted for livestock grazing. Grazing will continue to be authorized. Seasonal restrictions and limits on access may be required to prevent disturbance to condors.
Caliente/Tembler NCLWMA 114,000 acres	Open for the leasing of oil, gas and geothermal resources subject to LSU - Protected Species stipulation. These lands are withdrawn from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws. Available for livestock grazing.

Biological Resources

Public lands identified by the USF&WS and CDF&G as important for the recovery of Federally listed species would be managed as conserved lands (see "A Conservation Strategy for Threatened and Endangered Species in the San Joaquin Valley" in RMP Chapter 9). These areas would be managed in a manner consistent with the direction established by the USF&WS and CDF&G through the Kern Valley Floor HCP and any pertinent recovery plans, and would complement local conservation plans.

Lands within threatened and endangered species range would be available for oil, gas, and geothermal leasing subject to the limited surface use threatened and endangered species stipulation, with the exception of lands within Bittercreek SMA, which is closed to leasing, and Alkali Sink and Goose Lake ACECs which are open to leasing subject to NSU (see Map packet).

Land Tenure Adjustments

Approximately 80,000 acres (250 parcels) would be identified for local repositioning through land exchanges to consolidate natural resource values, with an emphasis on meeting conservation needs identified in species recovery plans and county habitat conservation plans. See RMP Chapter 4 for detailed information.

Approximately 7,000 acres would be identified as suitable for New Managers where lands would be transferred to other parties as follows:

Approximately 5,500 acres would be targeted for transfer to the U.S. Forest Service.

Approximately 1,500 acres would be targeted for transfer to the U.S. Fish and Wildlife Service for the Bittercreek National Wildlife Refuge. These lands would be managed to serve as a threatened and endangered species conservation area.

Approximately 5,400 acres in the Kettleman Hills would be cooperatively managed with the BLM Hollister Resource Area.

Livestock Grazing

Approximately 275,000 acres of the public land within the Valley Management Area would be available for livestock grazing. Of this figure, 270,200 acres lie within existing allotments, and 4,800 acres are currently unallotted and would be available for application for livestock grazing. The remainder of the public lands in the Management Area, approximately 18,000 acres, would be classified as unavailable for livestock grazing. Authorizations will only be made on lands available for grazing. The following criteria are used to identify lands unavailable for grazing:

Unallotted lands which have known sensitive resource concerns would be considered closed to new grazing authorizations.

Unallotted lands which are inaccessible to livestock due to heavy brush, steep slopes, rough terrain, or are too far from water sources would be considered unsuitable for new grazing authorizations.

Livestock grazing would continue to be authorized on 270,200 acres of public land in 54 allotments at levels shown in RMP Chapter 6.

New grazing applications may be authorized if residual impacts to sensitive resources are not significant. Applications for new grazing allotments would be evaluated on a case-by-case basis following the criteria listed in RMP Chapter 6. Mulch, utilization and seasonal use restrictions would be consistent with guidelines used for existing allotments found in RMP Chapter 6.

Minerals

Fluid Minerals

The Valley Management Area contains a total of 397,300 acres of mineral estate of which a total of 136,000 acres are currently leased. Approximately 24,700 acres within the existing Caliente Mountain WSA are closed to leasing. The remaining 253,200 acres in the management area are unleased. Public acreage that is currently leased will not be subject to additional stipulations; however, if leases expire, and new leasing occurs, special stipulations may be applied.

Approximately 5,800 BLM acres at Bittercreek SMA would be closed to oil and gas leasing.

Approximately 500 BLM acres in Goose Lake and Alkali Sink ACEC would be open to oil and gas leasing with a No Surface Use stipulation (NSU). Approximately 300 acres are currently leased.

Approximately 18,000 acres would be open to oil and gas leasing under standard terms and conditions.

Approximately 348,300 acres would be open to oil and gas leasing with a Limited Surface Use (LSU) stipulation; of that total, approximately 136,000 acres are currently under lease.

Special categories of the LSU stipulations include:

212,300 acres would be subject to the LSU-Protected Species stipulation of which 136,000 acres are currently leased.

300 acres would be subject to the LSU-Critical Habitat stipulation.

126,500 acres would be subject to the LSU-Sensitive Species stipulation, of which 42,100 acres are currently leased.

113,100 acres would be subject to the LSU-Raptor stipulation of which 26,500 acres are currently leased.

Areas within the Valley Management Area that would be subject to more than one category of the LSU stipulations include: the Carrizo Plain Natural Area ACEC where protected species, sensitive species and raptor stipulations apply; Lokern ACEC, where both protected species and sensitive species stipulations apply; and Kettleman Hills where protected species and raptor stipulations apply.

The 16,600 acres of Federal mineral estate under the administration of the Department of Defense (DOD at Lemoore Naval Air Station) would be open to oil and gas leasing subject to the LSU-Defense stipulation.

Solid Minerals

Approximately 7,900 acres are proposed for withdrawal from entry under the mining law in four areas. These areas would include the Alkali Sink, Carrizo Plain Natural Area (Soda Lake only), Chico Martinez and Goose Lake ACECs.

The remaining 389,400 acres within the Valley Management Area would remain open to solid mineral and mineral material exploration and development under existing laws and regulations. Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources.

South Sierra Management Area Proposed Action

Management Area Summary

Total Area 3,390,000 acres including portions of:

Kern County	1,187,000 Acres
Tulare County	2,203,000 Acres

Federal Lands 1,910,000 surface acres

BLM	472,000 Acres
Surface/minerals	276,000
Minerals only	196,000
National Park Service	423,000 Acres
Kings Canyon National Park (Portions)	
US Forest Service	1,152,000 Acres
Sequoia National Forest	
U.S. Fish and Wildlife Service (Wildlife Refuge)	900 Acres
Blue Ridge	
BIA	55,400 Acres
Tule River Reservation	
Bureau of Reclamation	2,700 Acres

Existing Land Use Allocations

Blue Ridge ACEC 3,175 Acres Designated in 1984	Wilderness Study Areas Domeland 40 Acres Moses 558 Acres Owens Peak 310 Acres Milk Ranch Peak 8,970 Acres Piute Cypress 3,453 Acres Rockhouse 310 Acres Sacatar Meadows 140 Acres Scodie 420 Acres Sheep Ridge 5,102 Acres
Piute Cypress ACEC 720 Acres Designated in 1964	
Critical Condor Habitat 3,474 acres public surface and subsurface 18,546 acres subsurface only	
Pacific Crest National Scenic Trail 116 miles	
National Cooperative Land and Wildlife Mgmt Area Monache-Walker Pass 140,000 Acres Designated in 1962	Kern County No oil and gas leases in South Sierra Portions of 33 grazing allotments covering 93,000 acres and supporting 11,000 AUMs.
Wilderness Areas Chimney Peak 13,700 Acres Domeland 36,300 Acres Sacatar Trail 18,000 Acres Owens Peak 25,000 Acres Kivah 16,000 Acres	Tulare County No oil and gas leases. Portions of 22 grazing allotments covering 97,000 acres and supporting 3,300 AUMs.

Management Area Characteristics

The management area encompasses the foothill and mountain regions of the southern Sierra Nevada Range from Sequoia National Park to the Grapevine area of the San Emigdio and Tehachapi Mountain Ranges. Lands in the region are characterized by generally rough, rugged and steep terrain with high scenic qualities, diverse ecological communities and high erosion potential. Large portions of the management area are Federally held lands administered by the National Park Service, United States Forest Service and Bureau of Land Management. The area also encompasses the Tule River Reservation.

The area is sparsely populated with rural communities that have a growing number of ranchettes as well as retirement or second home residents. Livestock grazing (historically and currently) and tourism-related industries dominate the economic base. A high percentage of the residents belong to families that have lived in the area for many years. At one time, mining was an important aspect of the communities but now serves primarily as an important historical complement to the rural character of the landscape. Residents are actively involved in land use issues.

Recreational features of the area are receiving increased local, regional and national attention; many are final target destinations within wilderness areas, wild and scenic rivers, and camping and boating areas. The level of recreational use continues to grow as increasing numbers of visitors are being attracted to the Sierras from the Los Angeles Basin, Central Valley and broadening multi-state areas.

The South Sierra region has high value for watershed and riparian resources as well as hydroelectric power generation, and a high sensitivity level for cultural resources and Native American issues.

Five physiographic regions of southern California converge within the management area, resulting in highly diverse vegetative communities and a number of unusual plant assemblages. The area also has ecological and cultural resource importance as a transitional zone and migratory route between regions.

Public Land Characteristics

Approximately 75% of the 276,000 acres of BLM land occur in relatively large consolidated blocks of land, the majority of which are within designated wilderness, wilderness study areas, or otherwise in consolidated blocks of lands in close proximity to National Forest or Park Service lands. The scattered isolated lands in the management area are generally located throughout the foothills and in the Tehachapi area.

Recreation demands and uses are prevalent on public lands, where visitors are served by three developed campgrounds, 116 miles of the Pacific Crest National Scenic Trail and numerous other popular dispersed recreation use areas. Administrative facilities are maintained at South Fork, Chimney Peak and Kennedy Meadows.

The proximity of public land to the numerous rural communities and the large acreage of public land in the management area increases the dependence on public lands by community services. Public lands serve local communities by providing sites for schools, cemeteries and community mineral material pits. Additionally, in many areas the interwoven nature of rural residential and public lands increases the need for fire suppression and patrol.

Management Area Objectives

Assist in the maintenance of rural lifestyles and economies of local communities by providing for livestock grazing, community infrastructure needs and a range of dispersed recreational opportunities.

Maintain an increasingly active management presence to resolve private/public land use issues and respond to fire suppression needs that threaten private property.

Integrate management objectives with those of other Federal and State agencies and local and county governments.

Actively participate in regional conservation plans and proactively manage for the conservation of rare species and habitats, cultural resources, Native American traditional values.

Management Mechanisms, Allocations and Actions

Special Area Designations

Approximately 24,120 Acres in 4 areas would be identified for Area of Critical Environmental Concern designation. See management prescriptions in RMP Chapter 11.

The existing Piute Cypress ACEC, encompassing 865 acres surface and subsurface and 175 acres subsurface only, would retain its designation and be slightly expanded. It would be managed to protect the Piute Cypress grove and other associated sensitive plant species.

The existing Blue Ridge ACEC, encompassing 3,195 acres surface and subsurface and 2,100 acres subsurface only, would also retain its ACEC designation, be expanded, and would be managed for the protection of designated critical condor habitat.

Case Mountain ACEC (18,530 acres) would be managed to protect the giant sequoia groves, sensitive plant/animal species, cultural resources, and riparian values.

Horse Canyon ACEC (1,530 acres federal surface and subsurface and 1,330 acres subsurface only) would be managed to enhance protection of significant cultural resource and paleontological resource values, and Native American traditional lifeway values.

Approximately 155,485 acres in 9 areas and 116 miles of the Pacific Crest National Scenic Trail would be identified for Special Management Area designation. See management prescriptions in RMP Chapter 12.

Erskine Creek (2,960 acres surface and subsurface and 480 acres subsurface only) would be managed to protect limestone caves, riparian areas, and sensitive vegetation.

Keyesville (7,133 acres surface and subsurface and 220 acres subsurface only) would be managed for the enhancement of compatible low impact recreational opportunities and natural resources.

The North Fork of the Kaweah (4,870 acres surface and subsurface) would be managed for riparian resources, cultural resources, and sensitive vegetation, while improving recreational opportunities.

The Ker-311 cultural site (160 acres federal surface and subsurface) would be managed for the protection of its cultural resources values and characteristics which qualified the property for listing on the National Register of Historic Places.

The Granite Cave cultural site (5 acres federal surface and subsurface) would be managed for the protection of its cultural resource and Native American traditional lifeway values, and the cave's microclimate and natural environs.

The Monache-Walker Pass National Cooperative Land and Wildlife Management Area (140,000 acres) would be managed to improve and maintain a diverse assemblage of vegetative communities to benefit wildlife resources and recreational opportunities.

Deer Spring (320 acres surface and subsurface) would be managed to protect riparian resources, cultural resources, and to improve wildlife habitat.

The Walker Pass National Historic Landmark (approximately 37 acres Federal surface and subsurface) would be managed for the protection of its historic property, natural landscape, and viewshed values.

Summary of ACEC/SMA Management Allocations and Management Guidelines

South Sierra Management Area

ACEC/Size	Management Prescription
Blue Ridge * 3,195 acres and 2,100 acres minerals	Closed to oil, gas and geothermal leasing. The area is proposed for withdrawal from entry under the mining laws. Unavailable for livestock use due to other resource concerns unless grazing is deemed necessary by the USFWS to assist in condor recovery. Designated as closed to OHVs. Public access may be restricted during condor use periods.
Case Mountain 18,530 acres	Open for the leasing of oil and gas resources subject to the ISU - Raptor stipulation. Closed to the leasing of geothermal resources. Lands within sequoia groves, approximately 250 acres, shall be withdrawn from the mining laws. The two access routes, Salt Creek Road and Oak Grove Road off Mineral King, are open to mountain biking but closed to other public vehicular travel until a management plan is written for the area. Off road public access is limited to pedestrians and equestrians only. Travel within the sequoia groves is limited to pedestrians. Available for livestock grazing. Grazing operations shall be adjusted or terminated within the sequoia community if studies show they have a negative effect upon the plant community.
Horse Canyon 1,530 acres and 1,330 acres minerals.	Open for leasing of oil, gas, and geothermal resources subject to NSU. Unavailable for livestock grazing due to other resource concerns.
Piute Cypress * 865 acres and 175 acres minerals	Closed to oil, gas, and geothermal leasing. Available for livestock grazing. Collection of vegetative materials within the ACEC requires authorization. Access off designated routes of travel is restricted to pedestrian travel. Manage as a Day Use area.

* Includes existing ACEC's.

SMA/Size	Management Prescription
Deer Springs 320 acres	Closed to the leasing of oil, gas and geothermal resources Available for livestock grazing. The Spring enclosure is unavailable for livestock grazing due to other resource concerns.
Erskine Creek 2,960 acres and 480 acres minerals	Closed to the leasing of oil, gas and geothermal resources. About half of the southwestern portion of the SMA is within the Plute Cypress WSA where no new oil, gas, and geothermal leases may be issued. N1/2 Sec. 22 and S1/4SW1/4 Sec. 15, T. 27 S., R. 33 E., MDB&M, shall be proposed for withdrawal from entry under the mining laws. A portion of the SMA is available for livestock grazing if riparian resource concerns can be met. A portion of the SMA is unavailable for livestock grazing due to its unsuitability.
Granite Cave 5 acres	Open for the leasing of oil, gas and geothermal resources subject to NSU stipulation.
Keyesville 7,133 acres and 220 acres minerals	Disposals of mineral materials may be authorized outside of or away from riparian zones, sensitive plants, and cultural resources. Shooting of firearms, except for the legal taking of game, is prohibited. Open for the leasing of oil, gas and geothermal resources subject to LSU - Sensitive Species stipulation. Continued closure to the mining laws in the Keyesville area (Sec. 25 SLX, and Sec. 36 N ² /NE ² %, SE ² %, T. 26 S., R. 32 E., MDB&M). Expand closure to include Sec. 25 S ² /SW ² %, Sec 35 NE ² /NE ² %, and Sec 36 S ² /NE ² %, N ² /NW ² %. Portions limited to day-use only. Routes of travel for OHVs and bicycles shall be designated in the Keyesville SMA. Available for livestock grazing. Recreational mining may be allowed within areas near Keyesville that are withdrawn from the general mining laws, subject to permit.
KER-311 160 acres	Open for the leasing of oil, gas and geothermal resources subject to NSU. Unavailable for livestock grazing due to other resource concerns.
Monache NCLWMA 306,422 acres within the Caliente and Ridgecrest Resource Areas	These lands are withdrawn from application under the non-mineral public land laws and from disposition under the homestead, desert land entry and script selection laws. Available for livestock grazing.
North Fork 4,870 acres	Available for livestock grazing. Portions of the area may be managed as day use. Maximum lengths for stays for visitors may be shortened to accommodate more visitors and reduce visitor conflicts.
Pacific Crest Trail 116 miles	Continue closure of trail to vehicles, including bicycles. Manage the Lamont Peak spur trail to the PCNST as a hiking and equestrian trail, keeping it closed to motorized and mechanized vehicles. Spur trails will be established where possible and an equestrian trailhead will be pursued near Tehachapi.
Walker Pass NHL 37 acres	Open for the leasing of oil, gas and geothermal resources subject to NSU stipulation. Available for livestock grazing.

Land Tenure Adjustments

Approximately 113,500 acres (160 parcels) would be identified for local repositioning through land exchanges to consolidate natural resource values and meet the management objectives of this plan. Special emphasis would be placed on repositioning to enhance wilderness values, recreation, special plant communities and meeting local community needs.

Approximately 53,540 acres would be targeted for cooperative management with other Federal and State agencies:

Approximately 28,000 acres would be identified for cooperative management with the U.S. Forest Service in the Lake Isabella area.

Approximately 3,200 acres of federal surface would be identified for cooperative management with the U.S. Fish and Wildlife Service or California Department of Fish and Game at the Blue Ridge National Wildlife Refuge.

Approximately 21,000 acres would be identified for cooperative management with the U.S. National Park Service in the Three Rivers area.

Approximately 40 acres would be identified for cooperative management or withdrawal to the Bureau of Indian Affairs in support of the Tule River Reservation.

Approximately 1,300 acres would be identified for cooperative management with the State of California Parks Department in the Horse Canyon/Sand Canyon area.

Livestock Grazing

Approximately 220,800 acres of the public land within the South Sierra Management Area would be available for livestock grazing. Of this figure, 188,400 acres lie within existing allotments, and 32,400 acres are currently unallotted and available for application for livestock grazing. The remainder of the Management Area, approximately 55,200 acres, would be classified as unavailable for livestock grazing.

Unallotted lands which have known sensitive resource concerns would be considered closed to new grazing authorizations.

Unallotted lands which are inaccessible to livestock due to heavy brush, steep slopes, rough terrain, or are too far from water sources are considered unsuitable for new grazing authorizations.

Livestock grazing would continue to be authorized on 188,400 acres of public land in 53 allotments at levels shown in RMP Chapter 6.

New grazing applications may be authorized if residual impacts to sensitive resources are not significant. Applications for new grazing allotments would be evaluated on a case-by-case basis following the criteria listed in RMP Chapter 6. Mulch, utilization and seasonal use restrictions would be consistent with guidelines used for existing allotments found in RMP Chapter 6.

Minerals

Fluid Minerals

The South Sierra Management Area contains a total of 472,000 acres of mineral estate of which approximately 128,300 acres are within Wilderness and WSAs, which are closed to mineral leasing. Approximately 346,400 acres remain potentially available for leasing, of which none are currently leased for oil and gas exploration.

Approximately 10,100 BLM acres would be closed to oil and gas leasing, and an additional 18,500 acres would be closed to geothermal development.

Approximately 3,000 acres would be open to oil and gas leasing with a No Surface Use (NSU) stipulation.

Approximately 234,700 BLM acres would be open to oil and gas leasing under standard terms and conditions.

Approximately 95,600 acres would be open to oil and gas leasing under a Limited Surface Use (LSU) stipulation.

Special categories of the LSU stipulation will be applied as follows:

- 34,400 acres are subject to the LSU-Protected Species stipulation
- 22,300 acres are subject to the LSU-Critical Habitat stipulation
- 27,400 acres are subject to the LSU-Sensitive Species stipulation
- 18,500 acres are subject to the LSU-Raptor stipulation

Areas in which more than one category of Limited Surface Use stipulation may apply include several townships and ranges within the Sierra Management Area. Limited potential for oil and gas development in the Sierras would minimize the effects of the overlap on oil industry exploration activity.

Solid Minerals

Existing land use allocations for Wilderness Areas have closed 109,000 acres to entry under the general mining law of 1872.

Approximately 6,300 acres are proposed for withdrawal from entry under the mining law in four areas. These areas would include portions of the Blue Ridge and Case Mountain ACFs and Erskine Creek and Keyesville SMAs.

The remaining 356,700 acres within the South Sierra Management Area would remain open to exploration and development under existing laws and regulations.

Management objectives and guidelines would be utilized to evaluate applications for development of the solid mineral and mineral material resources.

Recreation

Four river segment corridors, including a total of approximately 10 miles, would be identified as being eligible for designation in the National Wild and Scenic Rivers System (NWSRS). These segments would include: the Lower Kern (3.5 miles of a 32 mile river segment), East Fork of the Kaweah (2.4 miles of a 10 mile river segment), Middle Fork of the Kaweah (1,000 feet of a 10 mile river segment), and North Fork of the Kaweah (4 miles of a 6 mile river segment). Cooperative studies with the U.S. Forest Service and National Park Service, who manage adjacent potentially eligible segments of these same rivers, would be conducted to determine if the river segments are suitable for designation in the NWSRS. In the interim, management requirements would ensure that river segment corridors maintain current characteristics. RMP Chapter 7 provides information about the NWSRS.

The Canebrake/Long Valley Loop Road would be managed as a Scenic Back Country Byway.

The five areas designated as wilderness by the *California Desert Protection Act of 1994* (Chimney Peak, Domeland, Kiavah, Owens Peak, and Sacatar Trail) would be managed through an activity plan in cooperation with Sequoia National Forest and Ridgcrest Resource Area. Trailheads (such as Rockhouse) and campgrounds (Walker Pass, Long Valley, and Chimney Creek) would be identified in the activity plan to be maintained and managed as staging areas for back country users.

Area-Wide Management Allocations

Biological Resources

Naturally occurring waters on public lands, including public water reserves, would be managed to maintain, improve, or benefit in-stream flow requirements needed for riparian systems. Applications for water developments or diversions on public lands would be approved only if the above needs have been met.

Lands acquired through Compensation activities would be managed to benefit the species identified in the applicable U.S. Fish and Wildlife Service or California Department of Fish and Game biological opinion, agreement, or other document. Acquisition of lands with compensation funds will target areas approved by the USF&WS and CDF&G. Management of these areas would be to promote recovery of the target species. Special management terms and condition for these areas include:

These lands may only be repositioned or transferred to a party with concurrence from the USF&WS and CDF&G.

ROW authorizations, land use permits, geophysical explorations, recreation permits and public uses and livestock grazing will be managed to be compatible with objectives for the area.

These lands would be proposed for withdrawal from entry under the mining laws if surface lands are acquired over federal mineral estate.

The area would be open to leasing of oil, gas, and geothermal resources with the Limited Surface Use - Protected Species stipulation (refer to RMP Chapter 5).

Unless otherwise closed elsewhere in this plan, threatened and endangered species range (see Map Packet) would be open to leasing of oil, gas, and geothermal resources with the Limited Surface Use - Protected Species stipulation.

Unless otherwise closed elsewhere in this plan, known locations of federal candidate species, State threatened and endangered species, and Bureau Sensitive species would be open to leasing of oil, gas, and geothermal resources with the Limited Surface Use - Sensitive Species stipulation.

Critical condor habitat, and lands near Hopper Mountain National Wildlife Refuge would be open to leasing of oil, gas, and geothermal resources with the Limited Surface Use - Protected Species stipulation. Lands within the Blue Ridge Critical Condor Area would be closed to leasing of oil, gas, and geothermal resources.

Essential and critical condor habitat would only be repositioned with concurrence from the USF&WS.

Lands

All existing or occupied utility corridors delineated in the Western Regional Corridor Study of 1986 are designated as utility corridors. These right-of-way corridors are one mile wide and follow existing routes. Uses of these corridors include routes for: larger electric transmission facilities, major pipelines, communication sites and associated pathways, and communication lines for interstate use.

The mineral estate lands of patents issued pursuant to the Recreation and Public Purposes Act and the Small Tract Act would be managed consistent with county zoning requirements.

All mineral estate lands (split estate lands) under BLM jurisdiction would be considered potentially suitable for disposal through exchange under Section 206 of FLPMA or sale under Section 209 of FLPMA. Any such disposal shall require a site-specific evaluation under the applicable regulations, prior to any final decision on such action.

BLM lands that are newly-recognized due to a land survey error or hiatus, mapping or records errors would be managed consistent with adjacent public lands, if any. In some cases, the newly-recognized lands may be suitable repositioning, based on site-specific circumstances.

Due to low productivity and/or conflicts with endangered species habitat, all BLM lands within the Resource Area are considered unsuitable for entry under the Desert Land Entry Act of March 3, 1877 (43 USC 321) and Indian Allotment Act of February 8, 1887 (25 USC 334).

Livestock Grazing

Livestock grazing would be managed under the standards, guidelines and criteria described in RMP Chapter 6. These standards and guidelines will be modified as necessary to maintain consistency with those adopted in the Record of Decision for the Rangeland Health Standards and Guidelines Environmental Impact Statement. Grazing authorizations, including class of livestock and season of use, may be modified to meet these standards and to meet the needs of the grazing operation.

Allocations for new grazing allotments would be handled on a case-by-case basis following the criteria listed in RMP Chapter 6. Mulch, utilization and seasonal use restrictions would be consistent with guidelines used for existing allotments found in RMP Chapter 6.

Grazing treatments that are occurring as a part of research may be modified to reflect the needs of the study and may not conform with the guidelines in RMP Chapter 6.

Grazing lessees and permittees whose allotments include lands identified in this plan as being available for potential land tenure adjustments are hereby notified, as required by 43 CFR 4110.4-2(b), of the proposed disposal of those properties.

Recreation

Camping up to 14 days per person within any 30-day period and up to 28 days in a one-year period is allowed in any location not specifically closed to camping. Dispersed camping is not permitted within 100 feet of any freshwater source.

Personal property left unattended on public land for more than 72 hours would be treated as abandoned.

Shooting is not allowed within ¼ mile of developed recreational sites, visitor facilities, livestock water improvements, guzzlers, the Poso Creek area (E½NE¼, Sec. 32, T. 27 S., R. 27 E., MDB&M), the area around Soda Lake, the vicinity of Painted Rock (closed to both shooting and hunting), and all authorized facilities belonging to lessees or permittees of the Federal government, as well as buildings and residences on adjacent private lands. These areas, except Painted Rock, are still available for the lawful taking of game. The restrictions do not apply to federal, state, and local law enforcement officers who are engaged in their official duties.

Motorized and mechanized travel on public land would be "limited" to existing mapped or maintained roads and trails or designated routes of travel, with the exception of the following areas that would be managed as closed to all travel (except foot and equestrian): Point Sal, Blue Ridge, Short Canyon, Cholla Canyon, Cane Canyon, and the Pacific Crest National Scenic Trail. Caliente Mountain Ridge Road would be closed to motorized vehicles but open for mechanized travel. Salt Creek would be closed to motorized travel, but only until an ACEC plan addressing public access is completed. Designated routes of travel would be posted and include roads and trails shown on surface management maps. Existing roads and designated routes may be closed to protect resources following public notification; use of closed roads may be allowed by the authorized officer.

The speed limit on unpaved roads not maintained by the county, shall be a maximum of 25 MPH (unless otherwise posted).

Collection of wood, plant material or minerals specimens, other than casual collection requires a permit.

EIS - Environmental Consequences

Introduction

This chapter analyzes the environmental effects of the Resource Management Plan (RMP) presented in Chapter 3. The RMP consists of the area-wide allocations from the Draft RMP, combined with the draft's Alternative 5 prescriptions for each management area, as modified in response to public comments. The effects of all alternatives evaluated in the Draft are summarized in tables at the end of Chapter 4. The cumulative impacts of all alternatives for the planning area are summarized in the impact summary table also found at the end of this chapter. Please refer to the Draft RMP for the full impact analyses of the other alternatives.

The plan incorporates objectives and land use allocations with mitigating measures which were designed to avoid or reduce environmental impacts. The effects discussed here are those that remain after mitigation, and are considered unavoidable.

In order to adequately analyze impacts, reasonably foreseeable development and levels of use were projected. Projections are described for each category of development or use, such as mineral development and use, with the potential to cause environmental impacts.

Environmental analysis will be required to implement resource management allocations. More detailed or site-specific studies will be conducted in compliance with the National Environmental Policy Act (NEPA) and its implementing regulations as the need arises. The analysis of impacts from oil and gas leasing was conducted at a level determined satisfactory to meet NEPA requirements. The resource forecasts meet the Council on Environmental Quality definition of significant.

The baseline assumptions for analysis are described in the following sections. Following that are descriptions of the impact topics, the methodology of estimating the effects of the alternatives, and the actual analysis of the environmental consequences. The section concludes with the projections of reasonably foreseeable development, and tables summarizing the effects of the RMP. Literature citations refer to the list of references within the Draft RMP.

Analysis Assumptions

The analysis of environmental consequences is a difficult art. Factors as disparate as the price of oil, rainfall, population growth, and politics can have significant effect on resources in the planning area. It is therefore imperative that certain assumptions be made - both as a starting point for those conducting the analysis, and also to help the public understand how conclusions were derived.

General Assumptions

1. Only significant adverse and beneficial changes or effects would be fully analyzed. In some cases, less significant effects are presented to better illustrate the scope of a management allocation or action, or to differentiate between significant and non-significant effects.
2. Short term effects are those that would occur within ten years of plan implementation. Long term effects would occur after ten years, but generally before twenty years. Unless otherwise stated, changes or effects described in this analysis are short term.

3. Land use allocations will go into effect 30 days after the Record of Decision is signed by the BLM California State Director, but it was assumed that increased funding and staffing for implementation would not be available for at least three years after the plan goes into effect. It was assumed that this would delay full implementation of the management actions until the year 2003.
4. It was assumed that this plan will have a minimum life span of ten to fifteen years. Under existing conditions and with proper monitoring and maintenance, it may guide management for twenty or more years.
5. Implementation of any given alternative would comply with Federal regulations and BLM policies. The analysis assumed that the standard operating procedures, stipulations, and mitigating measures would be applied as appropriate. The consequences described in this chapter are those remaining after implementation of these measures.
6. Unless otherwise specified, estimates and projections were based upon information currently available for the area.
7. The effects of actions not included in this plan would be addressed in future environmental reviews. Unforeseen changes in law, regulation, policy or the environment could require an amendment to or replacement of the plan.

Topics Selected for Analysis

The major resources/topics to undergo in-depth analysis are listed below. Other important topics that were not reviewed in detail are described in the draft RMP/EIS starting on page 43. The discussion for each resource/topic includes direct, indirect, and cumulative impacts. Where feasible, the discussion is divided into the geographic management area for each resource.

Air & Water Quality

Biological Resources and Ecological Systems

Cultural Resources & Native American Traditional Lifeway Values

Livestock Grazing Opportunities and Operations

Oil and Gas Development Opportunities and Operations

Other Mineral Developments and Operations

Recreation Resources and Opportunities

Oil and Gas Development Opportunities and Operations

Analysis Assumptions

Oil and gas operations administered by the BLM within the Caliente Resource Area are governed by Federal Onshore Orders. Under the RMP, mitigation and compensation would continue to be handled on a case-by-case basis. The stipulations identified in the Resource Management Plan would apply to new leases. Current leases would continue to be administered under existing lease terms and would be unaffected by allocations in this Plan. Current federal lessees would continue operating under permitted authorizations, with specific terms of use already agreed upon by the BLM and the lessee.

Effects of Area Wide Land Use Allocations on Oil Resource Development

The specific recreation allocations that regulate off-road use by the general public also protect the safety of oil and gas lessees by limiting off-road use. Current procedures to obtain permission from the Bureau for off-road activity for an oil-field activity would remain unaffected. Allocations related to riparian resources and grazing allocations would not be anticipated to have an effect on oil resources. The Caliente Area riparian zones are relatively narrow; if the Bureau recommended that a proposed activity be moved to outside a riparian zone, the effect on the project would generally be minimal.

When special stipulations are added to the standard lease terms and conditions, additional costs to new projects may be incurred. In areas that would be leased with the Limited Surface Use (LSU) stipulation or the No Surface Use (NSU) stipulation, higher costs may result from project delays and site relocation. Application of a special stipulation at the time of nomination would allow the interested lessee to factor in the potential costs. These costs would be offset by the ability of operators to acquire leases on public lands to consolidate and protect private holdings and existing leases. Application of the NSU Stipulation would allow parcels with significant resource values to be leased rather than withdrawn from leasing, allowing development from adjacent lands.

Effects of Coast Management Area Land Use Allocations on Oil Resource Management

Special Designations

The California Rocks and Islands ACEC is closed by existing allocations that are continued under this plan. The closure of approximately 100 acres is proposed by this Plan. The No Surface Use stipulation would be applied to 1,500 acres, including Tierra Redonda ACEC and Huasna Peak SMA.

The LSU stipulation would be applied to a total of 92,400 acres. Of that total, 69,700 acres are within lands administered by the Department of Defense and would be subject to the LSU - Defense stipulation. Another 4,300 acres of federal minerals, including the Cypress Mountain ACEC and the Frog Pond, Irish Hills, and Rusty Peak SMAs, would be subject to the LSU - Coast stipulation. 16,500 acres of public mineral estate would be subject to the LSU - Protected Species stipulation. The LSU - Sensitive Species would apply to 6,000 unleased acres of mineral estate. The remaining 42,800 acres would be open for oil and gas leasing under Standard Terms. 2,800 acres are currently leased under standard terms.

The application of the Limited Surface Use stipulation would not preclude oil and gas exploration and development. None of the proposed ACECs or SMAs are located in areas of high potential for new discoveries of oil and gas. Overall effects of the application of the ACEC and SMA designations to federal lands within the Coast Management Area (CMA) would be minimal.

Land Tenure Adjustments

The repositioning and cooperative management goals would have minimal effects on the development of oil resources on lands currently managed by the BLM along the coast. The sale of mineral estate would be expected to have a positive effect on the industry.

Livestock Grazing and Recreation

The mineral estate administered by the Bureau on the Coast is approximately 69,000 acres. Of these acres, 4,400 have existing oil leases and of the remaining, 64,600 have low to no potential for oil and gas development. Surface allocations related to grazing and recreation on the 20,400 surface acres would not be likely to interface with oil and gas exploration or development along the coast.

Effects of Valley Management Area Land Use Allocations on Oil Resource Management

New leases would be available for unleased lands within the 293,000 surface acres of public lands within the Valley Management Area. Most lands both inside and outside the ACECs and SMAs would be subject to the Limited Surface Use stipulation. Application of this stipulation could increase operating costs by delaying work or causing the repositioning of projects, but it could expedite the approval of projects by a similar amount of time, and reduce the need for consultation with the USF&WS, which might result in similar timing or location restrictions. Effects of the Final Plan on oil development would be minimal.

Special Designations

Most of the public lands within the Valley Management Area are identified as having high potential for oil and gas. The areas recommended for designation as Areas of Critical Environmental Concern (ACEC) or as Special Management Areas (SMA) are within high-potential regions. Special stipulations that are added to standard lease terms and conditions would affect the leasing of new lands. The effects on future oil and gas exploration and development would be small, however, due to the limited application of the most restrictive stipulations.

An existing ACEC designation covers Goose Lake. The forty-acre area would remain subject to a No Surface Use stipulation. The Alkali Sink ACEC would become available for leasing with an NSU stipulation. Although Alkali Sink is surrounded by oil fields such as Yowtumne Field, exploration interest in the area peaked in the 1980's. The application of special stipulations to newly issued leases on these parcels would result in small negative effects on oil exploration, but would not preclude leasing or development.

The proposed closure of the Bittercreek SMA to fluid mineral extraction would remove from oil development 5,800 acres of federal minerals. Industry would be negatively affected by the lost opportunity to acquire new oil and gas leases within an area where approximately 50% of the acreage is considered to have high potential for undiscovered reserves of oil and gas, and the remainder is of moderate potential. While oil exploration would be halted in the immediate future, the development of undiscovered oil reserves would be deferred and not precluded.

New leases that fall inside the proposed boundaries of the Carrizo Plain Natural Area, Chico Martinez, Kettleman Hills, and Lokern ACECs would have the Limited Surface Use - Protected Species stipulation applied. The limited area along the northern border of Los Padres National Forest known to have critical condor habitat (40 surface acres) would be subject to the LSU - Protected Species stipulation. Sixteen thousand six hundred (16,600) acres under the Department of Defense administration would have the LSU - Defense stipulation. The LSU - Raptor stipulation would be applied to 113,100 acres. Because the Limited Use stipulation would be applied to leases that are to be issued as a result of future lease sales, and most of the high-potential federal acreage within ACECs is currently leased, the effect of the proposed Plan allocations on the oil industry is

anticipated to be small, primarily affecting permits and rights-of-way associated with short-term surface disturbance (such as geophysical activity).

Land Tenure Adjustments and Allocations

While some repositioning of lands currently managed by the BLM would be recommended, particularly in the Elk Hills Area and along the northern boundary of Los Padres National Forest, most of the large acreage managed by the BLM would remain under BLM administration. Therefore, the effects of land tenure adjustment and allocations would be minimal on oil and gas development. Sale of mineral estate could benefit private industry.

Recreation and Grazing

No changes are anticipated to the oil industry based on allocations and designations of this Plan related to recreation and grazing.

Effects of the South Sierra Management Area Land Use Allocations on Oil Exploration

The potential for the occurrence of new deposits of oil and gas in the South Sierra Management Area is low. Effects to the oil industry from resource allocations in this Plan would correspondingly be low. For planning purposes, a minimum amount of short-term exploration activity (2 wildcats wells and 65 miles of seismic lines over ten years) has been forecast as a high-activity scenario; the expected case is no activity. Exploration drilling in frontier areas that have very low probabilities of successful discovery of new hydrocarbon deposits is very sensitive to oil prices. Consequently, drilling in hard-rock country (the highly crystallized mountainous areas) is likely to be deferred until the oil industry has more domestic exploration dollars available. Existing closures to oil and gas leasing include 128,300 acres within Wilderness and Wilderness Study Areas. 10,100 acres of public lands, including the Blue Ridge and Piute Cypress ACECs and the Deer Spring and Erskine Creek SMAs, is proposed for closure to oil and gas leasing. Approximately 96,000 acres of public lands would be open to leasing for oil and gas exploration subject to the Limited Surface Use stipulation. Approximately 234,700 acres would remain open under standard terms and conditions.

The 18,530 acres of public lands within the Case Mountain ACEC would be closed to geothermal development. No major effects from the closure would be expected as no development of the area is anticipated.

Other Mineral Development Opportunities and Operations

Analysis Assumptions

Existing federal law has closed 110,500 acres within Wilderness Areas in the Caliente Resource Area to solid mineral development. Withdrawals proposed under previous land use plans have been brought forward into the current plan as part of the total lands proposed to be withdrawn from mining development. While not withdrawn, many lands within the Resource Area are recognized as highly restricted to the development of solid minerals. These include mineral estate reserved to the United States on lands patented under the Recreation and Public Purposes and Small Tract Acts, and reserved mineral estate in the Sand Canyon area near Tehachapi and the Lake Isabella area where the surface has been developed for residences.

Effects of Resource Area Wide Land Use Allocations on Solid Mineral Development

About 409,000 acres of land in the Caliente Resource Area is habitat for federally listed species. Approximately 5% of that habitat is proposed for withdrawal from mining by allocations under this plan. The remaining areas are open to all kinds of mineral development. The Sierra Management Area contains most of the high to moderate solid mineral potential lands in the Resource Area, but little potential development would be anticipated to overlap the habitats of protected species.

The exploration and development of locatable, saleable, and solid leasable mineral resources would be affected by allocations of this plan primarily on lands designated as Areas of Critical Environmental Concern (ACEC). Proposed projects that would affect more than five acres of public lands, including those in SMAs, and new projects proposed for ACECs that remain open to mining would continue to require a Plan of Operations and an environmental assessment. For operations which would not be able to avoid take of listed species, either a formal or informal consultation under the Endangered Species Act, would continue to be required.

The effects to mineral development by allocations of the Caliente Plan would be minimal within newly proposed Areas of Critical Environmental Concern (ACEC) in the Coast and Valley Management Areas, and moderate in the ACECs of the Sierra Management Area. Moderate effects are potential delays associated with the required plan of operations; such delays may, in fact, turnout to be negligible. Effects would be minimal in areas outside those special interest areas and other existing withdrawn areas.

Effects of Coast Management Area Land Use Allocations on Solid Mineral Development

Of the 69,000 acres of mineral estate administered by the BLM, 1,900 acres are existing closures. An additional 5,800 acres are proposed for closure to entry under the general mining law. No mining claims exist in Ventura County. There is one claim in Santa Barbara County (alabaster) and five mining claims in San Luis Obispo County (Rinconada Mine - mercury). No mining development is anticipated on the widely scattered holdings of the BLM in the Coast Management Area.

Special Designations

Approximately 500 acres are proposed to be withdrawn from the mining of solid leasable and locatable minerals within ACECs proposed by this Plan. Although gold was produced in the past at Point Sal, the existing California Rocks and Islands ACEC and the Pt. Sal ACEC have little potential for future development of solid minerals. All would be withdrawn from mining. The 400 acres of public lands within the Tierra Redonda ACEC contain moderate to high potential for the development of solid leasable minerals (phosphate). No mining is currently occurring at Tierra Redonda, and the 400 acres of federal minerals would be closed.

Evaluation of the solid mineral potential of the Frog Pond, Hopper Mountain, Huasna Peak, Irish Hills, and Rusty Peak SMAs determined that these SMAs have low to no potential for the development of locatable and solid leasable minerals. Frog Pond and Hopper Mountain are proposed for withdrawal from mining laws. A total of approximately 5,300 acres are proposed to be closed to mining within SMAs. The effect of these actions on the mining industry should be minimal.

Other Natural Resources, including Grazing, Recreation, and Fluid Leasables

Impacts to the mining of solid minerals in the Coast Management Area would be minimal as a result of other allocations in the Caliente Resource Management Plan. Although approximately 5,300 acres are proposed for withdrawal from mining, industry interest in developing federal minerals within the Coast Management Area has been low over the last ten years and is anticipated to remain low over the next fifteen years of the Plan. Therefore, impacts to the mining industry from allocations related to other resources such as grazing and recreation would be minimal.

Effects of Valley Management Area Land Use Allocations on Solid Mineral Development

A total of approximately 8,000 acres within ACECs would be withdrawn from the mining of solid minerals. A total of approximately 390,000 acres would remain open to solid mineral development. One active permit exists for the mining of gypsum in the Lost Hills area of Kern County.

Special Designations

Within the Carrizo Plain ACEC, salt and sodium sulphate have been produced from Soda Lake. The normally dry lake bed contains estimated reserves of at least one million tons of sodium sulphate. Of the total 143,300 acres of public land and 10,880 acres of Federal subsurface mineral rights administered by the BLM, in the Carrizo Plain only the 3,000 acres in the area of Soda Lake and its surrounding wetlands would be withdrawn from entry to mining. The Chico Martinez ACEC is recognized to have potential for the mining of phosphate, but would be withdrawn from entry to mining to protect cultural and educational sites. The 40-acre Goose Lake ACEC would be closed to all mining. No active mining is occurring in the Soda Lake area of the Carrizo Natural Area, and no active interest in mining of the Chico Martinez or Goose Lake ACECs has been expressed.

Therefore, only a minimal effect is anticipated to the mining industry by the resource allocations outlined in the Caliente Resource Management Plan.

Biological Resources

In the Valley Management Area, several mineral commodities are presently being mined or would have some potential for development within habitat for Federally listed species. These commodities include gypsum, siliceous shale, sand and gravel and clay. Expansion of existing operations, or development of new deposits would possibly be impacted by government regulations implemented since the initial development phase. Costs would be unaffected by the proposed allocations of this Plan.

Fluid Leasables

Currently, thirteen wells are producing oil from the Temblor Formation in Cienga Canyon, a producing oil field in Kern County. Ten mining claims overlap the area of active production. The Bureau would coordinate negotiations to resolve any potential conflict prior to site development of the gypsum deposits.

Midway-Sunset Oil Field has overlapping active mining claims for gypsum and diatomaceous earth. Although no mining is currently ongoing, the potential for adverse effects to both resources exists. If mining is resumed,

the Bureau would coordinate negotiations between operators so as to minimize modification of the existing activities and proposed plan of operations.

Lost Hills Oil Field has gypsum deposits overlapping the oil producing facilities. Currently, mining of gypsum and oil production have occurred without conflict; however, either resource could be adversely affected by a change in the production of oil or gypsum. Deep oil exploration is currently ongoing in the general area of Lost Hills but would not be expected to impact mining operations. Effects to mining would remain minimal.

Recreation and Grazing

The primary areas of overlap between grazing, recreation and mining would lie in the ACECs and SMAs. The focus of past mining activity, the Carrizo Plain Natural Area, has no active mining and no known plans for any. Recreation and grazing activities would not adversely impact current or future mining operations there.

Effects of South Sierra Management Area Land Use Allocations on Solid Mineral Development.

Public lands within the South Sierra Management Area have high to moderate potential for solid minerals. Wilderness Areas include 109,000 acres closed to mining entry. A total of 6,300 acres would be withdrawn from the mining of solid minerals. A total of 356,700 acres would remain open to mineral development.

Special Designations

Piute Cypress ACEC has moderate potential for gold and other metallic minerals and would remain open to the mining of solid minerals. Blue Ridge ACEC would be closed to mining. A total of 5,300 acres of public lands within ACECs of the South Sierra Management Area would be withdrawn from mining entry. Minimal mining industry interest in the lands proposed for withdrawal results in nominal effects from the Plan.

The Erskine Creek SMA has over 3,400 acres with moderate potential for tungsten and other metallic minerals. 360 acres including riparian habitat and limestone caves would be withdrawn from mining entry. Recreational mining in the Keyesville SMA would continue while the 360 acre and the additional 280 acre proposed withdrawal would be closed to commercial mining.

A total of 720 acres at Deer Spring SMA would be closed to mining. Wilderness Areas within the Monache-Walker Pass National Cooperative Land and Wildlife Management Area (NCLWMA - SMA) would remain withdrawn from all mining. Expansion of mining operations into non-wilderness portions of the NCLWMA would be limited by riparian zones, Joshua tree woodlands, sensitive plants and cultural resources, but is not precluded.

Biological Resources

Effects on mining from biological resource management include restrictions for the protection of riparian areas as well as for proposed and listed species. These restrictions may limit or increase the costs of expansion or development of existing or new mining operations. Currently, there is no active mining of locatable minerals outside the Keyesville area. Although there are 363 active mining claims, casual mining operations of less than five acres represent more than 99% of the mining activity on public lands in the Sierras. No interest in commercial mining operations would be expected over the plan life so conflicts between resource protection and mining in the Sierras would be small over the fifteen year life of the Plan.

Sand and gravel removal at Canebrake Creek is the only private sand and gravel operation in the Lake Isabella area. A portion of the operation is currently on reserved mineral estate. If the operation is expanded onto

additional federal mineral estate in the area, protection of Joshua trees would potentially interfere with the expansion; avoidance could decrease income, and transplanting could increase costs.

Grazing and Fluid Leasables

Grazing allocations in the South Sierra Management Area would not affect the current low level of mining activities. The development potential for fluid leasables such as oil and gas would be small and of no effect on the commercial development of solid minerals.

Recreation

Recreational mining at Keyesville could be adversely impacted if the lower Kern is designated as recreational under the wild and scenic river designation unless the designation clearly allows recreational mining, including dredging. A positive effect may be the result of an expanded area of operation. Recreational activities at Keyesville would be in potential conflict with recreational mining. Currently there is no commercial mining occurring in the Keyesville area to be affected by the proposed withdrawal or by a scenic river designation should that occur at some future date.

Livestock Grazing Opportunities and Operations

Analysis Assumptions

Livestock grazing opportunities and existing livestock operations are affected by changes in when, where and to what extent grazing lands are available for use. Management changes which result in long term sustainability of resources may offset short term economic effects to existing operations. In general, these management changes which provide consistency and predictability to livestock operations, but are flexible enough to meet the natural fluctuations of this market, are considered important to the public lands grazing operation.

Effects of Resource Area Wide Land Use Allocations on Livestock Grazing

Managing public lands for minimum standards of rangeland or ecosystem health will provide consistency across public lands for the management of all uses. These standards should insure the maintenance of rangeland resource health, which will support livestock grazing into the future. These minimum standards will also provide managers and authorized users with a basis for sound decisions and a framework for change.

Areawide allocations such as camping limits, no shooting zones, and management of naturally occurring waters would serve to protect water sources and developments from a multitude of potential impacts, thus sustaining their availability or functionality for livestock grazing purposes. No negative effects are anticipated.

Road use designations and speed limits would reduce conflicts between users and potentially minimize livestock harassment and/or casualties. Where appropriate, authorized users will have administrative access, thus no negative effects are anticipated.

New grazing authorizations could be allowed on new lands acquired through compensation (should it be compatible with management objectives for these lands). No significant negative effects to livestock grazing opportunities should be realized from restricting the potential use of these lands.

The guidelines for existing grazing allocations and the criteria for new grazing authorizations found in RMP Chapter 6, would provide the clarity and flexibility required to properly administer livestock grazing within the resource area while providing appropriate use restrictions to ensure maintenance of proper rangeland health. The exceptions to these guidelines would accommodate grazing research treatments that could benefit livestock operations as well as natural resources. These guidelines would also continue to provide compliance with the Endangered Species Act. Specific guidelines for riparian areas or high potential habitat for the California jewelflower could remove desired grazing periods for a few lessees/permittees, but are not anticipated to cause significant hardship.

The notification of lessees/permittees in the RMP of the potential disposal of parcels within the grazing allotments they use would have little effect since these parties are notified at the beginning of this usually lengthy (1 - 2 year) process anyway. In addition, most lessees/permittees control access to the parcels, so they often receive priority as interested parties. Furthermore, lessees/permittees can waive their two year notification and commonly do in order to speed up the disposal process.

Effects of Coast Management Area Allocations on Livestock Grazing

Special Designations

The designation and retention of ACECs within this management area does not affect current livestock grazing operations. It would, however, close 60 acres in the proposed Salinas ACEC to new livestock grazing authorizations.

Special Management Area designations also occur in areas currently unauthorized for grazing. These areas are generally be classified as closed or unsuitable for livestock grazing. The exceptions are certain lands in the

Hopper Mountain SMA, which remain available for grazing application under the terms and conditions of the SMA. No significant negative effects from this proposal are anticipated.

Land Tenure Adjustment

Proposals for management transfer, cooperative management, or repositioning could have widely differing effects on livestock grazing opportunities and operations. These effects would range from providing better grazing opportunities for local ranchers when exchanged public lands are under private ownership, to eliminating grazing opportunities and ranching operations which were or would have been available under BLM ownership.

Acres targeted for transfer to the U.S. Forest Service could provide Forest Service grazing permittees with additional lands available for authorized grazing should the adjacent forest properties be available for grazing.

The land in the Hopper Mountain SMA targeted for transfer to the U.S. Fish and Wildlife Service would provide grazing for local applicants should the Service decide livestock grazing would complement management of the adjacent Sespe Condor Sanctuary, Hopper Mountain National Wildlife Refuge, and the Sespe-Piru Critical Condor Habitat Area. Should the Service decide against authorizing livestock grazing, those currently ungrazed acres which were identified as available for grazing application would no longer be available to local interests for that purpose.

Local repositioning through land exchanges would also have varying effects on livestock grazing opportunities and operations. These effects could range from providing better grazing opportunities for local ranchers when acquired private lands are under BLM ownership, to eliminating grazing opportunities and ranching operations which were or would have been available under private ownership.

Livestock Grazing

The designation of lands available or unavailable for livestock grazing (either closed or unsuitable) would have limited effects on livestock grazing opportunities or operations within the management area. The lands considered available for application are small in acreage, but could be intermingled with private lands and thus provide an opportunity to support small livestock operations. Authorizing and managing grazing use could reduce potential unauthorized grazing uses. Lands considered closed to new grazing applications within this management area due to other sensitive resource concerns, such as Point Sal, contain parcels with inherently low forage value or are insignificant in size. Lands considered unsuitable within this management area are classified as such due to their steepness and/or the low forage value or inaccessibility resulting from a heavy cover of brush. These unsuitable parcels have not been of interest to the livestock industry in the past and would require such a commitment to vegetation manipulation in order to maintain any grazing value, that it is impractical to offer them for application.

Effects of Valley Management Area Allocations on Livestock Grazing

Special Designations

The designation and retention of ACECs within this management area does not affect current livestock grazing allocations. The effect to new livestock grazing operations by the closure of available lands is insignificant.

Lands already authorized for livestock grazing are included in newly designated Special Management Areas. Since no modifications to these authorizations are proposed, no significant effects are anticipated.

Land Tenure Adjustment

Repositioning through land exchanges could have widely differing effects on livestock grazing opportunities and operations. These effects would range from providing better grazing opportunities for local ranchers when

exchanged public lands are under private ownership, to eliminating grazing opportunities and ranching operations which were or would have been available under BLM ownership. Ranchers may have the opportunity to acquire public land inholdings or those adjacent to their ranches. This could lead to reduced or eliminated need for coordination between the BLM and the rancher regarding their private grazing operations. It could also reduce the potential need for new fencing to control grazing on public lands for such things as protection of sensitive resources. Within the Valley Management area there are 35 allotments which include lands designated for potential repositioning.

Public land acquisitions would also have varying effects on livestock grazing opportunities and operations. These effects could range from providing better grazing opportunities for local ranchers when acquired private lands are under BLM ownership, to eliminating grazing opportunities and ranching operations which were available under private ownership.

Proposals for management transfer or repositioning would affect livestock grazing opportunities and operations as follows:

Land available for transfer to the U.S. Forest Service would provide Forest Service grazing permittees with additional lands available for authorized grazing, should the adjacent forest properties be permitted for grazing.

The parcels in the Bittercreek SMA available for transfer to the U.S. Fish and Wildlife Service would provide authorized grazing for local applicants as long as the Service continues to permit grazing within the Bittercreek National Wildlife Refuge.

Livestock Grazing

Cooperative management of the parcels within the Kettleman Hills with Hollister Resource Area would provide efficient and consistent management efforts for livestock grazing lessees.

The designation of lands as available or unavailable (including either closed or unsuitable lands) for livestock grazing would have limited effects on livestock grazing opportunities or operations within the management area. The lands available for application are small in acreage, but could be intermingled with private lands and thus provide an opportunity to support small livestock operations or eliminate potential unauthorized grazing uses from occurring. Lands are considered closed to new grazing applications within this management area due to other sensitive resource concerns and/or inherently low forage value, such as the Goose Lake ACEC, the Alkali Sink ACEC and portions of the Carrizo Plain Natural Area ACEC. Some parcels closed to grazing within this management area would also require multiple restrictions on grazing should it be authorized, thus making it economically infeasible for that use. Lands considered unsuitable within this management area are classified as such due to their low forage value or inaccessibility resulting from other developments. A classification as unsuitable thus generates no negative effects to livestock grazing opportunities and operations.

Effects of South Sierra Management Area Allocations on Livestock Grazing

Special Designations

The designation or retention of ACECs within this management area does not affect current livestock grazing operations, but lands at Horse Canyon would become unavailable for new livestock grazing authorizations.

The designation of Special Management Areas in the South Sierras does not affect current livestock grazing operations but could remove public land containing riparian resources in Erskine Creek from availability for new livestock grazing authorizations. This in turn could complicate resolution of a longstanding livestock trespass problem at Erskine Creek.

Land Tenure Adjustment

Repositioning through land exchanges could have widely differing effects on livestock grazing opportunities and operations. These effects would range from providing better grazing opportunities for local ranchers when exchanged public lands are under private ownership, to eliminating grazing opportunities and ranching operations which were or would have been available under BLM ownership. In addition, land acquisitions would also have varying effects on livestock grazing opportunities and operations. These effects could range from providing better grazing opportunities for local ranchers when acquired private lands are under BLM ownership to eliminating grazing opportunities and ranching operations which were or would have been available under private ownership.

Cooperative management proposals could affect livestock grazing opportunities and operations as follows:

Acres identified for cooperative management with the U. S. Forest Service in the Lake Isabella area would not affect existing livestock grazing operations, as grazing on these parcels would still be required to be managed under the Bureau's regulations for grazing on public lands.

Acres identified for cooperative management with the U. S. Fish and Wildlife Service or the California Department of Fish and Game at the Blue Ridge National Wildlife Refuge would not affect livestock grazing operations or opportunities since this acreage is already closed to grazing.

Acres identified for cooperative management with the U. S. National Park Service in the Three Rivers area should not affect existing livestock grazing operations. Grazing on these parcels would still be required to be managed under the Bureau's regulations for grazing on public lands.

Acres identified for cooperative management or withdrawal to the Bureau of Indian Affairs in support of the Tule River Indian Reservation would most likely remove the 40 acre parcel from availability for new grazing authorization or place authority to graze the parcel in the hands of the reservation.

Acres identified for cooperative management with the State of California Parks Department in the Horse Canyon/Sand Canyon area would not affect livestock grazing operations or opportunities since this acreage is classified as closed to grazing under the terms of the ACEC.

Livestock Grazing

The designation of lands available or unavailable for livestock grazing (either closed or unsuitable) would have limited effects on livestock grazing opportunities or operations within the management area. The lands considered available for application are typically small in acreage, but could be intermingled with private lands and thus provide an opportunity to support small livestock operations or eliminate potential unauthorized grazing uses from occurring. Lands are considered closed to new grazing applications within this management area often due to other sensitive resource concerns. They may also contain parcels with inherently low forage value which would require substantial effort to increase. Some parcels would pose people/livestock conflicts should they become authorized for grazing. Lands considered unsuitable within this management area are classified as such due to their low forage value and/or inaccessibility resulting from steepness, heavy brush or lack of water. The unsuitable designation thus results in no negative effects to livestock grazing opportunities and operations.

Recreation

Identification of eligible National Wild and Scenic River segments would not affect current livestock grazing operations, however opportunities for new range improvements which could modify the river segment's characteristics would be denied.

Recreation - Environmental Consequences

Analysis Assumptions

Studies have indicated that changes in future visitor use to outdoor recreation areas will include the following: more diversification among visitors and a corresponding broader spectrum of demands for outdoor recreation opportunities; greater cultural pluralism that will require an enhanced level of sophistication and sensitivity on the part of management; and growth in the demand for amenities (e.g. electricity and modern comfort stations) at outdoor recreation sites (Ewert, 1990). Increases in public recreation use can mostly be attributed to urban expansion and population growth. Some of the expected increase specific for the Caliente Resource Area can be attributed to increased publicity and public visitation to the Carrizo ACEC, motorized touring on the back country byway, and expected use of designated wilderness areas.

The major landholders in south-central California, not including the BLM Bakersfield District, are Sequoia and Los Padres National Forests (USFS), Sequoia National Park (NPS), California State Parks, BLM Desert District, and U.S. Army Corps of Engineers. These agencies manage recreational areas that attract visitors from all over the United States as well as from foreign countries. Public lands within the Caliente Resource Area incur some spill-over use from these attractions, and serve as primary destination goals for smaller numbers of visitors. Caliente's lands are generally at a lower altitude than those in the USFS and NPS and in many cases, closer to larger population centers. Therefore, visitors are utilizing BLM lands during the seasons when the higher elevations are too cold, snow-covered, or inaccessible.

The state of California found that the highest latent demands (unmet outdoor recreation demands where Californians would support public funding for facilities for activities) to be for camping in developed sites, visiting natural areas and general nature study, walking and bicycling in undeveloped parks and open areas, and freshwater fishing. In the same study, public support for government spending was strongest for campgrounds with tent or vehicle sites, walking, picnicking in developed sites and camping in primitive areas and backpacking (California, 1987). In recent times, budget restraints have demonstrated a need toward self-sufficiency of recreation programs and general support by the public related to fees for certain uses, such as camping, to help recover costs.

The Caliente Resource Area works with other agencies and local governments through cooperative agreements, and oversees a volunteer program that is expected to gain further momentum in the future. Eighty-five percent of Californians support using volunteers in recreational areas and nearly sixty-five percent indicated that they would consider volunteering (California, 1987). These recreation-oriented volunteers, in addition to assisting on valuable research projects, are devoting their energies to protecting natural resources and/or developing recreational facilities such as hiking, bicycling and OHV trails, that satisfy their demands.

Land use allocations were developed for this plan accounting for general public preferences compatible with other land uses and legal mandates. Overall, land use allocations would not have significant impacts on the current recreational opportunities available on BLM public lands, but would serve to enhance recreational use through coordination with other land management agencies and local governments. In particular locations, the Caliente Resource Area would be concentrating its recreation management efforts on high resource value lands of regional and/or national significance, such as the Pacific Crest National Scenic Trail, the Carrizo Plain Natural Area, wilderness, wild and scenic rivers and ACEC designations, and the Chimney Peak Back Country Byway. Effects of specific allocations are described in the following text.

Effects of Resource Area-Wide Land Use Allocations on Recreation

Collection of vegetative products, camping, and shooting limitations would have no measurable effect on recreation since these requirements are substantially in place already through Federal Register notices. In

conjunction with the California Department of Fish and Game, hunting would only be restricted in a forty acre area around Painted Rock because of the high sensitivity of this resource. Legal hunting would be allowed on all other BLM lands.

Vehicle use would be designated as "limited" on most public lands, restricting vehicles to designated routes. Areas closed to vehicular travel would include those with sensitive resources, such as ACECs, or other locations requiring specific management attention, such as the Pacific Crest National Scenic Trail and wilderness. No OHV open areas would be available. These designations would affect only a few miles of road closures amounting to less than 3% of the total resource area while leaving many miles of paths available for vehicle travel elsewhere. OHV open areas are accessible outside of the resource area, such as Jawbone Canyon to the east and Hungry Valley to the south, and are available to anyone wishing to use them. As areas and routes are signed and maps made available, the public would be better able to locate and enjoy lands in the resource area.

Managing water on public land to improve in-stream flows would slightly benefit recreational use by providing better hunting, birdwatching, scenic quality, etc. River segments totalling 10.1 miles would be eligible for designation under the National Wild and Scenic Rivers System. Protective management of these segments would have very minimal impact on their recreational use. Designation of a waterway as a wild, scenic or recreational river could result in a small increase in visitors from those people attracted by the river designation.

Management of compensation lands and threatened and endangered habitat to benefit identified species could improve overall wildlife observation recreational opportunities and even hunting possibilities. Prescribed burning, by enhancing wildlife habitat and reducing the potential severity of wildfires, would also enhance recreational use. There would be a short term negative impact to scenic values from prescribed burning.

The management of ACECs and other lands for sensitive resources would not have a significant impact on recreation, although some recreational activities may be restricted within the ACEC and users displaced to other less sensitive areas. Recreational opportunities could be enhanced through coordination with other land management agencies and local governments. Public use off designated routes would be limited to pedestrian use on 2,100+ acres. However this would have only a minor impact, as little equestrian use occurs in the areas to be restricted.

In general, recreation is highly impacted by livestock through trampling damage to trails, fecal contamination of streams and water supplies, and visual intrusion. These impacts are particularly evident in wilderness settings and around highly utilized recreation sites, such as the North Fork of the Kaweah River and Keyesville. However, application of livestock grazing guidelines identified in RMP Chapter 6 and minimum standards for rangeland health would have no increased impact to recreational use of public lands as compared to existing utilization of range lands.

The repositioning of small isolated parcels of public lands would have negligible impacts to recreation use. Most isolated parcels have no public access and their use is controlled by the adjacent landowners. Retention of these parcels would not benefit public recreational use or opportunities. Acquisitions of land (generally through exchange of the aforementioned parcels) which increase public access would increase recreational opportunities and use. However, such benefits would be limited, as public use of most acquired lands would be restricted to protect threatened and endangered species or other special values.

The retention or revocation of withdrawals would have limited impacts on recreational opportunities. Impacts would occur only if these lands are subsequently developed for mining or for oil and gas operations. As additional lands are developed, there would be a reduction in hunting opportunities and increased hunting safety issues. Also, vehicular access for hunters could become more limited as lands were developed. However, the reasonable foreseeable developments in oil and gas or mining activities would result in minimal impacts on these recreational opportunities and uses.

Effects of Coast Management Area Land Use Allocations on Recreation

Special Designations

Cooperative management with Santa Margarita Lake County Park on adjacent BLM lands should increase the use of this area for hiking and other non-consumptive uses. There could be a minor loss of hunting opportunities if these lands are transferred to the County in the future. Acquisition of pedestrian access to Point Sal would increase walking, hunting, and related outdoor pursuits in this area.

SMA designations would not impact recreational use of this management area. However, public awareness of these lands could increase which would result in slightly elevated non-consumptive pursuits (nature study, sightseeing) in certain areas.

Effects of Valley Management Area Land Use Allocations on Recreation

Special Designations

The camping prohibition in some ACECs would have very minimal impact since a demand for such activity has not existed in the past. Camping opportunities are abundant on other BLM lands as well as Forest Service areas. Camping within the Carrizo ACEC would be restricted to specified locations. This would result in some loss of dispersed camping opportunities, which would primarily affect hunters setting up camp near their hunting area.

SMA designations would not impact recreational use of this management area.

Effects of South Sierra Management Area Land Use Allocations on Recreation

Special Designations

Public access has been acquired to Case Mountain and would be studied further in conjunction with local interests, particularly the residents on Skyline Drive, in order to assess the potential for traffic increases on local residential streets. This process would serve to benefit all affected parties. Likewise, the pursuit of a cooperative management agreement with the National Park Service for Case Mountain and North Fork of the Kaweah River would provide for enhancement of recreational opportunities by ensuring safe and sanitary use of the areas while limiting impacts to resources.

Management of Keyesville for a variety of recreational opportunities would provide for continued benefits to users of this area. Trail designation would eliminate redundant routes while allowing for safer use by OHVs. Organized events, such as the Keyesville Classic and the Kernville Fat Tire Festival, help to promote tourism in the Kern River Valley and encourage more responsible use of the area. Likewise, the proposed relocation of the low water raft launch site would greatly benefit commercial outfitters and individual boaters which favorably impacts the local economy.

The Canebrake-Long Valley Loop Road was designated as the Chimney Peak Back Country Byway on June 8, 1996. This designation and subsequent publicity will result in a slight increase in motorized touring recreational use in the area and provide for tourism benefits to the Kern River Valley.

The cooperative agreement with the Ridgecrest Resource Area for maintenance of the Pacific Crest National Scenic Trail should help to keep the route open for hikers and equestrians. Development of a trail head would greatly benefit equestrians and enhance overall use of the trail.

Cultural Resources and Native American Traditional Lifeway Values

Analysis Assumptions

Direct effects to cultural resources and localities having Native American traditional lifeway values frequently result from surface disturbing activities. In the Caliente Resource Area, projects such as the construction of right-of-ways, oil and gas development, and range improvement projects are common causes of surface disturbance. Effects to cultural resources such as the illegal collection of artifacts, site vandalism, and erosion may indirectly result from a land use decision, such as a right-of-way authorization.

The preferred alternative would have minimal negative effects to cultural resources. However, significant positive effects are anticipated as a result of closer on-ground management practices, greater emphasis on resource protection, and as a result of land consolidation into effective management units.

The implementation of allocations which may affect cultural resources is subject to the NEPA review, the National Historic Preservation Act (provisions) as set forth in 36 CFR Parts 60 and 800, and the Programmatic Agreement between the BLM, the California State Historic Preservation Officer, and the Advisory Council of Historic Places. Full compliance with federal antiquities and Native American laws and regulations will be met prior to any decision being made which might affect cultural resources eligible for inclusion to the National Register of Historic Places, as well as any cultural and traditional values of importance to the Native Americans. For further explanation of the NEPA and cultural processes, refer to Chapters 3 and 8 in the RMP.

Effects of Resource Area Wide Land Use Allocations on Cultural and Native American Traditional Lifeway Values

Biological

Management of compensation lands and threatened and endangered species habitat to benefit identified species would reduce the overall amount of surface disturbing activities and increase restrictions on use of the land. The effect to cultural resources would be positive as a result of protective measures and by the reduction in surface disturbance activities.

Management of ACECs and critical wildlife habitat areas would afford greater protection to cultural resources and native species and habitats important to Native Americans. Required environmental restrictions and the reduction in surface disturbing activities in these areas would have a positive benefit on cultural resources.

Lands

Designating utility corridors as delineated in the Western Regional Corridor Study would consolidate major right-of-ways and thereby reduce long term soil disturbance to new areas. In the short term, cultural resources in the existing corridors would be negatively affected or mitigated through a treatment plan. The long term effect would be beneficial by reducing the number of new major corridors and number of sites to be potentially effected.

Special mitigation and/or avoidance measures included in land use authorizations would protect cultural resources by reducing surface disturbance activities. This would result in a beneficial effect to cultural resources which frequently occur in these areas.

Repositioning of small isolated parcels of public land through the exchange process would consolidate public lands into management units which would facilitate protection and management of cultural resources. Additional benefits of repositioning would accrue from the acquisition of significant cultural properties. Disposal

of small parcels would have no negative effects to significant cultural properties because parcels with such identified resources would be retained.

Livestock Grazing

Implementation of the livestock grazing guidelines and minimum standards for rangeland health would improve protection to cultural resources. Livestock tend to congregate along riparian zones and other water sources which results in trampling and mixing of soil stratigraphy and fecal matter. This has a highly negative effect by mixing archaeological constituents, contaminating deposits, and breaking artifacts. As a consequence of the new guidelines, increased vegetative cover along riparian areas and mulch requirements on the uplands would reduce direct negative effects from trampling as well as the indirect negative effects from soil erosion affecting cultural resources.

Minerals

Oil and gas development and mining activities would have little detrimental effect to cultural resources as the NEPA process would identify significant cultural properties for avoidance or appropriate mitigation.

Recreation

Camping, shooting limitations, and the collection of vegetative materials would have no measurable effect on cultural resources since these requirements for the most are in place through existing regulations. However, elevating public awareness of these existing limitations would be beneficial. Closure to hunting and shooting around Painted Rock would be beneficial because it would afford additional protection to several eligible National Register properties.

Limiting vehicle use to designated routes of travel would have a beneficial effect on cultural resources outside the routes of travel by eliminating direct negative effects to cultural resources caused by cross country travel. However, continued use on designated existing routes of travel across extant cultural resources would have a continuing negative effect.

Managing for the enhancement of riparian systems would afford greater protection to cultural resources since these areas generally have a higher density of cultural resources. This would also be true for corridors along waterways eligible for designation under the National Wild and Scenic Rivers Act.

Effects of Coast Management Area Land Use Allocations on Cultural and Native American Traditional Lifeway Values

Special Designations

Approximately 7,500 acres of public land and an additional 5,350 acres of mineral estate within ACECs and SMAs would be managed for their cultural and Native American traditional lifeway values, biological, paleontological, and other natural resource values. Raising the awareness of significant resource values in these areas would increase the probability of additional inventory and assessment of cultural resources. The preparation of site specific activity plans would increase consultation and coordination with Native Americans regarding management. This would lead to a more accurate identification of important cultural and traditional values associated with the specific areas. The proposed management prescriptions for ACECs and SMAs are highly beneficial as they provide measures for protection and long term preservation of cultural, Native American traditional lifeway values, and paleontological resources.

Lands

All of the lands in the Coast Management area are identified as suitable for either management transfer, cooperative management, or repositioning. Selection of appropriate new managers or repositioning of parcels of equal or greater resource value could be beneficial for cultural resources, Native American values, and paleontological resources because of the proximity of the new manager to these isolated parcels. Management would be integrated with local or regional governments, Native Americans, or conservation groups to enhance management of the parcels. A new manager or partner would provide a field presence on the parcels which would result in improved management, protection, and preservation of resource values.

The acquisition of access to isolated public land parcels would be beneficial to cultural resources. It would provide access to gather baseline inventory data, monitor, and patrol cultural resources for protection. For the areas having cultural or traditional lifeway values, access would be beneficial to the Native Americans.

Effects of Valley Management Area Land Use Allocations on Cultural and Native American Traditional Lifeway Values

Special Designations

The Goose Lake ACEC is an existing ACEC recognized for its important natural, cultural, and Native American traditional values. In addition, the Carrizo Plain, Chico Martinez and Kettleman Hills are recognized for their paleontological and other natural resource values. The management prescriptions or limitations proposed for these areas would be beneficial for the protection of cultural, paleontological, and Native Americans values.

Lands

The limited number of public land parcels identified as suitable for either management transfer, cooperative management or repositioning would have no known negative effect to cultural resources. Cultural resource responsibilities would transfer to the agency as the land transferred. Cooperative management efforts would place greater emphasis on field presence and management of resource values. Such integrated management would help deter vandalism and unauthorized activities involving cultural resources.

Effects of South Sierra Management Area Land Use Allocations on Cultural and Native American Traditional Lifeway Values

Special Designations

Of the two existing ACECs and two proposed ACECs, Blue Ridge, Horse Canyon, and Case Mountain have known cultural and Native American traditional lifeway values. In addition, Horse Canyon has fossiliferous formations depicting significant vertebrate localities. Six of the Special Management Areas have known cultural and Native American traditional values. Important prehistoric and historic resources such as the Walker Pass National Historic Landmark and Ker-311 National Register property, are associated with these areas. Of particular traditional importance to the Native American are the pinyon pine stands in the south Sierra, Granite Cave, and the Ker-311 cultural property. The management prescriptions for these areas are consistent for long term protection and preservation of cultural and natural resource values. The one exception is the Keyesville SMA prescription which could have some negative effect on cultural resources. Both OHV use and recreational mining could disturb cultural resources in this SMA.

Lands

The repositioning of public land parcels through the exchange process would provide an avenue to enhance or focus management actions and protection of cultural resources. Additional benefits of repositioning would be the potential acquisition of significant cultural properties. Disposal of the isolated parcels would have no negative effects to significant cultural properties because parcels with such properties would be retained.

A limited number of isolated parcels in the South Sierra Management Area are identified as suitable for either management transfer, cooperative management, and/or repositioning. Selection of appropriate new managers or repositioning for parcels of equal or greater resource value would be beneficial for effective management of cultural resources, Native American, and paleontological values. Integration of management with local or regional governments, Native Americans, or conservation groups would enhance management of the parcels.

Livestock Grazing

Under present management, impacts to cultural resources from livestock grazing would decline, primarily due to constraints of wildlife and habitat protection. The new guidelines outlined in RMP Chapter 6 would improve grazing management strategy, resulting in the overall health of range lands. As a consequence, increased vegetative cover along riparian areas and mulch requirements on the uplands would reduce negative effects from trampling and associated soil erosion disturbance to cultural resources.

Wilderness

Identification of rivers as eligible for Wild and Scenic River designation would provide protective measures to cultural resources in those corridors. Due to the high density of cultural resources occurrence along major water systems, the proposed designation and constraints would be beneficial for long term cultural resources preservation.

Biological Resources

Analysis Assumptions

Direct effects to biological resources most frequently result from surface disturbing activities which remove or modify habitat or directly impact species themselves. Human activity and human associated activity, such as pets and vehicles, can also affect biological resources. For example, animals may be displaced from an area merely by human presence. Changes in non-living features, such as water, air, soil and topography can also affect biological resources. For example, the availability and quality of water can modify how animals use an area or what annual plant species germinate in a particular year. It is assumed that for most projects these types of effects would be minimized or avoided by the application of standard operating procedures, stipulations and mitigating measures.

Effects of Resource Area-Wide Land Use Allocations on Biological Resources

Many of the resource area-wide allocations directly support the resource area-wide objective to maintain and restore the health of the land. The allocations range from limiting the collection of wood, to restricting vehicle travel to designated routes, to directing management of lands to promote endangered species recovery and riparian habitat protection. The collective effect of such allocations will be to reduce surface disturbance, minimize unnecessary habitat loss and reduce habitat fragmentation.

Vehicle travel within the resource area is limited to designated routes of travel. In addition, several areas will remain closed to motorized vehicles. New closures in Short Canyon, Cholla Canyon, and Cane Canyon were established to protect range improvement projects from vandals and would help protect biological resources from damage caused by vehicle use.

Lands acquired as compensation for impacts to species listed as threatened or endangered would be managed to benefit the species impacted by the compensating project. These lands could be disposed only to a party approved by the USFWS or CDFG. Discretionary uses, such as grazing and land use permits, would be restricted to those that are compatible with species requirements. Mineral estate would be proposed for withdrawal from the mining laws and the Limited Surface Use - Protected Species stipulation would be attached to any oil and gas lease. These decisions should adequately protect compensation areas so that they contribute to the recovery of listed species, as well as the conservation of biological resources in general.

Lands within the range of the listed species would be open to leasing of oil, gas, and geothermal resources subject to the Limited Surface Use - Protected Species stipulation or the Limited Surface Use - Critical Habitat stipulation. In addition, the proposed Alkali Sinks ACEC and Goose Lake ACEC would be open to leasing subject to the No Surface Use stipulation, and lands within the Bittercreek SMA would be closed to leasing. The Limited Surface Use stipulation would preclude surface disturbing activities from commencing until certain provisions have been met. One of these provisions is to conduct an inventory for listed species in and around the Surface Use Plan of Operation area. If the inventory indicates that neither listed species nor their habitats are present, the Conditional Surface Use stipulation may be waived and surface disturbing activities may be authorized.

If the inventories indicate that listed species are present, surface activities may be allowed if implementation of mitigation measures could reduce impacts to an acceptable level. If impacts cannot be reduced to an acceptable level, activities may continue to be prohibited on portions or all of the lease. The acceptable level of impact will take into consideration listed species objectives for the area, requirements for contributing to a recovery program for the species and the requirement to avoid jeopardizing the species.

With the use of this Limited Surface Use stipulation areas developed are expected to avoid areas of importance to listed species. The Limited Surface Use stipulation would also allow for the preclusion of surface disturbing activity from the lease, should this be required to prevent species jeopardy or to allow implementation of an approved recovery plan. Retention of the option to preclude development is necessary, since these leases will be issued without the benefit of site specific inventories or the benefit of completed recovery plans. If site specific inventories or completed recovery plans were currently available, a decision may have been made to close certain parcels of lands to leasing at the time of RMP development. Potential habitat for listed species may be developed, possibly resulting in the loss of areas important for the recovery of the species.

Special mitigation and/or avoidance measures would be included in any new land use authorizations in all ACECs and Special Management Areas, and eligible and designated Wild, Scenic, and Recreation Rivers. This would benefit the biological resources of these areas by preventing new disturbances and fragmentation of habitat.

In this alternative, approximately 810,000 acres would remain available for solid minerals development under standard lease terms and conditions. Areas within listed species habitat and certain ACECs are available subject to compatibility with the objective for the area. Listed plants and other sensitive species may be impacted from mining operations due to soil disturbance, erosion, and soil compaction. Off-road vehicle use associated with mining activities will result in impacts to vegetation and possibly wildlife.

Effects of Coast Management Area Land Use Allocations on Biological Resources

Special Designations

There are two existing ACECs and three proposed ACECs within the Coast Management Area. A total of 2,487 acres of federal surface and subsurface and 915 acres of subsurface only are included within these areas. Five more areas are proposed for Special Management Area designations, totalling 4,984 acres federal surface and subsurface and 4,435 acres subsurface only. These areas would be managed for their unique biological resources as well as cultural and paleontological resources. The proposed ACECs contain several sensitive plant communities such as Northern Interior Cypress Forest at Cypress Mountain, and riparian forest at Salinas River. In addition these areas are home to a number of sensitive plant and animal species. The proposed management prescriptions would prevent or limit actions that are incompatible with these biological resources.

Land Tenure Adjustment

All of the lands in the Coast Management Area are identified as suitable for either management transfer, cooperative management, or repositioning. Prior to any land tenure adjustment, a parcel would be evaluated to determine the cultural and biological values that are present. If the parcel supports values warranting conservation, the land tenure adjustment action will be designed to contribute to the conservation of that value. For example, a parcel may be exchanged for another parcel that might be more strategically located and support a better quality example of a given biological value. A parcel may also be transferred to or managed cooperatively with another conservation entity or agency that has other holdings in the area that support the biological value. This type of land tenure adjustment should help in the acquisition of parcels important for the conservation of regional biological values. Pooling of human and monetary resources with other conservation agencies and organizations should allow for more efficient and effective conservation of regional biological values.

Livestock Grazing

In the Coast Management Area, approximately 4,000 acres of public land in 7 allotments are authorized for livestock grazing. All of these allotments are annual forage allotments with a minimum mulch level of 500 pounds per acre (lbs./acre). There are an additional 2,100 acres available for livestock grazing. Because many

of the parcels available are small and are difficult to access, it is likely that the Bureau will receive few new grazing applications for these areas. All applications would be evaluated under NEPA and grazing would be authorized only if residual impacts to sensitive resources are not significant.

General effects of grazing on plants include trampling and direct consumption. Trampling can damage or kill individual plants. This in turn may cause a reduction in annual seed production which affects the future of the species. Indirect effects include soil disturbance and erosion; introduction and increase in non-native species which compete with native vegetation for space, water, and sunlight; soil compaction which can prevent germination and stunt growth because the roots cannot grow through the hard soil; and decline in the seedbank. These effects can lead to the permanent loss of habitat for native species and the overall loss of plant diversity within grazing lands. Grazing may also benefit some species of native plants by controlling non-native species through grazing and reducing the amount of mulch which in some instances may prohibit germination and subsequent growth. Reduction of mulch also reduces the threat of fire. Light grazing prior to flowering may enhance the overall fitness of some plant species (Paige and Whitham, 1987).

Grazing effects to animal species includes habitat modification, competition for resources, or displacement of wildlife species from an area. Grazing can modify vegetation of an area and make the area more or less suitable for an animal species. Livestock can trample burrows or dens, or scatter surface food caches. Livestock can compete directly with some animal species for food and water. Some wildlife species may avoid use of areas when livestock are present. Grazing may benefit some species by reducing the amount of vegetation in an area. Species such as the mountain plover and blunt-nosed leopard lizard prefer areas that are sparsely vegetated. Many species of insects make use of livestock dung. These insects may provide food for some animal species.

Grazing is a traditional use of public lands. Many of the allotted areas have been grazed by livestock for 50 or more years. The grazing guidelines in final RMP Chapter 6 have been designed to protect biological resources on grazed lands. Grazing of public lands using these guidelines should promote continued biological diversity in most allotments and improved biological resource conditions in others.

Oil and Gas

Lands within the range of San Joaquin Valley listed species would be open to leasing of oil, gas, and geothermal resources subject to the Limited Surface Use - Protected Species stipulation. Leasing of lands under the jurisdiction of the Department of Defense would be subject to the Limited Surface Use - Defense stipulation, which allow the base commander to specify development conditions. Department of Defense development conditions could include measures to protect natural resources including threatened and endangered species. Designated critical condor habitat would be subject to the Limited Surface Use - Critical Habitat stipulation. Leasing lands for oil and gas under these constraints should provide strong protection for federally listed species. The Cypress Mountain ACEC and the Frog Pond Mountain, Irish Hills and Rusty Peak SMAs would be protected by the application of the Limited Surface Use - Coast stipulation. Leasing in the Tierra Redonda SMA and Huasna Peak ACEC would be subject to the No Surface Use stipulation. Taking into consideration that most leases are never developed, leasing of lands for oil and gas development is not expected to result in a substantial loss of biological resources.

Effects of Valley Management Area Land Use Allocations on Biological Resources

Special Designations

There are two existing and four proposed ACECs within the Valley Management Area. With the exception of the Chico Martinez ACEC which was designated to protect paleontological resources, all of these areas are important for endangered, threatened, and sensitive species and sensitive plant communities. The management

prescriptions proposed for these areas would prevent or limit actions that are incompatible with these biological resources. Designation of Carrizo, Lokem, and Kettleman Hills as ACECs may provide important recovery habitat for several of the listed species including California jewelflower, Kern mallow, San Joaquin woolly-threads, Hoover's woolly-star, San Joaquin kit fox, blunt-nosed leopard lizard, giant-kangaroo rat and California condor. The Temblor Mountain and Caliente National Cooperative Land and Wildlife Management Areas will continue to be managed as Special Management Areas. These large areas have important habitat for upland game species such as deer, quail, and chukar partridge. Public land within the Bittercreek National Wildlife Refuge is proposed as a new SMA.

Land Tenure Adjustment

Some of the lands in the Valley Management Area are identified as suitable for either management transfer, cooperative management or repositioning. Management transfer or cooperative management of lands with the Forest Service and USFWS would allow for more efficient and effective management by pooling human and monetary resources to benefit biological resources. In the Valley Management Area, repositioning would be undertaken mainly to implement the conservation strategy outlined in final RMP Chapter 9. Parcels which are determined to have lower conservation values, such as those outside threatened and endangered conservation areas, would be exchanged for parcels with higher conservation value, such as those inside threatened and endangered conservation areas. These types of land tenure adjustment actions should contribute to the recovery of listed species and the conservation of other biological resources.

Livestock Grazing

There are 54 livestock grazing allotments within the Valley Management Area totaling approximately 270,200 acres. After California jewelflower, San Joaquin woolly-threads, Kern mallow, Hoover's woolly-star, and Bakersfield cactus were federally listed in 1990, the Bureau reevaluated its grazing program. Allotments with known or potential habitat for these species and habitat for the listed animal species within the management area had their grazing prescriptions reviewed. Within the combined range of the San Joaquin kit fox and Bakersfield cactus (which encompasses the ranges of all of the other listed species), many changes were made to the seasons of use and thresholds for mulch management and perennial utilization. The proposed grazing allocations in this alternative reflect these changes with a few modifications that the Bureau made as it acquired new information. All allotments within the Valley Management Area are managed for 500 lbs./acre of residual dry matter. In addition, livestock may not turn out on public land unless there is at least two inches of new annual growth of the annual forage species or there is at least an additional 200 lbs./acre of residual dry matter. The general season of use within areas with saltbush is December 1 through May 31. This allocation is intended to prevent livestock from over utilizing the saltbush after the annual forage has cured out. Generally, allotments within the CPNA are grazed on a rest rotation system or shortened season of use. This grazing system is addressed in detail in the CPNA plan. The proposed grazing program was designed to minimize negative effects on sensitive species based upon our current knowledge of the species, and to provide for opportunities for research to determine if livestock grazing can benefit natural communities and listed species.

Known populations of California jewelflower and Kern mallow are not authorized for grazing. This is accomplished by either suspending use on the entire allotment or pasture if the species is scattered throughout the area, or by fencing the area that contains the plant species if it is a relatively small area. Grazing may be allowed on these species if it is part of an approved study. Areas with known locations of San Joaquin woolly-threads are also excluded from livestock grazing unless these areas are part of an approved study or the USFWS has agreed that grazing may be allowed in those areas with adequate monitoring. Grazing would be allowed within known populations of these species if research shows that grazing benefits the species.

California jewelflower occurs in three pastures within the CPNA which are not grazed because of concern for these species. These three pastures total approximately 9,100 acres of federal surface. California jewelflower

also occurs within the House pasture of the KCL allotment. This pasture is part of the rest rotation system and it will have a livestock enclosure added around this small population. In the Santa Barbara Canyon allotment in the Cuyama Valley area, 74 acres have been fenced to protect known occurrences of California jewelflower. The season of use has been changed from the typical saltbush season of December 1 through May 31, to December 1 through February 14 and then from May 1 through May 31 for the remainder of this allotment. This change would also be applied to one allotment in the Cuyama area which has potential habitat for California jewelflower. This season of use would prevent cattle from damaging this species during the critical flowering period if California jewelflower occur within these areas.

Undiscovered populations of sensitive plant species may be adversely affected by grazing. Once new populations are found they will receive the full protection of currently known populations. Protection would be implemented the following year. Little is known about the requirements of many of these species. Research may find that some grazing is necessary for the continued vigor of California jewelflower and Kern mallow or that different levels of grazing may aid in the recovery of listed species. If this should be the case, not grazing the species or grazing at an inappropriate level could result in a gradual reduction in numbers over time. It is unlikely that the allocations proposed under this alternative would result in the extirpation of populations over the life of the plan.

Oil and Gas

Areas with substantial biological values, such as certain ACEC's or Special Management Areas, have been closed to oil and gas leasing or may be leased subject to a special stipulation intended to protect the special values. Additionally, all other lands in the Valley Management Area are within the range of the San Joaquin Valley suite of listed species and would be open to leasing of oil, gas, and geothermal resources subject to the Limited Surface Use - Protected Species stipulation. Designated critical condor habitat is subject to the Limited Surface Use - Critical Habitat stipulation. Leasing lands for oil and gas under these constraints should provide strong protection for federally listed species and areas with substantial biological values. Important use areas for raptors is protected by the applications of the Limited Surface Use - Raptors stipulations to the Carrizo Plain and Kettleman Hills ACECs. Taking into consideration that most newly leased areas in the Valley are never developed, leasing of lands for oil and gas development is not expected to result in a substantial loss of biological resources.

Threatened and Endangered Species Conservation

Threatened and endangered species conservation areas will be managed to promote the recovery of listed species and the conservation of other natural resource values (final RMP Chapter 9). Management will be consistent with the direction established by the USFWS and CDFG and to complement local conservation plans. Management of conservation areas should contribute to the recovery of listed species and prevent other species from becoming listed.

Effects of South Sierra Management Area Land Use Allocations on Biological Resources

Special Designations

There are two existing ACECs and two proposed ACECs within the South Sierra Management Area. Each of these areas has unique plant communities or wildlife habitat. The management prescriptions proposed for these areas would prevent or limit actions that are incompatible with these biological resources. Four areas proposed to be managed as Special Management Areas have important biological resources.

Land Tenure Adjustment

Some of the lands in the Sierra Management Area are identified as suitable for either management transfer, cooperative management or repositioning. Prior to any land tenure adjustment, a parcel would be evaluated to determine the biological values that are present. If the parcel supports biological values warranting conservation, the land tenure adjustment action will be designed to contribute to the conservation of that biological value. For example, a parcel may be exchanged for another parcel that might be more strategically located and support a better quality example of the biological value. A parcel may also be transferred to or managed cooperatively with another conservation entity or agency that has other holdings in the area that support the biological value. These types of land tenure adjustments should help in the acquisition of parcels important for the conservation of regional biological values. Pooling of human and monetary resources with those of other conservation agencies and organizations should allow for more efficient and effective conservation of regional biological values.

Livestock Grazing

There are 53 livestock grazing allotments, totalling approximately 189,000 acres within the South Sierra Management Area. Grazing in these allotments will be according to the guidelines outlined in final RMP Chapter 6 which were designed to protect biological resources. The majority of the allotments with annual forage have a minimum residual mulch level of at least 500 lbs/acre. Twelve of the annual forage allotments can be grazed to 300 lbs/acre and one allotment can be grazed to 400 lbs/acre. As in the other two management areas, key perennials except for saltbush may have up to 50% of new growth utilized. Fifteen allotments within the management area have known or suspected riparian or wetland habitats. The majority of these allotments have a proposed season of use that falls within the cool season of November 1 to May 31. This season is intended to prevent heavy utilization of riparian vegetation and reduce streambank erosion. Cattle tend to concentrate along stream courses during the hot, dry summer months. Three allotments are currently authorized for grazing in the summer months. In the Proposed RMP, riparian areas that are rated good to excellent would continue to be grazed during the current season of use. The Bureau will assess the condition of riparian areas within allotments which have a summer season of use. If these riparian areas are in good or excellent condition, the season of use will remain the same. If the riparian areas are in poor to fair condition, the season of use will be modified to conform to the November 1 through May 31 guideline. Five allotments with riparian areas have seasons of use which extend one month outside of the November 1 to May 31 guideline. Riparian areas within these allotments will be assessed within two years and if found to be in poor to fair condition, the season will be modified. The net effect on riparian areas will be an improvement over the life of the plan.

Oil, Gas and Geothermal

Lands within the range of San Joaquin Valley listed species and known locations of proposed plant species would be open to leasing of oil, gas, and geothermal resources subject to the Limited Surface Use - Protected Species stipulation. Designated critical condor habitat and proposed critical habitat for the southwestern willow flycatcher would be subject to the Limited Surface Use - Critical Habitat stipulations. Known locations of the Tehachapi slender salamander would be protected by the application of the Limited Surface Use - Sensitive Species stipulation. Blue Ridge and Piute Cypress ACECs would remain closed to all leasing and Case Mountain ACEC would be closed to geothermal leasing. Leasing lands for oil, gas and geothermal under these constraints should provide strong protection for federal and state listed species. Important use areas for raptors are protected by the application of the Limited Surface Use - Raptors stipulations to the Case Mountain ACEC. Taking into consideration that most leases are never developed, leasing of lands for oil and gas development is not expected to result in a substantial loss of biological resources.

Environmental Consequences - Air Quality

Analysis Assumptions

Air quality within the Caliente Resource Area is regulated by Air Pollution Control Districts (APCD). The Caliente Resource Area includes portions of the San Joaquin Valley Unified APCD, and San Luis Obispo, Santa Barbara, and Ventura County APCDs. Permits relating to Air Quality matters are issued by the appropriate local APCD.

Following is a summary of particulate emissions potentially resulting from the management of public lands under this plan. Emissions may come from direct or indirect sources. Figures represent an estimate of emissions, based on 1990 data. The Valley and South Sierra Management Areas have been combined for discussion purposes, since both are within the San Joaquin Valley Air Basin (SJVAB), and are regulated by the San Joaquin Valley Unified APCD.

Effects of Resource Area Wide Land Use Allocations on Air Quality

Emission levels under proposed management are predicted to decline over the life of the plan. No significant departures from historical operations are planned/anticipated. Major indirect emissions, such as those from oil and gas sources, are actually in decline. The emission inventory (See RMP Chapter 10) completed in compliance with the Clean Air Act General Conformity Regulations (40 CFR 51.850 Parts 6, 51 & 93), indicates no impact to air district plans such as the San Joaquin Valley Unified APCD Ozone Attainment Demonstration and Serious Area PM₁₀ Plans.

Collection of vegetative products, camping, and shooting limitations would have no measurable effect on air quality. Vehicle and associated motorized equipment use on public lands are governed by EPA and/or APCD emissions standards. Although cursory surveys and projected growth in recreational activity on public land show a definite increase in PM₁₀ emissions (See RMP Chapter 10), the restriction of vehicles to designated routes on most public lands, would reduce proliferation of new roads, enable poorly placed/designed roads to be obliterated, and redirect vehicle traffic to roads receiving PM₁₀ reducing measures. The establishment of speed limits would also reduce the generation of particulates from designated routes. These measures should result in the overall reduction of PM₁₀ generated from public land.

Managing water on public land to improve in-stream flows would result in a positive effect to air quality by increasing the stability of stream banks and increasing riparian vegetative cover, thus reducing the amount of exposed soils and PM₁₀ being generated on public land. Management of compensation lands and threatened & endangered species habitat to benefit identified species could result in a slight improvement in air quality by limiting surface disturbing types of activities, allowing for increased vegetative cover and an associated reduction in production of PM₁₀. Application of livestock grazing guidelines identified in Chapter 6 as well as the minimum standards for rangeland health would have a positive effect on air quality by reducing grazing related PM₁₀ on public land. This would occur through increased vegetative cover and mulch residue on uplands, improved soil infiltration and permeability rates, and reduced intensity of grazing occurring in riparian areas.

There should be no significant effects to air quality from saleable or locatable mineral development on public land. Any mineral operation that disturbs more than an acre of land must obtain appropriate county and APCD permits prior to commencing operations.

Effects of Coast Management Area Land Use Allocations on Air Quality

Special Designations

The designation of approximately 7,500 acres of Federal land as ACECs and SMAs would have a slight positive effect on air quality (lands in question represent only 0.13% of the management area) through implementation

of specific management prescriptions designed to reduce surface disturbance. ACECs and four of the five SMAs in the Coast Management Area would be closed to grazing; access is either closed, limited to pedestrian access, or limited to designated routes of travel; both ACECs and SMAs are land use authorization avoidance areas. The reduction in surface disturbance would increase vegetative cover on these parcels reducing the volume of PM₁₀ emissions.

Land Tenure Adjustment

The proposed land tenure adjustments for public land in the Coast Management Area should have no significant effect on air quality, and could have some slight positive effect on reducing PM₁₀ emissions. This would be attributable to the increased management presence associated with management at the local level.

Effects of Valley & South Sierra Management Areas Land Use Allocations on Air Quality

Special Designations

The designation of approximately 328,000 acres of Federal land as ACECs and SMAs in the Valley Management Area and 180,000 acres in the South Sierra Management Area would have a small positive effect on air quality (PM₁₀ emission reductions). This would result from season of use limitations, utilization and mulch requirements associated with grazing, management limitations on the sale, location, and other development of minerals, and limitations on access.

Land Tenure Adjustment

There is no anticipated change in air quality resulting from land tenure adjustment since land uses are expected to remain non-intensive on the vast majority of public lands following repositioning. Additionally, county zoning designations and air quality requirements of local APCDs would continue to apply.

Land Use Authorizations

Disturbances associated with land use authorizations on federal lands above 3,000 feet elevation are anticipated to continue to decline over the life of the plan (See RMP Chapter 10). At lower elevations, the need for rights-of-way associated with oil and gas production is expected to continue at the current rate of 30 applications per year and possibly increase if the nation's energy needs increase. However, requirements of local APCD PM₁₀ rules would result in no net increase in emissions and should have a slight positive effect on air quality.

Livestock Grazing

The proposed riparian management that restricts season of use, or excludes livestock from certain riparian areas would improve vegetative cover and would have a slight positive effect on air quality.

Minerals

Solid mineral activity is not expected to have a significant effect on air quality. Authorized mining activities with the greatest potential for impacts to PM₁₀ include gypsum and cat litter production. These operations will be required to implement Reasonable Available Control Measures, which would result in reduced emission levels of PM₁₀ with no, or possibly a slight positive, effect on air quality.

Oil and Gas Development

Fluid mineral activity results in the release of reactive organic compounds (ROCs) and nitrogen oxides (NOX). Increases in fine particulate matter (PM₁₀) can result from dust generated by seismic exploration activities, travel on unpaved surfaces in conjunction with oil exploration or development activities, and indirectly from the

emission of gases, such as ROCs and NOX, which combine in the atmosphere to form PM₁₀. San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) figures indicate that locally less than 5% of these pollutants come from activities related to oil and gas. Requirements to meet SJVUAPCD plans for PM₁₀ abatement will limit usage of some roads, and demand prompt rehabilitation, including requiring dust and other particulate control measures resulting in a positive effect on air quality. Additionally, the percent contribution from oil and gas operations in the Resource Area managed portions of the SJVAB would not change measurably, since drilling from Bureau regulated wells would probably proceed at a rate comparable to the drilling that would occur overall and New Source Rules preclude the allowance of additional pollutants from new fluid mineral activity.

Recreation

On the basis of cursory surveys and projected growth and interest, the effect of recreational activities on air quality is expected to result in slight increases in emissions (entrained and exhaust PM₁₀). This should be offset by the redirection of vehicle use to designated roads/trails, and the rehabilitation of roads. This should cause the net emissions to decrease over the life of the plan.

Water Quality - Environmental Consequences

Analysis Assumptions

Water quality management objectives have been established for individual water basins by each Regional Water Quality Control Board (RWQCB). Water quality within the Caliente Resource Area is regulated by the Central Valley, Central Coast and Los Angeles Basin RWQCBs.

Water pollution from nonpoint sources is discussed in Section 208 of the Federal Water Pollution Control Act and the State's Nonpoint Source Program. The Section 208 plan for public lands in California established guidelines for identification of Best Management Practices (BMPs) to be developed in coordination with the responsible RWQCB.

Effects of Resource Area Wide Land Use Allocations on Water Quality

Most Resource Area Wide allocations would have a minimal effect on water quality. A few specific allocation decisions will have minor positive effects on water quality.

Prohibition of camping within 100 feet of any fresh water source will protect these water sources from possible contamination.

Restricting vehicle use to designated routes of travel, would result in a slight positive effect through the obliteration of roads and trails that contribute to erosion and non-point pollution.

Livestock grazing will continue to have a slight negative effect on unfenced springs and riparian areas. Livestock have a tendency to congregate around water sources, resulting in an increase in *E. coli* and *Giardia* and an increase in nitrification of these waters. Application of grazing guidelines (including standards for improving infiltration and permeability rates in upland soils, standards for ensuring riparian-wetlands are in properly functioning condition, and ensuring stream channel morphology and functions are appropriate for the climate and land form) would have a positive effect on water quality.

Oil and gas operations, while having potential to affect surface water quality as well as aquifers, are not considered to have a significant effect because of the application of standard engineering practices spelled out in Onshore Orders 1 and 2 (CFR 43-3160), and permit requirements of the RWQCBs.

Effects of Coast Management Area Land Use Allocations on Water Quality

Special Designations

ACEC designation of 2,487 acres of Federal surface and subsurface and an additional 915 acres of subsurface mineral estate could have a small positive effect on water quality resulting from the implementation of specific management prescriptions for ACECs (See RMP Chapter 11 for additional information).

SMA designation of 4,984 acres of Federal surface and subsurface and an additional 4,435 acres of subsurface mineral estate could have some positive effects to water quality from specific management prescriptions relating to mineral development, grazing and access.

Land Tenure Adjustment

The proposed land tenure adjustments of 13,200 acres (approximately only 0.3% of all lands in the Management Area) of public land in the Coast Management Area should have no significant effect on water quality. However increased management presence as a result of Management Transfer and/or Cooperative Management could result in a slight positive effect to water quality on those lands.

Livestock Grazing

Livestock grazing allocations would have no significant effect on water quality in the Coast Management Area. Classification of approximately 14,300 acres of public land as unavailable or unsuitable because of sensitive resources and/or other factors will eliminate the potential for increased grazing related non-point pollution on those lands.

Minerals (Fluid)

The decision to lease approximately 67,000 acres of Federal land in the Coast Management Area for Oil and Gas should have only a minimal effect on water quality since any development would require a permit from the RWQCB.

Effects of Valley Management Area Land Use Allocations on Water Quality

Special Designations

ACEC designation of approximately 213,000 acres of Federal surface and 19,345 acres of Federal subsurface mineral rights could have a small positive effect on water quality resulting from the implementation of specific management prescriptions for ACECs (See RMP Chapter 11 for additional information).

SMA designation of approximately 115,000 acres of Federal surface and subsurface and an additional 4,840 acres of subsurface could have some positive effects to water quality from specific management prescriptions relating to mineral development, grazing and access (See RMP Chapter 12).

Land Tenure Adjustment

The repositioning of lands proposed in the Valley Management Area would have no negative effect on water quality since there would be no anticipated change in level of use on the majority of parcels.

Livestock Grazing

Although livestock grazing has the potential for affecting water quality, most surface water on public land in the Valley Management Area is ephemeral, consisting of storm runoff. There are some perennial streams in the area,

but for the most part, they are on private land. In many cases livestock operators have increased the availability of water through water developments.

Application of grazing guidelines and classification of lands which should not be grazed as unavailable should have a slight positive effect on water quality (See RMP Chapter 6).

Fluid Minerals (Oil & Gas)

Cumulative effects to water quality in the San Joaquin Valley associated with oil and gas production from federal leases is incrementally insignificant. Exploration and development of oil and gas resources from federal lands represent less than 2% of total activity in the San Joaquin Valley. Potential effects to water quality from nonpoint source pollutants such as storm water runoff from roads and well pads associated with oil and gas exploration and development would be minimal. RWQCBs require containment and monitoring of pad areas, including sumps. These restrictions would also benefit other areas where drilling and production fluids might leak or be washed off-site by storm waters. Additionally aquifer integrity would be maintained since authorizations require the protection of aquifers by appropriate well casing and cementing practices.

Sumps must be lined if there is a potential for negative effects to natural drainages or groundwater. In other areas unlined sumps may be required to have leak detection systems. Prevailing spill contingency plans and proper well abandonment procedures safeguard ground surfaces, natural drainages, and subsurface aquifers.

Solid Minerals

Although mining for solid mineral resources can affect both surface and ground water sources, there are very few active mines in the Valley Management Area. State and the local RWQCB requirements, and the withdrawal of the most sensitive areas from mineral entry, would minimize any effect solid mineral development might have on water quality.

Recreation

Although recreation activities can be relatively intense in localized areas in the Valley Management Area, and have the potential to impact water quality from activities such as camping, off highway vehicle activity and waste disposal in or near ephemeral streams, restricting vehicle use to designated routes, limiting camping within 100 feet of water sources, and implementing educational programs directed at informing the recreational public of the importance of proper functioning ephemeral streams and the need to keep them free of debris, waste and damage to banks, channels and beds will minimize these impacts and will likely result in improved conditions in and near water sources/ephemeral streams.

Effects of South Sierra Management Area Land Use Allocations on Water Quality

Special Designations

Implementation of the ACEC Management Prescriptions would result in a positive effect on water quality by modifying the intensity of use on the four ACECs (See RMP Chapter 11).

Implementation of SMA prescriptions would reduce soil disturbing activity near several water courses, positively affecting water quality (See RMP Chapter 12).

Land Tenure Adjustment

The intent of repositioning lands proposed in the South Sierra Management Area is to improve the efficiency of managing these lands by transfer or cooperative management. There would also be a slight positive effect

to water quality associated with an increased management presence, and in some cases a decrease in level of use as a result of increased protection, i.e. transfer to national & state parks.

Access Acquisitions

Only administrative access is proposed. This could have a slight positive effect on water quality by discouraging indiscriminate use of portions of these lands (i.e. unauthorized dumping of trash).

Livestock Grazing

Effects of livestock grazing on water quality can include impacts to riparian zones, i.e., trampling and consumption of vegetation. This could result in water temperature increases and stream bank instability. Temperature changes in some instances may be allowable but in other instances the resulting changes to riparian flora and fauna may be unacceptable. The concentration of livestock in and around water sources also results in introduction of fecal material into the water, and the array of accompanying organisms such as fungi, algae, viruses, protozoa, bacteria, etc. However, the proposed livestock grazing guidelines should reduce past impacts by implementing riparian protection measures on primary riparian zones, applying management constraints within threatened and endangered habitat, and implementing improved grazing management strategies.

Minerals

Mining for fluid or solid mineral resources can affect both surface and ground water sources, particularly where activity is near live or ephemeral drainages and where groundwater sources are near the surface. Enforcement of state requirements by the RWQCB, and the fact that there is very little water other than storm runoff in the vicinity of present mining activity, makes it unlikely that an exploration or production operation will affect a surface water source. Further, the probability for groundwater contamination is minimal under existing federal and state regulations.

Recreation

OHV activity could have an indirect effect on water from surface disturbance; this might include surface, rilling and gully types of erosion contributing to nonpoint source pollution. OHV areas would not be designated, but limited use on existing trails could result in unquantified damage. In particular, the Keyesville area receives substantial OHV use which could result in erosion that impacts the Lower Kern River. Illegal OHV activity in the South Sierra, where the majority of perennial streams are located, could affect water quality if unchecked.

Recreation activities associated with the concentration of users in a specific area have the potential to affect water quality. When concentrated use occurs near water resources, the sediment, turbidity, and bacteria content may increase. Also, improperly maintained or located sanitary facilities are often the cause of water quality impairments. Specific places where such use occurs include the sites along the North Fork of the Kaweah River and the Keyesville area.

Overall, the cumulative impact is not significant, although localized problems may occur, and these can be minimized through a regular testing program, the posting of appropriate signs, limited treatment, and public education. The rehabilitation of routes in Keyesville and the North Fork of the Kaweah area, as well as increased enforcement and the improvement of trash removal and restroom facilities should reduce past problems. Such actions would maintain water systems and provide improved water quality for wildlife and recreational users.

Managing river segments to protect Wild and Scenic River values would have a positive effect on water quality by reducing surface disturbing activity adjacent to these river segments.

Reasonably Foreseeable Development Scenarios

Introduction

A Reasonably Foreseeable Development Scenario (RFD) is a forecast or estimate of activity that is likely to occur. The goal is to give scope or scale to the potential consequences of new activities and their associated impacts to the environment. The RFD is not meant to be used to predict actual activities, but rather, as a basis for the quantification of environmental effects from a range of development scenarios. Regulations in the 1987 Onshore Oil and Gas Leasing Reform Act require such a projection to be formulated to facilitate development of federal lands that are not otherwise constrained by existing land allocations, such as wilderness areas and mineral withdrawals.

The RFD projection is based on knowledge of past utilization, the capability of the resource for additional development, local and regional economic trends, and the needs of the public. The data presented in an RFD is deliberately generalized for ease in assessment. Specific locations of surface disturbing activities such as roads or oil wells are not specified. The typical period covered by an RFD is ten to fifteen years. A particularly dollar sensitive resource such as oil exploration is discussed over a ten-year period, while less volatile commodities such as salt can be discussed over a fifteen year period, paralleling the period covered by this Plan.

Typical resources that would be evaluated with a RFD format are oil and gas, hard rock mining, livestock grazing, and improvements such as rights-of-way, recreation, and air quality. The information presented here for oil and gas as well as hard rock mining is a brief summary of potential projected activity. Projections for other resources are included with the discussions of environmental consequences.

Oil & Gas Reasonable and Foreseeable Development Scenario

A new forecast of Reasonably Foreseeable Development (RFD) for oil and gas activities over the next ten years was developed in 1996, replacing the projections included in the draft RMP. Due to its more general scope and shorter forecast period, a brief summary is included within this document. The entire oil and gas RFD is available upon request. The forecast is regional in its scope and covers both private and public lands within a six-county area, including Kern, Ventura, Santa Barbara, San Luis Obispo, Kings and Tulare Counties. The following conclusions are taken from the text of "A Reasonable and Foreseeable Development Scenario for Oil and Gas Activities, South-Central Planning Region, California."

Values developed for the RFD are displayed as a range from an expected value to the maximum development scenario. Both scenarios include making available previously unleased federal lands within Los Padres National Forest, Vandenberg Air Base, Port Hueneme, and Point Mugu. Based on a review of lease nominations over the last decade, industry interest in leasing would be expected to be high. Taken together with a depressed domestic oil market, moderate to low drill rates paralleling the average over the last decade are anticipated. The high development scenario projects high industry interest in the actual drilling of wells.

Between 150 and 260 federal wells are forecast to be drilled on federal mineral estate per year. Surface disturbance associated with exploration and development activity is estimated to fall between 100 and 215 acres per year. Approximately 15 - 30% of the disturbance would be short-term and reclaimed within one year. Actions causing short-term effects include geophysical work and the drilling of unsuccessful wells. Long-term disturbance may not be reclaimed in a year, and perhaps not during the planlife. Successful drilling and producing facilities are activities that create long-term effects. The positive impact of separating the two categories of surface-disturbance is that the brief surface effects of drilling an unsuccessful well as well as the minimal effects from geophysical activity, can be quantified and recognized for their passing nature, while long-term effects such as a producing oil field and its processing facilities can be realistically examined. Reclamation of inactive wells would result in up to 200 acres being reclaimed on an annual basis.

Management Area	Long-term Disturbances (acres)	Total Surface Disturbance (acres)
Coast	3-18	8-40
Valley	29-134	33-173

**Annual Surface disturbance on Federal Lands
Caliente Resource Area**

As both tables show, between approximately 80% and 90% of all surface disturbing activities related to the oil industry would be expected to occur in the Valley Management Area. Most of this will be within the established field boundaries of producing fields in Kern County. Surface disturbance related to the actual drilling of new wells accounts for most of the total surface disturbance associated with oil activities (65-78%). Associated activities include new processing facilities, pipelines, and seismic surveys.

Area	New Drilling over the Plan Life		Associated Activities over the Plan Life	Annual Disturbance
	wells	acres	acres	acres
Coast	75 -420	52 - 265	28 - 138	8 - 41
Valley	1,459 -4,409	745 - 1,177	208 - 560	95 - 174
Sierra	0 - 2	0 - 6	0 - 63	0 - 7

**Annual Surface Disturbance by Activity
Caliente Resource Area**

Three significant new fields have been discovered in the last twenty years, all in the Valley Management Area and none with any federal interest. No change from current activity levels has been forecast. Additions of new reserves would be anticipated to continue the current decline begun in 1990 in all management areas. Other factors unique to California act to further depress oil prices and discourage new drilling. The geologic basins of the Coast Management Area are mature oil-producing basins (the onshore portions of the Santa Maria and Ventura Basins), meaning that most of the obvious as well as more obscure structural oil prospects have been drilled. Further depressing drilling activity on the Coast is the relatively high cost of exploration, compared to other parts of the state. Higher drilling and completion costs are the result of surface restrictions, rough terrain, and well depths. Although industry interest in leasing newly available lands is likely, new exploration projects that result in actual drilling may be rare.

Ongoing reviews of the monthly activity in the Caliente Resource Area suggest that the 1986 to 1994 decline in activity levels within existing fields may stabilize at current levels. More specifically, federal oil activity would continue to be focused in Midway-Sunset Field, in the Valley Management Area. The South Sierra Management Area would be projected to have less than ten acres/year surface disturbance from new oil and gas exploration activity.

Other Mineral Developments and Operations

Reasonably Foreseeable Development Scenario for Solid Mineral Resources

In 1991, California produced over three billion dollars worth of non-fuel mineral products (industrial nonmetallic minerals-59%, gold and silver-13%, other metallic/non-metallic minerals-28%). Construction materials (cement, clay, lime, sand & gravel, and stone) accounted for 44% of the total revenue. However, solid mineral deposits are difficult to find in quantities and concentrations sufficient to be economically developed. Large areas of

the southern Sierra Nevada have low or moderate potential for the occurrence of gold and tungsten. Known economic deposits are rare occurrences. Gold, sand and gravel, gypsum and rock continue to be produced from public lands. Although limestone and mineral absorbents are not currently produced from federal lands within the Caliente Resource Area, both are under production from nearby private lands and the potential for development on federal lands would exist. A summary of forecasted activities are shown in the table below.

Solid Mineral Forecast

	Commodity	Area	Activity	Number	Total Surface Acres
Metallic, locatable Minerals	Gold	Southern Sierra Nevada	Claim Staking	25-100	neg.
			Exploration: Roads, drill pads	2	50
			Placer Gold (continuously)	2-5	neg.
			Notices	40	40
			Plans (minor)	2	20
			Plans (major)	1	200
Non-metallic Salable minerals	Sand & Gravel	Lake Isabella	New pits	2	40
		Tehachapi	Sand pit	1	10
		Western San Joaquin Valley	Oil Field Fill	20	20
			Pit	1	40
	Rock	Paso Robles Area	Rock pit	1	10
	Clay	Loraine	Clay pit	1	10
	Gypsum	Western San Joaquin Valley	Gypsum pit	2	40

Metallic Minerals

Gold and Silver. The Loraine mining district thirty-five miles east of Bakersfield has the greatest gold development potential of any public lands in the southern Sierra Nevada. Gold and silver mines near the town of Loraine have produced gold and silver intermittently since 1894. Other areas with the potential for more gold development include Havilah, Keyesville, Kernville, and the foothills of the Sierra Nevada, north of Bakersfield. Mercury mines in the Coast Ranges continue to be evaluated for associated gold.

The mining of placer gold (gold deposited along with river sediments) in the Keyesville area began in the 1850s. Today's recreational mining includes panning, sluicing and small scale dredging as well as dry placer mining. The California Department of Fish and Game and U.S. Army Corps of Engineers issue dredging permits and limit seasons of use to minimize impacts to habitat. Hydraulic mining is not allowed at Keyesville.

Over the next ten years, the Caliente Resource Area would be expected to receive four mining Notices per year with an average surface disturbance of one acre each. The Bureau would receive two small Plans of Operation with a total twenty acres of disturbance, and one major Plan of Operation with 200 acres of disturbance (see table on previous page).

Other Metals. None of the tungsten mines in the Caliente Resource Area are "world class" and none are now in operation. Several inoperative mercury mines are located within the Coast and Valley Management Areas. A large supply of by-product mercury from gold mines in Nevada and the resultant low price contributes to a poor market for California's mercury. Each management area contains old chromite mines and prospects.

Most were small deposits, worked during the World Wars. There is little likelihood of renewed interest in the mining of these other metallic minerals during the next ten to fifteen years.

Nonmetallic Mineral Potential (locatable and saleable)

Sand and Gravel. Extraction of sand, gravel or rock occurs on public land near Lake Isabella and Tehachapi (South Sierra Management Area), and west of Paso Robles (Coast Management Area). The Bureau operates a community pit for fill sand east of Lake Isabella. In the Lake Isabella area, two twenty-acre pits would be anticipated. In the Tehachapi area, a new 5 to 10 acre pit is projected as a local source for Caltrans' winter road-sand needs. One new ten acre pit is anticipated for the Paso Robles area. In each of the next 10 years, about 2 acres of surface would be temporarily impacted to provide local sources of fill material (sand and/or gravel) for oil field operations in the San Joaquin Valley. A county borrow pit would possibly be reactivated. One additional 40-acre pit may be developed, possibly the old community pit northeast of McKittrick.

Limestone. Three major limestone quarries/cement plants operate in the southern Sierra Nevadas. Two are within the Resource Area, and the third borders the Resource Area. Although limestone deposits exist on public lands south of Loraine, on the southeast side of the Tehachapi Mountains and south of South Lake, development on public land is unlikely in the Plan life.

Clay. Although useable deposits of clay occur on public land near the Sand Canyon area east of Tehachapi, the potential for conflict with local residents precludes development. In a remote area near Loraine, ten acres have development potential.

Gypsum. Gypsum is mined from public lands in the Lost Hills area for agricultural purposes. Historical mining of gypsum has resulted in large surface disturbances. Small high-grade deposits within low-grade areas may be economic to mine but development would be limited to two new twenty-acre operations under current environmental constraints.

Siliceous shale. Although widespread deposits of siliceous shale occur within the Caliente Resource Area, no mining is currently occurring on federal lands. Siliceous shale is used to produce pet waste absorbent. Two active mining operations have impacted 1,000 acres of nearby public lands. Clay from Florida successfully competes in the California market and new development would be unlikely.

Solid Leasable Minerals

Phosphate. Although phosphate is known to occur in several areas in the Coast Ranges, the deposits are of low quality and development of phosphate is not anticipated.

Saline minerals. The Soda Lake deposits consist of sodium sulphate and sodium chloride. The deposits are uneconomic due to remote location, environmental sensitivity and small size.

Geothermal Resources

An area of public lands extending from Kernville southwest to Democrat Hot Springs in the Kern River Canyon is underlain by thermal waters. Approximately 1,400 acres of BLM lands are scattered along the Kern River in a two-mile wide strip. This includes lands just northeast of the community of Lake Isabella and portions of Keyesville. Potential uses of geothermal water are primarily local and include heating, personal use, and light industrial use, such as hot house heating. One geothermal well may be drilled on public land. Total disturbance would not exceed five acres. Relatively low water temperatures makes the development of large-scale geothermal power production unlikely. Other areas of high potential within the Resource Area contain no BLM lands.

Comparison of Alternatives

The following pages display a comparison of alternatives. The Preferred Alternative is described in detail in this document. The remaining alternatives are described in greater detail in the draft Callente Resource Management Plan.

Comparison of Alternatives - Coast Management

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Special Designations		
ACECs	2 ACECs 77 acres Plus Off Shore Rocks & Islands	8 ACECs 4,436 acres Plus Off Shore Rocks & Islands
Special Management Areas	None Proposed	3 SMAs proposed 3,160 acres
Land Ownership Adjustment		
Acquisition	None are proposed	Acquire lands with high resource values.
Livestock Grazing		
Minerals		
Leasable Minerals	67,000 acres available for oil and gas and geothermal leasing. 67,000 acres available for other leasable minerals	65,000 acres available for oil and gas and geothermal leasing. 65,000 acres available for other leasable minerals
Withdrawn lands	1,900 acres withdrawn from Mineral Entry, and 100 acres proposed for withdrawal.	1,900 acres withdrawn from Mineral Entry, and 7,200 acres proposed for withdrawal.
Recreation		
Vehicle Use Designation	Vehicle use limited to designated routes of travel; 1 ACEC and 2 Wilderness Areas closed to OHVs.	Vehicle use limited to designated routes of travel; 3 ACECs, and 2 Wilderness Areas closed to OHVs
Wild and Scenic Rivers	Study Suitability of BLM Salinas River Corridor.	Study Suitability of BLM Salinas River Corridor.

Alternative 3 -Administrative adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>7 ACECs 4,559 acres Plus Off Shore Rocks and Islands</p> <p>1 SMA Proposed 797 acres</p> <p>Exchange up to 18,000 acres</p> <p>Acquire land with high resource value</p> <p>7 Allotments - 3, 953 acres. Add'l. mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available new allotments; seasonal restrictions within riparian areas.</p> <p>68,000 acres available for oil and gas and geothermal leasing.</p> <p>66,000 acres available for other leasable minerals</p> <p>1,900 acres withdrawn from Mineral Entry, and 5,400 acres proposed for withdrawal.</p> <p>Vehicle use limited to designated routes of travel; 1 ACEC and 2 Wilderness Areas closed to OHVs.</p> <p>Study Suitability of BLM Salinas River Corridor.</p>	<p>6 ACECs 3,562 acres Plus Off Shore Rocks and Islands</p> <p>None Proposed</p> <p>Exchange up to 12,000 acres</p> <p>Acquire land with high resource value</p> <p>7 Allotments - 3, 953 acres. Limited mulch requirements; lands available for new allotments; no restrictions within riparian areas.</p> <p>69,000 acres available for oil and gas and geothermal leasing.</p> <p>67,000 acres available for other leasable minerals</p> <p>1,900 acres withdrawn from Mineral Entry, and 2,100 acres proposed for withdrawal.</p> <p>1 ACEC and 2 Wilderness Areas closed to OHVs; 2,600 acres in Calf Canyon open for OHV use.</p> <p>Study Suitability of BLM Salinas River Corridor.</p>	<p>5 ACECs 2,487 acres Plus Off Shore Rocks and Islands</p> <p>5 SMAs 4,984 acres</p> <p>Reposition 7,200 acres; on 13,200 acres transfer primary management responsibilities to another agency, if feasible.</p> <p>Acquire land with high resource value for public recreation or public access.</p> <p>7 Allotments - 3,953 acres. Add'l. mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available new allotments; seasonal restrictions within riparian areas.</p> <p>69,000 acres available for oil and gas and geothermal leasing.</p> <p>61,300 acres available for other leasable minerals</p> <p>1,900 acres in existing withdrawals. 5,800 acres would be proposed for withdrawal from Mineral Entry</p> <p>Vehicle withdrawal to designated routes of travel; 1 ACEC and 2 Wilderness Areas closed to OHVs.</p> <p>BLM Salinas River Segment included in ACEC & dropped from further Study.</p>

Comparison Of Alternatives - Valley Management Area

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Special Designations		
ACECs	5 ACECs 14,980 acres	9 ACECs 194,192 acres
Special Management Areas	2 SMAs (NCLWMAs)	2 SMAs (NCLWMAs)
LAND OWNERSHIP ADJUSTMENT		
	Exchange up to 14,000 acres	Exchange up to 4,000 acres
Acquisition	Acquire land with high resource value	Acquire land with high resource value
LIVESTOCK GRAZING		
	51 Allotments - 260,231 acres Mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; no seasonal restrictions in riparian areas.	38 Allotments - 239,794 acres High mulch requirements (700#) & broad seasonal restrictions within listed species habitat; no new grazing allotments; green season of use only.
MINERALS		
Leasable Minerals	321,000 acres available for oil and gas and geothermal leasing. 395,000 acres available for other leasable minerals	435,000 acres available for oil and gas and geothermal leasing. 349,000 acres available for other leasable minerals
Withdrawn lands		19,800 acres proposed for withdrawn from Mineral Entry.
RECREATION		
Vehicle Use Designation	1 Wilderness study area closed to OHVs.	1 Wilderness study area closed to OHVs.
Wild and Scenic Rivers	Study suitability of Soda Lake.	Study suitability of Soda Lake.

Alternative 3 Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
6 ACECs 149,945 acres	5 ACECs 147,372 acres	6 ACECs 213,000 acres
6 SMAs 28,460 acres + NCLWMAs	4 SMAs 21,780 acres + NCLWMAs	2 SMAs 115,000 includes NCLWMAs
Exchange up to 26,000 acres	Exchange up to 20,000 acres	Reposition 80,000 acres; on 7,000 acres transfer primary management responsibilities to another agency, if feasible.
Acquire land with high resource value	Acquire land with high resource value	Acquire land in Carrizo Natural Area, Lokern Natural Area, and/or small areas to meet mgt area objectives.
51 Allotments - 260,231 acres Add'l mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; season restrictions within riparian areas.	52 Allotments - 263,664 acres Limited mulch requirements; lands available for new allotments; no seasonal restrictions in riparian areas.	54 Allotments - 270,000 acres Add'l mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; season restrictions within riparian areas.
435,000 acres available for oil and gas and geothermal leasing.	435,000 acres available for oil and gas and geothermal leasing.	367,000 acres available for oil and gas and geothermal leasing.
361,000 acres available for other leasable minerals	431,000 acres available for other leasable minerals	389,400 acres available for other leasable minerals
3,452 acres proposed for withdrawn from Mineral Entry.	3,000 acres proposed for withdrawn from Mineral Entry.	8,000 acres proposed for withdrawal from Mineral Entry.
1 Wilderness study area closed to OHVs.	1 Wilderness study area closed to OHVs.	1 Wilderness study area closed to OHVs.
Study Suitability of Soda Lake	Study Suitability of Soda Lake.	Soda Lake included in Carrizo Plain ACEC & dropped from further study.

Comparison of Alternatives - Sierra Management Area

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Special Designations		
ACECs	2 ACECs 3,895 acres	11 ACECs 94,570 acres
Special Management Area	2 SMAs Proposed	3 SMAs Proposed
LAND OWNERSHIP ADJUSTMENT		
	Exchange up to 12,000 acres	Exchange up to 15,000 acres
Acquisition	Acquire land that might facilitate management	Acquire land with high resource value
LIVESTOCK GRAZING		
	51 Allotments - 188,596 acres Mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; no seasonal restrictions in riparian areas.	51 Allotments - 188,246 acres High mulch requirements (700#) & broad seasonal restrictions within listed species habitat; no new grazing allotments; green season of use only.
MINERALS		
Leasable Minerals	345,000 acres of Federal mineral estate available for Oil and gas and Geothermal leasing.	350,000 acres of Federal mineral estate available for Oil and gas and Geothermal leasing.
	371,000 acres of Federal mineral estate available for other leasable minerals	352,000 acres of Federal mineral estate available for other leasable minerals
Withdrawn lands	109,000 acres withdrawn from Mineral Entry, and 400 acres proposed for withdrawal.	109,000 acres withdrawn from Mineral Entry, and 7,000 acres proposed for withdrawal.
RECREATION		
Vehicle Use Designation	1 ACEC closed to OHVs.	Keyville, Short Canyon and 1 ACEC closed to OHVs.
Wild and Scenic Rivers	Study Suitability of Canebrake Creek, Chimney Creek, Spanish Needles Creek, South Fork and Lower Kern, and North, Middle, and East Forks of the Kaweah .	Study Suitability of Canebrake Creek, Chimney Creek, Spanish Needles Creek, South Fork and Lower Kern, and North, Middle, and East Forks of the Kaweah .

Alternative 3 Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>6 ACECs 45,031 acres</p> <p>8 SMAs Proposed 51,510 acres + NCLWMA</p> <p>Exchange up to 21,000 acres</p> <p>Acquire lands of high resource value in Keyesville and Erskine Creek areas</p> <p>51 Allotments - 188,596 acres Add'l mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; season restrictions within riparian areas.</p> <p>393,000 acres of Federal mineral estate available for Oil and gas and Geothermal leasing.</p> <p>394,000 acres of Federal mineral estate available for other leasable minerals</p> <p>109,000 acres withdrawn from mineral entry, and 2,150 proposed for withdrawal.</p> <p>1 ACEC & Short Canyon closed to OHVs</p> <p>Study Suitability of Canebroke Creek, Chimney Creek, Spanish Needles Creek, South Fork and Lower Kern, and North, Middle, and East Forks of the Kaweah .</p>	<p>5 ACECs 40,500 acres</p> <p>3 SMAs Proposed</p> <p>Exchange up to 28,000 acres</p> <p>No acres have been specifically proposed for acquisition</p> <p>51 Allotments - 188,596 acres Limited mulch requirements; lands available for new allotments; no seasonal restrictions in riparian areas.</p> <p>394,000 acres of Federal mineral estate available for Oil and gas and Geothermal leasing.</p> <p>391,000 acres of Federal mineral estate available for other leasable minerals</p> <p>109,000 acres withdrawn from mineral entry, and 2,000 acres proposed for withdrawal.</p> <p>1 ACEC & Short Canyon closed to OHVs; 1 OHV Open Area</p> <p>Study Suitability of Canebroke Creek, Chimney Creek, Spanish Needles Creek, South Fork and Lower Kern, and North, Middle, and East Forks of the Kaweah .</p>	<p>4 ACECs 24,120 acres</p> <p>9 SMAs Proposed 155,485 acres & 116 miles</p> <p>Reposition 53,500 acres; on 113,500 acres transfer primary management responsibilities to another agency, if feasible.</p> <p>Acquire wilderness inholdings, lands of high resource value in Keyesville and Erskine Creek, and small areas needed to meet mgt area objectives.</p> <p>53 Allotments - 190,000 acres Add'l mulch requirements (500#) & seasonal restrictions within listed species habitat; lands available for new allotments; season restrictions within riparian areas.</p> <p>333,600 acres of Federal mineral estate available for Oil and gas leasing and 454,000 acres for Geothermal leasing.</p> <p>465,700 acres of Federal mineral estate available for other leasable minerals</p> <p>109,000 acres withdrawn from mineral entry, and 6,300 are proposed for withdrawal.</p> <p>1 ACEC , 1 wilderness area & Short Canyon Closed to OHVs</p> <p>Study Suitability of Lower Kern, and North, Middle, and East Forks of the Kaweah.</p>

Comparative Summary of Impacts

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Air Quality	<p>Fugitive dust, PM₁₀, contributed from paved, unpaved and open sources on public lands, estimated at < 1%, is negligible.</p> <p>Emissions due to O&G operations could have an effect in the immediate area of activity but would be of no significance air basin wide because of new source rules.</p> <p>Development/operations following land disposal, mineral extraction, etc. could result in localized increased PM₁₀ production. Emission generation would be regulated by dust control rules, and could have slight to moderate impacts.</p>	<p>Fugitive dust, PM₁₀, contributed from paved, unpaved and open sources on public lands, estimated at < 1%, is negligible.</p> <p>Emissions due to O&G operations could have an effect in the immediate area of activity but would be of no significance air basin wide because of new source rules.</p> <p>This alternative has the least impact on emissions from development or operations following land disposal, mineral exploration because of fewer acres open.</p>
Land Tenure Adjustment	<p>Approximately 39,000 acres of public land would be considered for disposal through exchange or sale. Acquisitions would target high resource values. The Bureau's ability to manage these lands would be increased due to their consolidation into larger blocks. Privatization of the public land may increase opportunities to meet some rural residential growth needs, while impacts to open space are expected to be slight.</p>	<p>Approximately 19,500 acres of public land would be considered for disposal through exchange or sale under this alternative. Most lands with significant resources are unavailable for disposal. There would be fewer opportunities to meet rural growth needs. Open space would be retained, but difficult to manage.</p>
Land Use Authorizations	<p>Applications for land use authorizations are expected to increase with community expansion and increase rural residential development to support population growth. When these actions occur within Federally listed species habitat, there may be delays or additional costs borne by the applicant to mitigate or compensate for disturbance or habitat loss.</p>	<p>Under this Alternative land use applications may be reduced by 20% due to constraints on public lands with high resource values. Land uses would be constrained in right-of-way exclusion and avoidance areas (379,300 acres). Mitigation costs would increase.</p> <p>Designation of utility corridors may reduce right-of-way proliferation.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>Fugitive dust, PM₁₀, contributed from paved, unpaved and open sources on public lands, estimated at < 1%, is negligible.</p>	<p>Designating OHV use areas may enhance PM₁₀ control and further reduce production from dispersed activities on public land.</p>	<p>Fugitive dust, PM₁₀, contributions from public land will drop under this alternative by limiting vehicle use to designated routes.</p>
<p>Emissions due to O&G operations could have an effect in the immediate area of activity but would be of no significance air basin wide because of new source rules.</p>	<p>Emissions due to O&G operations could have an effect in the immediate area of activity but would be of no significance air basin wide because of new source rules.</p>	<p>Under this alternative there would be no increase in emissions due to O&G operations because of new source rules.</p>
<p>Development/operations following land disposal, mineral extraction, etc. could result in an increased PM₁₀ production in the SJVAB. Emission generation would be regulated by dust control rules, and could have slight to moderate impacts.</p>	<p>This alternative has the potential to have the most impact with 712,000 acres open for leasing of solid minerals and 80,000 acres available for disposal. The generation of PM₁₀ could affect air basin air quality.</p>	<p>There is no anticipated change in air quality resulting from land tenure adjustment, and a possible slight positive effect on development/operations from local APCD PM₁₀ requirements.</p>
<p>Approximately 48,750 acres of public land would be considered for disposal through exchange or sale under this alternative. Most lands with significant resources are unavailable for disposal. There would be a greater ability to meet rural growth needs and to improve manageability of public lands.</p>	<p>Approximately 45,000 acres of public land would be considered for disposal through exchange or sale under this alternative. Most lands with significant resources are unavailable for disposal. There would be a greater ability to meet rural growth needs and to improve manageability of public lands.</p>	<p>Approximately 200,000 acres of public land would be considered for disposal through exchange or sale. Acquisitions would target high resource values. The Bureau's ability to manage these lands would be increased due to their consolidation into larger blocks. Privatization of the public land may increase opportunities to meet some rural residential growth needs, while impacts to open space are expected to be slight.</p>
<p>Under this alternative land uses would be constrained where right-of-way exclusion and avoidance areas have been identified (323,300 acres). Mitigation costs would increase slightly. This may also reduce the number of land use applications by 15%.</p>	<p>Under this alternative right-of-way exclusion and avoidance areas could constrain land uses on 286,000 acres. This may also reduce the number of land use applications by 10%.</p>	<p>Land uses would be constrained on (359,800 acres). Mitigation costs would increase slightly. This may also reduce the number of land use applications by up to 15%.</p>
<p>Designation of utility corridors may reduce right-of-way proliferation.</p>	<p>Designation of utility corridors may reduce right-of-way proliferation.</p>	<p>Designation of utility corridors may reduce right-of-way proliferation.</p>

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Livestock Grazing	<p>Approximately 20% less forage would be allowed to be harvested from public land, mainly within the Valley Management Area, due to restrictions required to protect listed threatened or endangered species. Seasonal use restrictions would reduce management flexibility and eliminate 16% of the grazing season. 2,974 AUMs of forage would be lost to land disposal action and oil or gas development. Livestock grazing would be suspended on one entire allotment and portions of 6 allotments involving 3,432 acres of public land.</p> <p>There would be no significant economic impact to the Coast or Sierra Management Area, and slight to moderate adverse economic impact to grazing operations in the Valley Management Area.</p>	<p>Approximately 60% less forage would be harvested from public land, mainly within the Valley Management Area, to protect listed threatened or endangered species. This alternative could eliminate 50% of the grazing season of use for the Valley Management Area. 1,938 AUMs of forage within existing allotments could be lost to land disposal actions or oil and gas development. Livestock grazing could be suspended on 14 entire allotments and portions of 3 other allotments involving 24,219 acres of public land.</p> <p>There would be a moderate to high adverse economic impact to most grazing operations within the Valley Management Area and to those on 19 allotments within the South Sierra Management Area.</p>
Minerals	<p>Under this alternative 110,900 acres are closed to mineral development and 500 acres are proposed for closure to mineral development.</p> <p>Under this alternative 826,900 acres remain open to solid mineral development.</p> <p>Minimal interest in minerals at Pt. Sal will result in no impacts on solid mineral development.</p>	<p>Under this alternative 110,900 acres are closed to mineral development and 34,000 acres are proposed for closure to mineral development.</p> <p>Under this alternative 793,400 acres remain open to solid mineral development.</p> <p>Moderate impact to the Mining industry would be felt in the Coast and Sierra Management Areas. ACECs proposed for closure would include areas of current mining interest such as Cypress Mountain, Keyville, and Piute Cypress.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5-Preferred
<p>Approximately 20% less forage would be allowed to be harvested from public land, mainly within the Valley Management Area, to protect listed threatened or endangered species. Seasonal use restrictions could reduce management flexibility and eliminate 15% of the grazing season. 4,774 AUMs of forage within existing allotments could be lost to land disposal actions or oil and gas development. Grazing could be suspended on one entire allotment and portions of six other allotments involving 3,432 acres of public land.</p>	<p>Available forage would be grazed more closely under this alternative than any other alternative, resulting in the most AUMs of forage harvested. Seasons of use would remain unchanged. 2,974 AUMs of forage within existing allotments would be lost to land disposal actions or oil and gas development.</p>	<p>Approximately 20% less forage would be allowed to be harvested from public land, mainly within the Valley Management Area, to protect listed threatened or endangered species. Seasonal use restrictions could reduce management flexibility and eliminate 15% of the grazing season. Approximately 4800 AUMs of forage within existing allotments could be lost to land disposal actions or oil and gas development. Grazing could be suspended on one entire allotment and portions of six other allotments involving 3,400 acres of public land.</p>
<p>There would be no significant economic impact to the grazing operations in the Coast or South Sierra Management Areas, and a slight to moderate adverse economic impact to operations within the Valley Management Area.</p>	<p>There would be no significant economic impact to existing grazing operations within the Caliente Resource Area.</p>	<p>There would be no significant economic impact to the grazing operations in the Coast or South Sierra Management Areas, and a slight to moderate adverse economic impact to operations within the Valley Management Area.</p>
<p>Under this alternative 110,900 acres are closed to mineral development and 12,000 acres are proposed for closure to mineral development.</p>	<p>Under this alternative 110,900 acres are closed to mineral development and 9,000 acres are proposed for closure to mineral development.</p>	<p>Under this alternative 110,900 acres are closed to mineral development and 20,100 acres are proposed for closure to mineral development.</p>
<p>Under this alternative 815,400 acres remain open to solid mineral development.</p>	<p>Under this alternative 818,400 acres remain open to solid mineral development.</p>	<p>Under this alternative 807,300 acres remain open to solid mineral development.</p>
<p>There would be no significant economic impact to the mineral operations in the Coast or Valley Management Areas and a small effect due to the closure of the Plute Cypress ACEC to mining in the Sierra Management Area.</p>	<p>There would be no significant economic impact to existing mining operations within the Caliente Resource Area.</p>	<p>Mining interest in the lands proposed for withdrawal from mineral entry is believed to be minimal, and effects from the proposed withdrawals will be small.</p>

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
<p>Minerals (Continued)</p>	<p>A total of 826,900 acres remain open to solid mineral development. 110,900 acres are closed by previous federal action. Approximately 500 additional acres would be closed under this Plan.</p> <p>12% of the total 938,000 acres of the Caliente Resource Area are unavailable to solid mineral development due to existing closures. The closure of Point Sal will have negligible effects on the mining industry.</p>	<p>A total of 793,400 acres remain open to solid mineral development. 110,900 acres are closed by previous federal action. Approximately 34,000 additional acres would be closed under this Plan.</p> <p>12% of the total 938,000 acres of the Caliente Resource Area are unavailable to solid mineral development due to existing closures. The closure of areas with known development potential such as Keyesville, would have moderate effects on the mining industry within the Sierra Management Area, and small effects on the Valley and Coast Management Areas.</p>
<p>Oil and Gas</p>	<p>No effect on the development of oil resources would be anticipated for the entire Resource Area from proposals under the No Action Alternative.</p>	<p>Of the total acreage within the Caliente Resource Area, 155,000 acres are unavailable to oil and gas leasing by existing closure. Approximately an additional 200,000 acres would be closed to oil and gas leasing under the Resource Protection Alternative. Effects to the industry would be anticipated to be moderate to high, with the greatest impacts felt in the Valley Management Area.</p> <p>Low industry interest in leasing federal lands for oil exploration in the Coast and Sierra Management Areas would result in minimal effects in those areas.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>A total of 815,400 acres remain open to solid mineral development. 110,900 acres are closed by previous federal action. Approximately 12,000 additional acres would be closed under this Plan.</p> <p>12% of the total 938,000 acres of the Caliente Resource Area are unavailable to solid mineral development due to existing closures. The proposed closures are located in the Coast Management Area where mining industry has waned and should produce minimal effects on the industry.</p> <p>Of the total acreage within the Caliente Resource Area, 155,000 acres are unavailable to oil and gas leasing by existing closure. Approximately an additional 42,000 acres would be closed to oil and gas leasing under the Admin. Adjustment Alternative.</p> <p>Effects from the application of special leasing stipulations would be minimized by the limited application of the most restricted stipulations.</p> <p>Additional lands recommended for closure would be located primarily in the Sierra Management Area, where there is little overlap between oil and gas development and habitat conservation.</p>	<p>A total of 181,400 acres remain open to solid mineral development. 110,900 acres are closed by previous federal action.</p> <p>There would be no significant economic impact to existing mining operations within the Caliente Resource Area.</p> <p>Of the total acreage within the Caliente Resource Area, 155,000 acres are unavailable to oil and gas leasing by existing closure. Approximately an additional 41,000 acres would be closed to oil and gas leasing under the Development Alternative.</p> <p>Effects from the above acreage closures would be minimum, being primarily located in the Sierra Management Area.</p>	<p>A total of 807,300 acres remain open to solid mineral development. 110,900 acres are closed by previous federal action. Approximately 20,100 additional acres would be closed under this Plan.</p> <p>12% of the total 938,000 acres of the Caliente Resource Area are unavailable to solid mineral development due to existing closures. An additional 2% are proposed for closure under this Plan.</p> <p>With a low level of interest from the mining industry, and low to moderate potential for mineral development, the additional closures will result in minimal effects on the mining industry.</p> <p>Of the total 940,000 acres within the Caliente Resource Area, 630,000 acres remain open to leasing. 16% of the total federal acreage administered by the BLM is unavailable due to existing closures. Less than an additional 2% is proposed to be closed to oil and gas development by this Plan.</p> <p>No effects on the development of oil resources would be anticipated for the Coast and Sierra Management Area. A small or minimal effect would be experienced by the oil industry in the Valley Management Area. Effects from the application of special leasing stipulations would be minimized by the limited application of the most restricted stipulations.</p>

Resource/ use	Alternative 1 - No Action	Alternative 2 - Resource Protection
<p>Recreation</p>	<p>Little change from existing recreation use, opportunities, and impacts.</p> <p>Continued adverse impacts and user conflicts from dispersed camping activities along the North Fork of the Kaweah River and in the Keyesville area.</p> <p>No shooting restrictions, but continued user conflicts and safety concerns.</p> <p>Emphasis on providing dispersed undeveloped recreation opportunities and maintaining the existing facilities. Increasing amounts of dispersed use may reduce the quality of the recreationists' experience.</p> <p>Sanitation problems along the Kern River from unmanaged concentrated use.</p>	<p>Greatest restrictions on general dispersed camping.</p> <p>Provide developed picnic areas along the North Fork of the Kaweah River, increasing day use opportunities in this area with a loss of dispersed camping along the river.</p> <p>Shooting closures would have limited impacts, as other nearby areas would remain open.</p> <p>Develop picnic area at Keyesville and close to dispersed camping except by permit. Will result in loss of dispersed camping in that area.</p> <p>Increased public access to areas without existing access would increase opportunities for dispersed use in these areas, primarily from hunting and OHV use.</p> <p>The additional low water raft launch site would permit rafting during low water years, with reduced impacts from launching activities.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>Emphasis on increased access, with additional facilities.</p> <p>Provide developed picnic areas along the North Fork of the Kaweah River, increasing day use opportunities in this area with a loss of dispersed camping along the river.</p> <p>Shooting closures would have limited impacts, as other nearby areas would remain open.</p> <p>Develop picnic area at Keyesville and close to dispersed camping except by permit. Will result in loss of dispersed camping in that area.</p> <p>Increased public access to areas without existing access would increase opportunities for dispersed use in these areas, primarily from hunting and OHV use, greater access improves opportunities for dispersed activities.</p>	<p>Emphasis on increased facilities, opportunities, and access.</p> <p>A developed campground would reduce impacts from dispersed camping along the N. Fork Kaweah River, while still providing camping opportunities.</p> <p>Shooting closures would have limited impacts, as other nearby areas would remain open.</p> <p>Developed campground would provide additional camping near Lake Isabella with a loss of dispersed camping, except along the Kern River.</p> <p>Increased public access to areas without existing access would increase opportunities for dispersed use in these areas, primarily from hunting and OHV use.</p> <p>The additional low water raft launch site would permit rafting during low water years, with reduced impacts from launching activities.</p>	<p>Increased facilities, opportunities, and access.</p> <p>Improved facilities and patrol would reduce impacts while still allowing dispersed use.</p> <p>Shooting closures in high use areas would reduce conflicts, while leaving most lands open to shooting.</p> <p>Continued dispersed undeveloped recreation opportunities may continue to reduce the quality of recreation experience. However, restricting vehicle travel to designated trails will reduce user conflicts.</p> <p>Increased public access to areas without existing access would increase opportunities for dispersed use in these areas, primarily from hunting and OHV use.</p> <p>The additional low water raft launch site would permit rafting during low water years, with reduced impacts from launching activities.</p> <p>Restrictions specific to the Caliente Resource Area for shortened lengths of stay for visitors will accommodate use by more visitors</p>

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
<p>Vegetation</p>	<p>Grazing is expected to be compatible with the five listed plant species. Grazing may adversely affect alkali mariposa lily, Jared's pepper-grass, and oak wood-land. Grazing may indirectly impact or have minimal direct impacts to annual saltbush species, Kelso Creek monkey-flower, recurved larkspur, hollisteria, Owen's Peak lomatium, Piute Mountains jewefflower, Nine Mile Canyon phacelia, oval-leaved snapdragon, and forked fiddleneck. Moderate impacts from grazing may result to valley saltbush scrub, Joshua tree woodland, and giant Sequoia forest.</p> <p>Oil and gas exploration, leasing, and development may adversely affect the federally listed plants, special status plant species which occur within the Valley MA, and valley saltbush scrub, and valley sink scrub.</p> <p>Development following land disposal would have negative impacts on the listed species potential habitat, alkali mariposa lily, Kelso Creek monkey-flower, valley saltbush scrub, oak woodland, valley sink scrub, and Joshua tree woodland.</p> <p>Mining activities may negatively affect mouse buckwheat and Joshua tree woodland. Other species may also be adversely affected.</p> <p>Vehicle travel is limited to designated routes of travel. No impacts expected from authorized OHV use.</p> <p>Acquisition of lands with listed or special status species or special plant communities may benefit these species and communities.</p>	<p>Grazing management should have no negative impacts on the listed species and may enhance the recovery of the species. Impacts from grazing would be the same as Alternative 1 for recurved larkspur, forked fiddleneck, hollisteria, Jared's pepper-grass, mouse buckwheat, and Nine Mile Canyon phacelia. Grazing should have only minimal impacts on annual saltbush species, Kelso Creek monkey-flower, oval-leaved snapdragon, Owen's Peak lomatium, valley saltbush scrub, oak woodland, valley sink scrub, Joshua tree woodland, and giant Sequoia forest.</p> <p>Oil and gas exploration, leasing, and development may adversely affect the federally listed plants, special status plant species which occur within the Valley MA, and valley saltbush scrub, and valley sink scrub.</p> <p>Development following land disposal may negatively impact potential habitat for listed and sensitive status species. Negative impacts may also occur to the sensitive plant communities.</p> <p>Mining activities may negatively affect mouse buckwheat and Joshua tree woodland. Other species may also be adversely affected.</p> <p>Vehicle travel is limited to designated routes of travel. No impacts expected from authorized OHV use.</p> <p>Increased emphasis on acquisition of lands with listed or special status species or special plant communities and designation of several new ACECs should benefit many of these species and communities.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>Grazing is expected to be compatible with the listed species. Grazing may adversely affect alkali mariposa lily and Jared's pepper-grass. Grazing may indirectly impact or have minimal direct impacts to annual saltbush species, Kelso Creek monkeyflower, recurved larkspur, hollisteria, Owen's Peak lomatium, Piute Mountains jewelflower, Nine Mile Canyon phacelia, oval-leaved snapdragon, and forked fiddleneck. Moderate impacts from grazing may result to valley saltbush scrub, Joshua tree woodland, oak woodland, and giant Sequoia forest.</p> <p>Oil and gas exploration, leasing, and development may adversely affect the federally listed plants, special status plant species which occur within the Valley MA, and valley saltbush scrub, and valley sink scrub.</p> <p>Development following disposal may negatively affect listed and sensitive status species potential habitat and occupied habitat of alkali mariposa lily, Kelso Creek Monkeyflower, valley sink scrub, oak woodland, valley sink scrub, and Joshua tree woodland.</p> <p>Mining activities may negatively affect mouse buckwheat and Joshua tree woodland. Other species may also be adversely affected.</p> <p>Vehicle travel is limited to designated routes of travel. No impacts expected from authorized OHV use.</p> <p>Acquisition of lands with listed or special status species or special plant communities and designation of some new ACECs should benefit many of these species and communities.</p>	<p>Grazing may result in the extirpation of populations of California jewel-flower and Kern mallow. Grazing may severely impact San Joaquin woolly-threads, Hoover's woolly-star, and potential habitat for Bakersfield cactus. Grazing may indirectly impact or have minimal direct impacts to annual saltbush species, Kelso Creek monkeyflower, recurved lark-spur, hollisteria, Owen's Peak lomatium, Piute Mountains jewelflower, Nine Mile Canyon phacelia, oval-leaved snapdragon, and forked fiddle-neck. Grazing may severely damage valley saltbush scrub and oak wood-land, resulting in the decline of both communities.</p> <p>Oil and gas leasing and development may result in more severe impacts to potential habitat for listed species and occupied habitat of special status plant species which occur within the Valley MA, and valley saltbush scrub, and valley sink scrub.</p> <p>Development following disposal may negatively affect listed and sensitive status species potential and occupied habitat.</p> <p>Mining activities may negatively affect mouse buckwheat and Joshua tree woodland. Other species may also be adversely affected.</p> <p>OHV development will seriously impact alkali mariposa lily and Kelso Creek monkeyflower resulting in the extirpation of populations occurring in Cyrus Flat.</p> <p>Acquisition of lands with listed or special status species or special plant communities and designation of some new ACECs should benefit many of these species and communities.</p>	<p>Grazing is expected to be compatible with the listed species. Grazing may adversely affect alkali mariposa lily, Jared's pepper-grass, and oak woodland. Grazing may indirectly impact or have minimal direct impacts to annual saltbush species, Kelso Creek monkeyflower, recurved larkspur, hollisteria, Owen's Peak lomatium, Piute Mountains jewelflower, Nine Mile Canyon phacelia, oval-leaved snapdragon, and forked fiddleneck. Moderate impacts from grazing may result to valley saltbush scrub, Joshua tree woodland, and giant Sequoia forest.</p> <p>Oil and gas exploration, leasing, and development may adversely affect the federally listed plants, special status plant species which occur within the Valley MA, and valley saltbush scrub, and valley sink scrub.</p> <p>Development following disposal may negatively affect listed and special status species potential habitat and occupied habitat of alkali mariposa lily, Kelso Creek Monkeyflower, valley sink scrub, oak woodland, valley sink scrub, and Joshua tree woodland.</p> <p>Mining activities may negatively affect mouse buckwheat and Joshua tree woodland. Other species may also be adversely affected.</p> <p>Vehicle travel is limited to designated routes of travel. No impacts expected from authorized OHV use.</p> <p>Acquisition of lands with listed or special status species or special plant communities and designation of some new ACECs should benefit many of these species and communities.</p>

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
Water Resources	<p>A moderate to high hazard of erosion exists on all watersheds of the Sierra and Coast Management Areas as a consequence of current watershed condition. The continuing Wildfire potential elevates potential impacts.</p>	<p>This alternative is the most beneficial management option for water resources development and protection. However, wildfire continues to pose a potential threat. Nonpoint pollution is the primary threat and the potential impact is low.</p>
Wildlife	<p><u>Federally Listed Species</u></p> <p>Grazing is expected to be compatible with all listed species. It is unknown how discontinuation of grazing will affect Tipton kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect most listed species.</p> <p>Mineral extraction and spraying of malathion may adversely affect blunt-nosed leopard lizards. Exchanges of lands may either benefit or adversely affect the blunt-nosed leopard lizard, giant kangaroo rat and San Joaquin kit fox. Disposal of public land may adversely affect the California condor, Tipton kangaroo rat and Kern primrose sphinx moth. Continued designation of five ACECs and management of the Carrizo Plain Natural Area will benefit most species.</p> <p><u>Special Status Species</u></p> <p>Grazing is expected to be either compatible with or adversely affect special status species. It is unknown how discontinuation of grazing will affect short-nosed kangaroo rats. Continued leasing, development, and operation in old or new oil and gas fields for oil and gas development may adversely affect the LeConte's thrasher.</p>	<p><u>Federally Listed Species</u></p> <p>Grazing is expected to be compatible with all listed species. It is unknown how discontinuation of grazing will affect Tipton kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect most listed species.</p> <p>Mineral extraction and spraying of malathion may adversely affect blunt-nosed leopard lizards. Disposal of public land may adversely affect the California condor. Continued designation of two ACECs and designation of six new ACECs is expected to benefit listed species.</p> <p><u>Special Status Species</u></p> <p>Grazing is expected to be compatible with special status species in some allotments and adversely affect special status species in other allotments. It is unknown how discontinuation of grazing will affect short-nosed kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect the LeConte's thrasher.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>The Administrative Adjustment Alternative differs only slightly from Alternative Two for water resource development and protection. Wildfire continues to pose a potential threat. Nonpoint pollution is the primary threat and the potential impact is moderate.</p>	<p>The Development Emphasis Alternative would have the most impact on water resources. Wildfire continues to pose a potential threat. Nonpoint pollution is the primary threat and the potential impact is moderate.</p>	<p>The Preferred Alternative adequately provides for water resource development and protection. However, wildfire continues to pose a potential threat. Nonpoint pollution is the primary threat, although impacts may decrease under this alternative.</p>
<p><u>Federally Listed Species</u></p>	<p><u>Federally Listed Species</u></p>	<p><u>Federally Listed Species</u></p>
<p>Grazing is expected to be compatible with all listed species. It is unknown how discontinuation of grazing will affect Tipton kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect most listed species.</p>	<p>In most allotments, grazing is expected to adversely affect listed species. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect most listed species.</p>	<p>Grazing is expected to be compatible with all listed species. It is unknown how discontinuation of grazing will affect Tipton kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development are expected to avoid areas of importance to listed species.</p>
<p>Mineral extraction and spraying of malathion may adversely affect blunt-nosed leopard lizards. Exchanges of lands may either benefit or adversely affect the blunt-nosed leopard lizard, giant kangaroo rat and San Joaquin kit fox. Disposal of public land may adversely affect most listed species. Continued designation of two ACECs and designation of three new ACECs will benefit most species.</p>	<p>Mineral extraction and spraying of malathion may adversely affect blunt-nosed leopard lizards. Exchanges of lands may either benefit or adversely affect the giant kangaroo rat and San Joaquin kit fox. Disposal of public land may adversely affect the California condor, Tipton kangaroo rat and Kern primrose sphinx moth. Continued designation of two ACECs and designation of three new ACECs will benefit most species.</p>	<p>Mineral extraction would be subject to compatibility with listed species objectives. Spraying of malathion may adversely affect blunt-nosed leopard lizards. Land Tenure adjustments, such as exchanges, should contribute to securing lands important in the recovery of listed species. Retention of two ACECs and designation of four new ACECs will benefit most species.</p>
<p><u>Special Status Species</u></p>	<p><u>Special Status Species</u></p>	<p><u>Special Status Species</u></p>
<p>Grazing is expected to be compatible with special status species in some allotments and adversely affect special status species in other allotments. It is unknown how discontinuation of grazing will affect short-nosed kangaroo rats. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect the LeConte's thrasher.</p>	<p>In most allotments, grazing is expected to adversely affect special status species. Continued development and operation of existing oil and gas fields and issuing leases for oil and gas development may adversely affect the LeConte's thrasher.</p>	<p>Grazing is expected to be compatible with special status species in most locations. It is unknown how discontinuation of grazing will affect short-nosed kangaroo rats. Continued leasing, development, and operation in old or new oil and gas fields for oil and gas development may adversely affect the LeConte's thrasher.</p>

Resource/Use	Alternative 1 - No Action	Alternative 2 - Resource Protection
<p>Wildlife (Continued)</p>	<p>Mineral extraction and disposal of public lands may adversely affect Mojave ground squirrels. Maintenance of existing roads may adversely affect San Joaquin antelope squirrels.</p> <p>Continued designation of four ACECs and management of the CPNA will benefit most species.</p> <p><u>High Economic or Recreation Value Species</u></p> <p>Grazing is expected to be either compatible with or adversely affect game species. Continued designation of one ACEC and management of three NCLWMAs is expected to benefit the species.</p> <p><u>Aquatic, Wetland or Riparian Habitat</u></p> <p>Livestock grazing may adversely affect riparian resources on some allotments. Riparian habitat may be present on some parcels identified for disposal.</p> <p>Continued designation of three ACECs and management of the Carrizo Plain Natural Area is expected to benefit riparian, alkali pond and intertidal habitat.</p> <p><u>Significant Populations</u></p> <p>Suitable habitat conditions for raptors will continue to be provided on public lands. Continued designation of five ACECs and management of the CPNA is expected to benefit raptors. Livestock grazing and land disposals may adversely affect riparian resources used by some neotropical migrants. Retention of two ACECs is expected to benefit neotropical species.</p>	<p>Mineral extraction would be subject to compatibility with special status species objectives. Maintenance of existing roads may adversely affect San Joaquin antelope squirrels.</p> <p>Continued designation of one ACEC and designation of four new ACECs is expected to benefit special status species.</p> <p><u>High Economic or Recreation Value Species</u></p> <p>Grazing is expected to be compatible with game species in most allotments. Continued designation of one ACEC and three NCLWMAs and designation of eight new ACECs is expected to benefit the species.</p> <p><u>Aquatic, Wetland or Riparian Habitat</u></p> <p>Livestock grazing is expected to be compatible with riparian resources on most allotments.</p> <p>Continued designation of two ACECs and designation of ten new ACECs is expected to benefit riparian, wetland and intertidal habitat.</p> <p><u>Significant Populations</u></p> <p>Suitable habitat conditions for raptors will continue to be provided on public lands. Continued designation of two ACECs and designation of nine new ACECs is expected to benefit raptor species. Livestock grazing may have a slight adverse effect on riparian resources used by some neotropical migrants. Retention of two ACECs and designation of six new ACECs is expected to benefit neotropical species.</p>

Alternative 3 - Administrative Adjustment	Alternative 4 - Development	Alternative 5 - Preferred
<p>Mineral extraction and disposal of public lands may adversely affect Mojave ground squirrels. Maintenance of existing roads may adversely affect San Joaquin antelope squirrels.</p> <p>Continued designation of one ACEC and designation of three new ACECs will benefit most species.</p>	<p>Mineral extraction and disposal of public lands may adversely affect Mojave ground squirrels. Maintenance of existing roads may adversely affect San Joaquin antelope squirrels.</p> <p>Continued designation of one ACEC and designation of three new ACECs will benefit most species.</p>	<p>Mineral extraction would be subject to compatibility with special status species objectives. Maintenance of existing roads may adversely affect San Joaquin antelope squirrels.</p> <p>Continued designation of one ACEC and five new ACECs will benefit most species.</p>
<p><u>High Economic or Recreation Value Species</u></p>	<p><u>High Economic or Recreation Value Species</u></p>	<p><u>High Economic or Recreation Value Species</u></p>
<p>Grazing is expected to be compatible with game species in some allotments and adversely affect game species in other allotments. Retention of one ACEC and three NCLWMA and designation of four new ACECs is expected to benefit the species.</p>	<p>Grazing is expected to be compatible with game species in some allotments and adversely affect game species in other allotments. Retention of one ACEC and three NCLWMA and designation of four new ACECs is expected to benefit the species.</p>	<p>Grazing is expected to be compatible with game species in most allotments. Retention of one ACEC and three NCLWMA and designation of four new ACECs is expected to benefit the species.</p>
<p><u>Aquatic, Wetland or Riparian Habitat</u></p>	<p><u>Aquatic, Wetland or Riparian Habitat</u></p>	<p><u>Aquatic, Wetland or Riparian Habitat</u></p>
<p>Livestock grazing may adversely affect riparian resources on some allotments. Riparian habitat may be present on some parcels identified for disposal.</p>	<p>Livestock grazing may adversely affect riparian resources on some allotments. Riparian habitat may be present on some parcels identified for disposal.</p>	<p>Livestock grazing is expected to be compatible with riparian resources on most allotments. Riparian habitat may be present on some parcels identified for land tenure adjustment.</p>
<p>Continued designation of one ACEC and designation of five new ACECs is expected to benefit riparian, alkali pond and intertidal habitat.</p>	<p>Continued designation of two ACECs and designation of four new ACECs is expected to benefit riparian, alkali pond and intertidal habitat.</p>	<p>Continued designation of two ACECs and designation of five new ACECs is expected to benefit riparian, alkali pond and intertidal habitat.</p>
<p><u>Significant Populations</u></p>	<p><u>Significant Populations</u></p>	<p><u>Significant Populations</u></p>
<p>Suitable conditions for raptors will continue to be provided on public lands. Continued designation of two ACECs and designation of five new ACECs is expected to benefit raptor species. Grazing and land disposals may adversely affect riparian resources used by some neotropical migrants. Retention of two ACECs and designation of three new ACECs is expected to benefit neotropical species.</p>	<p>Suitable habitat conditions for raptors will continue to be provided on public lands. Retention of two ACECs and designation of four new ACECs is expected to benefit raptor species. Livestock grazing and land disposals may adversely affect riparian resources used by some neotropical migrants. Retention of two ACECs and designation of three new ACECs is expected to benefit neotropical species.</p>	<p>Suitable habitat conditions for raptors will continue to be provided on public lands. Retention of two ACECs and designation of seven new ACECs is expected to benefit raptor species. Grazing may have a slight adverse affect on riparian resources used by some neotropical migrants. Retention of two ACECs and designation of four new ACECs is expected to benefit neotropical species.</p>

Chapter 5 - Consultation and Coordination

Introduction

Public involvement is an integral part of the development of the Resource Management Plan (RMP). This chapter describes the public participation procedures utilized by the BLM in the development of the Proposed Final RMP and Final Environmental Impact Statement (FEIS), and summarizes comments made on the draft RMP/EIS.

The chapter is divided into five sections: 1) Overview of Public Participation; 2) Comments and Responses; 3) Glossary; 4) Acronyms and 5) Preparers.

Overview of the Public Involvement Process

The Council on Environmental Quality regulations (40 CFR 1501.7) and BLM's planning regulations (43 CFR 1610.4-1) require an early and open process (scoping) for determining the planning issues. The regulations also require opportunities for public involvement during the planning process, including review of the planning criteria and review of the draft RMP/EIS. In addition, those persons or organizations who have participated in the planning process are given an opportunity to protest any part of the Proposed RMP that they believe to be in error. These opportunities have been or are being provided during the development of this RMP. In addition, efforts have been made to make the public aware of the planning process and of opportunities for involvement.

Issue Identification/Public Scoping

A Notice of Intent to Prepare the Resource Management Plan (RMP) was published in the Federal Register on April 14, 1989 (54 FR 15028), and a Notice of Availability of Proposed Planning Criteria and Pre-Planning Analysis was published on October 17, 1989 (54 FR 42575). The Notice of Intent to Prepare the RMP announced the schedule of public scoping meetings and invited public participation. In addition, an announcement of the meetings was made in a letter to the mailing list of over 1300 persons and organizations. An Amendment to the original Notice Of Intent inviting the public to nominate ACECs was published on August 14, 1991 (56 FR 40341).

Six public scoping meetings were held in April 1989 for identifying public concerns in the issue identification process. A total of 68 concerns were identified at the public meetings, with access/land tenure adjustment and oil & gas issues being brought up most often. Other categories of concern included development and use conflicts, OHV use, and law enforcement/BLM presence.

Review of the Draft RMP/EIS

The scheduled 90 day comment period following distribution of the Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) was extended for an additional 30 days in response to public requests. The comment period began on July 1, 1994. During the comment period 153 people attended the 6 Open Houses which were held in Lake Isabella, Bakersfield, Three Rivers, Taft, New Cuyama and San Luis Obispo. Copies of the draft RMP/EIS were furnished to numerous public libraries throughout the planning area and mailed to over 1,000 individuals, organizations and other agencies who requested to review the document. The distribution list can be found on pages 407-410 of the Draft document.

Public Comments

A total of 286 comment letters containing 787 comments covering a wide range of topics were received. All comments were carefully considered in the preparation of the Proposed Final EIS and RMP. In response to the comments a number of clarifying statements, modifications to the proposed actions, and revisions to the environmental analysis have been added to the final documents. A brief description of these changes is included in the preface of this Final EIS.

Comments addressed in detail are those relating to inadequacies or inaccuracies in the analysis or analysis methodologies used, identifying new impacts, recommending reasonable new alternatives or involving substantive disagreements or interpretations of significance. Numerous comments were received that raised questions, pointed out the need for clarification, suggested editorial changes, expressed opinions or preferences for differing alternatives. Those comments have been only briefly summarized.

Because of the volume of comments received on the draft EIS, it was not feasible to reprint individual letters or statements, although they are retained as a part of the record. Comments have been abstracted and categorized by issue, topic or geographic area. Where feasible, references are made in the responses to the location in the final documents where either changes have been made or additional clarification has been provided.

List of Commentors

Federal Agencies

USDA Forest Service - Sandra Key
 USDOE Naval Petroleum Reserve - Danny Hogan
 USDI Bureau Mines - Michael D. Dunn
 U.S. Environmental Protection Agency - J. Farrell

State Agencies

Cal Coastal Commission
 Cal Reg Water Quality Control Board
 Central Valley Region - Lonnie M. Wass
 Cal Department of Conservation
 Cal Department of Fish & Game - George Nokes
 Cal Division of Oil & Gas - Hal Bopp
 Cal Resource Agency - Jason Marshall
 San Joaquin Valley Unified Air Pollution Control
 District (SJVUAPCD) - Blair R. Bradley
 SJVUAPCD - Dave Mitchel
 SJVUAPCD - Joe O'Bannon
 Cal State Lands Commission - Mary Griggs
 Cal State University, SLO - Aryan Roest
 Colorado State University, Fort Collins
 - Fred Schmidt
 Cal State Northridge - Paula Schiffman

County Government

San Luis Obispo, County Dept. of Planning
 - John Euphrat for Alex Hinds
 Tulare County Board of Supervisors
 - James E. Maples
 Ventura County, Public Works Agency,
 Transportation Dept - Robert B Brownie

City Government

City of Avenal - Melissa G. Harriman
 City of Taft - Dan Fissori

Organizations/Industry

American Whitewater Affiliation - Richard J. Bowers
 Avenal Lumber & Hardware Industrial - R.J. Altimus
 Calif Archaeological Inc - Catherine Pruett
 Cal Cattlemen's Assoc - Daniel Macon
 Cal Independent Petro Assoc - John Donovan
 Cal Native Plant Society - Scott Wilson
 Cal Native Plant Society - Emily Roberson
 Calif. Wildemess Coalition - Ryan Henson
 Ecology-Central So. Cal. - Anna Harlowe

Organizations/Industry (cont.)

Friends of Point Sal - Bill Denneen
 Friends of The River - Steven Evans
 Friends of Sand Canyon - Sandy Hare
 Gear Grinders WAD Club - Mary Grimsley
 Green League - Linda Matisse
 High Desert MU Coalition Inc - Ron Schilller
 Independent Oil Producers Assoc.- Michael Sansing
 Kern Audubon Society - Mary J. Griffin
 Kerncrest Chapter National Audubon Society
 - Terri Middlemiss
 Law Office Spallina & Krase - Robert Krause
 Life on Planet Earth - Eleanor Garcia et al
 Mountain Spirit Center Inc - Eric Beral

Native American Heritage - Robert Gomez Jr
 Outdoor Adventures - Bob Volpert
 Outdoor Adventures - Jim Ritter
 Rincon-Vitova-Insectaries - Everett Dietrick
 SLO League Women Voters - Isobel Hoffman
 Santa Fe Energy Resources Inc - DB Kilpatrick
 Sierra Club Kern-Kaweah Chapter
 - Georgette Theotig
 Twin Oaks Business Council - Alan M Shaw
 Tule River Tribal Council - Jip Woudstra
 Western Drilling, Inc - Roy Crow
 Western States Petroleum Association
 - Catherine Reheis

Individuals

Sireah Abulaban	Chris Carlson	Robert Forbes
Dean Acheson	Lucinda Carnell	R. Forgett
Nick Aghazarian	Ricardo Cavallera	Kerry Forni
Fidele Alcorn	Francis Chapman	Michael Frazer
Andrea Alvarado	Mary Chinabain	William Friedel
Stacie Alvarado	Marguerite Christoph	Lynn Friedman
Julie Albertson	Tom Church	Jonathan Fuhrman
Marcella Anderson	Jasmine Churchill	Terri Gallion
J. Stanley Antongiovanni	Lawrence Churchill	Tom Gelder & Chloe Webb
Julie Auslander	Nicole Churchill	Thomas Granneman
Alan Bade	Lucy Clark	Steven B. Giddings
Julie A Badertscher	Debra Coelho	Vernon Glade
Kim Bain	William Cohen	W. Gonzales
Gordon Bainbridge	Jane Colbert	J. & Mary Gorden
The Barizons	Jack P. Connell	Sally Green
Sue Barizon	E. Craig Cunningham	Lynn Greenwood
Alan Baty	Daniel Davis	M. Gubbels
H.R. Baumann	Gregg Delle	Dennis Haensly
John Bauman	Brad Dickson	Barbara Hall
David Baxter	David Dodgen	Rich Hall
Sharon Beach	Carmen Domingo	Tom Harrington
Ida Benton	Robert Peterson, et.al	Julie Harvey
Heather Bias	Eric Egan	Connie Hearn
Enrico Bongio	Melissa English	Mitch Helbrecht
Maureen Branley	Ed Evans	Jeannine Helton
Matt Brewer	Mary Evans	Michael Henstra
Roy Bridgman	Gene Evans	Wendy Herrera
Ben Briscoe	Joy Ewalt	Mike Hidaha
Lona Brown	Dave Ewaldt	Jennifer Hill
Sherie Brubaker &	Mary Fernandez	Elizabeth Hettion
Randy Matthews	Ron Fite	Philip & Lois Hoadley
Daniel Bruno	Allison B. Fleming	Holly Wilcox Hill
	M. Fleming	John W. Humfreville

Ricardo Jaramillo
 Kim Johnson
 Sieglinde Johnson
 Thomas Johnson
 Andrew Jones
 Jean Kaplow
 Howard Karlin
 David Karrs
 Elizabeth Keate
 Drue Kennedy
 Dena Koerpel
 Mathew Krummel
 Joanna Lee
 Jane Leiby
 Ryan Leiby
 Elena Levine
 Elsie Lindner
 Veronica Lopez
 David Luboff
 Cathrine Lyons
 Boyd MacDonnell
 W.R. Maddux
 Pam Manthey
 Lisa Marrone
 James & Mille May
 Hall McClain
 Sherilyn McDonald
 Randy McDonald
 Michael McGuire
 Irv McMillan
 Audrey Mertz
 Dave Miller
 Jason Mix
 A. Mobly
 Camille Mojica
 Gene Moraida
 Tony Morin
 Richardson Morse
 James Movis
 Philip Mullen
 William Neal MD Inc
 Jeff & Laura Neish
 Herbert J. Nelson
 John Newstead
 John Nowell
 Keiji Ohshita
 Stephanie Ohshita

Kelly Okada
 Edith Parke
 Dianne Parrott
 Jill Peebles
 Kristen Peterson &
 Alex LaBuri
 Sally Peterson et al
 Ramona Phillips
 Sherry Piatt
 Jerky Rizzo
 Orvis & Edna Powers
 David Prince
 Kevin & Marybeth Qualls
 Homero Rey
 Fred Reyes
 Robert E. Reynolds
 Ronald & Carol Riccio
 Judy Richard &
 Shirley Lopez
 Wendy Roberts
 Ted & Pat Roberts
 Mary Rosenstein
 George Ross
 S. Rowe
 Jamie Rubin
 Dr Amanda Sue Rudisill
 Jenifer Sallfield
 C. Boone Sadler Jr.
 Mike Sawsienowicz
 Richard Sawyer
 Corey Scalise
 Ken Scheidecker
 Dennis Schirmer
 Bob & Gwen Schlatter
 Gregory Shultz
 Denis Schure
 Jennifer Shaw
 Margaret Shao
 Keith Shillington
 Howard Shultz
 David Simpson
 Dan Silver, MD
 R.M. Sloan
 Steve Smith
 Richard Snedden
 Dick Spang
 Joyce Sprayberry

Chenon Sue
 Steve States
 Catherine Steane
 Susan Stewart
 Virginia Stilwell
 Edwin H. Stinemeyer
 Larry Tapper
 Mark Taylor
 Nancy Taylor
 Kerry Thompson
 Reno Thompson
 Hector Topete
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 Sidney Tsubota
 Francesca Tyrnauer
 Carl Twisselman II
 Arthur Unger
 Robert Van Santeen
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 Steve Vincent
 Sally Vogel
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 Sue Weaver, Esq.
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 Glenn West & Family
 H.J. Whitaker
 Alan White
 Dennis White
 Dorothy Wiley
 John Wilkerson
 Nicole Wilkerson
 Talle Wilkerson
 Johanna Williams
 Autumn Wojciechowski
 Nancy Yamada
 Nikolina Yonhow
 Art Young
 Joe Zarnoch
 Mark Zuisi

No Name/Partial Name

Elvira
 Garley
 Sacramento, CA
 Long Beach, CA

Areas of Particular Public Interest

Some commentors provided or requested very specific information on resource site locations or suggested the need for or opposition to site specific management actions. That information and those interests will be retained for use in developing future site specific activity level plans. The level of site specific knowledge and interest of the comments has been quite impressive and will serve to continue public involvement in the implementation of this plan.

A large number of commentors wrote to voice support for Wild and Scenic River designations. Several individuals provided very detailed information on the resources of the Horse and Sand Canyon area and numerous commentors favored identification of an expanded area designation for the protection of those unique resources. Many comments were received specific to the draft Carrizo Plain Natural Area management plan that was included as an appendix to the draft document. Those comments were utilized in completing the activity level plan for the Carrizo Plain Natural Area. A large number of commentors raised concerns regarding specific wording and intents of the material presented in the appendices for Mitigation Measures and Standard Operating Procedures.

Comments directed toward the oil and gas portions of the Draft Plan questioned the level of detailed oil field technical information found in the Draft. Particular focus by the public was directed toward the federal standard operating procedures and potential array of mitigations. Another area of several comments was the limited scope and dated information in the Reasonable and Foreseeable Oil and Gas Development Scenario (RFD). Several comments were received suggesting that the wording was biased against oil and gas development, in favor of plant and animal resource protection, and that the benefits to the environment and communities from oil revenues should be given equal emphasis.

Comments and Responses

The following section contains a summary of abstracted public comments made on the DEIS/DRMP and BLM responses to those comments. Every attempt has been made to accurately capture and display the content of the comments. Where feasible similar comments on topics or issues were summarized as singular statements.

The list below indicates the categories of comments as they were grouped by topic and location.

General Comments

- Informational and Editorial
- NEPA Compliance
- Preference or Opinion

Case Mountain Area

Horse Canyon Area

Blue Ridge Area

Walker Pass Area

Recreation

- Access and Routes of Travel
- Visual Resource Management
- Three Rivers and Case Mountain
- Use Restrictions
- Pacific Crest National Scenic Trail
- Wilderness and Wilderness Study Areas
- Keyesville
- Avenal Nature Area
- Wild and Scenic Rivers

Lands

- Case Mountain
- Land Tenure Adjustment
- Land Use Authorizations
- Wind Energy
- Miscellaneous

Minerals

- Hard Rock
- BLM Permitting Process
- Oil and Gas Impacts

Cultural/Paleontological Resources

- Point Sal
- Cultural Resources
- Horse Canyon
- Economics
- Paleontological
- CPNA

Biological Resources

Walker Pass
Collection
Disease
Fire
Mitigation
Sensitive Species
Surveys
Other

Air

Unpaved roads/PM10
Smoke Management
Conformity
Air Regulation Conflicts
Global Warming

Soil

Erosion Control

Water/Watershed Management

Non-point Source Pollution

Livestock Grazing

Permit/Lease & Allotment Administration
Wild Horses
Economic or Cultural Heritage Impacts
Mulch Management
Perennial Utilization
Riparian Management
Sensitive Species
Impacts to Deer Herds
Fuels Management
Grazing management categories
Allotment Management Plans
Standards & Guidelines
Monitoring

General Comments - Informational and Editorial Corrections

Comment. A number of comments requested changes in the document to correct discrepancies in acreage figures and/or maps or update information. A few of the most notable issues raised included requests for identification of access to Yucca Flats provided by Fish & Game, confirmation that Buena Vista ACEC acreage does not include DOE lands, correction of maps and figures to reflect appropriate NPR-Elk Hills and Bittercreek NWR boundaries and acreage, and updating plant and animal lists.

Answer. Corrections have been made both within the documents and to the office records. None of the corrections required substantial alteration of the analysis or alternatives identified in the draft or final documents.

Comment. Several comments suggested the document was difficult to follow, and pointed out inconsistencies in different elements of the draft RMP.

Answer. In an effort to improve clarity of the document, some appendices from the draft RMP have been combined and simplified. Components of the proposed action have been combined and spelled out rather than referencing other alternatives. The format was made consistent from chapter to chapter, and more detailed reference to appropriate elements of the draft have been included.

Comment. The comments suggested that the draft RMP needs to be revised and portions rewritten to clarify management direction, include directives to achieve stated goals and required actions, eliminate inconsistencies in the document, and address new legislation. Specific items to be addressed should include inventory/monitoring needs; protection or enhancement of ecological resources; revising decisions relating to riparian areas; reconsider VRM classifications utilizing public views and on the ground evaluation; base BLM's ecosystem management on watersheds and discuss impacts of wind energy development, road construction, and OHV use.

Answer. RMP decisions are general and usually allocate the types of uses to be allowed, determine limits to be permitted, and provide mechanisms for resolving conflicts arising from disparate types of uses. Generally more detailed and site specific decisions are made through activity plans designed for specific areas and to solve specific problems or enhance resource production.

A monitoring and tracking plan will be developed for the final RMP within 90 days of approval of the Record of Decision (ROD) and approved Resource Management Plan by the State Director.

Inventory of public land is an ongoing effort that the Caliente Resource Area will continue to plan for and carry out within budget, personnel and time constraints.

The Caliente Resource Area will be striving to collaboratively manage public lands using ecosystem concepts and watersheds as the basic unit.

Comment. Because the actions would be significant the BLM should issue a new draft RMP and circulate for public comment.

Answer. After reviewing modifications to the draft, it was determined that actual changes to management direction were not significant.

Comment. FEIS must include risk assessment related to implementation and lack of implementation of proposed management actions

Answer. Significant potential impacts associated with each alternative were identified in EIS Chapter 4, recommended mitigation developed, and residual impacts discussed. Additionally, the tables at the end of Chapter 4 provide a comparison of allocations for each alternative, and a comparative summary of impacts of alternatives. These tables are provided to assist the manager in selecting between alternatives, as well as providing a public disclosure of impacts between alternatives including the no action alternative.

Comment. DEIS not adequate. Some commentors felt the Draft EIS did not provide sufficient information to function as a basis for decision working, or to justify excluding specific topics such as cultural or paleontological resources from detailed analysis in the EIS.

Comment. A serious lack of site specific grazing allotment management plans and, presumably, environmental assessments is documented in Chapter 2 of the DEIS. It is critical that the CRA make a commitment to gather the information that is necessary to assess the effects of grazing on area resources so that the Final EIS and allotment management plans can accurately disclose and evaluate the environmental effects on the RMP.

Answer. The RMP is a document designed to establish broad goals and objectives for present and future management of public lands within the Caliente Resource Area and to provide general guidelines and land use allocation type decisions to assist in the development of subsequent specific activity plans. These latter plans are intended to deal with specific conflicts, resource condition problems etc., and also are subject to NEPA analysis. Although more specific data will be required to adequately address potential impacts of activity plan development and implementation, the level of analysis of the RMP through this EIS meets NEPA requirements and provides sufficient level of detail to permit BLM managers to make a logical choice between alternatives and develop and issue a Record of Decision for the Proposed RMP.

Comment. A few comments expressed a need for a wider range of alternatives or for combining portions of one alternative with another in order to properly address the management possibilities or provide a better blend of benefits versus impacts.

Answer. The alternatives in the draft were developed to capture the full range of practical options while keeping within the Bureau's multiple use mandate. They reflect legal constraints imposed by existing legislation and policy (Endangered Species Act, Taylor Grazing Act, Mineral Leasing Act, etc). The proposed action within this plan was modified to incorporate many of the public comments.

Comment. A number of comments were received on Appendix F, Mitigation Measures, and Appendix I, Standard Operating Procedures. The comments included disagreement with the need for certain mitigation

measures or procedures, suggestions for alternate wording or requests for the addition of additional measures or procedures.

Answer. Appendix F provided a *sample* of measures that *may* be applied or incorporated into specific projects. Appendix I was a sample of standard practices for various activities that the Bureau expects project design to generally conform to. The actual mitigation measures, standard procedures and specific wording that would be used for a particular project would be determined on a case by case and site specific basis, in consultation with the project proponent. Chapter 3 in the Final RMP provides additional detail on how the NEPA process is used to refine project design to meet Bureau objectives.

General Comments - Preferences or Opinions on Alternatives and ACECs

Comment. We received comments supporting the preferred alternative, alternative 2, alternative 4, comments favoring both more or less livestock grazing, and favoring the designation of specific ACECs as well as comments disagreeing with the proposed designation of specific ACECs. These comments expressed a preference only and were not supported by additional factual information or data.

Answer. BLM appreciates the expression of interest in differing management alternatives and considered those interests in completing the final document.

Comment. Extend the boundary of Kettleman Hills ACEC into Fresno County.

Answer. The Hollister Resource Area has designated the portion of the Kettleman Hills in Fresno County as an ACEC. See Final RMP Chapter 11 and the map packet for further information on the management objectives for Kettleman Hills in both Kings and Fresno County.

Case Mountain Area - Access

Comments. Opposed access by the public through Skyline Drive or Salt Creek Road, preferring access through Oak Grove Road.

Public access should remain limited until an environmental baseline is established. One party suggested access by permit only.

Recreational access should be increased to improve hunting opportunities by handicapped persons.

Change the Preferred Alternative from Public access to Pedestrian and Non-motorized.

Answer. The decision on providing public access to the Case Mountain area via Skyline Drive or Oak Grove Road and access types and restrictions will be made at the activity plan level. Considerable additional analysis of alternative routes and public involvement in the analysis of alternative access routes will be required before a decision on access can be made. The level of detail at the activity plan or Cooperative Management Plan stage is a more appropriate place for making that decision.

Case Mountain Area - Other Case Mountain Comments

Comment. Comment opposed the proposal to transfer jurisdiction of public land in the area to the National Park Service.

Answer. The transfer of lands to the National Park Service will not be considered under the revisions to the preferred alternative. However, efforts to increase coordination with and improve cooperative management with the National Park Service and other entities are indicated management objectives for the Case Mountain Area. The expansion of the proposed Case Mountain ACEC under the proposed action would assist in facilitating cooperative management. Refer to the final RMP Chapter 11 for additional details on the Case Mountain ACEC.

Comment. Comments were received opposing authorization of cattle grazing in the area. One commentor suggested that the area closest to the residential housing (lower northwest sections) should be used as seasonal grazing allotments under BLM guidelines.

Answer. Livestock grazing in the entire ACEC will be allowed if it is compatible with the objectives of the ACEC. Specific allocations will be developed at the activity plan level.

Comment. The preferred alternative does not sufficiently safeguard long-term ecological sustainability, natural diversity, nor protect from impact to adjacent private property.

Answer. Progress toward meeting objectives will be monitored; management may be modified if the proposed combination of decisions proves insufficient to meet RMP objectives for the area.

Horse Canyon/Sand Canyon Area - Various

Comments. Supports the goals of the RMP especially those that enhance scenic resources, recreational opportunities, and natural resource protection for the Horse Canyon Area.

Answers. BLM will be working to increase collaborative management of public lands in an effort to reduce management costs, eliminate duplicative efforts and strive toward mutually agreed upon objectives. Subsequent planning for specific areas will be done cooperatively, and with public involvement.

Comments. Provides specific resource information i.e. terrain, recreational opportunities, vegetation, wildlife, cultural and paleo data as well as specific management action level recommendations i.e., inventories, surveys, specific trail management, acquisition, etc. for each parcel of public land within the boundaries of the Sand Canyon Specific Plan area.

We received several comments indicating the lack of site specific surveys for the Sand Canyon/Horse Canyon area. Some commentors provided information on specific resources such as presence of cultural values or sensitive species.

Answer. BLM appreciates the information generously provided by the commentors. Data was forwarded to the appropriate resource specialists for consideration in preparing the Proposed RMP/FEIS, and will also be used more extensively at subsequent activity planning levels.

Comment. The commentor believes that information provided in draft RMP/EIS is inadequate to support BLM's decision not to analyze the following resources/topics specific to the Horse Canyon Area:

- 1) *Cultural and Paleontological Resources.* Lack of survey data led to partial/inappropriate decisions i.e. ACEC that excludes valuable lands.
- 2) *Scenic quality.* Inappropriate VRM classes applied because of lack of specific knowledge of specific areas.
- 3) *Utility Corridors/Wind Energy Development.* Level of controversy associated with the proposed Wind Energy Development expansion into more rural areas of Kern County warrants analysis of the wind energy topic in this RMP/EIS.

Answer. Based partially on the additional information provided in the comment period, the Horse Canyon ACEC size and management objectives have been expanded. See Chapter 11 for revision to the ACEC. Also, refer to the heading Land Use Authorizations and Wind Energy under Lands Comments section in this chapter for discussion of the relationship between the ongoing EIS considering the suitability of public land for wind energy development.

Comment. Recommends that a Cooperative Management Agreement be developed between Caliente Resource Area, state parks, and Ridgecrest Resource Area that would address BLM managed lands within the Sand Canyon Specific Plan.

Answer. Management objectives for the Horse Canyon ACEC under the proposed action have been revised to ensure compatibility with the Middle Knob ACEC in the Ridgecrest RA and Tomo-Kahni State Park. The BLM will be working towards increased collaborative management of public lands with other agencies and local interests.

Comments. Recommends retention of all public lands in public ownership that fall within the Sand Canyon Specific Plan. Include Sections 1 and 11, T. 32 S., R. 34 E., M.D.M. in the proposed Horse Canyon ACEC.

Answer. Based on additional field observations, discussions with members of the public and coordination with Ridgecrest Resource Area personnel, Horse Canyon has been expanded to include public lands in section 24 of Township 31S, Range 34E and in section 24 of Township 32S, Range 34E, both of Mount Diablo Base Meridian. For more detailed discussion see Chapter 11 of the proposed RMP.

Comment. Commentor recommends BLM designate lands in Sand Canyon as Class II VRM Area.

Answer. VRM management class designations have been deleted from the proposed action and replaced with objectives to consider visual resources as an element of county planning objectives. By-and-large, and specifically in the Horse Canyon Area, the BLM land ownership pattern of isolated parcels surrounded by large amounts of private land does not lend itself to establishing or achieving visual management class objectives within a landscape.

Comment. The Horse/Sand Canyons have important cultural, paleontological, and traditional lifeway values. Red Mountain and Oil Canyon are important areas for cultural and Native American traditional values. This land and the resources should be respected and preserved.

Answer. The ACEC acreage has been expanded in the final RMP to include portions of Red Mountain and Oil Canyon.

Sand Canyon Site - Specific Surveys/Inventories

Comment. Recommends several surveys, inventories (biological, cultural, sacred lands, paleontological), trail designation/management, coordination activities for cooperative management i.e., information sharing, monitoring, administration to be applied management of public land within the Sand Canyon Specific Plan area. Feels like the level of information provided in the text of the draft EIS is technically inadequate to function as a basis for an EIS.

Answer. The management actions and specific activities recommended by the commentor are normally addressed at subsequent levels of planning. The commentor's recommendations and concerns will be taken into consideration when preparing any "Coordinated Management Plans" for the Sand Canyon Area. Inventories of public land are ongoing responsibilities that BLM plans to continue.

Blue Ridge Area

Comment. If condor are not present at Blue Ridge, why is designation of this area as an ACEC important?

Answer. Condors were documented to use the Blue Ridge Area as late as 1985, just prior to their removal from the wild in 1987. The Blue Ridge Area was designated as critical condor habitat in 1976 by the U.S. Fish and Wildlife Service and designated as an ACEC in 1984 by the Bureau. The Bureau, along with all federal agencies, is required by law to prevent destruction or adverse modification to designated critical habitat. Retention of

the ACEC designation for the Blue Ridge Area would help the Bureau to meet this legal requirement for maintaining critical habitat.

Walker Pass Area

Comment. A variety of comments were received opposing the Technical Review Team Recommendations in the Walker Pass Coordinated Resource Management Plan. The comments focused primarily on livestock grazing, riparian resources and wilderness.

Answer. Almost all the lands addressed by the Walker Pass CRMP were designated as wilderness under the California Desert Protection Act. Consequently, the Ridgecrest and Caliente Resource Areas together with the U.S. Forest Service will be developing a new South Sierra Management Plan that will replace the Walker Pass CRMP. Public involvement, as well as input from grazing operators, California Department of Fish and Game, and Native American groups, will address a variety of wilderness issues and management actions. Livestock grazing and riparian resources will be addressed in the new management plan.

Point Sal

Comments. Protect Point Sal as a National Natural Landmark and ACEC due to its archaeological, biological, and geological values.

We encourage volunteer archaeological society groups doing cultural resource monitoring at Point Sal.

Recommendation to acquire land north of Point Sal.

Answer. Comments noted. The Bureau will continue to work with interested members of the public. Acquisitions from willing landowners are limited by funding and would occur only in coordination with cooperating managers.

Recreation - Access and Routes of Travel

Comment. What routes of travel are open to vehicles and how are different types of vehicles defined?

Answer. Wilderness areas are closed to all vehicles, either motorized or mechanical, except for wheelchairs. On other lands in the resource area, motorized vehicle use by the public is restricted to designated routes of travel; specific lands are identified as closed. Designated routes of travel include all roads and jeep trails shown on BLM surface management maps, as well as those roads in oil fields that are identifiable and mapped from 1982 aerial photographs of the area or were subsequently authorized. All maps, including those with specific modifications to the road network, are on file at the Caliente Resource Area office. Vehicle use would be permitted on all roads and trails in the area unless otherwise signed as closed. Future revisions to route designations may be made in activity plans, subject to the criteria listed in RMP Chapter 7, NEPA analysis, and public review. The use of non-designated roads may be approved for authorized activities (such as for oil and gas development) and for administrative purposes.

Comment. What areas are available for off highway vehicles (OHV)?

Answer. Motorized travel is allowed on routes identified above. RMP Chapter 7 defines terms used by the BLM related to roads, trails, and OHVs. Travel would not be allowed off an existing route except in cases of emergency or when expressed written permission is given by the area manager. There are no "open" designations in the Caliente Resource Area where vehicle use is allowed both on and off roads.

Comment. What areas are closed to vehicles and why?

Answer. Areas or trails are designated closed to vehicular travel to protect resources, promote visitor safety, or reduce visitor conflicts. Use of vehicles in closed areas may be approved by the area manager for special

purposes or legal and administrative requirements. All wilderness areas are considered closed as well as certain specific sensitive areas such as Point Sal, the Salt Creek Road to Case Mountain, and the Caliente Mountain Ridge. Some roads may be closed to protect range developments such as the routes into Short, Cholla, and Cane canyons. All closed routes are identified on the ground.

Comment. What scenic byways will be promoted in the Caliente Resource Area?

Answer. Back Country Byways were identified in the Draft Resource Management Plan for the Carrizo Plain Natural Area, Kelso Valley, and around Chimney Peak. After reevaluation, only the Chimney Peak Back Country Byway will be nominated for designation in the BLM system. Other byways will be considered if interest is expressed by the public or by agencies outside the BLM.

Recreation - Visual Resource Management

Comment. How will BLM manage visual resources consistently across the resource area?

Answer. A number of comments were received about the BLM's Visual Resource Management (VRM) System which provides a method for analyzing and managing visual resources on public land. Generally, classification ratings are assigned to certain areas to provide guidance in developing management objectives. However, rather than categorize public lands with this rating system, visual resources will be considered overall in any management action. Without class rating, all public lands will be managed to minimize visual contrast and to keep activities consistent with elements found in the characteristic landscape while protecting scenic values.

Recreation - North Fork of the Kaweah River

Comment. What management actions are planned to protect the North Fork of the Kaweah River?

Answer. A large number of people visit the three BLM sites on the river along North Fork Drive creating some problems related to sanitation and safety. Two trash disposal bins and two portable toilets are located at these sites during the summer which, over the last two years, have proven to help the problem. Because of limited funding, litter removal is made on an infrequent basis, but a volunteer in Three Rivers is assisting with this work. To help control fires in the area, campfire rings will be placed at certain locations and their use strictly enforced. The long range goals for the North Fork of the Kaweah River and Case Mountain might involve a cooperative management arrangement with the National Park Service. The Bureau is currently coordinating with the National Park Service, and increased efforts are planned to heighten local community involvement.

Recreation - Use Restrictions

Comment. What actions will the BLM take to manage hunting and shooting?

Answer. Hunting, in accordance with State laws, is allowed on most BLM public lands. For public safety reasons, shooting restrictions are imposed on certain areas, such as Keyesville, but the lawful taking of game is still allowed. In other areas, the discharge of a firearm is totally prohibited, such as a developed recreational site (a campground or picnic area), visitor facilities (such as a toilet), authorized facilities belonging to lessees or permittees of the Federal government, as well as lands within ½ mile of buildings and residences on private lands. The specific closed areas are identified under Resource Area-Wide Allocations. A shooting range will not be authorized in the Caliente Resource Area.

Comment. What is BLM's policy on gathering of vegetative material?

Answer. The collection of dead and down wood is not allowed within developed campgrounds or areas where collection is posted as prohibited. Dead and down wood that is less than 6" in diameter may be collected elsewhere for use in campfires on public land. Collection of standing dead plants for firewood may be allowed

with a permit, but collection of live plants for firewood is not allowed. The non-commercial cutting of live trees will require a permit, issued only under special conditions which meet resource management objectives. Collection of any other vegetative material for personal use, including pinyon nuts, may be subject to a permit dependent on the amount of material collected.

Comment. Will dispersed camping still be allowed on BLM public lands?

Answer. Camping in the Carrizo Plain Natural Area is allowed at designated locations only. However, most of the remaining lands in the Caliente Resource Area are available to dispersed camping. Minimum impact camping techniques should always be used and vehicles parked adjacent to a designated route of travel must be kept as close to the road or trail as practical without blocking the passage of other vehicles. Of course, backpackers have the option of camping in a variety of places as long as a distance of 100 feet is maintained from any water source. Developed campgrounds have table sites, toilets, cookers, and other amenities. Such facilities are found at Walker Pass Campground/Trailhead, Chimney Creek Campground, and Long Valley Campground. These areas will not be enlarged, but will be maintained and improved as funding allows. A developed campground will be designed for Selby Camp in the Carrizo Plain Natural Area, but no other developed areas are indicated for the foreseeable future. As part of the development at Selby, water should be made available.

Recreation - Pacific Crest National Scenic Trail (PCNST)

Comment. How does the BLM plan to keep the PCNST open and what is being done about water for trail users?

Answer. Trail maintenance is dependent on volunteers and work by the BLM fire crew. To date, these efforts have proven to be effective, but some routine work still remains in the more remote portions of the trail. By pooling resources and more effectively managing trail maintenance, the Ridgecrest and Caliente resource areas are cooperatively working to keep the PCNST open while offering a quality trail experience. As a part of this endeavor, water sources were developed at Golden Oak, Willow, and Fox Mill springs. Other water sources will be evaluated and made available if conditions are favorable. Also, spur trails are being considered at appropriate locations, such as an additional access to Willow Spring and a much needed trailhead in the Cameron/Sand Canyon area. Where the PCNST passes through wilderness, new spur trails will not be developed.

Recreation - Wilderness and Wilderness Study Areas (WSAs)

Comment. How will BLM manage wilderness areas designated under the California Desert Protection Act?

Answer. Under the *California Desert Protection Act*, five wilderness areas were designated in the South Sierras within the Caliente Resource Area. The Ridgecrest and Caliente resource areas are working with the U.S. Forest Service to develop an overall management plan for these five areas plus one additional wilderness and the adjoining non-wilderness lands. Public involvement, as well as input from grazing operators, California Department of Fish and Game, and Native American groups, will address a variety of wilderness issues and management actions.

Comment. The commentor believes many proposed decisions relating to land use and disposal in the current RMP draft must be revised to reflect the recent designation of wilderness in the resource area, and Wilderness should be included for analysis in this RMP.

Answer. All designated wilderness areas will be retained in Federal ownership. The BLM wilderness parcels adjacent to the Los Padres National Forest may be transferred to Forest Service jurisdiction in the future for increased management efficiency. Refer to the map packet for disposal designations.

Comment. What will be done with WSA lands released by the California Desert Protection Act?

Answer. The *California Desert Protection Act* did not release any lands located in the Caliente Resource Area. In fact, 950 acres of WSA lands in the South Sierras were not included in wilderness designation in the Act and will continue to be managed as being under wilderness review. Other WSAs in the Caliente Resource Area include Plute Cypress (3,453 acres), Sheep Ridge (5,102 acres), Milk Ranch/Case Mountain (8,970 acres), Caliente Mountain (24,680 acres), Garcia Mountain (80 acres), and Machesna (70 acres). Lands under wilderness review are managed under the Interim Management Policy (BLM Manual H-8550-1) until Congress either designates the lands as wilderness or releases them for other purposes. Unless Congress specifies a specific purpose, released lands are managed under general BLM management policies and applicable land-use plans.

Comment. Are WSAs available for mineral leasing?

Answer. Minerals management in WSAs is fairly involved because of interactions with the Federal Land Policy and Management Act (FLPMA), the 1872 Mining Law, and the concept of "nonimpairment" of the area's suitability for preservation as wilderness. All mineral activities that were existing on October 21, 1976 (pre-FLPMA), may continue in the same manner and degree in which they were being conducted on October 21, 1976, even if they would impair wilderness suitability. They are "grandfathered" rights but are regulated to prevent unnecessary or undue degradation of the lands. New leases for oil and gas, geothermal, coal, and other leasable minerals are not issued on lands under wilderness review, but exploration may continue in certain cases if the nonimpairment criteria is satisfied. Mining operations on these lands are subject to the regulations 43 CFR 3802 which, among other things, establish the standards for approval of the conduct of mining operations, including reclamation. Work towards post-FLPMA discoveries may take place, but not to the extent that impairment is caused. If discoveries are made in a nonimpairing manner on claims located after October 21, 1976, patents may be issued.

Recreation - Keyesville

Comment. Will trails be designated to exclude one use over another?

Answer. All types of vehicle uses are allowed in the Keyesville area, but must be confined to designated roads and trails. A proliferation of trails, though, has resulted in damage to the resources and created hazardous conditions for trail riders. Therefore, redundant trails will be closed and routes better marked to benefit all users. Mountain biking is a big part of the use in Keyesville with the annual Keyesville Classic becoming a very popular event. However, the BLM does not intend to favor mountain biking or any existing use over another activity. Various user groups will be asked for input in planning management actions for the area including closure of some routes and designs for promoting resource protection and public safety.

Comment. Will camping only be allowed at developed sites in Keyesville?

Answer. Designated campsites are not planned for Keyesville, but some routes of travel may be designated to limit overall impacts. Also, areas such as the Raft Launch Sites and the Recreational Mining Area will be for Day Use Only.

Comment. The draft RMP indicates that the Keyesville historical mining area is being considered for designation as an Area of Critical Environmental Concern (ACEC). Will the public's use of the natural resources be affected by this designation? Will recreational mining be prohibited?

Answer. Part of the management objective for Keyesville is to provide for Recreational Use, with particular emphasis on, among other activities, Recreational Mining. The proposed RMP recommends that Keyesville be managed as a special management area rather than as an ACEC, to achieve these objectives.

Recreation - Avenal Nature Area

Comment. Will the BLM consider a cooperative management of lands located north of Avenal?

Answer. Some comments suggested a cooperative effort between the BLM and the Avenal Trails Committee to manage specific lands near Avenal as a nature area which could serve as a regional center for environmental, recreational, and educational purposes. The Bureau proposes to manage public lands in the Avenal and Kettleman Hills area as an Area of Critical Environmental Concern (ACEC). A nature area that highlights the biological species and habitats of the general area could complement Bureau management for the area. Low impact and localized activities could probably be undertaken in the area without reducing the effectiveness of the ACEC.

Recreation - Wild and Scenic Rivers

A very large number of comments were received concerning this subject. The following questions and answers summarize those concerns to address principal issues.

Comment. Why were certain streams listed as eligible in the Draft Resource Management Plan?

Answer. On October 2, 1968, Congress passed the National Wild and Scenic Rivers Act (Public Law 90-542), as amended - 16 U.S.C. 1271-1287) which provided a national policy and program to preserve and protect selected rivers or segments in a National Wild and Scenic Rivers System (NWSRS). To be considered eligible for possible designation in the NWSRS, a river must be free-flowing and contain at least one outstandingly remarkable value, i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, e.g., biological, botanical, ecological, heritage, hydrological, or paleontological. The waterways in the Caliente Resource Area were evaluated using the above criteria and policy guidance to determine eligibility for the Draft Resource Management Plan. After public comment, certain river segments were re-evaluated and appropriate changes were made.

Comment. What actions are taken if a river is determined to be eligible?

Answer. When a river is determined to be eligible, regardless of whether it is suitable or unsuitable for designation, protective management requirements ensure the river and the surrounding area are not degraded, subject to valid existing rights, in accordance with the environmental assessment process. Proposed actions which may enhance or degrade river values vary with the site-specific circumstances. Protective management will be taken to avoid or mitigate any actions which would adversely affect river values. The river area and any adjacent lands will be protected.

Comment. Will suitability recommendations be made in the final plan?

Answer. A river segment determined to be eligible for further study, must be evaluated to determine if it is suitable for designation in the NWSRS. Such a study will identify significant issues, describe the outstandingly remarkable features, address public concerns, name boundaries and the type of classification, offer various alternatives and impacts, and list appropriate protective management prescriptions and mitigation measures. All of the eligible river segments cross private, Forest Service, or National Park lands - in most cases BLM managed lands encompass a small part of the river. Further study will be done in conjunction with other landowners/managers, with the appropriate agency as the lead. Because of funding limits, no suitability studies will be done for the final Resource Management Plan. However, a priority list will be included in the plan which specifies an order for studying the rivers indicated as eligible. Wild and Scenic designation seeks to enhance a river's current natural condition and provide for public use consistent with retaining those values. Since some river segments were in areas designated as wilderness under the *California Desert Protection Act*, they will be protected through wilderness management which serves the same purpose as the intent of Wild and Scenic designation.

Lands - Land Tenure Adjustment -- Opposing Acquisition

Comments. The RMP does not support the proposed acquisition of up to 158,000 acres of private land under some alternatives. There were also expressions of concern about the repositioning process altering the balance of private-federal lands within counties.

Answer. The proposed action identifies roughly 200,000 acres of BLM lands for potential transfer into private ownership under the "Reposition" designation. This would be accomplished mainly through land exchanges so the net effect on the private vs. Federal land ratio should be minor within all management areas. Refer to RMP Chapter 4 for more information on land tenure adjustment processes. The BLM intends to work closely in land adjustment processes with local governments to ensure that a balance of acres is maintained, and that local land use patterns are not adversely affected by the adjustment processes.

Comment. California Department of Fish & Game opposes concentrating acquisition of lands in the CPNA.

Answer. Revisions to the proposed action clarify that in addition to the Carrizo Plain Natural Area, consolidation of lands of San Joaquin Valley type habitat are also planned for the Lokem Natural Area and other special management areas in the valley.

Comment. Since public land exchanges are authorized under Section 8 of the Taylor Grazing Act and 43 CFR 2244, your priorities for exchange as described on pages 100-101 might not hold up under pressure.

Answer. The current authority for BLM to enter into a land exchange is Section 206 of the Federal Land Policy and Management Act of October 21, 1976, with 43 CFR 2200 being the implementing regulations, and the Federal Land Exchange Facilitation Act of 1988. Also see responses to comments under the heading "Land Pattern Adjustment Processes" and final RMP Chapter 4 for further clarification.

Comments. Temper land tenure adjustments, directing efforts toward sound stewardship of scattered parcels, and use of available funds to improve existing land rather than acquiring more.

Acquisitions in Alternative 5 would overburden BLM staff; suggest the final RMP include costs for increasing staff in order to accomplish the acquisitions.

Answer. Experience has taught BLM that sound stewardship of scattered parcels is difficult at best. The majority of scattered BLM parcels have no legal access for BLM managers or the general public. These public parcels usually devolve into exclusive "backyards" for the adjacent landowners, a situation that does not benefit the general public and is very difficult to manage. The preferred method to remedy this situation is land exchanges to "reposition" these public lands for more efficient management and better service to the public. Land exchanges would proceed as funding permits, over the life of this plan. Available funds are used for management, lands are acquired in trade for difficult-to-manage parcels.

Opposing Disposal

Comments. Opposition was expressed for disposal of public land within the Twin Oaks (Special Focus Lands) area, Horse Canyon ACEC, lands with evidence of Piute Cypress, Native American concerns, and special biological and scenic features, the PCT.

Opposition was expressed to sale of public land in Rocky Canyon/Granite Ridge northeast of Santa Margarita.

Lands in Keyesville and Erskine Creek with high resource value should be retained.

Lands currently available for disposal should be retained in public ownership including lands along the South Fork of the Kern River, parcels against new wilderness boundary, and lands with riparian/wetland resources.

Rural residents have access to isolated public land and are able to monitor the land.

Answer. Concerns regarding disposal of land keyed in on areas with sensitive resources. The specific areas of concern in these comments under the proposed actions are proposed for ACEC or SMA designation. Designation will target these areas for improved land ownership patterns, with disposal as a less-preferred alternative. Additional concerns expressed about areas with Native American, riparian or other resources of concern or interest are addressed in the proposed action under the identification of the land repositioning process that focuses on analysis of resources present on properties, and evaluation of how and where those resources can best be managed. The repositioning process would also include additional opportunities for public involvement in the identification and consideration of adjustments to the land ownership patterns. The involvement process would also include close coordination with local government to ensure consideration of land use issues and tax base concerns. Refer to final RMP Chapter 4 for complete details on repositioning objectives and processes.

Comment. Lands in the Lake Isabella area should be transferred to the Forest Service if they could provide more efficient management.

Answer. Lands in the Lake Isabella area under the proposed action are identified for cooperative management opportunities. The BLM would seek in cooperative management areas assistance from the Forest Service and/or other interested parties in improving the effectiveness and efficiency of public land management.

Land Pattern Adjustments and Processes

Comments. A number of individuals identified specific parcels of public land that they would be interested in acquiring through the land tenure adjustment process.

Answer. Refer to RMP Chapter 4 for a detailed description of the processes that will be utilized to consider requests for the acquisition of public land. Interests in acquisition will be kept on file and referred to as the BLM initiates consideration of repositioning efforts in geographic areas.

Comments. A number of questions were asked and concerns expressed regarding the land disposal and acquisition process, including how the public is advised, suggesting grazing lessees be given first right of refusal, and that resource inventories be completed prior to the land tenure adjustments to ensure site specific adverse effects would not result to resource values including specific values such as riparian habitat, migratory birds, and raptors. Concern was also expressed that Guidelines needed to be developed for adjustments and additional clarification was needed to indicate that the site-specific assessment of parcels would include the option retaining the parcel in federal ownership.

Some concern was expressed about the need for acquisitions and disposals to be of equal dollar value to assure no loss of private property, consideration of tax revenues to the affected county, and encouraging cooperative efforts between Federal and State agencies to achieve environmental and resource development goals without the need to lose private land.

Answer. An expanded description of the processes for repositioning has been included in the final RMP Chapter 4 in response to above concerns. Under BLM's current regulations, the preferred method of repositioning is land exchanges. In the land exchange process, the public is advised of and invited to participate in consideration of proposals for land pattern adjustments. Adjacent landowners, as well as lessees, permittees, and right-of-way holders, and other interested parties, such as Native American groups, would be notified of proposals by letter inviting their participation in the process.

All land repositioning actions would occur on an equal value fair market basis as required by law and regulation.

Land Use Authorizations

Comment. Discuss and consider RS 2477 pending regulations.

Answer. Generally, state and county roads constructed prior to 1976 and established as public roads are those that would be affected by the Revised Statute 2477, a now-repealed 1866 law. Proposed regulations would establish an orderly process for verifying rights-of-way claimed by the state and local governments on lands administered by the U.S. Fish and Wildlife Service, National Park Service and the Bureau of Land Management. Final regulations are still pending.

Comment. Multiple-use classifications should not be changed by the RMP.

Answer. Multiple Use Classification, a historical method of classifying public land for particular uses is no longer utilized by BLM. Resource Management Plans, such as this one, are intended to replace the old Multiple Use Classifications. Unless otherwise classified, all public land is managed for multiple use of the land and its resource values so that they are utilized in the combination that will best meet the present and future needs of the public. Refer to the final RMP Chapter 4 for a listing of current classifications and withdrawals on the BLM lands.

Comments. Land use authorizations or activity that would change the natural character of the land (Twin Oaks Special Focus Lands) should not be considered.

Exclude Section 20, T. 31 S., R. 34 E., M.D.M., from land use authorizations.

Answer. Authorizations for use of public lands are considered following receipt of an acceptable application, payment of processing fees, and completion of a site specific environmental assessment to determine the impacts to the resources on public land and adjoining properties. The process provides opportunities for the public to become involved in the consideration of the application and analysis of the alternatives and effects.

Wind Energy

Comments. Opposed to new wind energy development in the Tehachapi area in eastern Kern County, specifically the Sand Canyon and Twin Oaks areas, and Horse Canyon ACEC area, indicating that the development would negatively affect the ambience of local lifestyle. Additionally, concern was expressed that lands identified for disposal would be acquired by wind energy companies and development occur in bird migration and raptor use area. Wind energy development would affect the noise levels and denigrate forested mountains and wildlife.

Proposals were suggested to remove specific parcels of land from the wind energy study area.

Address new wind energy development and the agreement with Kern County to not allow development in the Pine (Oil) Canyon Viewshed.

Consider development in the Temblor and Caliente Ranges, or near urban areas, the base of the Grapevine south of Bakersfield, or other California public lands instead of the Tehachapi's and Southern Sierra's.

Wind energy development described in Alternatives 1 and 4 would conflict with decisions of Ridgecrest RA and Kern County.

Concern was expressed about wind energy development in the Horse Canyon ACEC, that the Horse Canyon ACEC should be expanded in Caliente RA and further enhanced by adjoining the Middle Knob ACEC. Important cultural and traditional values, wildlife and plant resources, and the viewshed should be preserved.

Answers. There are currently no authorizations for wind energy development on public land in the Caliente Resource Area. Those wind energy facilities on public land in eastern Kern County are authorized and administered by the BLM Ridgecrest Resource Area.

The current wind energy development proposals being considered includes lands in both resource areas and coordination between both BLM offices has been occurring throughout the process, with the lead BLM office being the Ridgecrest RA. The current proposal for wind energy development is being considered under a regionally-based Environmental Impact Statement. Decisions related to the suitability of lands for wind energy development will be based on that EIS and will not be considered under this plan.

Lands - Miscellaneous Comments

Comments. The RMP will not impact county transportation systems, but county government should have the opportunity to review future projects where they might impact the roadway network.

BLM should consult with State Lands commission on projects which may affect state sovereign and school lands.

How will the public be involved when new utility corridors are proposed?

Answer. Proposed land use authorizations are considered on a case-by-case basis when applications are received. Consideration of those applications requires an evaluation of the proposals for consistency with land use plan objectives, a site specific impact assessment, and coordination with all affected interests. In some cases, BLM may require the applicant to obtain permits from appropriate state, local, or other federal agencies.

Comment. Screening applications for communication site authorizations for frequency interference is an unnecessary process since the FCC permit process requires such screening.

Answer. The BLM will continue to review and improve its practices to reduce regulatory duplication.

Minerals

Comment. Why was an assessment of cumulative restrictions on mineral exploration and development, similar to that done for other resources, not done? Is there a map of solid mineral potential?

Answer. Cumulative impacts of mineral exploration and development were evaluated. The Draft Caliente RMP contains a Reasonable and Foreseeable Development Scenario (RFD) for solid minerals (Chapter 4, pp. 227 - 233). The RFD has been updated and a summary is found in the Final Environmental Impact statement (EIS Chapter 4). BLM manuals outline the procedure for the assessment of solid minerals for Resource Management Plans. A draft map of solid mineral potential was prepared for in-house use for the preparation of the Draft RMP, which included evaluation of direct and cumulative impacts.

As indicated in the solid minerals RFD, there are areas of high potential for the development of solid minerals within the Caliente Resource Area. However, in general, solid mineral development potential is considered to be low through most of the Resource Area, and inclusion of a solid mineral potential map was not critical to the final recommendations of the Caliente Resource Management Plan.

Comment. The usage of "mineral potential" is not defined and it is unclear as to what constitutes a high, medium, or low potential area of remaining solid minerals.

Answer. The term "mineral potential" is discussed in RMP Chapter 5 of the Proposed Caliente Resource Management Plan. Evaluation of "potential" for development of solid mineral resources involved characterizing the mineral deposit models for each of the geologic terrains found within the Resource Area. Each model,

whether for metallic or non-metallic minerals, was then evaluated for presence of potentially economic mineral deposits within the life of the plan. A large area may have high potential for development, however only small individual areas are likely to be developed (please refer to details in the RFD).

An area has a "high" mineral development potential if rock formations with a known specific solid mineral resource have been identified in the area and there is a likelihood the resource will be developed within the life of the plan. An area with "moderate" potential is one in which a mineral deposit either is extrapolated to occur or is known to occur but probably will not be developed within the life of the plan. In an area with "low or no" potential, rock formations do not exist that contain potentially economic mineral resources. This may be simply because there is no demand for the mineral resources known to occur.

Oil and Gas Development and Operations

Comment. The draft RMP has a great deal of detail in areas of construction and oil and gas mitigation measures that would be better discussed in consultation, rather than included in the plan. A more general approach would eliminate discrepancies between current operating procedures and what we perceive as new regulation. Specific problem areas are, a) requirements that all changes in an approved operation must be handled in writing, b) a prohibition against earthen sumps, c) permanent rather than temporary signs on drilling wells, and d) the trucking off-site of drilling muds.

Answer. Mitigation measures and stipulations published in the draft were included to provide the public an understanding of the range of options the BLM would consider to avoid and minimize the effect of the proposed action. The range of options did not establish new regulations or policies, or indicate that all of measures would be applied to project approvals. However, as a result of the confusion and concern created by inclusion of those options in the draft document, the final does not include statements related to specific mitigations or stipulations. The application of mitigation and stipulations will be considered specific to the project and site and will be developed in concert with applicants, taking into consideration the needs of the applicant and the management objectives and resources applicable to site specific locations.

Comment. Several statements in the draft RMP are inaccurate or biased in favor of resource protection. Recommended changes include: refocusing the management of public lands toward the growing need for raw materials and natural resources. Shift emphasis from resource protection toward resource management.

Answer. Statements have been re-worded for the Final Plan to better portray resource management objectives. Refer to the management objectives for the Valley Management Area where the proposed action indicates resource management will be directed toward making oil and gas resources available, while providing for protection of sensitive species and habitats. Those two objectives are not viewed as being in conflict with each other at the management area scale.

Comment. Why does the draft RMP contain a section on the regulation of water disposal wells?

Answer. In discussing all aspects of oil field development, the draft RMP reviewed issues such as air quality and water quality. The California Division of Oil, Gas, and Geothermal Resources is recognized as the regulating agency for water disposal wells.

Oil & Gas Permitting Process

Comment. For those of the public whose lands have never been leased for oil and gas exploration, does the BLM require a bond to clean-up after a lease is no longer being used to produce oil and gas? If the lessee is permitted to gate and lock roads onto my property, how can emergency services get onto the lease?

Answer. The BLM requires a surety bond before any surface disturbing operations can be undertaken on a lease. The bond amount varies and there is a minimum of \$10,000 on a single lease, up to \$150,000 for a nationwide bond. Those monies are not released until all operations on a lease have ceased and the land has

been restored. In addition to the BLM bond, a lessee must post a Performance Bond with the California Division of Oil, Gas, and Geothermal Resources (CDOGGR), each time a drilling, completion, and abandonment operation is permitted. This bond is variable in amount starting at \$10,000 and increasing based on well depth. The CDOGGR bond will be refunded after inspection by CDOGGR has shown that the operation was safely completed. Gating of leases is an option that most California oil operators do not use; however, the surface owner can work out an agreement with the subsurface lessee to control access to private surface estates. Further, emergency services will always have the equipment to cut any lock and will do so.

Comment. Although the poor domestic oil market is hurting small producers, the BLM can play a role in minimizing the adverse impacts of federal regulations on the small operator, while still protecting the environment.

Answer. The Oil and Gas Work Group continues to actively pursue the open discussion of issues that concern oil operators. The members, including the BLM, California Division of Oil, Gas and Geothermal Resources, the Independent Oil Producers Association, the Western States Producers Association, the California Independent Producers Association, and any interested oil companies, meet in a forum setting to work on technical issues as well as the regulatory processes. The BLM's active involvement in the Group demonstrates its concern for the balancing of environmental regulations and the needs of oil industry in California.

Comments. The draft RMP does not consider impacts to the public resulting from existing or new federal policy. The oil industry in southern California is experiencing an increasing administrative burden as a result of duplicative measures and overlapping federal jurisdictions. Will the effect of new stipulations and operating procedures and the resulting reduced net oil revenues be assessed on the oil industry and on the local economy? New policies are being developed in Washington. How will these affect the implementation of this document?

The draft RMP focuses on impacts from the oil industry on the environment, but does not address T&E regulations as an impact to oil and gas. Evaluate the lost oil and gas development due to restrictive BLM policies.

Answer. Chapter 4 of the Final EIS entitled "Environmental Consequences" and has been reformatted to provide additional clarification of these impacts. Policies and regulations being formulated at the national level are beyond the scope of this document and are not assessed in this EIS. Consideration of the impact of new national policies is considered as a part of the policy formulation. Clarification has been made in the final RMP that the mitigation measures and standard operation procedures contained in the draft were not new "policies" for oil and gas operations.

Comment. Do not apply the ACEC designation to the Kettleman Hills area, or anywhere else in the Valley Management Area. These lands can be a "showcase" of the successful integration of T&E species protection and oil field operations, without the additional regulations specified in the description of the ACEC in the draft RMP (pages 172-174, 462). "Special management" of the Kettleman Hills Area is not justified.

Answer. Kettleman Hills is identified in the Kern County Valley Floor Habitat Conservation Plan as a species conservation area and is also identified by the Hollister Resource Area as an ACEC for the Fresno County portion of the Kettleman Hills. The ACEC designation would not preclude development of oil and gas resources. Designation recognizes that the area contains important resources that require an enhanced level of management attention.

Comment. What are the rights of existing lessees in areas proposed as Areas of Critical Environmental Concern? Please include a discussion of lessees' rights.

Answer. Designation of areas of critical environmental concern or special management areas does not affect outstanding third party lease rights. A statement to that effect has been included in the document to provide clarification.

Comment. The draft RMP does not comply with Executive Order 12630. A complete economic assessment is required. The potential socioeconomic impacts of management policies, stipulations, and operating procedures on oil and gas development, employment, public access to reasonably priced energy sources, or the revenues to the state have not been adequately analyzed.

Answer. The Draft Caliente Resource Management Plan addresses impacts to the various natural resources throughout Chapter 4 (refer to pages 243-298). Impacts from implementation of federal regulations are discussed within several sections, including but not limited to pages 250 and 336.

Comment. Expressed concern about procedures to follow regarding the late discovery of cultural and paleontological resources during the oil development phase. BLM should provide adequate information about cultural and paleontological resources to the project manager and construction crew in advance of oilfield operations. Any late cultural or paleontological resource discoveries requiring evaluation and mitigation should be paid for by BLM.

Answer. Comments were noted and previously addressed in the Draft Caliente Resource Management Plan, Appendix F, Cultural and Paleontological Resources, pages 612-613. In addition, the lessee or operator may be provided background information as appropriate at the development or activity level of the project. For specific requirements, refer to Onshore Oil and Gas Order No. 1, page 3, E. Cultural Resources Clearance; 36 CFR 800.11 (Properties discovered during implementation of an undertaking).

Comment. The greatest danger to cultural resources is illegal collection of artifacts. The RMP should focus on that problem rather than burdening businesses with unnecessary constraints.

Answer. Comment was noted and previously addressed under Affected Environment, Cultural Resources, page 55, paragraph 4. While there are federal laws which make it illegal to collect artifacts on public land, there are also mandates which require the agency to consider the potential effects an undertaking may have on cultural resources. For example, NEPA and Section 106 of the National Historic Preservation Act require the agency to consider the potential impact to important cultural resources from a proposed action, and to carry out the appropriate mitigation and/or avoidance to offset the impact. This was previously addressed in the draft RMP, Appendix L-1, pages 824 and 825; Environmental Consequences, Introduction, page 221.

Comment. The standards for cultural resources responsibilities are better described in the new handbook for geophysical operations.

Answer. The new handbook as mentioned above for geophysical operations (3150, H-3150-1) was issued as a draft interim manual and handbook through BLM Instruction Memorandum No. 92-122 on February 14, 1992 for review and comment, subsequently expiring on September 30, 1993. Whereas, the draft Caliente RMP was completed in January 1993. Because the draft manual and handbook had not evolved into an approved final document at the time the RMP was prepared, there was no reference to this draft document in the RMP. On June 7, 1994, the Onshore Oil and Gas Geophysical Exploration Surface Management Requirements manual (3150) and handbook (H-3150-1) were finalized after revisions of the draft. For specific requirements regarding cultural resources, refer to section 3150 manual, section 3, .31 A, B, C, D, E; H-3150-1 handbook, II. D., pages 6-7, illustration 9, pages 1-2, illustration 10, pages 1-2; 43 CFR 3150, 3151.

Stipulations

Comment. Why would any potential lessee want to bid on a piece of property that cannot be developed? Reword the No Surface Occupancy (NSO) Stipulation so it is not a deterrent to prospective bidders.

Answer. The NSO stipulation found in the Draft Caliente Resource Management Plan has been adjusted to specifically address this concern. The current No Surface Use Stipulation as shown in RMP Chapter 5 of the Final Caliente Resource Management Plan includes information indicating that subsurface mineral development from an off-site location as well as exceptions/waivers will be evaluated on a case-by-case basis.

Cultural/Paleontological Resources

Comments. Needs to enhance coordination efforts between BLM and Native Americans. Provide greater opportunity for communication and involvement regarding land use and acquisition, watershed, biological and archaeological resources preservation and use, and cultural site monitoring/consultation.

The RMP needs to consider, with input from the Native American community, Native American Traditional Lifeway Values and areas of spiritual or special significance to Native Americans when considering disposal or permitting other uses.

Answer. Comment was noted and previously addressed in draft RMP, Appendix L, page 825, paragraphs 5 and 7; and Cultural Resources, page 44, paragraphs 4 and 5.

Comment. The cultural resources and Native American areas of concern are rather brief in the plan. Impacts to both resources are not discussed under the management alternatives. We believe the EIS should address impacts to cultural and Native American areas of traditional value.

Answer. Policy and laws regarding cultural and Native American Traditional Lifeway Values were summarized in the draft RMP under Appendix L-1, pages 824, 825. Additionally, it was addressed under Resources And Topics Considered But Dropped From Further Analysis, page 43, Cultural Resources, page 44. Since cultural resources were determined not to be a major Issue/or topic for potential significant impact, in addition to being covered in the NEPA process and/or activity planning stage, only a few specific impacts were identified in the draft RMP. Some impacts to cultural resources were intertwined under other major resources and topics in the plan such as Land Use Authorizations, page 385, paragraph 3, etc. Additional detail has been added in the Final EIS.

Comment. Concerns were expressed about Traditional Lifeway Values being considered a cultural resource, i.e., sacred mountain, plants. We protest this concept in regard to any additional restrictions being placed on public lands.

Answer. Comment was noted and previously addressed in draft RMP, Appendix L, page 825, paragraphs 5 and 7; and Cultural Resources, page 44, paragraphs 4 and 5. BLM's legal responsibilities to the Native Americans regarding cultural and Traditional Lifeway Values is clearly defined under various laws and regulations. A few laws are the National Historic Preservation Act of 1966 (amended 1992), the American Indian Religious Freedom Act of 1978, and the Archaeological Resource Protection Act of 1979, etc.

Paleontological Resources

Comment. The Kern River Formation and paleontological resources should be mentioned in the Valley and South Sierra Management Areas.

Answer. The Kern River Formation and associated paleontological resources were not addressed in the draft RMP because BLM has so little public land under its jurisdiction in that area. Most of the land involving the Kern River Formation is under the jurisdiction of the Sequoia National Forest or privately owned.

Comment. Scientists, geological societies, and academia should be allowed to collect paleontological resources under a permit. Specimens should be offered to the California Well Sample Repository for curation.

Answer. BLM is currently revising its policies and procedures for the management of paleontological resources on public land; i.e., Draft Handbook 8270-1, Paleontological Resources on Public Lands: A Decision Makers Guide; Information Bulletin No. 96-03 and No. 95-170. Under this guidance, it is BLM's policy to facilitate the appropriate scientific, educational and recreational uses of paleontological resources on public land. BLM has in the past and currently requires a permit for the collection of vertebrate fossils. However, common

invertebrate fossils may be collected under the terms of 43 CFR 8365 in reasonable amounts for noncommercial purposes without a permit, except on developed recreation sites and areas, or where otherwise prohibited and posted. Through the BLM paleontological permitting process, repositories meeting federal standards, pursuant to Department Manual 411, may be considered for housing collections on behalf of the federal government.

Biological Resources

Collection

Comment. Non-commercial recreational gathering of piñon nuts should not be restricted.

Answer. It will continue to be permissible to collect reasonable amounts of commonly available renewable resources such as flowers, berries, nuts, seeds, cones and leaves from public lands. The proposed allocation on page 108 of the DEIS which states that collection of certain vegetative materials "may be subject to a permit" is intended to allow flexibility in determining what is a reasonable amount and when an item is commonly available. For example, in certain years, piñon nuts may not be commonly available and collection would not be appropriate. Or in certain areas, after consideration of Native American concerns, no amount of piñon nut collection may be reasonable. Issuing permits would be one way to provide the public with this information.

Comment. Consider allowing harvest of forest products prior to a prescribed burn

Answer. Non-commercial and commercial disposals of forest products will be considered on a case by case basis as part of the NEPA review.

Disease

Comment. The Bureau needs more aggressive policy in control of Black Stain Root Disease. Consider non-commercial harvesting of fuelwood for management of Black Stain Root Disease and piñon ecosystem.

Answer. The Bureau evaluated the potential of several treatment options for control of Black Stain Root Disease. Black stain is a natural part of the ecosystem. More aggressive treatment may adversely effect wilderness values, wildlife, and watershed values present. Non-commercial fuelwood harvesting will not affect growth of disease centers since the disease is transmitted primarily through root contact.

Comment. The RMP should address damage to digger pines from parasite in Walker Pass/Owens Peak/ Spanish Needles Creek area.

Answer. The Bureau is unaware of any non-native parasites affecting digger pine in the Resource Area. Diseases and parasites can be a natural and vital part of the ecosystem. The Bureau's goal is to improve or maintain the health of the entire community.

Fire

Comments. Fuels management should not have been dropped from further analysis in the RMP.

Restrictions on fuelwood cutting and gathering may be a concern from a fire prevention viewpoint

Answer. Fire is one of many tools available to the BLM when considering modifying the composition, structure, or density of vegetation on public lands. This type activity is best addressed at the activity plan level for specific sites and will receive public involvement and NEPA analysis as specific activity plans are developed.

Comment. Recommends establishing Prescribed Natural Fire protocol in South Sierra Management Area (p.180). Wants fire plan in RMP to call for use of prescribed fire and prescribed natural fire in wilderness and WSAs to restore function of fire dependent ecosystems.

Answer. Fire suppression and fire management in wilderness and wilderness study areas are to be conducted using the "minimum tool" to get the job done. Guidelines for fire suppression and implementation of prescribed natural fire are addressed in the Southern Sierra Wilderness Management Plan. Objectives for prescribed burning in wilderness areas must help to return the wilderness to a native, pristine ecosystem. Management ignited prescribed burns are appropriate to return fuels to a manageable state which will allow safe, cost effective prescribed natural fires. A century of fire suppression has allowed vegetation to accumulate above what small unsuppressed lightning fires would reduce in a pristine environment.

Comment. Clarify which plant communities derive long-term benefits from fire (p.405 under Recreation and Vegetation and Wildlife).

Answer. Fire is a natural process in the environment. Many plant communities may benefit in the long term from periodic fire. Some plant communities such as chaparral communities are dependent upon fire for their continued existence. In the forests, closed-coned pines are dependent on fire for germination. Exclusion of natural fire in many areas has resulted in decadent vegetation and accumulation of fuels. Prescribed fire or prescribed natural fire is a tool to improve the overall health of the plant community.

Sensitive Species

Comment. Special stipulations to protect sensitive species should only be applied to designated critical habitat and lands that are known to be currently occupied by federally listed species.

Answers. Bureau policy, and one of the objectives of the proposed management plan, are to manage public lands to promote recovery of listed species and to prevent the need for additional species to become listed. To accomplish this objective, it is necessary to manage all lands that may be important to sensitive species to be compatible with species recovery and maintenance. Designation of critical habitat is intended to highlight lands that are of essential importance to a species survival and recovery. Critical habitat does not include all the lands that may be important to a species. The absence of documented occurrences of a species from a particular area may not always equate to the lack of importance of the area to that species. Documented occurrences may be lacking because no inventories have been done in the area. Inventories may also have been done at the wrong time of year or during a year when the species was not detectable. Areas that are unoccupied one year may also become occupied in a subsequent year.

All proposed special oil and gas lease stipulations include a waiver, modification or exception provision. These provisions are included to allow the need for any limitation on surface use to be decided at the project planning stage in consultation with the project proponent.

Comment. Several commentors indicated a lack of specific, detailed information (such as a discussion of the entire range of species, typical habitat characteristics, species life history, taxonomy, etc.) in the DEIS.

Answer. The species information presented in the DEIS was intended to provide a general background for understanding the management alternatives and potential impacts of each alternative. We acknowledge that it was not a complete discussion of the species status, biology and taxonomy. The intent was to include only the most pertinent background information so that the reader would understand the role of public land and the potential effects of the management alternatives.

Comment. Several commentors felt that more management attention should be given to sensitive plants and animals in the DEIS.

Answer. Special Status Species management remains a high priority for the Bureau. In addition, the Bureau places a high priority on the management of lands to prevent species from requiring any protective status. Language has been revised to reflect this commitment.

Comment. Where is the specific location of Mojave ground squirrel habitat and what is the actual acreage? (p.401)

Answer. Approximately 25,140 acres of Joshua tree woodland and desert scrub habitat on public land in the Kelso Valley, Canebrake, Weldon and Onyx areas have the highest potential to support Mojave ground squirrels. For an analysis of potential grazing impacts, the following allotments were considered to be potential habitat for Mojave ground squirrels: 74, 75, 77, 78, 79, 80, 82, 83, 84, 86, 123. Addition of the acres contained in these allotments yields a total of 46,249 acres.

Comment. Known and potential species habitat should be managed with the primary goal of expanding the range of listed species. This may mean reduction or elimination of grazing in some areas, reduction or elimination of OHV access, prohibition of oil or gas exploration or working toward the acquisition of additional habitat.

Answer. Inventories for listed species have resulted in less land classified as potential habitat. Much of what was originally categorized as potential habitat in the draft RMP has been recategorized either as known habitat for the species, or as habitat that has no potential for the species to occur there. The remaining potential habitat occurs within the threatened and endangered species range line which was used for application of grazing management prescriptions as well as application of oil and gas leasing stipulations. OHV access throughout the Resource Area is limited to designated roads and trails or is completely closed in some areas. No further OHV restriction is required for potential habitat. The current and proposed grazing prescriptions were developed through consultation with the USFWS and are intended to protect listed species habitat, including potential habitat, and to promote recovery of the species. The Bureau is working closely with the SJV Recovery Planning Project on research on the effects of grazing on the listed species. The results of these studies will be used to modify grazing prescriptions on public land if necessary. The Bureau is working toward acquisition of additional habitat through its overall land tenure adjustment strategy (see final RMP Chapter 4).

Comment. Develop conservation strategies for all sensitive species and recovery plans for listed species perhaps in cooperation with the San Joaquin Valley Recovery Planning Project.

Answer. The Bureau is working closely with the SJV Recovery Planning Project and has contributed funding and other assistance toward that effort. Much of the research was done on BLM land. The Bureau will incorporate any conservation strategies developed by the SJVRPP into its management of the species. The USFWS is responsible for developing recovery plans for listed species. The Bureau will incorporate any conservation measures from these plans into its management of the species.

Comment. Need to address impacts to willow flycatcher

Answer. A supplemental wildlife information section was developed in January 1994 and submitted to the U.S. Fish and Wildlife Service. The supplemental wildlife information section includes a section on the southwestern willow flycatcher. The final Biological Opinion issued by the U.S. Fish and Wildlife Service will address impacts to the southwestern willow flycatcher.

Comment. RMP fails to address state listed (only) species

Answer. The San Joaquin antelope ground squirrel and the Mojave ground squirrel are featured species in the DEIS. Both are state listed but not federally listed. State listed, California Species of Concern and California Fully protected species are also included in the species list found in Appendix B of the DEIS and RMP Chapter 9 of the current document.

Comment. Recommend that public lands identified by CDFG as important for recovery of state listed species be managed as T&E conservation areas

Answer. The areas proposed for management as T&E management areas and T&E habitat linkages should overlap significantly with any areas identified by CDF&G as important for recovery of state listed species. The intent of is to manage public lands consistent with the most current U.S. Fish and Wildlife Service and CDF&G approved T&E management area and linkage maps.

Surveys

Comment. Several commentors expressed a general need for more inventories for sensitive species and emphasis on protecting natural resources.

Answer. Surveys for sensitive species are ongoing. The Bureau has greatly expanded the knowledge of the range and habitat characteristics of the San Joaquin Valley listed plant species in the last four years. In 1995, surveys were concentrated on the plant species proposed for listing in the southern Sierras. The majority of the potential habitat for these species on public land was surveyed. As part of NEPA compliance, proposed project areas are surveyed for sensitive species and impacts to these species are avoided or mitigated. Staffing and funding levels from year to year affect the number of acres that are surveyed.

Comment. RMP should contain provisions to study effects of grazing on sensitive plant species and include plans for continued inventory and research on species ecology and management.

Answer. The Bureau is currently working with the U.S. Fish and Wildlife Service, USGS - Biological Resources Division and California Department of Fish and Game to launch a five year program to evaluate whether annual grasslands in the Carrizo Plain can be managed with livestock grazing for the benefit of several plant and animal species. In the past, the Bureau has contributed funding to a number of research projects. Research topics have included sensitive plant and animal species distribution, life history, demography, habitat associations and response to management actions. Additional studies are being proposed for the Lokem ACEC.

Comment. The RMP should provide for survey of streams/rivers for exotic removal program (tamarisk, russian olive, tree of heaven) on BLM lands, and cooperatively work to remove from adjacent lands.

Answer. Inventories for certain invasive exotic plant species (tamarisk and yellow-star thistle) have been started and limited treatment has begun for the yellow-star thistle. Participation in the California Department of Agriculture's program for biological control of yellow-star thistle is also being pursued. The presence of invasive exotic plant species is a standard item that is addressed during any field survey for biological resources on public lands.

Other

Comment. Fixing roads in Morales Canyon would impact wildlife.

Answer. Prior to undertaking or authorizing any activity, the impacts of the action to natural resources, including wildlife, would be considered.

Comment. What is status of the Naval Petroleum Reserve(NPR) #2 relative to endangered species?

Answer. The Naval Petroleum Reserves have an active endangered species management program. They have recently completed consultation with the U.S. Fish and Wildlife Service on an endangered species management program for NPR-1. They are currently working with the U.S. Fish and Wildlife Service to finalize a similar program for NPR-2. The BLM will coordinate management activities with the Department of Energy as it does with other land managers.

Comment. How did BLM conclude that Canebrake Creek is "one of the most biologically diverse regions in the country" (see p.707 in WSR appendix in draft)?

Answer. The general area of Canebrake Creek is highly diverse because several biogeographical areas come together there. This area is influenced by the Sierra Nevada, Great Basin, and Mojave regions with representative species from each area.

Comment. The statement on page 178 of the DEIS that states "Constraints necessary for the protection of T&E...will be applied on 80% of all lands" implies that there may be no protection for T&E on the remaining 20%. Is this a correct interpretation of the statement?

Answer. The paragraph referred to on page 178 is referring to oil and gas leasing. It is intended to say that virtually all mineral estate in the Valley management area is open to oil and gas leasing. On 80% of the mineral estate that is open, a special lease stipulation will be attached to the lease to protect T&E species, other biological resources and cultural resources. On the remaining 20%, standard lease terms and conditions were deemed sufficient to protect sensitive resources.

Air

Comment. Comments relating to curtailing and/or eliminating of fugitive dust (PM₁₀) from new or existing unpaved roads included concern that opening any new roads on public land would violate air attainment plans for reducing PM₁₀ emissions. Concerns were also expressed that BLM not only lacked authority to regulate PM₁₀ emissions on public land, but also lacked authority to regulate speed limits on public land.

Answers. Emissions from unpaved roads have been accounted for in a Resource Area Wide inventory/Assessment (See Chapter 10 of the Proposed RMP). Any changes in the road system are governed by Air District Rules which regulate dust emissions from both new and existing unpaved roads. New roads would require appropriate mitigation.

The BLM does in fact have the authority to prescribe speed limits on public, Bureau managed, roads. Guidance for setting speed limits follows the standard Manual on Uniform Traffic Control Devices.

Comment. Some commentors were concerned that impacts to air quality from prescribed burning were not addressed in the draft EIS particularly in relation to curtailing of fugitive dust (PM₁₀), i.e., smoke management.

Answer. Caliente Resource Area is currently working with the local Air District and other Designated Burn Agencies in developing a coordinated regional approach to smoke management and BACM (Best Available Control Measures) for smoke from prescribed fire. Emissions from wildfire are expected to increase as prescribed burning is limited (RMP Chapter 10).

Comment. Commentors felt impacts to air quality from implementation of this plan would be significant. That the plan did not have sufficient data to indicate otherwise, nor did it address conformity to State Implementation Plans.

Answer. In order to determine the air quality impacts of this plan, a Resource Area wide emission inventory was completed in accordance with the Federal Clean Air Act. All federal actions affecting air quality must be accounted for and be in accordance with local air district SIPs (State Implementation Plans) and the Conformity (CAA) rules. (See Final EIS Chapter 4.) The preferred alternative air emissions inventory projects declining air emissions over the life of the plan.

Comment. Use current data for air quality facts and figures, and eliminate references to the BLM as a regulating authority.

Answer. There was no intent to imply that BLM has regulatory authority. However, the Clean Air Act requires that Government Agencies closely monitor direct and indirect actions which could affect local Air District attempts to reach attainment for specific criteria pollutants.

Comment. The inclusion of Global Warming in the resource area plan seems out of place.

Answer. All impacts on local air quality can be cumulative and contribute to total global atmospheric air quality - ecosystem management at its broadest level.

Soil

Comment. Erosion control and the appropriateness of site specific rather than generic treatment measures were questioned.

Answer. Site specific evaluations take into account impacts such as rill/gully width, depth, slope, stability, etc. These assessments are then used to determine what site specific treatments are appropriate.

Water

Comment. Watershed Management - Sedimentation/Non-point Source pollution need to be addressed in greater detail.

Answer. South Sierras Watershed specific assessment is beyond the scope of this plan. The need for non-point source assessment is realized and will be targeted as budget allocations permit. Non-point pollution from BLM authorized activities is expected to decrease with implementation of standards and guidelines for ecosystem health (RMP Chapter 6).

Comment. Stream road crossings affect water quality; this should be discussed.

Answer. If and when a road is opened and it is determined that road use would change due to increased traffic the need for a culvert and/or other mitigation would be assessed at that time.

Livestock Grazing

Permit/Lease and Allotment Administration

Comment. Explain the rationale and need for adding unallotted public lands to existing grazing allotments to complete "proper management units".

Answer. There are certain parcels which fall within a grazing permittee/lessee's area of use, but for some reason do not appear on the allotment description or lease. These parcels may have been considered unusable or were so small they were not applied for by the original applicant, or were just overlooked as being under public ownership. It is often impractical to segregate these parcels from the rest of the grazing allotment or area of private land use. Since these lands are currently being used in the same manner as the surrounding lands within the allotment and form a "proper management unit", it is our intention to add these parcels to the allotment. These parcels are usually small in nature and will not usually change the allotment's carrying capacity.

Comment. The RMP has not met its requirement under the grazing regulations for entering into consultation, cooperation, and coordination with affected permittees or lessees before making changes to permitted grazing use.

Answer. Development of this RMP included scoping meetings, briefings, open houses, and a call for written comments. Additional meetings have been held with grazing operators faced with the large changes.

Wild Horses

Comment. The Caliente Resource Area DEIS should have addressed the wild horses in the Oak Creek Canyon area.

Answer. The Oak Creek Canyon area is within the Ridgecrest Resource Area of the California Desert District. The nearest public land within the Caliente Resource Area is inaccessible to these wild horses due to natural barriers and steep terrain. No decisions regarding wild horses or burros need to be made within this RMP.

Economic or Cultural Heritage Impacts

Comment. BLM must fully evaluate the interdependency of public and private lands in the Caliente Resource Area, and the impacts of reductions in authorized grazing use on rural economies and the continuation of the ranching lifestyle and heritage. These proposed impacts could make ranchers unavailable in the future.

Answer. An analysis is included in EIS Chapter 4. The Proposed RMP would result in impacts similar to those under the No Action alternative.

Comment. Concern was expressed about cattle using and impacting the public lands. The spiritual heritage of the land should be preserved for us all.

Answer. The Bureau must provide for a multitude of uses of the public lands. Any one use should not be allowed at the total exclusion of all others. This RMP designates several ACECs and other areas which are closed to livestock grazing. In addition, grazing is authorized elsewhere under standards and guidelines designed to protect all resources.

Comment. Lands currently available for livestock grazing but unallotted should be used to mitigate for the reductions in grazing.

Answer. We provided for this situation in the draft RMP, page 582, and again in the final RMP, Chapter 6, Criteria for New Allotments.

Comment. The costs of relocating or constructing new range improvements for the protection of "sensitive resources" must be borne by BLM, not grazing lessees/permittees.

Answer. There are many ways to accomplish protection of sensitive resources from the potential impacts of livestock grazing. One way is to entirely remove an allotment from active use, another would be to take a particular pasture out of grazing, and another would be to construct a smaller barrier between the livestock and the resource. Since the public has mandated the BLM to protect these sensitive resources, the grazing lessee/permittee must contribute to the costs of protection if he/she wants to continue the action which may affect these resources. Where possible, the Bureau tries to cooperate in funding portions of beneficial range improvements through the use of the Bureau's Range Betterment fund. We also coordinate with the county grazing advisory boards for the use of the fees returned to them for this same purpose.

Comment. Ranchers will develop their private land if ranching is no longer economically viable due to restrictions in the RMP.

Answer. The livestock grazing decisions presented in the current document reflect what the Bureau feels is the best blend for meeting the objectives for the Caliente Resource Area. It is possible that some livestock operators may decide to develop their private land rather than to continue livestock grazing. This may occur regardless of public land decisions.

Comment. I question the short term uses versus long term productivity statement, "An indirect long term impact would result from the added grazing pressure that would undoubtedly be placed on adjoining private

lands from the loss or restriction of use on public lands". To suggest that ranchers would allow their range to be beat-up and depleted because of what takes place on adjoining public range is not a true reflection of the ranching community.

Answer. We do not anticipate that added grazing pressure to private lands will result in their becoming "beat-up and depleted". Where sound management practices are in place, they are likely to continue. However, increased use or extended seasons on private lands and their resulting impacts are considered to be likely.

Comment. Generalizations made in the Reasonable Foreseeable Development Scenario are questionable or inaccurate. How are 38,766 AUMs in the valley floor low to moderately significant, when 13,676 AUMs on land of lower carrying capacity are deemed moderate to highly significant?

Answer. Less than 6% of the Valley Management Area is public land; BLM grazing authorizations do not dominate the local livestock industry. Although less forage is produced within BLM allotments in the South Sierra Management Area, it plays a much larger role in the viability of the local livestock industry and the economies of nearby towns.

Mulch Management

Comment. Explain the scientific basis for the selection of the residual dry matter (RDM) levels. What is known about the effects on these RDM levels on soil compaction, wildlife habitat, plant species composition, and water quality? What success has the CRA had in enforcing these or any mulch levels?

Answer. Chapter 6 of the RMP discusses the rationale behind the RDM levels. The effects of the proposed RDM levels on vegetation and wildlife are discussed beginning on page 263 for vegetation and 279 for wildlife in the DEIS and Chapter 4 of the EIS. Past experience has found mulch management to be successful and efficient.

Comment. In the South Sierra Management Area, 300 lbs/acre of RDM will not adequately protect soils, vegetation, of forage and cover for wildlife. 500 lbs/acre or more RDM should be a standard throughout the SSMA. Those lower productivity allotments which do not attain these minimums should be removed from active status.

Answer. Modification of RDM levels may be made if the initial levels prescribed are not sufficient for meeting the objectives of the RMP. These objectives include adequate protection of soils, vegetation and wildlife habitat. Currently, our monitoring supports the idea that these lower levels are meeting our objectives for overall watershed health or T&E habitat in the areas they are designated.

Comment. I challenge the idea in the section on short term uses versus long term productivity, that excessive mulch layers which build up because of no grazing or overconservative utilization levels result in the long term lowering of soil productivity.

Answer. The draft EIS referred to a lowering of site productivity from excessive mulch. A build-up of thatch has been observed to decrease forage production at a site. The reasons for this may include a lowering of seedbed temperature through increased shading, reduced sunlight reaching the soil, and in some cases, increased failure of the seed to make contact with the soil. Soil productivity should be maintained or perhaps even enhanced from a build-up of mulch, via decreased erosion and improved nutrient flow.

Perennial Utilization

Comment. A number of comments were received on the proposed utilization levels for saltbush. Some comments requested additional information on how the levels were obtained. Other people felt that the proposed levels were too restrictive or not restrictive enough.

Answer. The proposed 20% utilization level on saltbush has been in place for several years. A provision has been included that allows saltbush utilization levels to be increased up to 50% if resource management objectives can still be met. Utilization levels may also be reduced if RMP objectives are not being met. The 20% utilization level was originally developed as part of the grazing program for the Carrizo Plain Natural Area. The grazing program in the Carrizo Plain Natural area was cooperatively developed by the California Department of Fish and Game, U.S. Fish and Wildlife Service, The Nature Conservancy and the Bureau after considering the recommendations of species experts, researchers, local livestock operators and the general public. After a few years of data collection we will re-evaluate this level to determine if it should be continued or replaced with some other measure of saltbush community health.

Comment. Grazing in the Valley Management Area seems to be oriented toward a continuation of annual forage production. Are there any proposals for the restoration of perennial grasses to these areas?

Answer. The proposed grazing program is oriented toward maintaining the health of the land while allowing for livestock grazing. The Bureau is working with researchers, The Nature Conservancy and the California Department of Fish and Game to determine if certain management practices may help to accelerate perennial grass restoration.

Riparian Management

Comment. A number of comments were received expressing concern for the protection of riparian areas. Many of these were especially concerned about the effects of grazing on riparian habitats. Neotropical migrating birds, which are heavily dependent on healthy riparian areas, was also a related concern. Concern was also expressed on the impacts of water diversions and land disposals.

Answers. Protection of riparian resources is a primary objective for the Bureau. The current plan allows continuation of grazing in riparian areas that are in good to excellent condition, so long as these areas remain in good to excellent condition. In areas that are not in acceptable condition, grazing will be reduced or excluded (see Final RMP Chapter 6). The importance of riparian areas to neotropical migrating birds combined with the Bureau's policy to promote neotropical migrating bird recovery will assist in the maintenance and restoration of riparian areas.

Impacts to riparian resources will be considered prior to authorizing any water diversion or proceeding with land tenure adjustments. Several ACFC's and special management areas are proposed with the objective of protecting riparian resources.

Comment. What method was used for the riparian stream surveys? What specific sites were identified as "good to excellent" and "poor to fair"? What factors influenced these ratings?

Answer. Extensive stream surveys were conducted using a method developed by a Bureau-wide task force to inventory, monitor and classify riparian areas. Soil alteration, vegetative bank protection and subsurface water status were used to determine overall condition of the area. A listing of the site ratings and a description of the methodology can be reviewed by contacting our office.

Sensitive Species

Comment. How were utilization levels and grazing season of use requirements in GKR areas developed?

Answer. In the current plan, the only special requirement for GKR is that in certain years, livestock operators may be asked to remove their livestock early to prevent damage to surface seed caches. This requirement was developed in conjunction with the U.S. Fish and Wildlife Service and species experts.

Comment. More comprehensive studies are needed before long-established grazing patterns are changed because reductions in grazing may be harmful to listed and sensitive species.

Answer. The current proposal is synonymous with the grazing patterns that have been in place on public land for the last several years. Monitoring has not indicated that the current grazing pattern is more harmful to sensitive species than previous levels of grazing. Monitoring and research will continue to help adjust grazing patterns to best meet the land use plan objectives.

Impacts to Deer Herds

Comment. Livestock grazing should never occur during deer hunting season.

Answer. Seasons of use for livestock grazing are usually determined by considering compatibility with natural resource management objectives and livestock operator needs. Occasionally, other issues such as compatibility with recreation activities is considered. We are unaware of any specific areas in the Caliente Resource Area where conflicts exist between livestock grazing and deer hunting.

Comment. Address impacts of livestock grazing on deer herds.

Answer. The most significant impacts of livestock grazing are discussed on page 294 of the DEIS.

Comment. Recommend no grazing on the Long Valley deer herd winter range from October 31 - April 30.

Answer. The grazing season for the Long Valley area was selected based on the concern for riparian resources in the allotment. Refer to page 296 of the DEIS for a discussion of grazing and riparian resources.

Fuels Management

Comment. Livestock grazing should be considered an important and economically beneficial method of managing vegetation and reducing fuel loads.

Answer. The value of livestock as a fire management tool is recognized.

Management Categories

Comment. The system used to determine selective management category of grazing allotments needs to be more thoroughly discussed and explained.

Comment. Resource condition should be the most important factor determining selective management category.

Comment. It is misleading and improper for all valley floor permits to be categorized in the (I) Improve category. Condition and quantity of BLM property has not been considered in the redesignation of the valley floor permits.

Answer. Since the Draft RMP was written, we have revisited allotment categorization and have modified that system to better meet management needs. The new process for allotment prioritization is fully described in RMP Chapter 6.

Allotment Management Plans

Comment. The DEIS commits to the development of an Allotment Management Plan for each "improve" category allotment, we suggest that AMPs be developed within 10 years for all allotments.

Answer. As noted above, the process for allotment categorization has been modified in RMP Chapter 6. We also feel that a more appropriate response to the issues on "I" category allotments would be the development of multi-disciplinary plans which integrate objectives for all resources, such as the Carrizo Plain Natural Area Management Plan and the Southern Sierra Management Plan. We will develop these more specific activity level plans as opportunities arise and the efforts will enhance proper management of resources

Standards & Guidelines

Comment. We recommend that grazing standards and guidelines be adopted proactively as part of the Final RMP, and have provided several concepts which we suggest be used as bases for these grazing standards and guidelines.

Answer. Proposed Standards and Guidelines developed by local Resource Advisory Councils have been fully integrated throughout the RMP and are discussed in RMP Chapter 6.

Monitoring

Comment. The grazing monitoring strategy does not appear to be adequate to assess the effects of grazing on rangeland ecosystems, to support high quality NEPA analyses, or to ensure that the RMP's resource objectives and utilization limits are met. The Caliente Resource Area must substantially strengthen its grazing monitoring commitments.

Answer. The grazing monitoring strategy presented in the draft has been refined and further strengthened in the Proposed RMP. It describes a program that can realistically be implemented in light of staffing limitations. The allotment categorizations allow us to focus efforts on high priority areas, while maintaining resource conditions in other areas. The addition of statewide standards of rangeland health and guidelines for grazing management should also provide the clarity and consistency needed to adequately assess and protect these resources.

Comment. Include available data on condition and trend for rangelands in the Final EIS.

Answer. Traditional condition and trend studies were developed for perennial rangelands, which are limited within the Caliente Resource Area. The data collected years ago in this resource area is not considered to be of value in guiding management, and may be misleading. The most recent data are available for review at the Caliente Resource Area office. Implementation of the standards and guidelines developed for this region, as illustrated in RMP Chapter 6, will provide valid management information.

Glossary

Activity Plan. A detailed action plan for a particular resource or combination of resources prepared after a land use plan is in place. The activity plan details how to accomplish the stated objectives of the land use plan for a particular area, allotment, etc., by the use of site-specific projects and analysis.

Alkali Sink. Land-locked basin that receives seasonal runoff; the soils of which are permeated by soluble minerals (usually alkaline). A sharp vegetational change separates plants of such soils from those of surrounding areas.

Allotment. An area of land where one or more operators graze their livestock. It contains public land and can include parcels of private or state-owned land. The number of livestock and period of use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture.

Allotment Management Plan (AMP). A concisely written activity plan for livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment. It is prepared with consultation, cooperation, and coordination with the permittee(s), lessee(s), or other affected parties.

Animal Unit Month (AUM). (1) The amount of feed or forage required by an animal unit for one month. (2) Tenure of one animal unit for a period of one month.

Annuals. Plants produced from seed which complete their life cycle in one growing season.

Archaeological Resources. Sites, areas, structures, objects, or other evidence of prehistoric or historic human activities.

Archaeological Site. Geographic locale which may contain structures, artifacts, material remains, rock art, and/or other evidence(s) of past human activity.

Areas of Critical Environmental Concern (ACEC). Areas within the public land where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

Critical Habitat. Same as Designated Critical Habitat.

Cultural Resources. A broad, general term meaning any cultural property and any traditional lifeway value, as defined below.

Cultural Property. A definite location of past human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups.

Traditional Lifeway Value. The quality of being useful in or important to the maintenance of a specified social and/or cultural group's traditional systems of (a) religious belief, (b) cultural practice, or (c) social interaction, not closely identified with definite locations.

Cumulative Impact. The impact on the environment which results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Designated Critical Habitat. An area designated as critical habitat by the U.S. Fish and Wildlife Service or National Marine Fisheries Service. It may include 1) the specific areas within the geographical area occupied by the species on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection, and 2) specific areas outside the geographic area occupied by the species upon determination that such areas are essential for the conservation of the species.

Designated Right-of-Way Corridor. A parcel or parcels of public land that have been identified by law, by Secretarial Order, through the land use planning process, or by other management decision as being a preferred location for existing and future right-of-way grants.

Disposal. Transfer of ownership of a tract of public land from the United States to another party.

Endangered Species. A species formally recognized by the U.S. Fish and Wildlife Service or National Marine Fisheries Service as in danger of extinction throughout all or a significant portion of its range.

Endangered Species Act (ESA) of 1973 (as amended). Federal law to ensure that no Federal action will jeopardize the continued existence of Federally listed or proposed threatened or endangered species of plants or animals.

Environmental Assessment (EA). A concise public document prepared to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. It includes a brief discussion of the need for the proposal, alternatives considered, environmental impacts of the proposed action and alternatives, and a list of agencies and individuals consulted.

Exchange. A conveyance of lands and interests therein from the United States to a person at the same time there is a conveyance of lands and interests therein from the person to the United States.

Federal Land Policy and Management Act of 1976 (FLPMA). Public Law 94-579, which gives the BLM legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the management, protection, development, and enhancement of public land.

Federal Mineral Estate. Subsurface minerals within a parcel of land that are Federally owned. Does not include the land surface. See Split Estate.

Federal Subsurface. Same as Federal Mineral Estate.

Federal Surface. Land surface which is Federally owned. Does not include subsurface minerals (mineral estate).

Fluid Minerals. Oil, gas, and geothermal resources.

Forage. All browse and herbaceous foods that are available to grazing animals.

Forage Utilization. The amount of current annual year's growth of a plant that is removed by grazing animals.

Forb. Non-woody herbaceous plants which are neither grass nor resemble grass.

Guzzler. A water catchment and storage device utilizing a concrete, asphalt, or steel apron to catch rainfall and a buried tank (usually fiberglass) to store it. Guzzlers usually store about 900-1,000 gallons of water, when full. They are accessible at ground level to small wildlife by means of a ramp leading into the tank.

Hazardous Waste. A solid waste or combination of solid waste which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase of mortality or increase in serious, irreversible or reversible incapacitating illness; or waste which may pose a substantial or potential hazard to human health or to the environment when improperly treated, stored, transported or disposed of, or otherwise managed.

Historic. Refers to period after permanent Euro-American settlement in California; post circa A.D. 1769.

Historic Resource or Historic Property. Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes, as defined in regulations, artifacts, records, and remains that are related to and located within such properties. The term "eligible for inclusion in the National Register" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria.

Interim Management Policy. The Bureau's management policy for land under wilderness review (wilderness study areas). The policy is to continue resource use on land under wilderness review in a manner that maintains the area's suitability for preservation as wilderness (referred to as the Non-impairment Standard).

Land Tenure Adjustment. A change in the public land ownership or jurisdiction accommodated through the sale, exchange or withdrawal of public land or acquisition of private lands, for the purpose of consolidating the public lands to improve their management, protection, and enhancement of their resources.

Leasable Minerals. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, asphalt, sulphur, potassium and sodium minerals, and oil and gas. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Listed Species. Plants and animals that are officially recognized as being threatened or endangered by Federal or State governments. Federally listed species are protected under the Federal Endangered Species Act. State listed species are protected under the California Endangered Species Act.

Locatable Minerals. Minerals or materials subject to disposal and development through the Mining Law of 1872, (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale (some bentonites, limestone, talc, some zeolites, etc.).

Mineral Materials. Also referred to as salable, or common variety minerals. Consists of common varieties of sand, stone, gravel, clay, pumice, cinders, etc., as defined by 61 Stat 681, and 69 Stat 367. These minerals may be sold under contract by the Bureau.

Mineral Material Site. An area where the Bureau has authorized the removal of mineral material pursuant to the Acts of 1947 and 1955. These may be individual free use or sale areas, common use areas, or community pits.

Mulch Level. The amount of dry plant material left on the ground from the previous year's growth. Measured in pounds per acre.

Multiple Use. The management of the public land and its various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific, and historical values, and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

National Environmental Policy Act (NEPA) of 1969. Public Law 91-190. Established environmental policy for the nation. Among other items, NEPA requires Federal agencies to consider environmental values in decision-making processes.

National Register of Historic Places (NRHP). A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archaeology, and culture, established by the Historic Preservation Act of 1966 and maintained by the Secretary of the Interior.

Off-Highway Vehicle (OHV). This term includes a wide variety of vehicles used for access and recreation including motorcycles, three and four wheeled all terrain vehicles (ATVs), 4-wheel drive trucks, jeeps and dune buggies.

Potential Habitat. Natural lands within the range of a species that may support the species. Due to the lack of information about the presence or absence of a species in many parts of its range, it is assumed that the areas are potential habitat until determined otherwise.

Princt. Kangaroo rat burrow system that defines a territory.

Proposed Critical Habitat. An area officially proposed for listing as Critical Habitat under Section 4 of the ESA. Habitat is officially proposed upon publication of a proposed rule in the federal register.

Public Access. A corridor or route through which all members of the public may legally travel when engaging in casual use of public lands, without specific authorization from the BLM or other landowner. Where public access is limited (to foot, foot and horse, or non-mechanized), any other means of travel requires approval of the authorized officer.

Public Lands. Any lands and interests in lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership.

Range Improvement. Any activity or program on or relating to rangelands which is designed to improve production of forage, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, and provide habitat for livestock, wild free-roaming horses and burros, and wildlife. The term includes but is not limited to structures, treatment projects, and use of mechanical means to accomplish the desired result.

Recovery. Improvement of the status of a listed species to the point at which listing is no longer necessary under the criteria of the Endangered Species Act.

Repositioning. The consolidation of BLM land parcels into a more contiguous pattern, for improved use by the general public and greater management efficiencies for BLM; the most common method of repositioning is through land exchanges, although land sales may also be used.

Residual Dry Matter (RDM). The amount of dry plant material left on the ground from the previous year's growth.

Riparian. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to the plants of all types that grow rooted in the water table of streams, ponds and springs.

Salable Minerals. Minerals that may be sold under the Material Sale Act of 1947, as amended. Included are common varieties of sand, stone, gravel, and clay.

Sensitive Species. Includes special status species and other species of plants or animals that are generally considered to be rare or of concern.

Sensitive Plant Communities. Plant communities that are generally considered to be rare or of concern.

Special Management Areas. A locally generated identification designed to flag locations which have specialized management concerns or needs but do not warrant ACEC designation.

Special Status Species. Includes the following:

Proposed Species. A species officially proposed for listing as an endangered or threatened species by the U.S. Fish and Wildlife Service or National Marine Fisheries Service. A species is officially proposed upon publication of a proposed rule in the Federal Register.

Threatened or Endangered. Species officially listed as threatened or endangered by the U.S. Fish and Wildlife Service or National Marine Fisheries Service. A list of threatened or endangered species is published in 50 CFR part 17.

Candidate Species. Species under review by the U.S. Fish and Wildlife Service or National Marine Fisheries Service for listing as an endangered or threatened species. The list of candidate species is published in the Federal Register.

State Listed or State Proposed Species. Species proposed for listing or listed by California in a category (rare, threatened, or endangered) implying potential endangerment or extinction. Listing is either by legislation or regulation.

BLM Sensitive Species. Species designated by the California State Director of BLM, usually in cooperation with the California Natural Diversity Data Base, as sensitive. They are those species that are: (1) under status review by the U.S. Fish and Wildlife Service; or (2) whose numbers are declining so rapidly that Federal listing may become necessary; or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats.

California Native Plant Society Sensitive Species. Plant species identified in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California.

Split Estate. A given area where either the surface or mineral estate are Federally owned.

Stipulations. The provisions of a grant or permit which include but are not limited to statements describing the boundary of the grant or permit, the limits which govern the holder's exercise of the rights granted and generally how the project will be constructed, operated, maintained and terminated. Used interchangeably with "Terms and Conditions".

Threatened and Endangered Species Conservation Area. Areas identified in regional conservation strategies as important to species conservation and recovery. These areas may be important as reserves or as corridors to connect these reserves.

Threatened Species. A species formally recognized by the U.S. Fish and Wildlife Service or National Marine Fisheries Service as likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Traditional Lifeway Values. See Cultural Resources

Transportation and Utility Corridor. A parcel of land, without fixed limits or boundaries, that is being used as the location for one or more transportation or utility rights-of-way.

Trespass. Any use, occupancy or development of the public lands or their resources without authorization to do so where authorization is required. Used interchangeably with "Unauthorized Use".

Unnecessary or Undue Degradation. Impacts greater than those that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices, including use of the best reasonable available technology.

Unsuitable Range. An area not suited for livestock grazing because of barrenness, lack of forage or water, unstable soils, or physical barriers such as topography, rock, or dense timber.

Utilization. The current year's growth that is consumed or destroyed by grazing or browsing animals.

Visual Resource Management (VRM). The planning, design and implementation of management objectives to provide acceptable levels of visual impacts for all BLM resource management activities. VRM classes I through V each describe a different degree of modification allowed in the basic elements of the landscape and still retain its character.

Wild and Scenic River. River with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition.

Wilderness Area. (1) An area formally designated by Congress as part of the National Wilderness Preservation System. (2) An area formally designated as part of the State of California's Wilderness Preservation System.

Wilderness Study Area (WSA). Roadless areas of 5,000 acres or more and roadless islands of public lands identified as having wilderness characteristics described in the Wilderness Act of 1964.

Withdrawal. Withholding an area of Federal land from settlement, sale, location, or entry under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land.

ACRONYMS

ACEC	Area of Critical Environmental Concern	NWSRS	National Wild and Scenic Rivers System
ACHP	Advisory Council of Historic Preservation	OHV	Off-Highway Vehicle
AMP	Allotment Management Plan	PCNST	Pacific Crest National Scenic Trail
APCD	Air Pollution Control District	PCT	Pacific Crest Trail
APD	Application for a Permit to Drill	PM ₁₀	Particulate Matter <10 microns in size
AUM	Animal Unit Month	PSD	Prevention of Significant Deterioration (Air Quality)
BIA	Bureau of Indian Affairs	PWR	Public Water Reserve
BLM	Bureau of Land Management	R	Range (referring to legal description)
BMP	Best Management Practice	RA	Resource Area
BNLL	Blunt-nosed Leopard Lizard	RACM	Reasonable Available Control Measures
CARB	California Air Resources Board	RMP	Resource Management Plan
CCAA	California Clean Air Act	RNA	Research Natural Area
CDFA	California Dept. of Food & Agriculture	ROC	Reactive Organic Compounds
CDF&G	California Department of Fish and Game	R&PP	Recreation and Public Purposes
CDOG	California Division of Oil and Gas	ROD	Record of Decision
CFR	Code of Federal Regulations	ROW	Right-of-way
CPNA	Carrizo Plain Natural Area	RT&E	Rare, Threatened, and Endangered
CRA	Caliente Resource Area	SBB&M	San Bernardino Base and Meridian
CRMP	Coordinated Resource Management Plan	SCCAB	South Central Coast Air Basin
DEIS	Draft Environmental Impact Statement	SHPO	State Historic Preservation Officer
EIS	Environmental Impact Statement	SJKF	San Joaquin Kit Fox
EPA	Environmental Protection Agency	SJVAB	San Joaquin Valley Air Basin
ESA	Endangered Species Act	SJVUAPCD	San Joaquin Valley Unified Air Pollution Control District
FEIS	Final Environmental Impact Statement	SMARA	Surface Mining & Reclamation Act of 1975
FLPMA	Federal Land Policy and Management Act	SMA	Special Management Area
HMP	Habitat Management Plan	SRP	Special Recreation Permit
IMP	Interim Management Plan	T	Township (referring to legal description)
LSU	Limited Surface Use	T&E	Threatened and Endangered Species
MDB&M	Mount Diablo Base and Meridian	USDI	U.S. Department of the Interior
MOU	Memorandum of Understanding	USFS	U.S. Forest Service
NCLWMA	National Cooperative Land & Wildlife Management Area	USF&WS	U.S. Fish and Wildlife Service
NEPA	National Environmental Policy Act	USGS	U.S. Geological Survey
NHL	National Historic Landmark	VRM	Visual Resource Management
NOX	Nitrogen Oxides	WSA	Wilderness Study Area
NPS	National Park Service	WSR	Wild and Scenic River
NRHP	National Register of Historic Places		
NSU	No Surface Use		

Preparers

Introduction

The Caliente Resource Management Plan/Final Environmental Impact Statement (RMP/EIS) was prepared by staff from the Caliente Resource Area Office and the Bakersfield District Office. The principal preparers contributed to nearly all facets of the plan and EIS. Many other employees both past and present made significant contributions to the plan through their support and teamwork.

The California State Office and Bakersfield District Office Planning, Minerals, and Resources staffs provided technical support and suggestions. Also see the Draft RMP/EIS pages 411 - 412 for the listing of preparers.

Preparers

James W. Abbott, Area Manager. Twenty years experience in natural resources management. B. S. Outdoor Recreation. Colorado State University. Provided management direction.

Mike Ayers, Outdoor Recreation Specialist. Three & one half years with BLM & fourteen years with the COE. M.S. Biology, East Texas State University. Responsible for recreation, wilderness and Wild & Scenic River elements, as well as general recreation input in the early planning phases.

Susan E. Carter, Botanist. Six years BLM and USFS experience. B.A. Botany and Environmental Biology, Humboldt State University. Responsible for vegetation input.

Duane W. Christian, Archaeologist. Sixteen years BLM experience. B.S. Anthropology, Brigham Young University. Responsible for cultural and paleontological Resources and Native American concerns input.

Karen M. Doran, Natural Resource Specialist. Eight years BLM experience. B.S. Agricultural Science and Management, University of California at Davis. Responsible for the livestock management section.

Rosalinda Estrada, Realty Specialist. Eight years realty experience in BLM. A.A. Business, and Paralegal Certification. Responsible for the land use and land tenure adjustment sections.

Judy Felli, Administrative Support Clerk. Eight years BLM experience. Provided clerical and administrative support.

Wanda Hayes, Computer Programmer Analyst. Ten years BLM experience. B.S. Mathematics, California State University, Bakersfield. Provided Geographic Information System maps and assistance.

Amy R. Kuritsubo, Wildlife Management Biologist. Fifteen years BLM experience. B.S. Wildlife Management, Humboldt State University. Responsible for wildlife management input.

Stephen F. Larson, Multi-Resource Staff Chief. Nineteen years BLM experience. B.S. Botany, Brigham Young University. Coordinated preparation of the RMP/EIS.

Carlos F. Lopez, District Soil/Air/Water Program Lead. Fifteen years BLM, Forest Service, and Soil Conservation Service experience. B.S. Soil Science, California State Polytechnic University at Pomona. Responsible for air quality and water resource input.

Ed Lynch, Planning & Environmental Coordinator. Twenty-seven years BLM experience. B.A. Biology, M.A. Botany, University of California at Berkeley. Responsible for direction and coordination.

Karen Margrave, Cartographer. Eight years BLM experience. Provided Cartographic input.

Debbie L. Santiago, Fire Management Technician. Seven years BLM experience. Responsible for fire management input.

Daniel Vaughn, Realty Specialist. Seventeen years professional experience in BLM and Soil Conservation Service. B.S. Soils and Plant Nutrition, University of California at Berkeley. Contributed input for the land tenure adjustment and land use authorization sections.

Carol Verrier, Geologist. Eight years government experience, and six years in the private sector. B. S. Geology, College of William and Mary. M.S. Geology, West Virginia University. Responsible for the fluid and solid mineral contributions.

