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S SUMMARY

S.1. INTRODUCTION

In many parts of the United States, National Forest System (NFS) lands overlie geological formations that contain oil and/or natural gas. "Leases" are issued under the mineral leasing laws on many lands for the purpose of drilling exploratory and production wells and extracting oil and/or gas. The mission of the Forest Service in relation to minerals management is to support, facilitate, and administer the orderly exploration, development, and production of mineral and energy resources on NFS lands to help meet the present and future needs of the Nation (Mining and Minerals Policy Act [1970] and Forest Service Manual (FSM 2802).

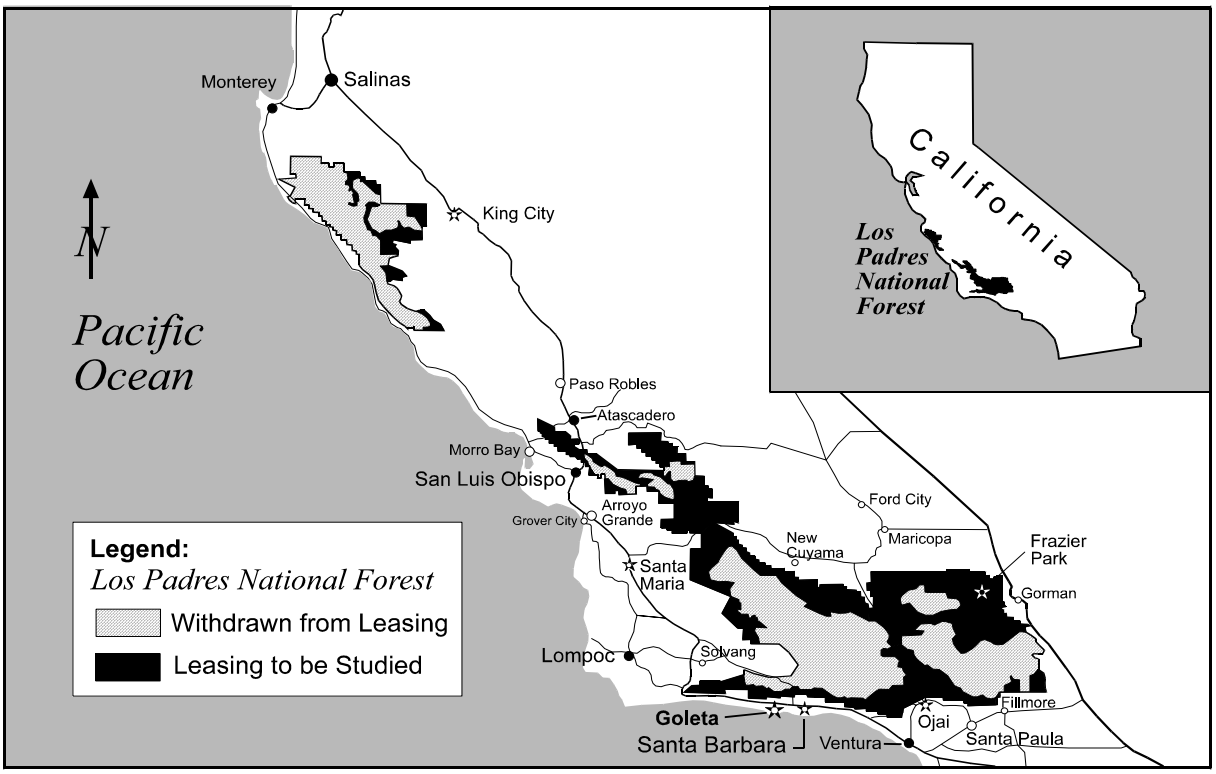


FIGURE S-1: LOCATION OF LOS PADRES NATIONAL FOREST AND LANDS CONSIDERED FOR OIL & GAS LEASING

The United States Department of Agriculture, Forest Service, Los Padres National Forest (LPNF) in cooperation with the United States Department of the Interior, Bureau of Land Management (BLM), Bakersfield field office, is conducting an environmental analysis with the intent of identifying Federal lands with Federal mineral rights and determining whether or not they should be made available for oil and gas exploration, development, and production on the Los Padres National Forest. The Forest Service is the manager of the surface resources on NFS lands and BLM is the manager of Federal subsurface minerals. Figure S-1 shows which parts of LPNF are "withdrawn from mineral entry" and which can be considered for oil and gas leasing. This analysis is being conducted in accordance with the National Environmental Policy Act of 1969 (NEPA) to identify and assess potentially significant environmental impacts and address issues associated with leasing.

This draft environmental impact statement (DEIS) describes and explains the leasing decisions the Forest Service and BLM will make, how the Forest Supervisor and the State Director of the BLM will implement the decisions, and how future decisions would be made to issue permits to drill and potentially develop oil and gas resources. This DEIS examines alternative leasing scenarios and the environmental consequences of implementing each alternative.

S.1.1. Proposed Action

The FS proposes to determine which NFS lands on LPNF could be made available for oil and gas leasing, and to authorize the BLM to offer these lands for lease. The BLM proposes to offer for lease lands that are authorized by the Forest Service. The Forest Service and BLM, Federal agencies with separate responsibilities for lands within LPNF boundary, propose the following specific actions:

1) *The Forest Supervisor of the Los Padres National Forest will decide, within the Los Padres National Forest study area, which NFS lands are administratively available for oil and gas leasing and under what conditions (lease stipulations).*

2) *The Forest Supervisor will decide what specific NFS lands the BLM is authorized to offer for lease, subject to the Forest Service ensuring that correct stipulations will be attached to leases issued by the BLM.*

3) *The Forest Service proposes to amend the Los Padres National Forest Land and Resource Management Plan (Forest Plan) to incorporate the leasing decision.*

4) *The BLM will decide whether or not to offer for lease the specific lands authorized by the Forest Service.*

The decisions made as a result of this analysis will not result directly in ground-disturbing activities. Ground-disturbing activities, such as exploration, drilling, and/or field development would require further environmental analysis under NEPA and a separate site specific decision prior to approval.

S.1.2. Lands Involved in the Analysis

The area involved in this leasing analysis is all within Los Padres National Forest, located along the central California coast (Figure S-1). It extends approximately 220 miles from the Point Sur area at its northwest corner to Lake Piru at its southeast end. Within its boundaries it contains 1,969,520 acres, of which 193,776 acres are privately owned. All NFS lands within the boundaries that are not withdrawn from mineral entry will be considered in this analysis process.

Areas with high potential for occurrence of oil and gas have been identified. The amount of activity (wells, roads, pipelines, and power lines) and the resulting acres of disturbance that can reasonably be expected to occur have been estimated for these areas. Estimates for activity and disturbance have not been made for NFS lands that are not thought to have high potential for occurrence of hydrocarbons. Nevertheless, this study does analyze the effects of oil and gas development if it did occur outside of the high potential areas.

The area being considered for leasing, also referred to as the study area, consists of all NFS lands within LPNF that have not been withdrawn from mineral entry. The areas withdrawn from mineral entry consist of all Wilderness areas, the Santa Ynez watershed, and the Big Sur Coastal Zone. All areas of LPNF are considered in the analysis of effects. The acres of the forest and withdrawn areas are shown in Table S-1.

TABLE S-1: ACRES OF LPNF AVAILABLE FOR OIL & GAS LEASE CONSIDERATION

Area	National Forest System Land	Private Land Within LPNF Boundary	Total
Within LPNF Boundary	1,775,744	193,776	1,969,520
Withdrawn Areas			
Coast Zone	42,089	9,891	51,980
*Santa Ynez Watershed **	152,228	10,184	162,412
Wilderness Areas	814,560	4,724	819,284
Total Withdrawn Areas	1,008,877	24,799	1,033,676
Lease Study Area	766,867	168,977	935,844

** A portion of the Santa Ynez watershed withdrawal is included in the "Wilderness Areas" acres.*

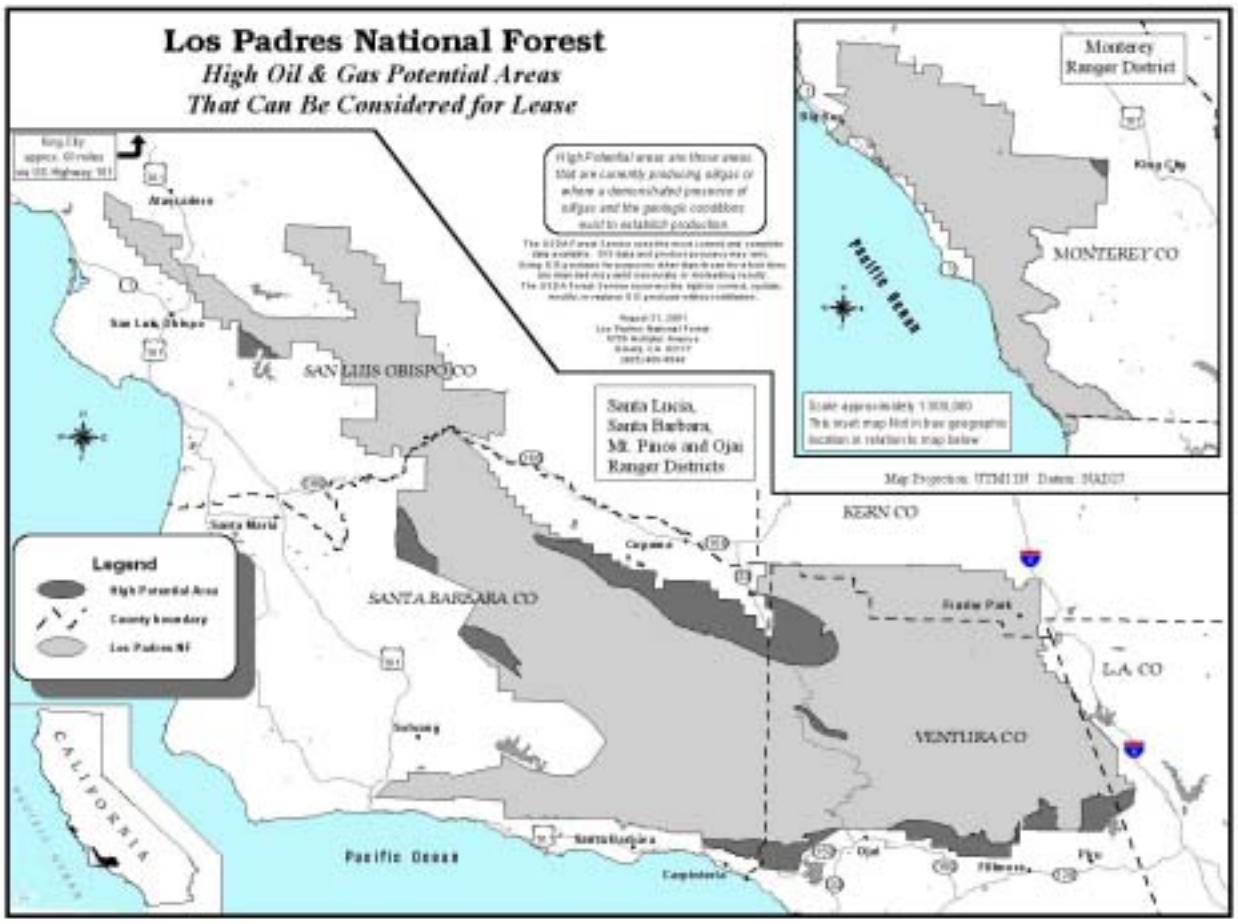
S.1.3. Reasonably Foreseeable Development Scenario

Activity that occurs after a lease is issued can create physical, biological, and socio-economic effects upon the environment. A reasonably foreseeable development scenario (RFD) was developed to identify high oil and gas potential areas (HOGPAs) and estimate the amount of surface disturbance and the amount of oil and gas that could be expected to occur from such development. The RFD was developed by consultant and Forest Service petroleum geologists

using historical oil and gas development information, other known geologic information, and interpretation of this information. The purpose of the RFD is to provide a basis for analysis, developing alternatives and estimating environmental effects.

The HOGPAs identified in the RFD analysis are shown in Figure S-2 and on maps in the maps packet.

FIGURE S-2: HOGPAS AND COUNTIES



S.1.4. Relationship to the Forest Plan

Management of each administrative unit of the National Forest System, one or more National Forest(s) or National Grassland(s), is managed through a Land and Resource Management Plan (Forest Plan). Most of the existing Forest Plans include general decisions, as part of management prescriptions, to provide for oil and gas leasing, but do not include decisions for leasing specific lands. Prior to the passage of the Federal Onshore Oil and Gas Leasing

Reform Act of 1987 (Leasing Reform Act) and except for acquired lands, the Forest Service had no authority to make decisions related to issuing or not issuing oil and gas leases on National Forest System lands. Forest Plan EISs that predate the Leasing Reform Act do not fully meet the intent of the regulations to make site-specific leasing decisions. Decisions the Forest Supervisor will make, including availability, will be used to develop an amendment to the Forest Plan.

S.1.5. Federal Management of Leases

The BLM is responsible for issuing oil and gas leases on Federal lands and on private lands for which the Federal government retains mineral rights. **The BLM cannot issue leases for lands administered by the Forest Service without consent from the Secretary of Agriculture.** In areas where exploration and development of oil and gas resources would conflict with the protection or management of other resources or public uses, the NEPA process identifies measures to mitigate impacts. The mitigation measures are applied to leases as stipulations, which may affect the types of uses that may occur or restrict surface occupancy.

S.2. ISSUES

The scoping process has identified the following twelve issue categories:

Physical Environment

1. **Air Quality**
2. **Watersheds, Wetlands, Riparian, and Floodplains**

Biological Environment

3. **Wildlife, Fisheries, and Vegetation**

Social Environment

4. **Heritage Resources**
5. **Socioeconomic Impacts/Growth**
6. **Social Impacts**
7. **Access and Traffic**
8. **Land and Resource Management Plans**
9. **Oil & Gas Development**
10. **Scenic Resources**
11. **Safety and Hazards**
12. **Recreation**

S.3. ALTERNATIVES

The alternative leasing scenarios vary in relation to the lands that would be offered for lease and the lease terms and stipulations that would be applied to the leases.

S.3.1. Lease Options/Terms

The lease terms and stipulations considered in this study are described below.

S.3.1.1. No Lease (NL)

Federal minerals within the analysis area would not be available for new leasing. Existing leases would remain in effect until they terminate or expire. This decision would not affect private minerals.

S.3.1.2. No Surface Occupancy (NSO)

Under this leasing option, roads, well sites, tank batteries, or other oil and gas exploration and development facilities would not be allowed to occupy the surface of specified lands.

S.3.1.3. Timing Limitation (TL)

Under this leasing option, oil and gas exploration and development activities would be restricted during certain periods of time. For example, timing limitations or seasonal restrictions would be applied to protect the breeding habitat of a sensitive wildlife species.

S.3.1.4. Limited Surface Use (LSU)

Under this leasing option, use or occupancy of the surface would be allowed but restricted to mitigate potential effects of oil and gas exploration and development activities on particular resource features or values. For example, stipulations could require oil and gas exploration and development operations (e.g., drill rigs, tank batteries, access roads) to meet a particular visual quality objective (VQO) to protect scenic values.

S.3.1.5. Standard Lease Terms (SLT)

Under this leasing option, no stipulations would be applied. Mitigation of impacts associated with oil and gas exploration and development activities on resources would be based on the requirements of existing laws such as the Endangered Species Act, National Historic Preservation Act, Clean Water Act, and Clean Air Act. For resources that are not protected by law, mitigation would be based on the BLM Standard Lease Terms and 43 CFR 3101.1-2, which provides clarification of reasonable mitigation as specified in Section 6 of the Standard Lease Terms (e.g., delaying of activities for up to 60 days in a calendar year, or moving a well location up to 200 meters).

S.3.2. Alternative Scenarios Considered in Detail

The following alternatives represent the reasonable range of possible oil and gas leasing scenarios for LPNF system lands that are legally available for lease consideration. Large maps of each alternative are contained in the map packet. These alternatives are based on an initial list of alternatives identified by the LPNF interdisciplinary (ID) Team, scoping input received, and the results of the analysis of the initial alternatives. The geographically specific alternatives were developed, based on the objectives of each alternative leasing scenario, using the LPNF Geographical Information System (GIS) database. GIS was used to estimate environmental sensitivity to oil and gas leasing, develop mitigating stipulations, and estimate Forest Plan compliance. The leasing alternatives vary from not allowing any new oil and gas leases through the maximum amount of oil and gas leasing possible.

Several oil and gas leases currently exist on LPNF lands. These are shown on the alternative maps in the packet of maps. These leases are entitled to continue as long as they produce oil and/or gas and meet existing lease terms. For this reason ***the existing leases must be considered a part of all alternatives.***

S.3.2.1. Alternative 1 – No Action – No New Leasing

This alternative represents one bound of the range of alternatives that can be considered. It also represents the National Environmental Policy Act (NEPA) requirement to consider a "no action" alternative, which in this situation is considered to be continuing the current management situation. No new leasing would occur under this alternative. Existing leases have an entitlement to continue as long as they are producing. Any leases not producing at the end of their lease term would be terminated. Alternative 1 serves as a basis of comparison for the other alternatives and is the minimum (no additional) amount of leasing that can be permitted.

S.3.2.2. Alternative 2 – Emphasize Oil & Gas Development

Alternative 2 represents the other end of the reasonable range of alternative leasing scenarios. This alternative represents the maximum amount of leasing that can be done, with the minimum amount of constraints upon the leases. Alternative 2 would allow leasing of all Los Padres National Forest System lands, not legally withdrawn from mineral entry, with BLM Standard Lease Terms as mitigation. Only Forest Service Information Notices interpreting BLM Standard Lease Terms for Los Padres National Forest application would be added to the Standard Lease Terms.

S.3.2.3. Alternative 3 – Meet Forest Plan Direction

This alternative was developed as a result of the analysis of Alternative 2. Alternative 3 answers the question, "What changes need to be made to Alternative 2 to bring it into

compliance with the Los Padres National Forest Land and Resource Management Plan (Forest Plan)?" These changes take the form of added lease stipulations.

S.3.2.4. Alternative 4 – Emphasize Surface Resources

This alternative builds upon Alternative 3 adding further stipulations as mitigation measures to emphasize rehabilitation and enhancement of the surface resources and mitigation or avoidance of all identified potentially significant impacts.

S.3.2.5. Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis

Alternative 4a is Alternative 4 but with all inventoried roadless areas (IRAs) given a "no surface occupancy" (NSO) stipulation.

S.3.2.6. Alternative 5 – Combination of Alternatives 3 and 4

Inside High Oil and Gas Potential Areas (HOGPAs), the Alternative 4 biological lease terms would apply, in addition to all other Alternative 3 lease terms. Alternative 4 lease terms are used outside of HOGPA's. No Surface Occupancy (NSO) areas that are considered inaccessible by current drilling practices on LPNF are not leased under Alternative 5. This consists of areas that are otherwise in NSO areas and are more than a half-mile away from a location from which slant drilling could occur.

S.3.2.7. Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis

Alternative 5a is Alternative 5 but with all inventoried roadless areas (IRA's) given a No Surface Occupancy (NSO) stipulation. Similar to Alternative 5, NSO areas that are considered inaccessible by current drilling practices on LPNF are not leased in Alternative 5a. Consequently, significant portions of the IRA's would not be leased and the remainder of the IRA's accessible by slant drilling would have the NSO stipulation applied.

S.4. AFFECTED ENVIRONMENT

LPNF is situated along the central coast area of California, as shown in figures S-1 and S-2, within the Southwest Mountain and Valley Character Type. Los Padres is the third-largest National Forest in California, and includes some of the wildest and most rugged land in the State. Elevations range from sea level on the Monterey coast to nearly 9,000 feet on Mt. Pinos. Six major vegetation types mantle the Forest's landscape: chaparral, mixed evergreen and oak forest, oak woodland, pinyon-juniper woodland, conifer forest, and grassland. The Forest covers parts of six counties (Kern, Los Angeles, Monterey, San Luis Obispo, Santa Barbara and Ventura). It is divided into five ranger districts: Monterey, Santa Lucia, Santa Barbara, Mt. Pinos, and Ojai.

S.4.1. Physical Environment

S.4.1.1. Air Quality

Los Padres National Forest enjoys a Mediterranean climate characterized by wet, cool winters and warm, dry summers. LPNF air quality is generally good except during fires or periods when pollutants from other areas are transported over the forest such as during inversions and off shore flow conditions.

The nine High Oil and Gas Potential Areas (HOGPA's) assessed in this report are located in five counties: Ventura, Santa Barbara, San Luis Obispo, Monterey, and Los Angeles. A small portion of the Sespe HOGPA lies within Los Angeles County; however, all of the development within the Sespe HOGPA is expected to occur within Ventura County.

The California Air Resources Board (CARB) has divided the state into air basins for air quality planning purposes. Ventura, Santa Barbara, and San Luis Obispo Counties compose the South Central Coast Air Basin (SCCAB). Monterey County is part of the North Central Coast Air Basin (NCCAB). In general, an air basin is characterized by a relatively uniform climate, geography, and air pollution potential. In addition, the CARB has further divided the state into local air pollution control districts (APCDs) or air quality management districts (AQMDs) that have permitting authority for stationary air pollution sources and serve as reviewing agencies for environmental documents. Table S-2 lists the HOGPAs by air district and by air basin.

The California Air Resources Board (CARB) and local air districts maintain a network of ambient air monitoring stations throughout California. The monitoring stations measure actual criteria pollutant concentrations for comparison to the state and national standards.

Based on the pollutant levels recorded at the monitoring stations, the EPA and CARB classify the status of air quality in the various air basins for air quality planning purposes. The current area designations for the state and national standards are listed in Tables S-3 and S-4, respectively.

An attainment designation means that all of the monitoring stations in the air basin have been meeting the standards over the past several years. A non-attainment designation means that violations of the air quality standards have been recorded at one or more stations over the past several years.

S.4.1.1.1. Current Attainment/Non-attainment of Air Quality Standards

As shown in Tables S-3 and S-4, ozone and PM_{10} are the pollutants of concern in the NCCAB and SCCAB. All counties in both air basins are non-attainment for the state ozone standard. Santa Barbara and Ventura Counties are non-attainment for the national ozone standard. For

PM_{10}, all counties in both air basins are non-attainment for the state standard. For the national PM_{10} standards, the air basins are attainment. For all other pollutants, the air basins are attainment.

The Federal Clean Air Act and the California Clean Air Act both require designated regional agencies to prepare air quality management plans for non-attainment pollutants. The plans must set forth strategies for reaching attainment of the standards according to specific schedules. Attainment is projected based on regional emission inventories conducted for future milestone years.

TABLE S-2: HIGH OIL AND GAS POTENTIAL AREAS BY AIR DISTRICT AND AIR BASIN

Air Basin	Air District	HOGPA
North Central Coast	*Monterey Bay Unified APCD*	*Monroe Swell*
South Central Coast	*San Luis Obispo County APCD*	*Lopez Canyon*
	Santa Barbara County APCD	*South Cuyama (west portion)*
		La Brea Canyon
		Figueroa Mountain
		Rincon Creek (west portion)
	Ventura County APCD	*Sespe*
		South Cuyama (east portion)
		San Cayetano
		Piedra Blanca
		Rincon Creek (east portion)

TABLE S-3: AREA DESIGNATIONS FOR THE CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Air Basin	County	Ozone	CO	NO_2	SO_2	PM_{10}
North Central Coast	Monterey	Non-attainment	Attainment	Attainment	Attainment	Non-attainment
South Central Coast	San Luis Obispo	Non-attainment	Attainment	Attainment	Attainment	Non-attainment
	Santa Barbara	Non-attainment	Attainment	Attainment	Attainment	Non-attainment
	Ventura	Non-attainment	Attainment	Attainment	Attainment	Non-attainment

Source: California Air Resources Board, 2000.

TABLE S-4: AREA DESIGNATIONS FOR THE NATIONAL AMBIENT AIR QUALITY STANDARDS

Air Basin	County	Ozone	CO	NO_2	SO_2	PM_{10}
North Central Coast	Monterey	Attainment	Attainment	Attainment	Attainment	Attainment
South Central Coast	San Luis Obispo	Attainment	Attainment	Attainment	Attainment	Attainment
	Santa Barbara	Non-attainment	Attainment	Attainment	Attainment	Attainment
	Ventura	Non-attainment	Attainment	Attainment	Attainment	Attainment

Source: California Air Resources Board, 2000.
Note: The national standards for $PM_{2.5}$ and 8-hour ozone were adopted by the EPA in July 1997. As a result, attainment designations will not be made until at least 2002 for $PM_{2.5}$ and 2000 for 8-hour ozone. The designations for ozone in this table reflect the 1-hour ozone standard only.

S.4.1.1.2. Sensitive Receptor Locations

At the time of project-level analysis, it will be important to consider sensitive receptors and the locations of sensitive receptor sites near the project areas. From an air quality perspective, sensitive receptor sites are defined as locations where adverse air quality levels could affect (a) a relatively large number of people, such as a nearby community or popular recreation area; or (b) a Class I wilderness area. The Ventana and San Rafael (see map entitled *Roadless Areas and ROS Classes* in the accompanying map packet) are both Class I wilderness areas. Some, but not all Forest recreation areas are identified on the map entitled *Recreation Stipulations Alternative 3.*

S.4.1.2. Watersheds

The watersheds of Los Padres National Forest are delineated on the *Watershed Stipulations* map in the map packet. These watersheds are composed of steep mountainous terrain with complex soil and geologic patterns. The South Coast Range and western portion of the Transverse Ranges provide the setting for most of the Forest's 1,775,744 acres. The oldest rock formation may be as much as 1.7 billion years old, but sedimentary formations less than 200 million years old underlie most of the Forest. This underlying bedrock is intensely folded, fractured, and faulted. The soils are poorly developed and are extremely susceptible to erosion when disturbed. The steepness of the terrain, the shallowness of the soils, and complex geologic faulting all contribute to landslide hazard potential. Soil erosion and landslides can be a major source of sediment, which can damage roads, pipelines and other facilities, and degrade water quality. In order to meet water quality standards, the land must be used in a way that does not accelerate soil erosion and instability. The Clean Water Act (Act of June 30, 1948, and amendments) and the National Forest Management Act of 1976 are the laws that govern water quality and soil productivity standards.

S.4.1.3. Wetlands, Riparian, & Floodplain

Wetlands consist of riverine and lacustrine systems. Riverine systems include the streams that occur in most of the valleys. Lacustrine systems contain mostly open water and consist of lakes and reservoirs. Because of the dry climate and steep topography of this region, wetlands are typically small and are primarily restricted to the narrow bands bordering streams, small lakes and ponds, and reservoirs. Wetlands that meet criteria of U.S. Army Corps of Engineers (1987) are considered to be subject to Section 404 of the Clean Water Act, and require a permit prior to dredging and filling activities.

Los Padres National Forest covers 1.75 million acres. Riparian habitat is only one percent of the total Forest land base. There are about 19,000 acres of riparian habitat, 3,100 acres of lakes and reservoirs, and 400 miles of intermittent and perennial streams in LPNF.

Many riparian areas are currently considered to be below their potential in terms of vegetative structure, density, and species diversity (LPNF Forest Plan). This condition is considered to be a result of past grazing, wildfires and recreation use. Stream habitat is presently degraded

in some areas due to lack of streamside cover, poor bank stability, high sediment load, and lack of pool areas. However, improvements have been made in recent years due to closures and other measures taken to protect threatened, endangered, protected, and sensitive species.

S.4.2. Biological Environment

For the purposes of this EIS, LPNF biological resources are categorized into three distinct groups:

- **Wildlife** Mammals, birds, reptiles, amphibians, and invertebrates
- **Fisheries** Resident and anadromous fish species
- **Vegetation** Terrestrial higher plants

Sensitivity analysis was conducted on all species listed as endangered, threatened, sensitive, or of special concern on the Forest, utilizing knowledge of the study area, the ecology of the involved species, and the activities of oil and gas development. This analysis resulted in an indication of how sensitive various species are to the oil and gas exploration and development activities. The resulting sensitivity data was used to estimate the environmental consequences of the various alternatives considered and in developing the mitigation measures that accompany each alternative. Unless otherwise known, the quality of vegetative types was assumed to be suitable to provide for individual species habitat requirements. The vegetation types were also assumed to be uniformly distributed over the area they were identified as occupying.

The analysis results are displayed in Tables S-5 through S-8. These tables display the sensitivity of a species to activities associated with oil and gas development, and present the significance of the impact, assuming that no stipulations are applied to restrict the activity. For example, an entry of M/N indicates that the species has a moderate sensitivity to development and that the impact would not be significant.

Tables S-5 through S-8 do not consider site specificity, i.e., where the species are located in relation to where oil and gas activities are reasonably expected to occur. That information is shown in Table S-9, to the extent possible with existing data.

Species other than those federally listed were not identified by specific HOGPA. This is due to:

- *insufficient available data,*
- *many species with wide habitat parameters,*
- *species with high mobility, and*
- *changes in species composition with changes in vegetative condition.*

TABLE S-5: WILDLIFE SENSITIVITY TO OIL AND GAS DEVELOPMENT: TES SPECIES

Wildlife Sensitivity / Disturbance Significance - *TES Species* [1/]						
Category/Species	***Status***	***Direct Mortality***	***Habitat Loss***	***Human Disturbance***	***Noise Disturbance***	***Pollution***
San Joaquin Kit Fox	FE,ST	M/S	H/S	H/S	H/S	M/S
Giant Kangaroo Rat	FE,SE	M/S	H/S	M/S	M/S	H/S
California Condor	FE,SE	M/S	L/S	M/S	H/S	M/S
Bald Eagle	FE,SE	L/N	L/N	L/N	L/N	L/N
Least Bell's Vireo	FE,SE	L/N	M/S	L/S	M/S	L/S
W. Snowy Plover	FT	L/N	M/S	M/S	M/S	L/S
Northern Goshawk	FS	L/N	L/N	L/N	L/N	L/N
Calif. Spotted Owl	FS	L/N	M/S	M/S	M/S	L/N
SW Willow Flycatcher	FE,SE	L/N	M/S	M/S	L/N	M/S
Blunt-nosed Leopard Lizard	FE,SE	M/S	M/S	NA	NA	M/S
SW Pond Turtle	FS	L/N	L/N	NA	NA	M/N
Arroyo SW Toad	FE	L/N	M/S	NA	NA	M/S
Calif. Red-legged Frog	FT	L/N	M/S	L/N	L/N	M/S
Foothill Yellow-legged Frog	FS	L/N	M/N	NA	NA	M/N
Tidewater Goby	FE	L/N	M/S	L/N	NA	H/S
Southern Steelhead Trout	FE/FT	L/N	M/S	L/N	NA	H/S
Smith's Blue Butterfly	FE	L/N	L/N	NA	NA	L/N
Conservancy Fairy Shrimp	FE	L/N	M/S	NA	NA	M/S
Longhorn Fairy Shrimp	FE	L/N	M/S	NA	NA	M/S
Vernal Pool Fairy Shrimp	FT	L/N	M/S	NA	NA	M/S

[1/] Without Protective Lease Stipulations;
FE=Federal Endangered,
SE=State Endangered,
FT=Federal Threatened,
ST=State Threatened,
FS=Forest Service Sensitive Species;
H = high sensitivity;
M = moderate sensitivity;
L = low sensitivity;
S = significant;
N = non-significant

TABLE S-6: WILDLIFE SENSITIVITY TO OIL AND GAS DEVELOPMENT: SPECIES OF SPECIAL EMPHASIS

Wildlife Sensitivity / Disturbance Significance - *Species of Special Emphasis* [2/]					
Category/Species	*Direct Mortality*	*Habitat Loss*	*Human Disturbance*	*Noise Disturbance*	*Pollution*
Mt. Pinos Lodgepole Chipmunk	L/N	L/N	L/N	L/N	L/N
Nelson's Ground Squirrel	M/N	M/N	L/N	L/N	M/N
Townsend's Big-eared Bat	L/N	L/N	L/N	L/N	L/N
Greater Western Mastiff Bat	L/N	L/N	L/N	L/N	L/N
Tehachapi White-eared Pocket Mouse	L/N	L/N	L/N	L/N	L/N
Short-nosed Kangaroo Rat	M/N	H/S	M/N	M/N	H/S
American Badger	L/N	M/N	M/N	M/N	L/N
Monterey Dusky-footed Woodrat	NA	NA	NA	NA	NA
San Diego Blacktailed Jackrabbit	M/N	L/N	L/N	L/N	L/N
Spotted Bat	L/N	L/N	L/N	L/N	L/N
California Leaf-nosed Bat	L/N	L/N	L/N	L/N	L/N
Occult Little Brown Bat	L/N	L/N	L/N	L/N	L/N
Mt. Pinos Blue Grouse	NA	NA	NA	NA	NA
Prairie Falcon	L/N	L/N	M/N	M/N	L/N
Swainson's Hawk	L/N	M/N	M/S	M/N	L/N
Lewis Woodpecker	L/N	L/N	L/N	L/N	L/N
Purple Martin	L/N	L/N	L/N	L/N	L/N
Western Bluebird	L/N	M/N	L/N	L/N	L/N
Yellow Warbler	L/N	L/N	L/N	L/N	L/N
Tricolored Blackbird	L/N	L/N	L/N	L/N	L/N
Ferruginous Hawk	L/N	M/N	M/N	M/N	L/N
So. CA Rufous-crowned Sparrow	L/N	L/N	L/N	L/N	L/N
Bell's Sage Sparrow	L/N	M/N	L/N	L/N	L/N
Mountain Plover	L/N	M/S	M/S	L/N	M/S
Southern Rubber Boa	M/N	M/N	NA	NA	L/N
Hybrid Blunt-nosed Leopard Lizard	M/S	M/S	NA	NA	M/S
San Joaquin Whipsnake	L/N	L/N	NA	NA	L/N
Two-striped Garter Snake	L/N	L/N	NA	NA	L/N
Coast Patch-nosed Snake	L/N	L/N	NA	NA	L/N
San Diego Horned Lizard	L/N	L/N	NA	NA	L/N
California Horned Lizard	L/N	L/N	NA	NA	L/N
Coastal Whiptail Lizard	M/N	L/N	NA	NA	L/N
California Tiger Salamander	L/N	M/N	NA	NA	M/N
Yellow-blotched Ensatina	L/N	M/N	NA	NA	M/N

[2/] Without Protective Lease Stipulations

TABLE S-7: WILDLIFE SENSITIVITY TO OIL AND GAS DEVELOPMENT: SPECIES OF SPECIAL EMPHASIS

Wildlife Sensitivity / Disturbance Significance - *Species of Special Emphasis* [3/]					
Category/Species	*Direct Mortality*	*Habitat Loss*	*Human Disturbance*	*Noise Disturbance*	*Pollution*
Tehachapi Slender Salamander	L/N	L/N	NA	NA	L/N
Western Spadefoot Toad	L/N	L/N	L/N	L/N	L/N
Globose Dune Beetle	Insufficient Data				
Tehachapi Mtn. Silverspot Butterfly					
San Emigdio Blue Butterfly					
Mule Deer	M/N	M/S	H/S	H/S	L/N
Black Bear	L/N	L/N	M/N	M/N	L/N
Wild Boar	L/N	L/N	M/N	L/N	L/N
Brush Rabbit	M/N	M/S	L/N	L/N	M/N
Waterfowl	L/N	L/N	M/N	M/N	M/S
Quail	M/N	L/N	L/N	M/N	M/N
Bandtailed Pigeon	L/N	L/N	L/N	M/N	L/N
Mourning Dove	L/N	L/N	L/N	L/N	L/N
Rainbow Trout	L	L	NA	NA	M

3/ Without Protective Lease Stipulations

TABLE S-8: WILDLIFE SENSITIVITY TO OIL AND GAS DEVELOPMENT: SPECIES OF AESTHETIC AND SOCIAL INTEREST

Wildlife Sensitivity / Disturbance Significance - *Species of Aesthetic and Social Interest* [3/]					
Category/Species	*Direct Mortality*	*Habitat Loss*	*Human Disturbance*	*Noise Disturbance*	*Pollution*
Mule Deer	M/N	M/S	H/S	H/S	L/N
Songbirds	M/N	M/N	M/N	H/N	M/S
Quail/Dove/Waterfowl	M/N	L/N	L/N	M/N	M/N
Wetland/Riparian Species	L/N	M/S	M/S	M/S	H/S
Bald Eagle	L/N	L/N	L/N	L/N	L/N
California Condor	M/S	L/S	M/S	H/S	M/S
Peregrine Falcon	L/S	L/S	H/S	M/S	L/S
Least Bell's Vireo	L/N	M/S	L/S	M/S	L/S
California Spotted Owl	L/N	M/S	M/S	M/S	L/N
Gray Squirrel	H/N	M/N	L/N	M/N	M/N
Cavity Nesters	L/N	L/N	L/N	L/N	L/N
Rainbow Trout	L	M	L	L	H
Arroyo Chub	L	M	L	L	H

[3]/ Without Protective Lease Stipulations

TABLE S-9: PROBABLE THREATENED AND ENDANGERED SPECIES OCCURRENCE BY HOGPA

Species/HOGPA	Piedra Blanca	San Cayetano	Sespe	Rincon Creek	South Cuyama	La Brea Canyon	Figueroa Mtn.	Lopez Canyon	Monroe Swell
San Joaquin Kit Fox					X				
Giant Kangaroo Rat					X				
California Condor	X	X	X	X	X	X	X	X	X
Bald Eagle									
Least Bell's Vireo				X					
W. Snowy Plover									
Northern Goshawk							X		
CA Spotted Owl	X		X	X	X		X	X	
SW Willow Flycatcher			X	X					
Blunt-nosed Leopard Lizard					X				
SW Pond Turtle	X	X	X	X	X	X	X	X	X
Arroyo SW Toad	X	X	X	X					
Foothill Yellow-legged Frog									
CA Red-legged Frog				X	X	X	X	X	
So. Steelhead Trout *	X	X	X	X		X	X	X	
Smith's Blue Butterfly									
Conservancy Fairy Shrimp					X				
Longhorn Fairy Shrimp					X				
Vernal Pool Fairy Shrimp					X				
Tidewater Goby				X			X	X	

* Includes historic range

S.4.3. Social Environment

S.4.3.1. Heritage Resources

Conducting an archaeological and historical resource survey is one of the first steps necessary in complying with Section 106 of the National Historic Preservation Act (NHPA). Most heritage resource studies on LPNF have been driven by the need to install utility lines or roads. As a result, only a small portion (approximately 3%) of LPNF lands has been systematically surveyed. The Heritage Resources Background Report lists identification numbers of surveys previously conducted by quadrangle map by level of oil and gas potential. However, existing archaeological survey coverage is spotty at best. Table S-10 lists the number of previous surveys. Applications for new ground disturbing oil and gas exploration and/or development activities will require conducting additional archaeological surveys and mitigating impacts through avoidance or recovery.

TABLE S-10: PRIOR HERITAGE RESOURCE SURVEYS CONDUCTED

Area within LPNF	***Number of Prior Heritage Resource Surveys Conducted***
High Oil and Gas Potential Areas	56
Remainder of Lease Study Area	102

S.4.3.1.1. Prehistoric Resources Summary

The oil and gas study area is geographically intermediate between California's central coast and the central valley. It contains a wide variety of Native American archaeological sites, including permanent villages and temporary habitation sites, cemeteries, rock art and places of religious significance, and resource procurement and processing locations. Much of the area is unexplored archaeologically, creating the need for careful baseline surveys prior to any development. Sites that could be affected by development have a good potential to yield information relevant to a variety of regional research issues. Because of the area's intermediate position between cultural zones, and the lack of previous surveys, it is possible that unique and unexpected site types may be encountered. Many sites are likely to be ephemeral and fragile, making them difficult to identify and easy to damage. Regional researchers, while wanting to know more about the data content of the area's sites, generally put high priority on avoidance of impacts. Archaeological investigations should be conducted early in the oil and gas development process, in order to provide information useful in avoiding impacts through project design.

S.4.3.1.1.1. Historical Resources

Historic resources associated with the Hispanic era may include Native American habitation sites, areas of mining or timber harvest, and transportation routes. The likelihood that such sites may be within LPNF is generally rated as "limited", but the research potential associated with such sites is rated as "high."

During the Early American period, homesteading replaces Native American habitation sites on the list of potential historic resources, while retaining the other three resource types. The likelihood that such sites may be within LPNF is generally rated as "limited", but the research potential associated with such sites is rated as "high."

For the period when LPNF was beginning, potential resources included administrative structures, recreational residences, transportation and communication routes, mining and timber harvest areas. Most have been rated "moderately likely" for being within LPNF, except for timber harvesting, which is rated as "limited' likelihood. However, most of these resources, if present, are rated as having "high" research potential.

Potential historic resources associated with the depression years include administrative structures, campgrounds and recreation, Civilian Conservation Corps (CCC) camps, fire control, mining, range control, recreational residences, transportation routes and water systems. Most of these resources are rated "highly likely" to occur on LPNF, but the only topic of high research potential was identified as the CCC camps.

The list of potential resources for Word War II to the present is similar to the list for the depression years, except that CCC camps and fire control are not listed. All the listed sites (except for mining) are rated as being "highly likely" to occur on LPNF, but their research potential has been rated as "limited."

S.4.3.1.1.2. Summary of Historic Resource Issues

The historical archaeological research potential of LPNF is extremely high, and to date remains largely untapped. Archival resources available on the Forest are extensive, particularly for the southern regions, although the majority of information is held in private archives. The value of historical documents and photographs for illustrating Forest history is rich, and should be thoroughly addressed prior to any project that may affect the Forest's historical cultural resources. Although some historical archaeological sites have been recorded within the Forest, additional surveys are likely to find many more previously undiscovered sites. Archival research and oral history interviews will be extremely important to understanding the function and history of these resources.

S.4.3.2. Socioeconomic Impacts/Growth

As tabulated in Table S-11, in Fiscal Year 1994-95, the general funds of the five counties with land in Los Padres National Forest where the proposed alternative leasing programs would take place (i.e., all but Kern County) received a total of $1.4 million of In-Lieu-of-Taxes payments from federal agencies. Santa Barbara and Ventura Counties received the largest portions ($503,440 and $404,404) respectively. These payments cover all national land resource receipts, not just minerals, and do not include non-general fund jurisdictions such as school districts. A somewhat different set of numbers comes from the federal Minerals Management Service (MMS) which reported that in FY 1996 it disbursed revenues from specifically minerals-related activities on federal lands totaling $1.2 million to all local jurisdictions in the five LPNF counties. The MMS is an agency of the U.S. Department of the Interior responsible for administering the offshore mineral resources on federal lands as well as the collection and disbursement of revenues from onshore and offshore mineral leases on federal lands. Ventura and Los Angeles Counties received the largest shares. These revenues are primarily based on royalties paid by leaseholders for oil and gas production (50 percent of which are returned to the state and local governments), and would be affected by issuing additional oil and gas leases in LPNF.

For perspective, these revenues are relatively insignificant to overall county general government budgets. In FY 1994-95, the five counties' general fund revenues from all sources totaled almost $12 billion (dominated by Los Angeles' $10.6 billion). Excluding Los Angeles County, the LPNF counties' total general fund revenues in FY 1994-95 totaled $1.35 billion as shown in Table S-12.

Thus, the federal payments to local governments, either the in-lieu-of-taxes from all agencies figure recorded by the counties or the more specific minerals revenue payments as reported by the MMS, typically represent less than one percent of the counties' total general fund revenues. California counties rely primarily on transfers of funds from the state and federal governments for their revenues, with sharing of sales and gas taxes, motor vehicle fees, and highway and welfare-related appropriations accounting for the bulk of the transfers. In FY 1994-95 local property taxes generated about 10 percent of local general government funds

while intergovernmental transfers from the state provided 38 percent of funds and federal government transfers provided another 20 percent.

TABLE S-11: COUNTY GENERAL FUND REVENUES FROM FEDERAL IN-LIEU-OF TAXES PAYMENTS

County	Payments In Lieu of Taxes to County General Funds (FY 1995) [1]	Federal Mineral Revenue Disbursements to Counties (FY 1996) [2]
Los Angeles	$180,838	$418,230
Monterey	$0	$20,896
San Luis Obispo	$327,053	$109,292
Santa Barbara	$503,440	$92,401
Ventura	$404,404	$560,863
Total	$1,415,735	$1,201,682

Sources: 1. State Controller's Office, 1996. All federal agencies to county general funds.
2. MMS, 1997. USFS, BLM and MMS to all local jurisdictions

TABLE S-12: COUNTIES' GENERAL FUND REVENUES

Ventura	$513.4 million
Santa Barbara	$316.0 million
San Luis Obispo	$191.9 million
Monterey	$332.4 million

Source: State Controller's Office, 1996

S.4.3.3. Social Impacts

S.4.3.3.1. <u>Forest Neighbors</u>

Forest neighbors consist of private property owners in and around the Forest, and surrounding communities. There are numerous LPNF neighbors that may be affected by further oil and gas leasing on the Forest. As shown in Table S-1, almost 10% of the 1,969,520 acres within the LPNF boundary are privately owned. Within the 935,844-acre lease study area, 168,977 acres (18%) are in private ownership. The private lands within the LPNF boundary and their location relative to the HOGPAs can be seen on the maps. In addition to the neighbors within the LPNF boundary there are numerous neighbors adjacent to or in close proximity of the LPNF boundary. These neighbors consist of undeveloped land, summer homes, private residences, and communities.

Communities adjacent to, or in proximity of, LPNF include:

- Big Sur
- Carpinteria
- Cuddy Valley
- Fillmore
- Frazier Park
- Goleta
- King City
- Lockwood Valley
- Montecito
- New Cuyama
- Ojai
- Santa Barbara
- San Luis Obispo
- Santa Paula
- Santa Ynez
- Solvang
- Sycamore Flat
- Ventura

All of these communities can be located on the set of two folded LPNF maps available at all Ranger Districts and the Forest Supervisor's Office. Specific concerns were expressed during scoping regarding community impacts to Frazier Park and Cuddy Valley.

S.4.3.3.2. Noise

Project noise may disturb either people or wildlife. Noise issues related to wildlife are discussed in the EIS sections on biological resources. People using the recreational resources of Los Padres National Forest, or of adjacent non-federal parks or recreation areas, may be disturbed in their activities by oil & gas project noise. Recreation noise considerations are addressed in the recreation sections of the EIS.

The persons, other than recreationists, considered most likely to be disturbed by noise resulting from oil and gas activities are rural and suburban residents.

S.4.3.3.3. Access and Traffic

A network of Interstate, State highways, and county roads provides access into and around LPNF. This network is extended by approximately 1540 miles of Forest Development Roads (FDRs). About 982 miles of these development roads are under LPNF jurisdiction. Certain roads and areas are closed to public use because rights-of-way are lacking.

The existing transportation system of roads and highways in and around the Forest are shown on the maps in the map packet and the two folded Forest maps available at District Ranger offices and at the Forest Supervisor's Office. Many roads have not been maintained to adequate levels. About 25% of system roads require extensive maintenance. The Forest provides 313 miles of roads and trails designated for off-road vehicle (ORV) use; 296 miles are open all year, and 17 miles are open seasonally. There are approximately 1,000 miles of uninventoried travel ways; most of these are the result of illegal ORV use on the Mt. Pinos and Santa Lucia ranger districts.

S.4.3.3.4. Land and Resource Management Plans

S.4.3.3.4.1. Forest Plan

The following guidelines and standards are commonly used in description of the Forest Plan Management Direction for specific Management Areas in Los Padres National Forest. In the table of specifics for individual management areas, which follows, the code letters along the left column refer to items from this list. Other provisions of the Plan that may bear on future oil and gas policies and stipulations are quoted in full under the applicable management areas.

<u>Management Guidelines (G) or Standards (S)</u> *(Forest Plan pp. 4-20 through 4-174)*

Cultural Resources

C.1 Protection is emphasized where monitoring indicates significant problems (G)

Fish and Wildlife

F&W.1 Projects, which may destroy or modify San Joaquin Kit Fox habitat shall be reviewed by Forest Biologist prior to approval (G)

F&W.2 Any projects which may destroy or modify critical condor habitat shall undergo consultation with U.S. Fish and Wildlife Service prior to approval.

Minerals

M.1 Integrate the exploration and development of energy resources with the use and protection of other resource values (G).

M.2 Oil and gas leases are documented through the NEPA process after considering the Guidelines for Recommending Action on Oil and Gas Lease Applications (Appendix J of Forest Plan) to determine where leasing is acceptable and what stipulations and advisory notices are appropriate (S).

M.3 All areas disturbed during exploration including roads and pads are managed as temporary disturbances and are restored to near natural condition at the end of use (S)

M.4 Roads are designed to be consistent with ROS classes where practical. The range of recreation experiences will be protected by appropriate mitigation (e.g. in semi-primitive non-motorized areas roads will be closed to public motorized vehicles). (S)

M.5 If leasing is recommended, include the "no surface occupancy" stipulation in addition to other appropriate stipulations.

Watershed

W.1 Areas to be disturbed or previously disturbed are evaluated to determine need for rehabilitation as soon as practical following watershed disturbance. The following factors are considered: - area disturbed is on slopes greater than 30%; - soils have an erosion hazard index greater than 4; - ecological needs of existing vegetation. (S)

Transportation

T.1 Design and locate public roads or motorized trails to minimize impacts on wildlife. (G)

T.2 Density of roads or motorized trails is limited to an average of one per square mile of area per major watershed (S).

T.3 New roads will not be constructed.

Visual Resources

V.1. Maintain a _____ landscape (G)

V.2 Variety class A lands are managed to meet retention (S).

V.3 _____ are managed for retention or partial retention (S).

V.4 Variety class A lands managed for retention are not subject to tradeoff.

V.5 Prepare a corridor viewshed plan for _____ (G).

S.4.3.3.4.2. County General Plans

County general plans were reviewed and found, for the most part, conform with oil and gas development on LPNF.

S.4.3.3.5. Oil and Gas Development

S.4.3.3.5.1. History

Production of oil and gas within Los Padres National forest began in 1887 when the Sespe Oil Field was discovered in the Tar Creek area near the town of Fillmore. Lyman Hardison and Wallace Steward, who later formed Union Oil Company, discovered the field. By 1900, Union Oil Company had drilled 35 wells to develop its first field, the Sespe Oil Field, producing oil mostly from Vaqueros Sandstone.

The cumulative production of oil and natural gas from oil fields in and around LPNF is listed in Table S-13.

S.4.3.3.5.2. Current Development

There are 22 existing oil and gas leases covering 14,618 acres within Los Padres National Forest. The leases are shown on the maps in the map packet.

Approximately 90% of the Forest oil and gas production is from the Sespe Oil Field. The Sespe Oil Field is on the east plunge of a four-mile wide anticlinal fold of Tertiary sediment and produces oil from the Vaqueros, Sespe, and "Coldwater" formations. Since it first came into production, the field has produced 47 million barrels of oil and 61 billion cubic feet of gas. Estimated reserves for the field in 1999 were 3.4 million barrels of oil and 5 billion cubic feet of gas.

Small amounts of oil and gas are produced from two LPNF leases (440 acres) in the South Cuyama Oil Field in the Cuyama Valley. Production is from a faulted section of the Vaqueros formation. Most of the South Cuyama Oil Field borders the Forest. Production is from formations, which underlie approximately 20% of the surface in the Forest. From 1948 through 1999 these formations have produced 284 million barrels of oil and 233 billion cubic feet of gas. Reserves are estimated at 2.7 million barrels of oil and 2.4 billion cubic feet of gas.

The number of wells drilled on the Forest varies from year to year. During the 1980's five or six wells per year were drilled. Since 1990 only two wells total have been drilled on the Forest. Most wells are drilled in known geologic structures (KGS) near existing field developments of the Sespe Oil Field and upper Ojai Field. Most are field development or

field extension wells. Wells range in depth from 2,000 feet to 10,000 feet (an estimated average of 4,000 feet).

A report recently released (2/15/01) entitled "Preliminary Report of Oil and Gas Production for 2000" by the California Department of Conservation, Division of Oil and Gas published the data listed in Table S-13 for fields in and around LPNF. Note that the Ojai, South Cuyama and Sespe oil fields produce from both Forest leases and private lands. All other fields do not produce from Forest leases.

TABLE S-13: OIL AND GAS PRODUCTION FOR OIL FIELDS IN AND AROUND LPNF

Oil field	**Oil (thousand barrels)**		**Gas (million cubic feet)**		**Approximate % on LPNF 1/**		**Estimated Remaining Reserves**	
	2000	Cumulative through 1999	2000	Cumulative through 1999	Oil	Gas	Oil (thousand Barrels)	Gas (million cu. ft.)
Hopper Canyon	14	3,221	49	4,246	0	0	95	114
Monroe Swell	18	662	6	134	0	0	126	43
Ojai	389	34,141	1,710	71,651	<1	<1	2,652	8,892
Rincon (onshore)	422	121,521	523	188,121	0	0	3,525	5,093
Sespe	513	46,655	1,320	61,117	60	40	3,431	5,062
South Cuyama	317	222,270	255	233,538	25	80	2,723	2,379
Temescal	59	7,953	99	6,510	0	0	100	203
Timber Canyon	53	6,884	101	14,257	0	0	553	1,789

1/ Based on 1998 production figures

S.4.3.3.6. Industrial Infrastructure

Sixteen refineries currently are operating in southern California (greater Los Angeles, Bakersfield, Santa Maria and Oxnard) with a total capacity exceeding 1.1 million barrels per day. Six refineries with additional capacity of about 100,000 barrels per day are presently idle. These refineries have sufficient excess capacity to accommodate any anticipated production from new LPNF oil and gas leases. Crude from most of the high potential areas would probably be refined in Los Angeles.

Access to oil and gas production has a major impact on facilities, operations and shipping. If new production is established within or adjacent to an existing oil field, existing facilities can almost always be used. These facilities include powerlines, pipelines and processing facilities. Such facilities were designed earlier in the life of the field when, in almost all cases, production rates were much greater. The decline to the present rates of production has resulted in excess capacity of most facilities.

The economics justifying construction of powerlines and pipelines is a function of distance to and size of the new discovery. If the new discovery is small (1-2 million barrels) it likely will

not support the cost of constructing powerlines and pipelines over any distance greater than about one mile. On the other hand, a discovery larger than 20 million barrels would support a considerable length of such new construction. In every case, it is necessary to have local facilities to remove produced water and sediment prior to shipping.

Based on the foregoing, this analysis assumes that within or adjacent to existing fields, facilities of the existing field will be utilized. For small discoveries in remote areas, new powerlines will not be installed and the well pumps will be powered by natural gas (or propane) fueled engines. If a pipeline passes through or very near such a discovery, it will generally be utilized. Otherwise, produced oil (and sometimes waste water) will be shipped by truck.

S.4.3.4. Scenic Resources

The scenic quality of Los Padres National Forest has aesthetic value in and of itself and is an important factor in the quality of the recreation experience enjoyed by numerous forest visitors. The largest single recreation use of Los Padres National Forest is “viewing scenery,” 17% of total recreation use.

Large natural appearing wildland landscapes near major population centers are an important feature of Los Padres National Forest. Ninety-three percent of the Forest's landscape has a natural appearance. A very small portion, less than 6%, has been modified. Roads, fuelbreaks, special use sites, oil and gas development, and utility lines are the principal types of modification. While most of the Forest has an appearance characteristic of the region as a whole, a significant portion (12%) features such distinctive landscapes as coastline, oak woodland and dry grasslands, deserts, conifer forest, streamsides, and rock outcrops. The Los Padres is the only National Forest in California that includes seashore and beaches on the Pacific Ocean.

Los Padres National Forest is situated within the Southwest Mountain and Valley Character Type. Landscapes within Los Padres generally have very steep slopes, deeply dissected landforms with numerous large rock outcrops. Pine forests are common on the Mt. Pinos Ranger District, but are rare to non-existent on other ranger districts, where grasslands and chaparral are the predominant vegetation types. Colors vary from dark-green in the pine forests to gray-green in chaparral to tan in grasslands and rock outcrop areas. Visual textures vary from coarse in the pine forests to medium coarse in chaparral to smooth in grasslands and rock outcrop areas.

S.4.3.4.1. <u>Scenic Conditions</u>

LPNF scenic resources are managed in terms of scenic conditions and Visual Quality Objectives (VQO’s). Scenic conditions refer to the visual state of a landscape. Scenic

conditions differ from VQO's in that VQO's are expressions of minimal acceptable levels for scenic conditions.

S.4.3.4.2. Existing Scenic Conditions (ESC)

Table S-14 shows the acres of land by Existing Scenic Conditions (ESC's), for the area being considered for lease. Over 94% of the study area is natural appearing. ESC's are classified as follows:

Class 1, Untouched (Correlates to "Preservation" Visual Quality Objective VQO),
Class 2, Unnoticed Alterations (Correlates to "Retention" VQO), and
Class 3, Minor Alterations (Correlates to "Partial Retention" VQO).

Less than 6% of the study area landscapes are characterized by modification, or human-dominated landscapes, with existing scenic conditions (ESC) being classified as:

Class 4, Disturbances (Correlates to "Modification" VQO),
Class 5, Major Disturbances (Correlates to "Maximum Modification" VQO), and
Class 6, Drastic Disturbances (Correlates to "Unacceptable Modification" VQO).

TABLE S-14: SCENIC CONDITION CLASS ACREAGES, LPNF LANDS AVAILABLE FOR OIL AND GAS LEASE CONSIDERATION

EXISTING SCENIC CONDITIONS	SC 1 Preservation	SC 2 Retention	SC 3 Partial Retention	SC 4 Modification	SC 5 Maximum Modification	SC 6 Unacceptable Modification	Total Lands Considered Acreage
ACRES	667,781	37,496	20,382	23,314	12,102	5,792	766,867

In Los Padres National Forest, roads, fuelbreaks, oil and gas developments, special use sites, and utility lines are the principal types of human alterations that have been classified as ESC classes 4, 5 and 6.

S.4.3.5. Safety and Hazards

Numerous issues and concerns regarding safety and hazards were identified during scoping. These included fire and geologic risks as well as spills of hazardous materials and resultant pollution.

S.4.3.5.1. Fire Hazards

Three of the main purposes for establishing LPNF were to protect watersheds, reduce off-site (downstream) damages from erosion and flooding, and provide water to local communities for domestic, agricultural and industrial use. Wildfires represent a major threat to all these resources.

Direct damage caused by large wildfires includes loss of property and lives. Indirect damages due to loss of cover vegetation include accelerated erosion that degrades water quality, increases flooding, and increases sedimentation of reservoirs. During critical fire weather, such as Santa Ana Winds, or periods of extremely hot weather, areas of the Forest are closed to entry on a temporary basis.

Total fire occurrence over the last four decades has increased a great deal due to such circumstances as communities moving into the chaparral zone, expanded recreation use, and an increase in the number of special use permits granted (roads, powerlines, dams, radio, TV stations, oil and gas leases, etc.).

Presently, the leading causes of fire on the Forest are (in descending order): arson, campfires, smoking, children playing with matches, and burning vehicles.

Over the years there have been numerous wildfires on LPNF due to oil operations. Some of these were directly attributable to the oil operation itself, and some were related to equipment used in the oil fields. More fires may have been due to oil operations than reported because some could be classified as non-statistical or non-reportable (in general, non-statistical fires are fires which do not constitute a threat to the Forest, a natural resource, or require FS suppression actions).

S.4.3.5.2. Geologic Hazards

S.4.3.5.2.1. Earthquakes

Major faults such as the San Andreas, Nacmiento, Rinconada, Big Pine, and Santa Ynez cross the Forest. Many of the major and associated secondary faults are considered active or potentially active. Earthquake damage usually is due to high intensity ground shaking. Secondary effects include landslides, soil liquefaction, differential soil settlement, ground lurching, and water oscillation. The potential for seismic damage to roads, highways, facilities, structures, and recreation areas exists Forest-wide.

S.4.3.5.2.2. Landslides

An inventory of slope stability indicates that approximately 15% of the Forest's surface is extremely sensitive to slope failure, 40% is highly sensitive, 35% is moderately sensitive, and 10% has low sensitivity. Over 250 active and 200 dormant landslides have been mapped. Fifty potentially active landslides near or above campgrounds and administrative sites may pose hazards to life and property. Other landslides affect Forest trails and roads, and State highways. Earthquake activity or intensive rainstorms greatly increase landslide potential and severity in extremely sensitive areas. In addition, landslide potential in extremely sensitive areas is higher after wildfire or prescribed fires. This is especially true when more than 20% of the vegetation is removed within a drainage basin.

The *Watershed Stipulations map* in the map packet shows locations of extremely unstable areas and active landslides.

S.4.3.5.3. Spill Hazards

A spill constitutes any discharge of oil or hazardous material which reaches, or which may reach wildlife, soil, vegetation, perennial, intermittent, or ephemeral stream courses, lakes, ponds, or reservoirs. It is also any discharge that may eventually reach water because of soil, vegetation, and potential runoff conditions, and would have an adverse effect on downstream uses.

The potential sources of hazardous materials spills are many. A major source is the transportation of these materials on Federal, State, county or private roads that are on or located near Forest land. Another major source is the use of these materials in the various phases of oil and gas exploration, development, production and abandonment. The development, production and transportation of oil by truck or pipeline are other sources of possible oil discharges. Earthquakes can cause failure of pipelines and storage tanks if not designed to withstand the seismic loads.

Well blowouts represent another form of spill and safety hazard. The risk of well blowouts has decreased as well blowout prevention techniques have improved over the years. Table S-15 shows the decreasing risk by decade from 0.83% in the 1940's to 0.03% in the 1970's and 1980's.

TABLE S-15: WELL BLOWOUTS IN CALIFORNIA BY DECADE

Decade	Numbered of Wells Drilled in CA.	Number of Blowouts	% of Wells Blowing out
1940's	7,552	63	0.83%
1950's	21,810	15	0.07%
1960's	24,944	19	0.08%
1970's	21,915	7	0.03%
1980's	30,417	10	0.03%

Source California Department of conservation, Division of Oil, Gas and Geothermal

S.4.3.6. Recreation

The objective in managing recreational settings on Los Padres National Forest is to provide opportunity for people to have recreational experiences. Land managers can facilitate (or hamper) many desired experiences by the way they manage such "setting indicators" as access, remoteness, social encounters, visitor management, facilities and sites, visitor impacts, and naturalness.

Los Padres National Forest is a major source of wildland recreation opportunities for Central and Southern California. Visitors are attracted to Los Padres by the variety of terrain, vegetation, and recreational settings including ocean beaches, sub-alpine forest, chaparral, desert badlands, and riparian areas. Both developed recreation and general forest (dispersed) recreation are available to large urban populations from the San Francisco Bay area to the Los Angeles basin. The Santa Barbara front is a scenic attraction of national and international fame. The Big Sur area of Los Padres National Forest is another national and international scenic attraction, which is visited by millions of people each year.

S.4.3.6.1. Recreation Opportunity Spectrum (ROS) System

The Forest Service has developed the Recreation Opportunity Spectrum (ROS) classification system to characterize and analyze recreation opportunity. The ROS provides a framework for stratifying, defining, and managing classes of outdoor recreation settings, activities, and experience opportunities. ROS is a continuum, or spectrum, that has been divided into six classes, as shown in Table S-16, classifying recreational opportunities ranging from the most developed to the least-developed settings.

Maintaining a broad spectrum of ROS classes is important to provide people with choices in their recreation opportunities.

The ROS system reflects that activities outside of Wilderness can indirectly affect the *Primitive* and *Semi-Primitive-Non-Motorized* settings inside of Wilderness. The same is true for other areas withdrawn from mineral entry. Consequently, the potentially affected environment for this recreation analysis is the entire LPNF, not just the Forest lands that are legally available to be considered for oil and gas leasing.

TABLE S-16: ROS CLASSES

Acronym	*Description*
(U)	Urban
(R)	Rural
(RN)	Roaded Natural
(SPM)	Semi-Primitive-Motorized
(SPNM)	Semi-Primitive-Non-Motorized
(P)	Primitive

LPNF does not provide “urban” recreation opportunities. Table S-17 shows the amount of acres in each ROS class for the withdrawn areas, HOGPAs and the non-HOGPA area.

S.4.3.6.2. Existing Recreation Use

The Forest Service measures recreational use in terms of thousands of recreational visitor days or MRVDs. The LPNF received 4,293 MRVDs (4,293,000 recreation-visitor-days) of recreation use in 1982, and ranked 15th in total recreation use among the nation's 156 National Forests. (The Forest Service stopped collecting recreation-use data in 1982, so these are the latest data available.) 1982 recreation use had increased 55% since 1965 when the Forest received 2,710 MRVDs. About 30% of recreation use in the Forest is in developed sites. These include public facilities such as campgrounds, picnic areas and observation sites. General forest recreation (dispersed recreation) opportunities include designated Wilderness areas, undeveloped areas, and roads and trails. About 70% of recreation use in 1982 occurred in the general forest category.

S.4.3.6.3. Existing Use At Developed Sites

Existing developed sites are being "loved to death." Most developed recreation sites are located in areas with shade trees and near water sources, used for fishing, swimming, and water play. Oak trees are declining throughout LPNF. Riparian areas are being adversely impacted by human use. The results are soil erosion, human sanitation problems, litter, and degradation of wildlife habitat and the recreation experience. Access roads, parking spurs, picnic tables, stoves, campfire rings, toilets, etc., are in states of disrepair. Many existing developed recreation sites and facilities do not meet federal standards for accessibility per the Americans with Disabilities Act. In recent years, the U.S. Congress has not made sufficient funds available to remedy these situations.

Several developed sites are shown on the map entitled *ROS Classes & Developed Recreation Sites* contained in the map packet. Other developed sites are shown on the two folded Los Padres National Forest recreation maps available at Forest ranger stations.

TABLE S-17: ACRES IN ROS CLASSES FOR HOGPA/NON-HOGPA AND WITHDRAWN AREAS

ROS CLASS	P Primitive			SPNM Semi-Primitive Non-Motorized			SPM Semi-Primitive Motorized			RN Roaded Natural			R Rural			Total
AREA	**Acres**	**% of Area**	**% of ROS Class**	**Acres**	**% of Area**	**% of ROS Class**	**Acres**	**% of Area**	**% of ROS Class**	**Acres**	**% of Area**	**% of ROS Class**	**Acres**	**% of Area**	**% of ROS Class**	**Acres**
Withdrawn Areas																
Wilderness Areas	577,450	71%	100%	237,110	29%	53%										814,560
Big Sur Coastal Zone				10,194	24%	2%				31,895	76%	9%				42,089
Santa Ynez Watershed				58,015	38%	13%	60,186	40%	16%	27,066	18%	8%	6,961	5%	41%	152,228
Total Withdrawn Areas	577,450	57%	100%	305,319	30%	68%	60,186	6%	16%	58,961	6%	16%	6,961	1%	41%	1,008,877
HOGPA's																
Piedra Blanca				1,597	57%	0%				1,218	43%	0%				2,815
San Cayetano				997	7%	0%	10,226	76%	3%	2,221	17%	1%				13,444
Sespe				5,029	39%	1%							7,853	61%	47%	12,882
Rincon Creek				1,476	16%	0%	3,352	37%	1%	4,224	47%	1%				9,052
South Cuyama				1,162	1%	0%	62,859	78%	17%	16,237	20%	5%				80,258
La Brea Canyon							1,324	14%	0%	7,949	86%	2%				9,273
Figueroa Mountain				2,268	26%	1%	1,356	16%	0%	5,121	59%	1%				8,745
Lopez Canyon				1,349	60%	0%				908	40%	0%				2,257
Monroe Swell										600	100%	0%				600
Total HOGPA's				13,878	10%	3%	79,117	57%	21%	38,478	28%	11%	7,853	6%	47%	139,326
Non-HOGPA				130,003	21%	29%	233,633	37%	63%	261,894	42%	73%	2,011	0%	12%	627,541
Total Study Area				143,881	19%	32%	312,750	41%	84%	300,372	39%	84%	9,864	1%	59%	766,867
Total LPNF	577,450	33%	100%	449,200	25%	100%	372,936	21%	100%	359,333	20%	100%	16,825	1%	100%	1,775,744

In an effort to remedy some of these situations, the USDA Forest Service is testing an "Adventure Pass" program to improve customer service and generate financial support to maintain facilities. Eighty percent of these funds are returned to National Forests on which they are generated for improvement and rehabilitation of recreation facilities. LPNF began selling the Adventure Pass in mid-June 1997 as part of the national fee demonstration project.

S.4.3.6.4. Wilderness and Roadless Areas

Extensive Wilderness and roadless areas on LPNF are utilized for dispersed recreation. The Forest contains nine Wilderness Areas (Ventana, Santa Lucia, Garcia, Machesna Mountain, San Rafael, Dick Smith, Matilija, Chumash, and Sespe). The designated Wilderness and Inventoried Roadless Areas (IRA's) of LPNF are shown on the map in the map packet entitled *Roadless Areas*. Forty-six percent of LPNF (814,560 acres) is in designated Wilderness. IRA's on LPNF have been evaluated several times for inclusion in the National Wilderness Preservation System (NWPS) over the past 30 years. During that time, 405,790 acres of the 1,064,486 acres in the 38 IRA's on LPNF have been included in the NWPS. Designated Wilderness areas are withdrawn from mineral entry and cannot be considered for oil and gas leasing. An additional 113,893 acres of IRA's are withdrawn from mineral entry due to inclusion in the Santa Ynez Watershed (113,893 acres) and the Coastal Zone (114 acres).

Table S-18 shows the portion of IRA's that are withdrawn from mineral entry. For the portions of IRA's not withdrawn, this table shows the acres in each ROS class.

Table S-19 shows how much of each IRA is in each HOGPA and breaks the acreage out by ROS class.

TABLE S-18: INVENTORIED ROADLESS AREAS ON LPNF

Inventoried Roadless Area			**Portion Withdrawn from Mineral Entry**				**ROS for Portion Not Withdrawn from Mineral Entry**				
ID #	Name	Total Acres	Wilderness	Coastal Zone	Santa Ynez	Total	SPNM	SPM	RN	R	Total
2	Sespe-Frazier	327,609	217,386			217,386	15,674	68,798	23,856	1,895	110,223
102	Black Bute	22,788	16,967			16,967	630		5,171	20	5,821
103	Bear Mountain	22,736	21,387			21,387	483		202	664	1,349
104	Bear Canyon	14,490				0	14,139		351		14,490
105	Chalk Peak	7,494		114		114	2,744		4,636		7,380
107	Garcia Mountain	22,531	14,156			14,156	1,531	4,404	2,440		8,375
108	Black Mountain	17,173				0		11,270	5,903		17,173
109	La Panza	5,026				0		2,634	2,392		5,026
110	Machesna	31,160	18,515			18,515	5,210	4,683	2,752		12,645
111	Los Machos Hills	12,128				0		3,442	8,686		12,128
112	Big Rocks	12,736				0	3,752	7,555	1,429		12,736
113	Stanley Mountain	15,725				0		9,652	6,073		15,725
114	Miranda Pine	13,636				0	3,007	3,427	7,202		13,636
115	Horseshoe Springs	14,145				0		9,390	4,755		14,145
116	Tepusquet Peak	5,827				0			5,827		5,827
117	La Brea	60,615	46,529			46,529	3,269	5,839	4,978		14,086
118	Spoor Canyon	13772				0	9288		4484		13,772
119	Manzana	2,962	718			718	1,861	332	51		2,244
120	Fox Mountain	52,469				0	11,383	35,981	5,105		52,469
121	Santa Cruz	21,416			21,214	21,214			202		202
122	Condor Point	18,933			52	52	7,680		11,201		18,881
123	Camuesa	8,213			8,213	8,213					0
124	Madulce-Buckhorn	14,184			11,488	11,488	27	1,015	1,654		2,696
125	Mono	28,466			28,424	28,424	14	28			42
127	Diablo	19,605			19,605	19,605					0
128	Juncal	12,486			12,343	12,343	63	80			143
129	Matilija	35,276	29,606			29,606	3,414	620	1,636		5,670
130	White Ledge	19,453			2,445	2,445	10,541	4,723	1,744		17,008
131	Dry Lakes	17,113				0	6,639	4,727	5,747		17,113
132	Nordhoff	12,033				0		7,888	4,145		12,033
134	Sawmill-Badlands	91,859	37,577			37,577	1,879	24,035	28,368		54,282
135	Cuyama	19,639				0	18	18,212	1,409		19,639
136	Antimony	44,059				0		35,610	8,449		44,059
263	Tequepis	9,493			6,856	6,856			2,637		2,637
268	Quatal	7,290				0		2,012	5,278		7,290
277	Church Creek	2,949	2,949			2,949					0
278	Little Pine	1,315			1,315	1,315					0
279	De La Guerra	5,682			1,938	1,938		3,206	538		3,744
Totals		1,064,486	405,790	114	113,893	519,797	103,246	269,563	169,301	2,579	544,689

TABLE S-19: INVENTORIED ROADLESS AREAS BY HOGPA

HOGPAs	Inventoried Roadless Areas (IRA)		ROS Class in Area (acres)				Total Acres	% of HOGPA	% of IRA(s)
	ID #	Name	SPNM	SPM	RN	R			
Piedra Blanca	5002	*Sespe Frazier*	428		479		907	32%	0.3%
		Not in an IRA	1169		739		1,908	68%	
		Total	1,597		1,218		2815	100%	
San Cayetano	5132	*Nordoff*		1309	840		2,149	16%	17.9%
	5002	*Sespe Frazier*	997	7,889	756		9,642	72%	2.9%
		Subtotal Roadless	997	9,198	1,596		11,791	88%	1.1%
		Not in an IRA		1,028	625		1,653	12%	
		Total	997	10,226	2,221		13,444	100%	
Sespe	5002	*Sespe Frazier*	4395			1,395	5,790	45%	1.8%
		Not in an IRA	634			6,458	7,092	55%	
		Total	5,029			7,853	12,882	100%	
Rincon Creek	5130	*White Ledge*	480	667	606		1,753	19%	9.0%
		Not in an IRA	996	2685	3,618		7,299	81%	
		Total	1476	3352	4224		9052	100%	
South Cuyama	5134	*Sawmill-Badlands*		12288	6905		19193	24%	20.9%
	5124	*Madulce-Buckhorn*		149	369		518	1%	3.7%
	5120	*Fox Mountain*	1140	32704	3692		37536	47%	71.5%
	5135	*Cuyama*		15829	1,409		17,238	21%	87.8%
	5118	*Spoor Canyon*	19		234		253	0%	1.8%
		Subtotal Roadless	1,159	60,970	12,609		74,738	93%	7.0%
		Not in an IRA	3	1,889	3,628		5,520	7%	
		Total	1,162	62,859	16,237		80,258	100%	
La Brea Canyon	5116	*Tapusquet Peak*			5816		5816	63%	99.8%
	5117	*La Brea*		340	610		950	10%	1.6%
	5115	*Horseshoe Springs*		214	506		720	8%	5.1%
		Subtotal Roadless		554	6932		7486	81%	0.7%
		Not in an IRA		770	1,017		1,787	19%	
		Total		1,324	7,949		9,273	100%	
Figueroa Mountain	5279	*De La Guerra*		144	273		417	5%	7.3%
		Not in an IRA	2,268	1,212	4,848		8,328	95%	
		Total	2,268	1,356	5,121		8,745	100%	
Lopez Canyon		*Not in an IRA*	1,349		908		2,257	100%	
Monroe Swell		*Not in an IRA*			600		600	100%	
Total HOGPA's		*Roadless*	7,459	71,533	22,495	1,395	102,882	74%	9.7%
		Not in an IRA	6,419	7,584	15,983	6,458	36,444	26%	
		Total HOGPA's	13,878	79,117	38,478	7,853	139,326	100%	

S.4.3.6.4.1.1. Trails

The trail system provides access within the Forest and a focal point for many recreation activities. There are 1175 miles of maintained trails within the Forest. These provide both day-use and extended backpacking opportunities for both non-motorized and motorized activities. This trail system is used for a variety of activities including hiking, horseback riding, for access to hunting, fishing and nature study opportunities, and most recently, for mountain bicycling and jogging. Mountain bicycling, in particular, is an emerging activity, which is currently permitted on all trails outside of Wilderness, and is beginning to create conflicts with other trail uses. In addition, the Piedra Blanca (22WO3), Aliso (28WO5), and Santa Cruz (27W09) trails are designated National Recreation Trails.

Off-road vehicle (ORV) use is also accommodated on designated trails and other routes. The Forest has 313 miles of roads and trails designated for ORV use. Of these, 296 miles are open year-round and 17 miles are open only part of the year. Each of these roads and trails is designated for motorcycle use, 4-wheel drive use, or a combination of the two uses according to the 1976 Forest Off- Road Vehicle Plan and subsequent amendments.

S.5. ENVIRONMENTAL CONSEQUENCES

Successful oil and gas exploration and development generally progresses through five basic operational phases: (1) preliminary investigation (includes geophysical exploration), (2) exploratory drilling, (3) development, (4) production, and (5) abandonment. Each of these phases may result in effects on/impacts to the environment. During preliminary investigations, little surface disturbance typically results. Surface disturbance occurs during the second phase, exploratory drilling, when an access road to the proposed well site would be constructed and/or upgraded, the well pad and associated features would be constructed, and drilling would occur. Surface uses associated with oil and gas field development include: access roads, well sites, pipelines, power lines, storage tank batteries, and facilities to separate water from oil and gas. Development access roads are typically located and constructed for long-term use as opposed to roads built for short-term use to access exploratory wells. Production involves operations that are less intensive than construction, but requires activities (such as transportation to and from the wells, treating and separating fluids, disposing of produced water, and transporting oil and/or gas to market) that could result in impacts to the environment. Abandonment, whether it involves an exploratory well or an entire leasehold, involves (1) plugging the well bore and (2) reclaiming the land surface to a productive use.

The potentially significant environmental consequences that could result from oil and gas activities under each alternative are summarized and compared, in terms of the major issues described previously, in the following tables. Please note that the environmental consequences of Alternative 1 apply to all other alternatives as well, since existing leases are allowed to continue as long as they are producing.

TABLE S-20: COMPARISON OF ALTERNATIVES BY PHYSICAL ISSUE AREAS

Alternative Leasing Scenario	***Physical Environment***	
	Air Quality	**Watersheds, Wetlands, Riparian, & Floodplains**
Alternative 1 – No Action – No New Leasing (8.3 acres disturbed)	Short-term emissions for three criteria pollutants could be significant. Long-term ozone pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.
Alternative 2 - Emphasize Oil & Gas Development (163.3 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO, & NO_x pollutants could be significant.	Three sub-basins in the lower Sespe Creek drainage have a high risk for adverse CWE.
Alternative 3 - Meet Forest Plan Direction (45 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO & NO_x pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.
Alternative 4 - Emphasize Surface Resources (43 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO & NO_x pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.
Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO & NO_x pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.
Alternative 5 – Combination of Alternatives 3 and 4 (45 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO & NO_x pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.
Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	Short-term emissions for all criteria pollutants could be significant. Long-term ozone, CO & NO_x pollutants could be significant.	Low risk of cumulative watershed effects (CWE) forest-wide.

TABLE S-21: COMPARISON OF ALTERNATIVES BY BIOLOGICAL ISSUE AREAS

Alternative Leasing Scenario	***Biological Environment*** 1/		
	Wildlife	**Fisheries**	**Vegetation**
Alternative 1 – No Action – No New Leasing (8.3 acres disturbed)	Depending upon the location of activities, potentially significant impacts could occur to the Peregrine falcon.	No significant impacts are projected.	Depending upon the location of activities, potentially significant impacts could occur to sensitive plant species.
Alternative 2 - Emphasize Oil & Gas Development (163.3 acres disturbed)	Depending upon the location of activities, potentially significant impacts could occur to the Peregrine falcon.	Potentially significant impacts to steelhead trout in lower Sespe Creek (as a result of adverse CWE).	Depending upon the location of activities, potentially significant impacts could occur to sensitive plant species.
Alternative 3 - Meet Forest Plan Direction (45 acres disturbed)	No additional significant impacts are projected.	No additional significant impacts are projected.	No additional significant impacts are projected.
Alternative 4 - Emphasize Surface Resources (43 acres disturbed)	No additional significant impacts are projected.	No additional significant impacts are projected.	No additional significant impacts are projected.
Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	No additional significant impacts are projected.	No additional significant impacts are projected.	No additional significant impacts are projected.
Alternative 5 – Combination of Alternatives 3 and 4 (45 acres disturbed)	No additional significant impacts are projected.	No additional significant impacts are projected.	No additional significant impacts are projected.
Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	No additional significant impacts are projected.	No additional significant impacts are projected.	No additional significant impacts are projected.

1/ Threatened and endangered species would be protected under provisions of the Threatened and Endangered Species Act under all alternatives.

TABLE S-22: COMPARISON OF ALTERNATIVES BY SOCIAL AND ECONOMIC ISSUE AREAS

Alternative Leasing Scenario	***Social and Economic Issue Areas*** *page 1 of 4*		
	Heritage Resources	**Socioeconomic Impacts/Growth**	**Social Impacts** *Private Property & Noise*
Alternative 1 – No Action – No New Leasing (8.3 acres disturbed)	No significant impacts are projected for any alternative. Avoidance and/or mitigation would occur at next stage of process.	No significant economic or growth impacts are projected at this level (leasing stage) of analysis.	No significant impacts are projected.
Alternative 2 - Emphasize Oil & Gas Development (163.3 acres disturbed)		No significant economic or growth impacts are projected at this level (leasing stage) of analysis. However, impacts to local communities could occur depending upon the location and extent of development.	Potential for significant impacts associated with San Cayetano, Sespe, and South Cuyama HOGPAs.
Alternative 3 - Meet Forest Plan Direction (45 acres disturbed)			Some impacts could occur but they are not expected to be significant.
Alternative 4 - Emphasize Surface Resources (43 acres disturbed)			Some impacts could occur but they are not expected to be significant.
Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis (23.5 acres disturbed)			More off-Forest development could occur than in Alt. 4, so there is a higher likelihood of operations being closer to sensitive human receptors.
Alternative 5 – Combination of Alternatives 3 and 4 (45 acres disturbed)			Some impacts could occur but they are not expected to be significant.
Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis (23.5 acres disturbed)			More off-Forest development could occur in Alt. 5, so a higher likelihood of operations being closer to sensitive human receptors.

TABLE S-22: COMPARISON OF ALTERNATIVES BY SOCIAL AND ECONOMIC ISSUE AREAS (CONTINUED)

Alternative Leasing Scenario	***Social and Economic Issue Areas*** *page 2 of 4*		
	Access and Traffic	**Land and Resource Management Plans** *Forest Plan; County General Plans*	**Oil & Gas Development** *Development Constraints; Industrial Infrastructure*
Alternative 1 – No Action – No New Leasing (8.3 acres disturbed)	No significant impacts are projected.	Existing leases do not meet all Forest Plan standards and guidelines. County general plan requirements are met.	Projects development of 6.5 BOE.* No significant impacts on infrastructure are projected.
Alternative 2 - Emphasize Oil & Gas Development (163.3 acres disturbed)	Potential for peak-hour traffic on Hwy. 33 between Ojai and Ventura to exceed threshold of significance during year of maximum development.	SLTs are not sufficient to meet numerous Forest Plan standards and guidelines. Not consistent with some requirements of general plans for San Luis Obispo, Santa Barbara and Ventura counties.	Projects development of 90.2 BOE.* No significant impacts on infrastructure are projected.
Alternative 3 - Meet Forest Plan Direction (45 acres disturbed)	No significant impacts are projected.	Except for existing leases, mitigation meets all Forest Plan standards and guidelines. Consistent with requirements of all county general plans.	Projects development of 21.4 BOE.* No significant impacts on infrastructure are projected.
Alternative 4 - Emphasize Surface Resources (43 acres disturbed)			Projects development of 17.4 BOE.* No significant impacts on infrastructure are projected.
Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis (23.5 acres disturbed)			Projects development of 17.3 BOE.* No significant impacts on infrastructure are projected.
Alternative 5 – Combination of Alternatives 3 and 4 (45 acres disturbed)			Projects development of 21.4 BOE.* No significant impacts on infrastructure are projected.
Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis (23.5 acres disturbed)			Projects development of 17.3 BOE.* No significant impacts on infrastructure are projected.

* Barrels of oil equivalent.

TABLE S-22: COMPARISON OF ALTERNATIVES BY SOCIAL AND ECONOMIC ISSUE AREAS (CONTINUED)

Alternative Leasing Scenario	***Social and Economic Issue Areas*** *page 3 of 4*		
	Scenic Resources	**Safety and Hazards** *Fire, geologic, spills*	**Recreation** *Off-road vehicle use, developed sites, primitive use, wilderness areas, roadless areas*
Alternative 1 – No Action – No New Leasing (8.3 acres disturbed)	San Cayetano, South Cuyama & Sespe HOGPAs all have existing significant impacts which could increase if developed further. Also, South Cuyama could have 7.3 acres of new disturbance.	Impacts associated with hazards are directly related to the projected amount of oil and gas development. Consequently, projected hazard impacts would be highest for Alternative 2 and lowest for Alternative 1. The risk of impacts associated with hazards for alternatives 4, 4a & 5a is roughly the same and slightly less than the risk for alternatives 3 & 5, which are the same.	Existing impacts to recreation opportunities resulting from leases in the Sespe HOGPA would continue. Significant indirect impacts to campgrounds and the San Rafael Wilderness could result from activities projected for the South Cuyama HOGPA.
Alternative 2 - Emphasize Oil & Gas Development (163.3 acres disturbed)	A great deal of development projected in the HOGPA areas is expected to result in potentially significant scenic impacts.		Projected development could result in significant direct impacts on the recreational setting (ROS classes) in large portions of the HOGPAs. Significant indirect impacts on Wilderness, Wild and Scenic rivers and developed sites could also result.
Alternative 3 - Meet Forest Plan Direction (45 acres disturbed)	Forest Plan adopted VQOs would be met and no additional scenic impacts would occur. However, some development could result in a change to a human-dominated landscape.		There would be no significant impacts on recreation opportunities, Wilderness, Wild and Scenic Rivers or developed sites except as they result from existing leases (Alternative 1). There could be some development in inventoried roadless areas.
Alternative 4 - Emphasize Surface Resources (43 acres disturbed)	Forest Plan scenic requirements would be met, no additional significant scenic impacts would occur, and some existing landscape impacts could be rehabilitated.		There would be no significant impacts on recreation opportunities, Wilderness, Wild and Scenic Rivers or developed sites except as they result from existing leases (Alternative 1). Some recreational settings could be rehabilitated/enhanced. There could be some development in inventoried roadless areas (IRAs).

TABLE S-22: COMPARISON OF ALTERNATIVES BY SOCIAL AND ECONOMIC ISSUE AREAS (CONTINUED)

Alternative Leasing Scenario	***Social and Economic Issue Areas*** *page 4 of 4*		
	Scenic Resources	**Safety and Hazards** *Fire, geologic, spills*	**Recreation** *Off-road vehicle use, developed sites, primitive use, wilderness areas, roadless areas*
Alternative 4a – Alternative 4 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	Forest Plan scenic requirements would be met, no additional significant scenic impacts would occur, and some existing landscape impacts could be rehabilitated.	Impacts associated with hazards are directly related to the projected amount of oil and gas development. Consequently, projected hazard impacts would be highest for Alternative 2 and lowest for Alternative 1. The risk of impacts associated with hazards for alternatives 4, 4a & 5a is roughly the same and slightly less than the risk for alternatives 3 & 5, which are the same.	There would be no significant impacts on recreation opportunities, Wilderness, Wild and Scenic Rivers or developed sites except as they result from existing leases (Alternative 1). Some recreational settings could be rehabilitated/enhanced. There would be no development in inventoried roadless areas.
Alternative 5 – Combination of Alternatives 3 and 4 (45 acres disturbed)	Forest Plan adopted VQOs would be met and no additional scenic impacts would occur. However, some development could result in a change to a human-dominated landscape.		There would be no significant impacts on recreation opportunities, Wilderness, Wild and Scenic Rivers or developed sites except as they result from existing leases (Alternative 1). There could be some development in inventoried roadless areas.
Alternative 5a – Alternative 5 With Roadless Conservation Area Emphasis (23.5 acres disturbed)	Forest Plan scenic requirements would be met, no additional significant scenic impacts would occur, and some existing landscape impacts could be rehabilitated.		There would be no significant impacts on recreation opportunities, Wilderness, Wild and Scenic Rivers or developed sites except as they result from existing leases (Alternative 1). There would be no development in inventoried roadless areas.