

GAO

Report to Congressional Requesters

June 1987

FEDERAL LAND MANAGEMENT

Nonfederal Land and Mineral Rights Could Impact Future Wilderness Areas



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**Resources, Community, and
Economic Development Division**

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The Honorable Don Young
Ranking Minority Member
Committee on Interior and Insular Affairs
House of Representatives

The Honorable Ron Marlenee
Ranking Minority Member
Subcommittee on National Parks and Public Lands
Committee on Interior and Insular Affairs
House of Representatives

This report responds to your request to review the potential problems facing the Congress in creating BLM wilderness areas containing privately owned or state-owned (nonfederal) land and mineral rights. Specifically, this report discusses (1) the extent of nonfederal land and mineral rights in BLM wilderness study areas, (2) the difficulties that BLM has experienced due to nonfederal land and mineral rights in areas that the Congress has designated as wilderness, and (3) the data that BLM is developing on nonfederal land and mineral rights to assist the Congress in designating wilderness areas.

As agreed, unless you publicly announce the contents of the report earlier, we plan no further distribution of this report until 10 days from its issue date. At that time, we will send copies to interested parties and make copies available to others on request.

This review was performed under the direction of James Duffus III, Associate Director. Major contributors are listed in appendix IV.

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

About 1.7 million acres of privately owned or state-owned lands and minerals exist within areas being studied by the Department of the Interior's Bureau of Land Management (BLM) for inclusion in the National Wilderness Preservation System. In addition, many of these areas include mineral rights, such as mining claims and mineral leases. BLM's ability to preserve wilderness areas in their natural condition, as intended by wilderness legislation, could be limited if these nonfederal land and mineral rights are developed. But acquisition by the federal government of nonfederal land and mineral rights to prevent development can be difficult and costly.

Realizing the potential problems resulting from nonfederal ownership of land and mineral rights and to assist the Congress in its deliberations regarding the designation of future BLM wilderness areas, Representatives Don Young and Ron Marlenee asked GAO to review this matter. This report provides information on (1) the extent of nonfederal land and mineral rights contained in BLM's wilderness study areas, (2) the difficulties that BLM has experienced due to the presence of nonfederal land and mineral rights in areas that the Congress has designated as wilderness, and (3) the data that BLM is developing on nonfederal land and mineral rights in areas that the Congress will consider for wilderness designation.

Background

In passing the 1964 Wilderness Act, the Congress created the National Wilderness Preservation System, now totalling about 89 million acres, to preserve and protect the natural and pristine characteristics of federal lands in national forests, parks, and wildlife refuges. Subsequently, the Federal Land Policy and Management Act of 1976 (FLPMA) directed BLM to study lands under its management for potential designation as wilderness areas.

As of June 1987, BLM was studying 860 areas with wilderness characteristics to determine which of the areas will be recommended for inclusion in the National Wilderness Preservation System. These areas, known as wilderness study areas, cover almost 25 million acres in the states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. When the study process is completed, BLM will develop recommendations as to which areas should be designated as wilderness. BLM is required to submit its recommendations through the Secretary of the Interior and the President to the Congress.

FLPMA requires that the Secretary's wilderness recommendations and supporting data reach the President no later than October 21, 1991, and that the President's recommendations must reach the Congress by October 21, 1993. However, the Congress already began designating wilderness areas on BLM lands in February 1978 apart from BLM's wilderness study program. As of June 1987, the Congress had created 23 BLM wilderness areas, 10 of which contain nonfederal lands and mineral rights.

Results in Brief

Many of BLM's 860 wilderness study areas contain nonfederal land and mineral rights that could be developed. BLM records show that 53 percent have some nonfederal land and minerals within their boundaries, covering 1.7 million acres. Many of these areas also include mining claims and mineral leases.

These nonfederal land and mineral rights make it difficult for BLM to protect wilderness characteristics. For example, private owners have the legal right to gain access to their property, which could include constructing roads through potential and existing wilderness areas. BLM has taken actions, including acquiring nonfederal land and mineral rights, to protect wilderness characteristics in BLM areas designated as wilderness. However, BLM officials are concerned that they could be faced with management problems and costly acquisitions if additional wilderness areas are created containing nonfederal land and mineral rights.

Although the President's wilderness recommendations are not due until 1993, the Congress has periodically considered legislation to designate BLM wilderness areas. BLM has pertinent information regarding nonfederal land and mineral rights within many of these areas, but only provides such information when specifically asked by the Congress.

Principal Findings

About 455 of BLM's 860 wilderness study areas contain privately owned or state-owned land and minerals that could be developed. In some areas, this nonfederal land and mineral ownership is extensive. For example, 32 study areas each contain more than 10,000 acres of nonfederal land and/or minerals.

At the time of GAO's review, BLM had analyzed the mineral development potential of 374 study areas and estimated that development could occur in about 179 areas. If development occurs, BLM will be faced with the difficult task of protecting the areas' wilderness characteristics without infringing upon the owners' property rights. BLM instructed its

state offices to exclude, where possible, nonfederal land when drawing the boundaries of the areas to be recommended for wilderness.

However, BLM acknowledged that some areas recommended for wilderness designation will include nonfederal land and mineral rights because these areas are essential to the overall character of the proposed wilderness area. Furthermore, BLM wilderness coordinators in the three states that GAO visited expressed concern that the Congress may designate wilderness areas before BLM completes its study process or expand the boundaries of BLM's recommended wilderness areas. This, BLM believes, could result in wilderness areas' containing nonfederal land and mineral rights which may have to be acquired to prevent development or may cause wilderness management problems. In some cases, BLM has taken actions to protect wilderness characteristics in the areas that contain nonfederal land and mineral rights, including acquisition of such rights. (See ch. 2.)

To assist the Congress in designating wilderness areas, BLM has instructed its state offices to include information on the extent, developmental potential, and possible acquisition costs of nonfederal land and mineral rights in the documentation supporting BLM's future wilderness recommendations. Based on GAO's review, information regarding state-owned lands that BLM field offices were collecting for inclusion in wilderness study reports appears to be accurate. However, GAO found that some information on privately owned land within the study areas often did not show the number of privately owned parcels of land or the number of owners. Subsequently, on October 20, 1986, BLM issued a memorandum to its state offices requiring them to obtain more complete information on these lands from state and county records. (See ch. 3.)

Recommendations to the Secretary of the Interior

The Congress should base its wilderness designations on the best available information regarding nonfederal land and mineral rights within wilderness areas. Therefore, GAO recommends that the Secretary direct BLM to provide the Congress with available analyses regarding such nonfederal land and mineral rights for any wilderness legislative proposals being considered by the Congress. GAO also recommends that the Secretary require that the Director, BLM, ensure that all data are fully developed and included in the final wilderness study reports and other analyses supporting wilderness recommendations.

Agency Comments

Interior stated that this report accurately and factually reflects the situation facing BLM in dealing with nonfederal land and mineral rights in designated wilderness areas and wilderness study areas. Furthermore, Interior agreed with GAO's findings and stated that it would implement its recommendations. However, it suggested that GAO modify its first recommendation to state that BLM should provide the Congress with such analyses "on a request basis originating from them." GAO believes that BLM should provide the information whether or not it is formally requested by the Congress. (See ch. 4.)

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Abbreviations

BLM	Bureau of Land Management
FLPMA	Federal Land Policy and Management Act of 1976
GAO	General Accounting Office
P.L.	Public Law
RCED	Resources, Community, and Economic Development Division (GAO)

Introduction

Wilderness lands are to be preserved in a natural and pristine wilderness condition for the benefit and enjoyment of present and future generations. In 1976, the Congress directed the Department of the Interior's Bureau of Land Management (BLM) to study its lands for possible inclusion in the National Wilderness Preservation System. However, much of the land BLM is studying for inclusion in the wilderness system contains (1) privately owned and state-owned land and minerals, (2) mining claims, and (3) mineral leases which could be developed, thereby damaging wilderness areas. Experience has shown that protecting wilderness areas from development activities can be difficult and expensive. This report discusses the extent of these nonfederal land and mineral rights in the areas that BLM is studying for possible inclusion in the wilderness system and the potential problems it could face if these areas become part of the wilderness system.¹

Legislative Background and Historical Perspective

The National Wilderness Preservation System was established by the Wilderness Act of 1964, Public Law 88-577. The act's purpose is to provide, for present and future generations, a long-lasting nationwide system of pristine, roadless, and undeveloped wilderness areas to be preserved and protected in their natural condition. The system, totalling about 89 million acres, is composed of federal lands that

- are primarily affected by the forces of nature, with the imprint of man's work substantially unnoticeable;
- have outstanding opportunities for solitude or primitive recreation;
- are comprised of at least 5,000 acres or are of sufficient size to make practicable its preservation and use in an unimpaired condition; and
- may contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The act further provides that except for existing private rights, such activities as commercial enterprises, permanent or temporary roads, use of motorized vehicles or equipment, and structures or installations are prohibited. Generally, wilderness areas are "subject to valid existing rights," thus acknowledging the property rights of mineral and land owners, including their right to develop their own property.

Four federal agencies manage lands as part of the National Wilderness Preservation System. Interior's National Park Service and Fish and

¹The term "mineral rights," as used in this report, includes such property interests as mining claims, federal mineral leases, and ownership of the subsurface minerals.

Wildlife Service and the Department of Agriculture's Forest Service manage lands under their jurisdiction as wilderness under the 1964 Wilderness Act. Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA) gave BLM similar authority. FLPMA represents the first congressional mandate for BLM to review land under its management jurisdiction for possible inclusion in the wilderness system.

To carry out the mandate, BLM developed a three-phase wilderness review process—inventory (essentially completed in 1980), study, and reporting—to identify areas with wilderness characteristics for the Congress. As of June 1987, BLM was reviewing 860 wilderness study areas covering 25 million acres in the states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.² (See fig. 1.1.)

BLM is studying each area to determine whether to recommend the area as suitable or unsuitable for inclusion in the National Wilderness Preservation System. When the wilderness study process has been completed, recommendations will be submitted through the Secretary of the Interior and the President to the Congress. FLPMA requires that Interior's recommendations reach the President by October 21, 1991, and that the President's recommendations reach the Congress by October 21, 1993.

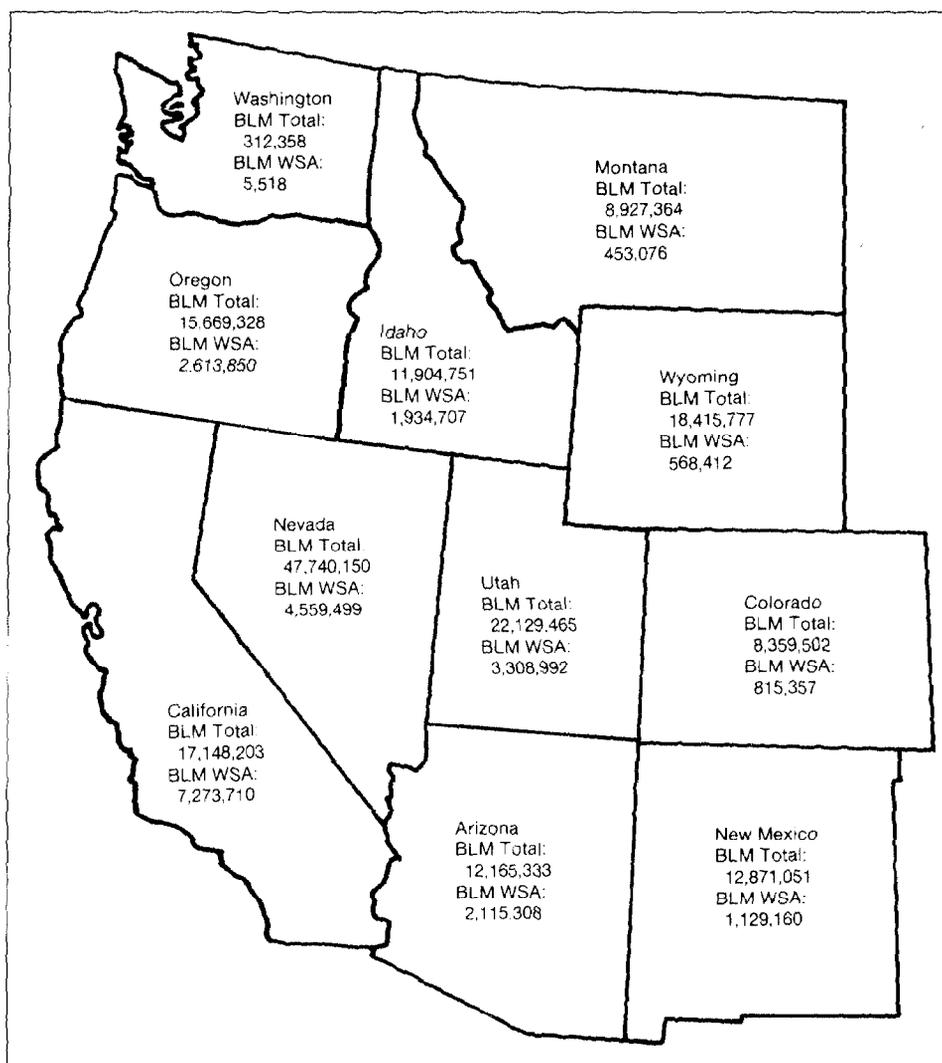
1984 GAO Report on Eastern Wilderness Areas

On July 26, 1984, we reported on problems associated with mineral rights in eastern wilderness areas managed by Agriculture's Forest Service.³ Our report noted that the Forest Service experienced management and legal problems in trying to preserve wilderness areas and control mineral development. In addition, attempts by the federal government to acquire private minerals in wilderness areas have caused considerable controversy and congressional debate because of the high costs associated with the purchases. Furthermore, we found that the Forest Service's wilderness recommendations to the Congress were flawed because they were made without an analysis of the potential costs associated with acquiring private mineral rights or the problems and effects of private minerals on wilderness management.

²Section 1320 of the Alaska National Interest Lands Conservation Act of 1980 (P.L. 96-487; 94 Stat. 2371, 2487) excluded public lands in Alaska from BLM's wilderness study program as mandated by section 603 of FLPMA.

³See Private Mineral Rights Complicate the Management of Eastern Wilderness Areas (GAO/RCED-84-101, July 26, 1984).

Figure 1.1: Map of the Western United States Showing the Acreage of BLM-Managed Land and Wilderness Study Areas (WSA)



Source: Public Land Statistics, 1986, Bureau of Land Management, U.S. Department of the Interior.

Because the Congress did not have all the information necessary to make decisions regarding wilderness designations, we recommended that the Secretary of Agriculture direct the Forest Service to provide the Congress with this information for areas recommended for wilderness designation and for areas which, at the time, were included in legislative proposals. We stated that the information for each area should include (1) the likelihood of private mineral development, (2) the need to acquire private minerals, and (3) a range of estimated costs to acquire

these mineral rights. The Chief of the Forest Service stated that the Forest Service had implemented our recommendation and will continue to apprise the Congress about potential problems and expenses related to privately owned minerals in areas recommended for wilderness designation.

Objectives, Scope, and Methodology

To assist in the consideration of wilderness legislation, Representatives Don Young and Ron Marlenee requested that we review the potential problems facing the Congress in creating BLM wilderness areas that contain private minerals. On the basis of subsequent discussions with the requesters' offices, we agreed to also look at those potential problems associated with the existence of state-owned minerals, privately owned or state-owned lands, and mining claims and mineral leases in BLM's wilderness study areas. Specifically, we were asked to assess

- anticipated acquisition and management problems in wilderness study areas that contain nonfederal land and mineral rights,
- problems that BLM experienced in acquiring privately owned or state-owned land and mineral rights in the 23 BLM areas that are now part of the National Wilderness Preservation System,
- problems BLM encountered in managing the designated BLM wilderness areas that contain privately owned or state-owned land and mineral rights, and
- information being developed by BLM during its wilderness study process on privately owned or state-owned land and mineral rights.

To accomplish these objectives, we talked to BLM headquarters and state officials having jurisdiction over BLM wilderness and wilderness study areas. In addition, we reviewed BLM data regarding nonfederal land and minerals; and mining claims and mineral leases in BLM wilderness and wilderness study areas in Arizona, California, and New Mexico. We selected these 3 states for detailed review because they contain 363 of the 860 study areas (42 percent) and 1.2 million of the 1.7 million acres (71 percent) of the nonfederal land and minerals located within wilderness study areas. Of the 23 designated BLM wilderness areas, 16 are within our 3 review states.

To assess anticipated BLM acquisition and management problems in wilderness study areas, we reviewed BLM information on the extent of nonfederal land and mineral rights in the 860 wilderness study areas. To determine how those nonfederal land and mineral rights might affect BLM's ability to protect wilderness characteristics, we obtained the views

of BLM officials in each of the state offices responsible for managing wilderness study areas. We also contacted land and mineral owners, and environmental groups to obtain their views. Finally, we made on-site visits, accompanied by BLM officials, to both designated wilderness areas and wilderness study areas containing nonfederal land and mineral rights.

To assess the problems BLM encountered in acquiring privately owned or state-owned land and mineral rights in designated wilderness areas, we obtained information on the acquisition status of such rights from each of the BLM state offices responsible for managing designated wilderness. In the three states that we visited, we talked to BLM officials about their efforts to obtain those nonfederal land and mineral rights and to identify acquisition problems and their causes.

To identify problems BLM encountered in managing the designated areas as wilderness when they contain nonfederal land and mineral rights, we talked to BLM officials in each of the states with designated wilderness areas. We then reviewed available wilderness management plans and environmental analyses covering the designated wilderness areas. Through this review and discussion, we identified activities associated with nonfederal land and mineral rights within BLM wilderness areas that were inconsistent with the concept of wilderness, such as mining and road construction. After identifying the inconsistent activities, we talked to BLM officials about management alternatives for maintaining the wilderness character of those areas when land and mineral rights are developed.

To assess the information that BLM is developing on privately owned or state-owned lands and mineral rights to support its wilderness recommendations, we reviewed draft wilderness study reports, draft and final environmental impact statements, BLM maps on wilderness study areas showing the parcels of private or state lands, and data on the development potential of mining claims. We reviewed BLM's policies and procedures for developing cost estimates to acquire nonfederal land and mineral rights and obtained information on the status of these estimates from each of the three BLM state offices included in our review. We also obtained information on mining claims and potential mining activity in study areas from 10 BLM state offices.

To verify BLM's data on private land within wilderness study areas, we compared BLM's land ownership data with county tax records. We examined these records for all wilderness study areas in Arizona and

Chapter 1
Introduction

New Mexico (47 and 36 areas, respectively) that BLM reported as containing nonfederal land, and for 4 of the 213 California study areas with nonfederal land. We limited our review of California areas because BLM (1) agreed that our findings indicated a larger problem and (2) took immediate action to correct the problems that we found concerning the subdivision of privately owned land. At each of the three state BLM offices, we discussed the discrepancies between county tax records and BLM records with BLM officials to verify that problems existed. We also reviewed procedures BLM used in developing information on privately owned and state-owned land in those states, and confirmed, by phone, that the seven other BLM state offices with wilderness study areas were using the same procedures that the states we visited used.

We conducted our review from February through December 1986 in accordance with generally accepted government auditing standards.

BLM's Wilderness Areas and Wilderness Study Areas Contain Nonfederal Land and Mineral Rights

The development of nonfederal land and mineral rights can limit BLM's ability to effectively manage and protect wilderness areas. Many of the areas BLM is studying for inclusion in the wilderness system contain extensive nonfederal land and mineral rights which could be developed, and it is likely that some of these areas will be designated by the Congress as wilderness areas.

BLM has taken action including acquiring nonfederal land and mineral rights in some designated wilderness areas to minimize the damage to wilderness characteristics. However, BLM officials have experienced difficulty in acquiring land from some private owners in designated wilderness areas and are concerned that they could be faced with difficult and costly acquisitions as additional BLM wilderness areas that contain nonfederal land and mineral rights are designated by the Congress.

Concern Exists About the Extent and Development Potential of Nonfederal Land and Mineral Rights

Although designated wilderness areas are to be preserved and protected in their natural condition, the 1964 Wilderness Act and FLPMA recognized that legal property rights could exist in areas at the time of wilderness designation and provided for their development and use.¹ In general, nonfederal land and mineral owners within BLM wilderness areas and study areas may exercise their property rights in ways that could damage wilderness characteristics. For example, they may use motorized vehicles to gain access to their property, construct roads, mine, subdivide and sell, or otherwise develop their lands. As a result, in some areas, BLM land managers are faced with the dilemma of protecting wilderness characteristics without infringing upon the legal property rights of private or state owners.

BLM instructed its state offices to exclude, where possible, nonfederal land when drawing the boundaries of the areas it will study and recommend for wilderness designation. However, BLM acknowledged that some areas that will be recommended for inclusion in the wilderness system

¹Ownership patterns of surface and mineral rights resulted from government land disposal policies of the mid-1800s, when the Congress passed a series of laws designed to help settle and develop the West. The laws included: the Homestead Act of 1862, which allowed settlers to claim 160 acres of public land and gain title to that land after 5 years of residence; the Morrill Land Grant Act of 1862, which provided states and territories with public land to build schools to teach agriculture and military tactics; the Pacific Railroad Act of 1862, as amended, which granted railroads twenty 640-acre sections of land for each mile of track as an incentive for constructing transcontinental railroads; and the Mining Law of 1872, which allows private parties to gain title to the land containing their mining claims. Furthermore, since leaving federal ownership, some of this land has been subdivided or sold several times. In some areas, the federal government, states, or individuals own both the surface property and subsurface minerals. In other areas, known as "split-estates," the federal government owns the surface, but private owners or states retain possession of the mineral rights.

will include nonfederal land and mineral rights because those areas are essential to the character of the proposed wilderness area. BLM wilderness coordinators in the three states that we visited expressed concern that the Congress may designate additional wilderness areas before BLM completes its study process or expand the boundaries of BLM's recommended wilderness areas. This, they believe, could result in the need to acquire additional areas containing nonfederal land and mineral rights to prevent development and avoid wilderness management problems. The following is a discussion, based on our analysis of BLM data, of the type, extent, and development potential of nonfederal land and mineral rights in BLM wilderness study areas.

State and Private Lands in Study Areas

Many of BLM's 860 wilderness study areas contain nonfederal lands that may be developed, and BLM is required to provide the owners legal access to their property, which could include constructing roads through wilderness areas. BLM records show that 455 of the 860 BLM study areas (52 percent) have some nonfederal lands within their boundaries. (For the amount of nonfederal land in each study area, see app. I.) Specifically, BLM records show that

- Two hundred fifty-six BLM wilderness study areas contain privately owned lands covering 492,000 acres. Of these 492,000 acres, 22,000 contain privately owned surface rights, and the federal government owns the mineral rights. On the 470,000 remaining acres, private parties own both the surface and mineral rights. In 10 of the study areas, each had more than 10,000 acres of privately owned land.
- Two hundred forty-eight BLM wilderness study areas contain state-owned land covering 589,000 acres. In 10 of the study areas, each had more than 10,000 acres of state-owned land.

Potential Mineral Development in Study Areas

BLM officials expressed concern that as a result of mining claims, federal mineral leases, and privately owned and state-owned minerals, some of the areas being studied by BLM for possible inclusion in the wilderness system may be developed. BLM officials are reviewing all 860 study areas to determine where mineral development could occur. At the time of our review, BLM officials had assessed the mineral development potential in 374 wilderness study areas and estimated that some type of mineral development could occur in about 179 of these study areas.

Chapter 2
BLM's Wilderness Areas and Wilderness
Study Areas Contain Nonfederal Land and
Mineral Rights

The extent to which BLM can manage the development resulting from mining claims and federal mineral leases to protect wilderness characteristics depends on a number of factors such as when a mining claim was established, when a mineral lease was issued, and the specific conditions included in the lease.² In general, mineral development activities associated with mining claims and mineral leases in wilderness study areas may be regulated to preserve wilderness characteristics. However, FLPMA recognized mining claims and mineral leases as valid existing rights if they were established on or before October 21, 1976, and BLM's ability to regulate the development of such rights is limited. In addition, FLPMA states that mining and leasing activities occurring on or before October 21, 1976, may continue in the same manner and to the same degree that they were being developed before FLPMA became law even if this would damage the wilderness characteristics of the study area.

Mining Claims

BLM state offices are developing information regarding the number of mining claims in BLM wilderness study areas. At the time of our review, these data had been developed for 394 of the 860 study areas. They showed that 178 (45 percent) of the 394 study areas contain mining claims. The BLM study area containing the largest number of claims was the Panoche Hills South Wilderness Study Area, California, which contained 7,570 mining claims. (For the number of mining claims in each of the 178 study areas, see app. I.)

FLPMA provides that while mining claims cannot be established once an area is included in the wilderness system, claims can be established in BLM wilderness study areas. BLM officials told us that although mining claims may exist in a study area, they will not necessarily be developed and thus not all will pose a threat to wilderness characteristics. However, they expect that mining claims in some study areas may be developed. For example, a BLM official expressed concern over the possibility that patented (privately owned) mining claims in Colorado's Red Cloud Peak Wilderness Study Area may be developed. Two mineral owners have expressed interest in constructing access roads through this study area to develop their patented mining claims. According to BLM's draft environmental impact statement for the area, the two owners would

²The Mining Law of 1872 (30 U.S.C. 22, 29, 37) allows U.S. citizens to establish claims to valuable mineral deposits commonly referred to as "hardrock" minerals, such as gold, copper, silver, lead, and iron, that are located on federal lands. After a mineral deposit has been discovered, the claim holder may patent the claim and purchase the land and mineral rights from the government. The Mineral Lands Leasing Act of 1920 authorizes the Secretary of the Interior to lease, license, and permit disposal of oil, gas, and certain other minerals from federal lands.

each construct roads 1 to 3 miles long across the wilderness study area, which would affect the wilderness characteristics of about 2,000 acres.

Federal Mineral Leases

Information provided by BLM state offices shows that as of August 1985 (the latest available data), 339 study areas containing oil or gas leases, which covered over 2.6 million acres, were issued after FLPMA became law. BLM officials told us that as of March 1987, 245 federal oil and gas leases, which were issued before FLMPA's enactment, exist in 35 study areas. (Figures on the acreage amounts covered by these leases were not available from BLM. For the number of active oil and gas leases in each wilderness study area, see app. I.)

In addition to oil and gas leases, eight pending preference right lease applications cover about 24,000 acres of BLM wilderness study areas in Colorado, New Mexico, and Utah for either coal or alunite—a mineral used to produce fertilizer.³ As of March 1987, no development had occurred as a result of these preference right lease applications. BLM's headquarters' Branch Chief for Coal Leasing told us that no action has been taken on these applications because of a series of actions taken for environmental protection reasons including: a moratorium imposed by the Secretary of the Interior on issuing new leases during the 1970s, litigation by environmental groups, and a congressional ban on the processing of preference right lease applications involving designated or potential BLM and Forest Service wilderness areas. Because of the processing ban, BLM has not made a determination as to whether any of the lease applications are economically producible and thus cannot be sure whether leases will be issued. BLM headquarters and field officials familiar with the preference right leasing process told us, however, that they believe the preference right lease applications in these areas will probably never be developed.

Privately Owned or State-Owned Minerals

One hundred forty-three of the 860 wilderness study areas contain nonfederal minerals. (For the extent of nonfederal minerals in each BLM wilderness study area see, app. I.) Specifically, BLM records show that

³The Mineral Lands Leasing Act of 1920 established the preference right leasing system by authorizing the Secretary of the Interior to issue exclusive prospecting permits which can be converted into leases if commercial quantities of coal are discovered. The Federal Coal Leasing Amendments Act of 1976 (P.L. 94-377) repealed this provision of the leasing act except for lease applications and prospecting permits that were in effect when the act passed (Aug. 4, 1976).

- Fifty-one BLM wilderness study areas contain private minerals covering about 486,000 acres. In 10 of these areas, each had more than 10,000 acres of privately owned minerals.
- One hundred four BLM wilderness study areas contain state-owned minerals covering 178,000 acres. Fifty-one of these areas are located in Oregon. In two wilderness study areas, each had 10,000 or more acres of state-owned minerals.

Like mining claims and federal mineral leases, privately owned or state-owned minerals can lead to mineral development activities that could damage wilderness characteristics. Generally, ownership of subsurface minerals is accompanied by the right to use as much of the surface as is reasonably necessary to gain access to and develop these minerals.

To regulate the development of private minerals, federal land managers must rely principally on terms and conditions in the original land patent or conveyance (deed of sale), which determines the extent and nature of the property rights, and applicable state and federal law and regulations, which establish limits on the use of the property rights. Because of the variations in conveyance documents (deeds) and state laws, the government's authority to regulate the development of private minerals on federal lands varies greatly.

BLM Actions to Minimize Impacts of Land and Mineral Development in Wilderness Areas

In February 1978, the Congress began designating wilderness areas on BLM lands. Nationwide, 10 of the 23 BLM areas designated as wilderness contain nonfederal land and mineral rights, some of which have been developed. At the time of our review, this development was not widespread. Furthermore, BLM was taking action, where possible, to minimize the impact of development on the areas' wilderness characteristics through regulation and/or acquisition of the nonfederal land and mineral rights.

The following discusses the development activities and acquisition actions that had occurred by the time of our review in the 10 wilderness areas containing nonfederal land and mineral rights.

Private Land Uses in Wilderness Areas

As of February 1987, BLM was allowing vehicle access through designated wilderness areas to private landowners in 3 out of 10 designated areas with nonfederal land. The landowners in the other six wilderness areas gain access to their property without crossing the wilderness or do

not use vehicles to access that property. A brief description of the nature of the access to private property in the three areas follows:

- Before the designation of California's Yolla Bolly-Middle Eel Wilderness Area, the California BLM state office authorized the construction of a road to provide access to timber on private property. The graded road passes through 4.5 miles of what is now the designated wilderness area. BLM restricts use of the road to private property owners, holders of federal grazing permits, and a timber company that has cutting rights on private property within the wilderness. (See fig. 2.1.)

Figure 2.1: View of the Road in the Yolla Bolly-Middle Eel Wilderness Area, California



- The De-na-zin Wilderness Area, New Mexico, contains 1,680 acres of Navajo Indian land, consisting of 11 parcels. BLM state officials told us that several dwellings are on the private land, but they are uncertain of the exact number. Though each of the original 11 Navajo Indian owners had 160 acres, the land has been passed down to their descendants and in one case, a 160-acre parcel is jointly owned by 84 people. The private landowners use motorized vehicles to access their property through five unimproved trails.
- Within the Arizona Mount Logan Wilderness Area, there are 40 acres of private land with corrals, a spring, and a watering tank. The private

landowner has a grazing operation that extends into the designated wilderness area. BLM allows the rancher to use an unpaved road to gain access to the property.

Mineral Development in Wilderness Areas

The state of New Mexico owns 1,280 acres of minerals in the De-na-zin Wilderness Area, and Utah owns 2,194 acres of mineral rights in the Paria Canyon/Vermilion Cliff Wilderness Area. At the time of our review, however, BLM officials told us that no mineral development was occurring on the state-owned land in these areas.

The Beaver Dam Mountains Wilderness Areas, Arizona, contained an operating gypsum mine when the Congress designated the area as wilderness in August 1984. This mine resulted from mining claims that (1) were established before the area was designated wilderness, (2) are considered to be valid existing rights, and (3) could be developed with only limited regulation by BLM. Although the operator planned to mine about 120 acres within the wilderness area, the mine—which ceased operation in December 1985—covers about 7 acres. (See fig. 2.2.)

Figure 2.2: Gypsum Mine in the Beaver Dam Mountains Wilderness Area, Arizona



The BLM District Manager for this area said the mine is about 1-1/2 miles within the designated wilderness areas' boundaries and is integral to the

area and its future manageability as wilderness. At the time BLM received the operating plan for the gypsum mine, he estimated that the mine could remain in operation for up to 30 years. As of February 1987, BLM officials were uncertain as to whether the operator would resume mining and said that no action had been taken by the operator to reclaim the mine site.

A producing oil and gas well was included in the De-na-zin Wilderness Area, New Mexico, when it was designated as part of the wilderness system in 1984. The well resulted from a federal mineral lease issued before FLPMA's enactment and is considered a valid existing right. The well began production in 1983 and continued producing until March of 1985. BLM's Resource Area Wilderness Coordinator said that this oil and gas development disturbed 2 acres of the wilderness area in addition to damage caused by the use of a 1-mile access road through the designated wilderness area.

In addition, a BLM New Mexico state office leasing specialist identified 4 pending coal preference right lease applications covering about 8,000 acres in the existing New Mexico Bisti and De-na-zin wilderness areas. However, as discussed earlier, no development has occurred as a result of these lease applications and none is anticipated.

BLM Has Acquired Some Nonfederal Lands Within Wilderness Areas but Is Having Trouble Acquiring Others

Acquisition of nonfederal land and mineral rights offers the most effective means of limiting or preventing development to protect wilderness characteristics. Experience to date has shown that because of the close working relationships between BLM and state agencies, it is easier to acquire state-owned lands than private lands in BLM wilderness areas.

BLM Attempts to Minimize Land and Mineral Acquisitions

BLM's policy authorizes it to acquire, through purchase, exchange, or donation, nonfederal lands and mineral rights located within designated BLM wilderness areas. However, recognizing the potential costs of a large-scale acquisition program, BLM has instructed its state offices that nonfederal lands and mineral rights should only be acquired when they are essential to ensure that the area can continue to be managed as wilderness and where granting access to nonfederal land and mineral owners would have a significant adverse affect on the area. BLM may not

employ eminent domain or condemnation authority to acquire nonfederal inholdings in wilderness areas unless specifically authorized to do so by the Congress or unless the owner agrees to the acquisition.⁴ BLM policy is to pursue the acquisition or management of nonfederal wilderness land and mineral rights in the following order:

- through donation from the nonfederal owner,
- through a cooperative management agreement with the nonfederal owner,
- through exchange of the nonfederal land and mineral rights for BLM lands or minerals outside the wilderness area, or
- through purchase of the nonfederal land and mineral rights.

As of February 1987, BLM had acquired 12,300 acres of state-owned lands and 278 acres of privately owned lands within the 23 designated wilderness areas it manages. In addition, BLM was to use \$500,000 from fiscal year 1986 appropriations and \$300,000 from fiscal year 1987 appropriations to acquire nonfederal land and mineral rights and in support of exchanges of nonfederal lands for other BLM land outside of the 23 wilderness areas.⁵

BLM Actions to Acquire State Land

At the time that the Congress designated the 23 BLM wilderness areas, states owned roughly 21,800 acres of land and/or minerals within 9 of those areas. All of the state-owned land and minerals were located in the states of Arizona, California, New Mexico, and Utah. As of December 31, 1986, BLM had acquired, through exchange, all of the state-owned lands (including both the surface and underlying minerals) in the wilderness areas in Arizona—about 9,900 acres—and all of the state-owned land (surface only) in the New Mexico wilderness area—about 2,640 acres. BLM has not acquired the approximately 1,280 acres of state-owned minerals in New Mexico nor any of the state-owned land or minerals in California (about 300 acres) and Utah (about 2,100 acres of surface and subsurface minerals and an additional 2,194 acres of subsurface minerals).

⁴Eminent domain refers to the authority of the federal government to take private property for public use after compensating the owner. This limitation is contained in Section 5(c) of the Wilderness Act of 1964 (16 U.S.C. 1134(c)).

⁵Although the fiscal year 1986 appropriation was to be used for acquisitions of land and mineral rights within the 23 designated wilderness areas, the fiscal year 1987 appropriation may also be used to acquire nonfederal land and mineral rights in wilderness study areas.

The Congress provided for the exchange of state land in the legislation creating the De-na-zin Wilderness Area, New Mexico. BLM initiated negotiations with New Mexico in January 1985 by providing the state with a list of BLM land that it was willing to exchange. The state did not consider the offered land comparable in value to the land and minerals it owned in the De-na-zin Wilderness Area, primarily because two 640-acre sections of the land it owned possessed mineral development potential, and the land that BLM was offering did not. (The state owned both the surface and subsurface for one 640-acre section and owned only the subsurface minerals in the other 640-acre section.) After a lengthy negotiation process, the state and BLM decided to complete the exchange in two parts, one part for the minerals of the two sections, and another part for the remaining surface in the area. BLM and the state completed the exchange for the land's surface rights in December 1986, and BLM is assessing the value of the two state sections of minerals and the value of BLM minerals in other areas in order to complete an exchange of minerals of approximately equal value.

BLM has not yet acquired any state lands within BLM wilderness areas in California and Utah primarily because those states have not placed a high priority on exchanging their land. However, state land officials in each of these states are interested in exchanging state lands in wilderness areas for other BLM lands. For example, a California state land commission official told us that the commission was charged with maximizing the return from state lands and believed that a greater return could be earned from lands outside of wilderness areas where growth is likely to increase the economic value of the land. However, he said that the wilderness lands had not been exchanged because the small acreage involved made it a low priority.

BLM Actions to Acquire Private Land

At the time that the Congress designated the 23 BLM wilderness areas, about 4,100 acres of private lands existed within the boundaries of those areas. We were told by BLM officials that about 40 percent of this land was owned by the descendants of 11 Navajo Indians (believed by BLM to total around 300 descendants today). The remaining 60 percent was owned by 19 other private parties. As of February 1987, BLM had acquired land from one rancher who owned 278 acres but had not acquired any other privately owned land. BLM wilderness coordinators in Arizona, California, and New Mexico told us that among the difficulties they have encountered or anticipate encountering, are (1) disagreements

with the private owners as to the value of their land and (2) a reluctance on the part of some of the private owners to sell or exchange their lands.

Specifically, BLM has contacted or made efforts to contact all but 1 of the remaining 18 people who own land in the 23 designated wilderness areas. (The Forest Service is pursuing the acquisition with the one owner not contacted by BLM because the land is being managed by that agency.) Two owners did not respond to BLM's contacts, and BLM officials believe this could indicate a lack of interest to sell or exchange their lands. Three owners indicated that they were unwilling to sell or exchange their land. Twelve private owners indicated that they are willing to sell or trade their land, but BLM is uncertain as to how much of the private land it will be able to acquire. Negotiations with two of the private owners are stalled because the owners are asking for a sale price above what BLM believes is the fair market value of the land. For example, BLM estimates the value of one parcel of land at \$150 an acre, and the private land owner values the land at \$1,000 an acre. Local BLM personnel dealing with the private owners believe that others who have indicated that they want to sell or exchange their lands may also value their lands higher than BLM.

BLM Anticipates Difficulty in Acquiring Private Land and Mineral Rights in Future Wilderness Areas

BLM officials told us that they anticipate encountering many of the same problems in acquiring nonfederal land and mineral rights within wilderness study areas after they are designated as wilderness that they are now facing in the 23 designated areas. Furthermore, they believe that attempts to acquire private minerals to prevent development could be costly and difficult. Establishing a mutually agreeable value between BLM and the owner can be a major problem because of the many unknown and speculative values of mineral property. Moreover, methods to determine fair market value of mineral rights, in the absence of market transactions, are very difficult to determine from a mineral value appraisal standpoint even though the valuation methodology has been proven. As appraisals are estimates of value, they are subject to dispute or question by both owners and professional appraisers. Because of the speculative or in some cases, the unknown nature of subsurface mineral interests particularly when there are no available market data, it could be necessary to perform exploratory drilling to determine the extent of any mineral values. Such drilling activities could be costly and involve surface disturbance activities which could destroy the very wilderness values for which the interests are being considered for acquisition.

BLM Is Developing Information on Nonfederal Land and Mineral Rights in Wilderness Study Areas

BLM has instructed its state offices to include information on the extent, development potential, and possible acquisition costs of privately owned and state-owned land and mineral rights for inclusion in its wilderness study reports and other documents supporting wilderness recommendations. This information is intended to assist the Congress in making informed decisions when designating wilderness areas. We found that some of BLM's information regarding privately owned land within BLM study areas was incomplete. BLM officials have agreed to correct these problems and have issued appropriate instructions to its state offices.

BLM Wilderness Study Reports and Other Data Are Intended to Assist the Congress in Making Informed Decisions

The primary goal of BLM's wilderness study process is to determine whether a study area is suitable for recommendation as wilderness. Analyses supporting BLM's recommendations are performed by BLM resource staff with public participation and input. For each study area, BLM officials consider, among other things, the area's naturalness and opportunities for solitude and primitive unconfined recreation. In addition, BLM officials attempt to identify all other uses of the area, such as potential mineral development, how wilderness designation could affect these potential uses, and how these potential uses could affect BLM's ability to manage the land as wilderness.

FLPMA requires the Secretary of the Interior to submit to the President recommendations on the suitability of wilderness study areas for wilderness designation by October 21, 1991. These recommendations will be based on analyses contained in environmental impact statements and other data developed for each area.

Wilderness study reports will also be supplemented by U.S. Geological Survey and the Bureau of Mines mineral surveys. Such surveys are conducted only on those areas where BLM has made a preliminary decision to recommend them as being suitable. As of March 1987, BLM had finalized environmental impact statements covering about 222 (26 percent) of the 860 wilderness study areas and prepared draft wilderness study reports for approximately 253 (29 percent) of those areas.

The President must submit his recommendations to the Congress within 2 years of receiving the Secretary of the Interior's recommendations, but no later than October 21, 1993. These recommendations will be included in wilderness study reports for each wilderness study area accompanied by environmental impact statements, public hearing records, and mineral surveys. Information on state and private lands within each study area will be included in the wilderness study reports, and information

on mineral rights within those areas will be included in either or both of the wilderness study reports and environmental impact statements.

Some BLM Information on Privately Owned Land Is Incomplete

Although information regarding state-owned lands that BLM field offices were collecting for inclusion in wilderness study reports appears to be accurate, some of the information on private land was incomplete. For example, information on privately owned land within study areas often did not show the number of privately owned parcels of land or the number of owners. We believe that this information is necessary for Congress' understanding of the potential difficulties and costs that BLM may face when trying to manage or acquire private lands. Although BLM's wilderness recommendations and reports are not due to the President until 1991, we confirmed BLM officials' suspicion that some of the data being collected were incomplete. In October 1986, BLM issued instructions to its state offices requiring the collection of more complete data.

During our review, BLM headquarters officials suspected that the data being collected by BLM state offices showing acreage and ownership of state and private lands within wilderness study area boundaries could be incomplete. BLM state office officials explained that the difference between their records and county records occurred because BLM only documents the first change of ownership when the land is conveyed from the federal government. Subsequent sales and subdivisions of these lands are not generally included in BLM land title records.

To determine the completeness of BLM's land ownership data, we reviewed county property tax records for four wilderness study areas in California and all wilderness study areas in Arizona and New Mexico with nonfederal lands (47 and 36 study areas, respectively). We found that BLM records were incomplete for private land in six study areas in Arizona, two study areas in New Mexico, and four areas in California. For those 12 wilderness study areas, BLM had underreported the number of owners and parcels of privately owned land. For example, according to BLM records, a major railroad owned a 640-acre section of land in Arizona's Black Mountain North Wilderness Study Area. However, our review of the Mojave County property records showed that this section of land had been subdivided into 272 parcels for a future housing development site and had 37 different owners. This section of land, originally conveyed to the railroad in 1922, had been subsequently sold and subdivided.

In another area—New Mexico's El Malpais Wilderness Study Area—BLM records showed 40 parcels of privately owned land in the study area, the majority of which were owned by a major railroad. However, county property records showed that the land had been subdivided into 131 parcels and was now owned by 65 different parties.

BLM state officials that we spoke with in Arizona, California, and New Mexico, agreed that it could be more difficult to manage these areas if they were to be designated as wilderness because of the many subdivided land parcels and different owners that would have to be contacted. Furthermore, BLM officials said that if the properties had to be acquired sometime in the future to protect wilderness characteristics, acquisition could be more difficult and costly because the government would be negotiating with a larger number of owners.

On October 6, 1986, we met with BLM's Assistant Director for Land and Renewable Resources and discussed the problems we found with BLM's land ownership data. He agreed that such information was essential to the Congress for making informed decisions on wilderness legislation and that immediate corrective action was necessary. On October 20, 1986, BLM issued an instruction memorandum to its state offices requiring that they review state and/or county records to obtain the most complete information regarding the number of parcels and owners of private lands for inclusion in wilderness study reports.

BLM Will Develop Cost Estimates for Acquiring Private Land and Mineral Rights in Wilderness Study Areas

Although at the time of our review, BLM's Arizona, California, and New Mexico state offices had not developed cost estimates for acquiring private land and mineral rights in wilderness study areas, BLM headquarters officials have told us that such information will be included in its wilderness study reports for those areas where acquisition by purchase with the use of appropriated funds is proposed.

In our report on eastern wilderness areas discussed in chapter 1, we recommended, and the Forest Service agreed, that the Forest Service should provide the Congress with data regarding the need to acquire private minerals and a range of estimated acquisition costs for each potential wilderness area containing privately owned minerals. We believe that when considering an area for wilderness designation, the Congress should know (1) if the area contains nonfederal property rights, (2) the impact that development of these property rights would have on wilderness characteristics, and (3) what it could cost to acquire

the property rights to prevent development that would damage wilderness characteristics.

BLM's Chief, Branch of Wilderness Resources, agreed that the recommendations in our report to the Forest Service were also applicable to BLM's wilderness study process. Furthermore, in an April 1986 instruction memorandum to all BLM state directors, the BLM Director instructed that each wilderness study report should provide information on the estimated monetary values of the private land and mineral rights. The estimate is not to be a formal appraisal, but should be based on comparable estimated values for similar parcels or resources. BLM's wilderness coordinators in the states we visited said that no cost estimates had been prepared at the time of our review because they had just recently received instructions to prepare the estimates and because of higher priority work, such as the preparation of environmental impact statements. These officials said that cost estimates would be prepared before the final wilderness study report is issued and would reflect the most current land and mineral values.

Analysis of Mineral Development Potential Is Lacking for Some Wilderness Study Areas

BLM has instructed its state offices to develop information regarding mineral development potential for all its study areas and to include it in the accompanying environmental impact statement. This information will alert the Congress to those potential wilderness areas where BLM could experience management problems and/or where nonfederal minerals may have to be acquired to protect wilderness characteristics. Although BLM state offices, at the time of our review, had developed this information for about 374 of the 860 wilderness study areas, some drafts and completed environmental statements do not have adequate information on this subject.

According to BLM's wilderness study policy, mining claims, mineral leases, rights of way, and other valid existing rights can limit BLM's ability to manage an area effectively as wilderness, and therefore must be summarized and documented in either the environmental impact statement or wilderness study report for each area BLM recommends for wilderness designation. The policy further states that recommended areas must be capable of being managed over the long term as wilderness.

This policy was further clarified in a November 1986 memorandum from the Director, BLM, to all BLM state offices. In the memorandum, BLM

advised its state offices of the importance of information on the potential for mineral development in wilderness study areas. The memorandum required the state offices to prepare development scenarios in environmental impact statements which project the type and level of disturbance to the study area that could reasonably occur in the foreseeable future as a result of mining and other development activities. According to Interior's Chief, Land Management Section, Office of Environmental Project Review, no wilderness environmental impact statements will receive final approval without information detailing potential mineral development in the area.

BLM state officials in Arizona, California, and New Mexico told us that not all of the initial draft environmental impact statements covering wilderness study areas within their states discussed potential mineral development, as required by Interior's Office of Environmental Project Review. For example, the Arizona BLM Wilderness Planner said that environmental impact statements covering study areas in his state were inadequate because they only provided information on the number of the mining claims in study areas, and did not provide information on their developmental potential. However, BLM officials in the three states said that they were revising or updating the draft environmental impact statements to provide information on possible mineral development.

Mineral Development Information Lacking for the California Desert Conservation Area

The California Desert Conservation Area contains 136 wilderness study areas.¹ Because the final environmental impact statement for this special area was approved before the requirements of the November 1986 memorandum were implemented, it does not contain information on the potential for mining activity in each study area. According to BLM's California wilderness coordinator, about 40,000 mining claims are located in those areas. According to BLM and the U.S. Geological Survey and Bureau of Mines mineral surveys, some of the study areas are highly mineralized and likely will be developed.

On January 12, 1987, we met with BLM's Chief, Branch of Wilderness Resources, and advised him of the situation with the California Desert Conservation Area's environmental impact statement. He told us that the California BLM state office would be instructed to provide summary information in the Desert Area's wilderness study reports for areas

¹Section 601 of FLPMA designated the California Desert Conservation Area, covering about 12.5 million acres of public land in southern California, and requires the Secretary of the Interior to manage this land in a manner which protects its environmental qualities.

identified as suitable for wilderness designation by adding information on potential mineral development.

BLM Provides Information on Nonfederal Land and Mineral Rights for Pending Legislation When Requested

As of March 20, 1987, six bills had been introduced in the 100th Congress recommending wilderness designation of BLM-managed lands covering about 4.4 million acres. Some of these bills would designate areas that were not identified as wilderness study areas during BLM's inventory phase, and thus are not now being studied for wilderness potential by BLM. Others would designate areas that are being studied by BLM, but the study is not yet complete and a final BLM recommendation is not available on which areas should be included or excluded from the area designated as wilderness because of nonfederal inholdings.

BLM's Chief, Branch of Wilderness Resources, told us that BLM is not always aware of wilderness legislation considered by the Congress outside of BLM's study program. As a result, BLM does not provide the Congress with information regarding nonfederal land and mineral rights for any wilderness legislation considered prior to the completion of BLM's study program unless requested to do so by the Congress. According to the Branch Chief, when requested, BLM alerts the Congress to any nonfederal land and mineral rights in an area being considered for wilderness designation through testimony and a written report. The report, which outlines Interior's position on the bill, also contains information on any significant nonfederal land and mineral rights within the area being considered for designation. A report of that type, however, is less detailed than a wilderness study report developed through BLM's study process.

Conclusions and Recommendations

One of the significant problems facing the Congress in creating wilderness areas on land managed by BLM is the potential difficulty in designating only those lands that BLM can maintain, for the most part, in a pristine, roadless, and undeveloped condition. Creation of wilderness areas without adequate information on nonfederal land and mineral rights that exist within an area may result in the designation of wilderness areas containing an extensive amount of such rights. The development of these rights may threaten the area's wilderness characteristics. Furthermore, in those areas where land and mineral development occur, BLM officials would be faced with the dilemma of protecting wilderness characteristics without infringing upon the legal property rights of private or state owners.

While we believe that the existence of nonfederal lands and mineral rights within a wilderness study area should not necessarily exclude that area from consideration for wilderness designation, we also believe that the long-range impact that such rights could have on the wilderness character of an area should be considered. For example, mining, road construction, and other activities associated with the development of land and mineral rights, mining claims, mineral leases, and other nonfederal property rights that damage wilderness characteristics can be expected to occur in BLM wilderness areas and in many of the 860 wilderness study areas. The timing, frequency, and location of these development proposals are difficult to predict.

At the time of our review, the preliminary information that BLM had developed on areas to be considered for wilderness designation did not always include information on nonfederal land and mineral rights that is essential to informed congressional decisions on wilderness legislation. However, BLM has taken action to obtain this information for its final reports. Specifically, BLM has instructed its state offices to develop data regarding (1) the number of land parcels and owners of state and private land in study areas, (2) acquisition cost estimates for nonfederal land and mineral rights, and (3) areas with the potential for mineral development.

We share BLM officials' concern that the Congress may designate wilderness areas before BLM's wilderness study program is completed or expand the boundaries of BLM's recommended areas. The process of designating BLM wilderness areas is just beginning and it is likely that the Congress will consider many areas, including some of the 860 study areas, for wilderness designation before BLM's wilderness studies are completed. The designation of additional wilderness areas containing

nonfederal property rights could cause possible acquisition costs or management problems. BLM has pertinent information on nonfederal land and mineral rights within many of these areas, but provides such information only when specifically asked by the Congress. We believe that for any legislative proposals that would create additional BLM wilderness areas before BLM's study process is completed, BLM should provide the Congress with all available information concerning nonfederal land and mineral rights within the areas being considered.

Recommendations to the Secretary of the Interior

The Congress should base its wilderness designations on the best available information regarding nonfederal land and mineral rights within wilderness areas. Therefore, we recommend that the Secretary of the Interior direct BLM to provide the Congress with available analyses regarding such nonfederal land and mineral rights, for any wilderness legislative proposals being considered by the Congress. We also recommend that the Secretary require the Director, BLM, to ensure that all data are fully developed and included in the final wilderness study reports and other analyses supporting wilderness recommendations.

Agency Comments

Interior stated that our report accurately and factually reflects the situation confronting BLM regarding nonfederal land and mineral rights in BLM's designated wilderness areas and wilderness study areas. Furthermore, Interior agreed with our findings and stated that it would implement our recommendations. However, Interior suggested that we modify the first recommendation that the Secretary direct BLM to provide the Congress with analyses regarding nonfederal land and mineral rights when such information is requested by the Congress. We have not modified this recommendation because we believe that BLM should provide the Congress with such data whether directly requested or not, to ensure that the Congress has as much information as possible to make informed decisions regarding wilderness designations. Interior also made a number of technical and editorial suggestions that we incorporated where appropriate.

Summary of BLM Data on Nonfederal Land and Mineral Rights in Wilderness Study Areas

Table I.1: Arizona

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Apache Box	932	932	0	0	0	0
Arrastra Mountain	114,410	105,290	640	20	640	7,820
Aubrey Peak	15,440	6,740	200	0	0	8,500
Baboquivari Peak	2,065	2,065	0	0	0	0
Baker Canyon	4,812	4,812	0	0	0	0
Big Horn Mountains	22,337	21,237	0	0	1,100	0
Big Maria Mountains North	415	415	0	0	0	0
Big Maria Mountains South	1,420	1,420	0	0	0	0
Black Mesa	8,512	8,512	0	0	0	0
Black Mountain/Ives Peak	9,665	8,985	640	0	0	0
Black Mountains North	21,078	11,498	0	680	0	8,900
Black Rock	8,492	8,492	0	0	0	0
Bowie Mountain	6,507	6,156	0	351	0	0
Buckskin Mountains	47,582	46,702	880	0	0	0
Burns Spring	30,601	22,161	640	0	0	7,800
Butterfield Stage Memorial	9,566	9,566	0	0	0	0
Cactus Plain	72,100	69,825	1,740	0	535	0
Chemehuevi Mountains	195	195	0	0	0	0
Chemehuevi/Needles	960	960	0	0	0	0
Coyote Mountains	5,080	5,080	0	0	0	0
Crossman Peak	38,620	26,150	0	20	5,650	6,800
Daymine	17,309	17,309	0	0	0	0
Dead Mountain, North Addition	1,905	1,815	90	0	0	0
Dead Mountain, South Addition	630	630	0	0	0	0
Eagletail Mountains	119,700	112,229	4,836	0	2,635	0
East Cactus Plain	14,375	13,735	640	0	0	0
East Clanton Hills	36,600	36,560	0	0	40	0
Face Mountain	27,575	27,575	0	0	0	0
Fishhooks	15,215	15,215	0	0	0	0
Galiuro Addition #3	640	640	0	0	0	0
Gibraltar Mountain	25,357	16,192	0	75	795	8,295
Gila Box	17,911	17,831	0	80	0	0
Grand Wash Cliffs	12,176	8,184	0	0	0	3,992
Grapevine Wash	2,200	2,200	0	0	0	0
Happy Camp Canyon	18,767	18,509	0	258	0	0
Harcuvar Mountains	76,738	69,238	1,960	0	5,540	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0	687	9	25,020	0	0	0	0	Yes
0	0	132	1	1,130	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	
0	0		2	2,684	0	0	0	0	
0	0	113	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	72	4	3,320	0	0	0	0	Yes
0	40	16	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	6	0	0	0	0	0	0	
0	0		1	3,182	0	0	0	0	
0	0	140	4	7,840	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	88	0	0	0	0	0	0	
0	0		4	11,100	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	21	0	0	0	0	0	0	
0	0		2	2,546	0	0	0	0	
0	0	1	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	36	1	4,820	0	0	0	0	
0	0		5	5,080	0	0	0	0	
0	0	198	0	0	0	0	0	0	
0	0	32	3	3,100	0	0	0	0	
0	0	34	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		2	2,880	0	0	0	0	
0	0	9	0	0	0	0	0	0	
0	0		2	4,880	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	152	3	1,165	0	0	0	0	
0	0	57	7	16,840	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Arizona (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Harquahala Mountains	73,875	71,875	800	0	1,200	0
Hassayampa River Canyon	21,900	21,680	0	0	0	0
Hells Canyon	9,379	8,099	640	0	0	0
Hoverrocker	2,791	2,791	0	0	0	0
Hummingbird Springs	67,680	64,760	1,920	1,000	0	0
Javelina Peak	19,560	17,870	0	40	1,650	0
Kofa Unit 3 South	3,400	3,400	0	0	0	0
Kofa Unit 4 North	1,900	1,900	0	0	0	0
Kofa Unit 4 South	11,220	11,220	0	0	0	0
Little Horn Mountains	91,930	89,070	1,360	0	1,500	0
Little Horn Mountains West	13,800	12,620	0	40	1,140	0
Little Picacho Peak South	2,915	2,915	0	0	0	0
Lower Burro Creek	22,300	22,300	0	0	0	0
Mocking Bird	5,700	5,700	0	0	0	0
Mohave Wash	115,453	47,548	3,400	6,480	8,010	50,015
Mount Davis 4 Parcels	2,560	2,560	0	0	0	0
Mount Nutt	29,985	20,202	80	705	0	8,998
Mount Tipton	21,190	17,630	40	1,600	0	1,920
Mount Wilson	24,821	24,821	0	0	0	0
Muggins Mountain	14,455	14,455	0	0	0	0
Needle's Eye	9,716	9,716	0	0	0	0
Needles East Addition	465	160	0	0	0	305
New Water Mountains	40,600	40,375	0	0	0	0
North Maricopa Mountains	75,483	70,943	0	160	4,380	0
Peloncillo Mountains	13,077	12,317	0	0	760	0
Peoples Canyon	10,280	10,280	0	0	0	0
Picacho Mountains	6,400	6,400	0	0	0	0
Planet	12,765	6,795	0	0	0	5,970
Planet Peak	17,570	13,380	0	0	740	3,450
Ragged Top	4,460	4,460	0	0	0	0
Rawhide Mountains	565,760	559,400	0	0	2,560	3,800
Saddle Mountain	5,500	5,500	0	0	0	0
Sierra Estrella	14,190	12,790	640	0	760	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	1,002	1	1,360	0	0	0	0	Yes
220	0	885	0	0	0	0	0	0	Yes
0	640	118	0	0	0	0	0	0	
0	0		1	144	0	0	0	0	
0	0	741	1	980	0	0	0	0	Yes
0	0	0	9	8,827	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	314	1	590	0	0	0	0	
0	0	844	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	443	1	640	2	2,460	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		12	14,378	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	1,200	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	2	1	1,280	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	21	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
225	0	149	0	0	0	0	0	0	
0	0	424	0	0	0	0	0	0	
0	0	0	1	300	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	2	1	2,560	0	0	0	0	
0	0	61	3	1,470	0	0	0	0	Yes
0	0	0	2	1,400	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	667	9	11,410	0	0	0	0	Yes
0	0	7	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Arizona (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Signal Mountain	20,920	19,640	0	0	1,280	0
South Bradshaws	640	640	0	0	0	0
South Maricopa Mountains	72,004	71,320	0	0	684	0
Swansea	42,575	29,355	0	640	1,375	11,205
Table Top Mountains	39,823	37,968	0	0	0	0
Tres Alamos	8,910	8,880	0	0	0	30
Trigo Mountains	4,500	4,500	0	0	0	0
Trigo Mountains	36,970	36,870	80	20	0	0
Turtle Mountain	18,347	17,422	640	285	0	0
Upper Burro Creek	28,050	20,990	640	20	0	6,400
Van Deeman	1,550	1,550	0	0	0	0
Wabayuma Peak	38,450	20,610	0	1,700	0	16,140
Warm Springs	118,455	61,016	0	0	0	57,439
Whipple Mountain Addition	1,380	1,380	0	0	0	0
White Canyon	6,968	6,968	0	0	0	0
Woolsey Peak	73,930	73,930	0	0	0	0
State total	2,654,439	2,354,026	22,506	14,174	42,974	217,779

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	243	1	320	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	431	2	10,360	0	0	0	0	
0	0		0	0	0	0	0	0	
1,855	0	149	1	1,900	0	0	0	0	
0	0	43	2	6,280	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	863	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	57	1	100	0	0	0	0	Yes
0	0		3	2,640	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	244	4	4,340	0	0	0	0	
2,300	680	9,504	108	168,066	2	2,460	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Table I.2: California

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Agua Tibia	360	360	0	0	0	0
Amboy Crater	13,300	12,650	0	650	0	0
Antelope Spring	801	801	0	0	0	0
Avawatz	107,770	100,180	5,620	1,970	0	0
Baker Cypress/Lava Rock N.A.	1,148	1,148	0	0	0	0
Bear Canyon	318	318	0	0	0	0
Bear Mountain	3,198	3,198	0	0	0	0
Beauty Mountain	12,683	11,342	0	0	0	1,341
Benton Range	4,052	4,052	0	0	0	0
Big Maria Mountain	51,090	46,422	3,648	700	0	0
Bigelow Cholla Garden	12,500	10,580	0	1,920	0	0
Bighorn Mountains	52,065	50,255	0	1,770	0	0
Bitterbrush N.A.	640	640	0	0	0	0
Black Butte	40	40	0	0	0	0
Black Canyon	6,518	6,518	0	0	0	0
Black Mountain	150	150	0	0	0	0
Black Mountain	15,480	8,960	640	5,880	0	0
Blackwater Well	7,260	6,620	0	640	0	0
Bodie	15,815	15,455	0	360	0	0
Bodie Mountains	25,720	23,600	0	2,120	0	0
Bristol/Granite Mountain	127,400	86,920	3,840	14,720	0	21,920
Buffalo Hills	48,995	47,315	0	1,680	0	0
Cady Mountains	110,320	79,280	2,880	28,160	0	0
Caliente Mountain	19,498	19,018	0	0	0	0
Carrizo Gorge/Eastern McCain Valley	14,573	14,573	0	0	0	0
Casa Diablo	9,167	9,167	0	0	0	0
Castle Peaks	47,360	43,960	640	200	1,280	1,280
Cedar Roughs	7,327	7,183	0	144	0	0
Cerro Gordo	16,102	16,102	0	0	0	0
Cerro Gordo Peak	56,690	56,370	160	160	0	0
Chemehuevi Mountains	61,680	57,200	3,200	1,280	0	0
Chemise Mountain P.A.	4,340	4,340	0	0	0	0
Chidago Canyon	20,926	20,246	0	0	0	0
Chuckwalla Mountain	129,604	118,756	8,000	2,848	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	0	0	0	0	0	0	No
0	0		1	400	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	320		2	1,498	0	0	0	0	
0	0		1	140	0	0	0	0	
0	40		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	485	0	0	0	0	0	0	
0	0	348	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
440	40	0	27	9,047	0	0	0	0	
0	0	0	0	0	0	0	0	0	Yes
0	0	32	0	0	0	0	0	0	
0	0		3	1,845	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	47+	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	1	318	0	0	0	0	No
680	0	1	0	0	0	0	0	0	
0	0		1	3	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Cima Dome	21,950	21,310	640	0	0	0
Cinder Cones	52,173	49,613	2,560	0	0	0
Clark Mountain	14,400	14,400	0	0	0	0
Cleghorn Lakes	32,040	25,040	280	6,720	0	0
Clipper Mountains	54,100	44,400	1,940	7,760	0	0
Coso Range	24,873	23,593	1,280	0	0	0
Cottonwood Creek	3,729	3,729	0	0	0	0
Cow Heaven	5,564	5,164	0	80	0	0
Coxcomb Mountains	72,124	68,604	2,560	960	0	0
Coyote Mountains	11,034	11,034	0	0	0	0
Coyote Southeast	3,211	3,211	0	0	0	0
Crater Mountain	7,260	7,260	0	0	0	0
Darwin Falls	8,319	8,319	0	0	0	0
Dead Mountains	41,560	32,250	1,800	7,510	0	0
Deer Spring	2,280	2,280	0	0	0	0
Domeland	2,209	2,209	0	0	0	0
Dry Valley Rim	95,545	95,025	0	520	0	0
Eagle Mountains	63,256	60,056	2,560	640	0	0
East Fork High Rock Canyon	54,500	52,000	0	580	0	1,920
Eden Valley/Middle Fork Eel River	6,994	6,674	0	320	0	0
Eight-Mile Tank	22,760	22,760	0	0	0	0
El Paso Mountain	17,064	15,144	0	1,920	0	0
Essex	16,250	13,650	650	1,950	0	0
Fish Creek Mountains	17,278	16,638	0	640	0	0
Fish Slough	15,090	14,450	0	640	0	0
Five Springs	49,620	48,460	0	1,160	0	0
Fort Piute	48,930	48,150	140	640	0	0
Frog Creek	9,865	9,825	0	40	0	0
Funeral Mountains	59,980	55,620	2,440	640	0	0
Garcia Mountain	494	494	0	0	0	0
Golden Valley	32,208	32,048	0	160	0	0
Granite Mountains	56,941	56,741	0	200	0	0
Grass Valley	13,875	13,755	120	0	0	0
Great Falls Basin	5,972	5,652	0	320	0	0
Greenwater Range	153,624	145,624	8,000	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		11	10,640	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	320		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	59	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		3	4,141	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	6	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	20	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0		1	1,458	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		5	3,540	0	0	0	0	
0	0		0	0	0	0	0	0	
0	1,280		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	60+	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		4	6,663	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Greenwater Valley	60,150	57,400	2,750	0	0	0
Hauser Mountain	5,489	5,489	0	0	0	0
High Rock Canyon	33,985	33,300	0	0	0	685
Hollow Hills	31,740	29,920	1,300	470	0	0
Horse Canyon	4,067	4,067	0	0	0	0
Hunter Mountain	23,604	23,284	320	0	0	0
Ibex Hills	41,792	40,272	1,500	20	0	0
Ibex Spring	2,720	2,720	0	0	0	0
Indian Pass	27,867	27,067	800	0	0	0
Inyo Mountain	87,145	86,195	800	150	0	0
Jacumba	33,255	31,298	1,199	758	0	0
Kelso Creek Valley	2,244	2,244	0	0	0	0
Kelso Dunes	206,135	150,030	9,600	46,505	0	0
Kelso Mountains	80,320	76,560	3,600	160	0	0
Kelso Peak	6,826	4,706	0	680	0	0
King Range	39,553	32,900	0	1,137	0	5,516
Kingston Range	270,720	256,210	13,760	750	0	0
Last Chance Mountain	36,287	34,367	1,920	0	0	0
Laural-McGee	110	110	0	0	0	0
Lava	11,632	11,632	0	0	0	0
Lava Hills	30,410	23,370	640	6,400	0	0
Little Chuckwalla Mountain	44,422	41,286	960	2,176	0	0
Little High Rock Canyon	52,503	52,143	0	360	0	0
Little Lake Canyon	25,207	25,207	0	0	0	0
Little Picacho Peak	43,240	41,320	1,920	0	0	0
Little Sand Spring	32,876	32,236	640	0	0	0
Log Cabin-Saddlebag	520	520	0	0	0	0
Lower Saline Valley	6,560	6,400	160	0	0	0
Machesna	120	120	0	0	0	0
Magee/Atkins	14,440	13,800	640	0	0	0
Manly Peak	33,390	33,110	280	0	0	0
Marble Mountains	43,300	36,900	640	5,760	0	0
Masonic Mountains	6,720	6,600	0	120	0	0
Massacre Rim	110,840	110,000	0	840	0	0
McAfee Creek	456	456	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	Yes
0	50		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	1,440		0	0	0	0	0	0	
0	0	14	4	7,109	0	0	0	0	No
0	0		4	20,839	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		1	400	0	0	0	0	
0	0	44	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		2	9,024	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	21	0	0	1	1,145	0	0	
0	0	75	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Mecca Hills	23,074	12,450	640	2,816	0	7,168
Merced River	13,775	12,835	0	940	0	0
Mesquite Mountains	55,500	51,800	3,700	0	0	0
Mesquite Spring	22,620	19,450	360	2,810	0	0
Mid Hills	18,640	18,000	640	0	0	0
Middle Park Canyon	8,532	8,482	0	50	0	0
Milk Ranch/Case Mountain	6,382	6,382	0	0	0	0
Mormon Meadow	7,920	7,280	0	640	0	0
Morongo	7,040	7,040	0	0	0	0
Moses	558	558	0	0	0	0
Mount Biedeman South	12,500	12,420	0	80	0	0
N.W. Fishlake Valley	12,585	12,505	0	0	0	0
New York Mountains	45,750	45,070	640	40	0	0
Newberry Mountains	36,160	24,320	640	11,200	0	0
Nopah Range	117,330	111,000	4,200	680	0	1,280
North Algodones Dunes	24,862	23,412	800	650	0	0
North Argus Range	21,099	20,359	500	240	0	0
North Coso Range	8,102	8,062	0	40	0	0
North Death Valley	7,951	7,951	0	0	0	0
North Mesquite Mountains	29,640	29,000	640	0	0	0
North Tip	407	407	0	0	0	0
Old Dad Mountains	59,800	57,900	1,900	0	0	0
Old Woman Mountains	81,360	58,000	3,960	19,400	0	0
Orocopia Mountains	71,296	32,148	1,984	19,424	0	17,740
Owens Peak	23,760	22,560	0	80	0	0
Owens Peak	54,022	51,862	0	400	0	0
Owlshead Mountain	130,700	123,000	7,700	0	0	0
Pahrump Valley	35,250	33,115	2,135	0	0	0
Paiute	2,480	2,480	0	0	0	0
Paiute	5,120	5,120	0	0	0	0
Paiute Cypress N.A.	5,527	5,527	0	0	0	0
Palen/McCoy	239,878	224,038	8,320	7,520	0	0
Palo Verde Mountains	29,369	27,889	1,280	200	0	0
Panamint Dunes	90,427	87,852	2,560	15	0	0
Panoche Hills North	6,677	6,677	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0	209	0	0	0	0	0	0	Yes
0	0		16	16,525	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	40	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0	30	0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	30	0	0	0	0	0	0	
0	80		0	0	0	0	0	0	
0	0		3	5,240	0	0	0	0	
0	0		0	0	0	0	0	0	
40	130		2	1,500	0	0	0	0	
0	0		7	5,980	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		6	7,940	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	1,760	0	0	0	0	
0	0		0	0	0	0	0	0	
0	1,120		0	0	0	0	0	0	
0	1,760	17	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		14	21,070	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	47	0	0	0	0	0	0	
0	0		12	55,228	0	0	0	0	
0	0		2	7,652	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	2,000	2	4,010	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Panoche Hills South	11,347	11,267	0	80	0	0
Picacho Peak	6,300	6,300	0	0	0	0
Pilot Peak	41,900	32,380	1,920	7,600	0	0
Pinnacles Wilderness Contiguous	5,838	5,838	0	0	0	0
Pinto Basin	4,480	4,480	0	0	0	0
Pinto Mountains	33,600	31,520	2,080	0	0	0
Piper Mountain	69,282	65,172	3,840	270	0	0
Pit River Canyon	11,575	11,575	0	0	0	0
Piute Mountains	24,000	20,100	640	3,260	0	0
Providence Mountains	59,130	54,340	3,200	1,590	0	0
Rainbow Wells	22,400	21,760	640	0	0	0
Red Mountain	6,455	6,455	0	0	0	0
Red Mountain	7,040	6,520	0	520	0	0
Resting Spring Range	119,314	112,354	6,720	240	0	0
Rice Valley	48,448	45,262	50	2,816	0	0
Rockhouse	34,790	34,110	0	0	0	0
Rocky Creek/Cache Creek	34,702	33,582	600	520	0	0
Rodman Mountains	40,800	30,720	640	9,440	0	0
Sacatar Meadow South	18,375	18,175	200	0	0	0
Sacramento Mountains	44,280	35,000	1,280	8,000	0	0
Saddle Peak Mountains	9,760	9,120	640	0	0	0
Saline Dunes	5,760	5,760	0	0	0	0
Saline Valley	405,215	389,215	13,760	2,240	0	0
San Benito N.A.	1,500	1,500	0	0	0	0
San Felipe Hills	7,225	5,265	0	1,960	0	0
San Ysidro Mountain	2,131	2,131	0	0	0	0
Santa Rosa Mountains	73,792	40,064	2,560	24,128	0	7,040
Sawtooth Mountains A	3,892	3,892	0	0	0	0
Sawtooth Mountains B	24,696	24,696	0	0	0	0
Sawtooth Mountains C	2,510	2,510	0	0	0	0
Scodie	5,847	5,847	0	0	0	0
Shadow Valley	10,150	10,150	0	0	0	0
Sheep Ridge	4,905	4,905	0	0	0	0
Sheephole/Cadiz	183,340	157,600	3,040	22,700	0	0
Sheldon Contiguous	24,930	24,130	0	800	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	7,570	2	3,222	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		1	150	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		2	8,080	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	80	0	0	6	7,230	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	320		2	7,980	0	0	0	0	
0	680		0	0	0	0	0	0	
0	0	300	7	4,646	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		1	1,580	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		1	640	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Ship Mountains	30,480	25,360	960	4,160	0	0
Signal Hill	44,120	36,130	1,800	6,190	0	0
Silurian Valley	18,980	17,860	640	480	0	0
Skedaddle	63,790	63,790	0	0	0	0
Skinner Peak	896	796	0	0	0	0
Slate Range	89,528	88,108	1,180	240	0	0
Sleeping Beauty Mountain	33,520	23,680	880	8,960	0	0
Slinkard	6,990	6,350	0	370	0	0
Soda Mountains	133,615	119,590	5,440	8,580	0	0
South Algodones Dunes	55,101	54,141	280	680	0	0
South Avawatz Mountains	27,190	26,360	650	180	0	0
South Bristol Mountains	32,540	27,700	650	4,190	0	0
South Nopah Range	13,080	12,400	640	0	0	0
South Providence Mountain	30,868	24,850	1,280	4,738	0	0
South Saddle Peak Mountains	6,855	6,375	480	0	0	0
South Warner Contiguous	4,330	4,330	0	0	0	0
Southern Inyo	36,672	36,600	0	72	0	0
Southern Otay Mountain	8,300	7,940	360	0	0	0
Stateline	9,170	9,170	0	0	0	0
Stepladder Mountains	121,430	104,990	4,480	11,960	0	0
Surprise Canyon	52,696	52,356	320	20	0	0
Sweetwater	960	960	0	0	0	0
Sylvania Mountains/Pigeon Spring	14,983	13,743	1,240	0	0	0
Symmes Creek	8,770	8,130	0	640	0	0
Table Mountain	958	958	0	0	0	0
Table Mountain	8,250	8,250	0	0	0	0
Teutonia Peak	3,490	3,490	0	0	0	0
Thatcher Ridge	17,387	17,187	0	200	0	0
Timbered Crater	17,737	17,542	0	195	0	0
Toler Creek	897	897	0	0	0	0
Tule Mountain	17,830	16,950	0	880	0	0
Tunnison Mountain	21,180	20,650	0	530	0	0
Turtle Mountains	272,578	270,878	0	1,700	0	0
Twin Peaks	92,665	91,405	0	1,260	0	0
Valley View	3,230	3,230	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		1	1,279	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	9	0	0	1	20	0	0	Yes
0	100		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	270	18	0	0	0	0	0	0	
0	5		0	0	0	0	0	0	
0	0		10	36,459	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	40		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	170+	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		8	7,085	0	0	0	0	
0	0		2	10,800	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0	0	2	1,686	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		10	20,167	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

California (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Ventana Wilderness Contiguous	640	640	0	0	0	0
Volcanic Tableland	11,840	11,840	0	0	0	0
Walford Springs	13,360	13,200	0	160	0	0
Wall Canyon	46,890	45,790	0	1,100	0	0
Waucoba Wash	11,465	11,135	330	0	0	0
Western Otay Mountain	6,716	5,750	0	0	0	238
Wheeler Ridge	3,197	3,197	0	0	0	0
Whipple Mountains	91,900	88,700	3,200	0	0	0
White Mountain	1,260	1,260	0	0	0	0
White Mountains	7,784	7,144	640	0	0	0
Whitewater	15,580	14,812	0	768	0	0
Wildrose Canyon	36,949	34,549	2,400	0	0	0
Woods Mountain	52,010	43,820	1,280	6,910	0	0
Wyman Creek	5,729	5,369	0	360	0	0
Yellow Rock Canyon	13,050	13,050	0	0	0	0
Yolla Bolly	640	640	0	0	0	0
State total	7,898,485	7,226,828	210,566	383,800	1,280	66,128

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	
0	0	7	0	0	0	0	0	0	
0	0	5	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	728	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	No
1,160	8,723	11,704	186	307,789	8	8,395	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

Appendix I
 Summary of BLM Data on Nonfederal Land
 and Mineral Rights in Wilderness
 Study Areas

Table I.3: Colorado

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Adobe Badlands	10,425	10,425	0	0	0	0
American Flats	4,720	4,710	0	0	10	0
Ant Hills	4,354	4,354	0	0	0	0
Beaver Creek	871	870	1	0	0	0
Bill Hare Gulch	370	370	0	0	0	0
Black Canyon	2,300	2,300	0	0	0	0
Black Mountain	9,932	9,932	0	0	0	0
Black Ridge Canyons	18,150	18,150	0	0	0	0
Black Ridge Canyons West	49,090	49,090	0	0	0	0
Browns Canyon	6,614	6,614	0	0	0	0
Bull Canyon	12,617	12,297	0	320	0	0
Bull Gulch	15,000	14,360	0	0	640	0
Cahone Canyon	9,440	9,240	0	0	200	0
Camel Back	10,722	10,562	0	160	0	0
Castle Peak	11,940	11,940	0	0	0	0
Chew Winter Camp	1,320	1,320	0	0	0	0
Cold Springs West	17,682	17,682	0	0	0	0
Cross Canyon	11,734	11,734	0	0	0	0
Cross Mountain	14,081	14,081	0	0	0	0
Demaree Canyon	21,050	21,050	0	0	0	0
Diamond Breaks	36,015	35,380	0	0	635	0
Dolores River Canyon	28,630	28,630	0	0	0	0
Dominguez Canyon	32,310	31,990	0	320	0	0
Eagle Mountain	330	330	0	0	0	0
Gunnison Gorge	20,712	20,712	0	0	0	0
Hack Lake	3,360	3,360	0	0	0	0
Handies Peak	19,605	18,860	0	145	600	0
High Mesa Grassland N.A.	680	680	0	0	0	0
Larson Creek	900	900	0	0	0	0
Little Bookcliffs Wildhorse Area	26,525	26,525	0	0	0	0
Lower Grape Creek	11,295	10,630	0	75	590	0
Lower Grape Creek	2,300	2,300	0	0	0	0
McIntyre Hills	17,330	16,060	470	60	740	0
McKenna Peak	19,562	19,562	0	0	0	0
Menefee Mountain	7,409	7,249	0	40	0	120

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		2	4,354	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		5	1,351	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		6	3,903	0	0	0	0	
0	0		1	2,620	0	0	0	0	No
0	0		10	4,089	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	320	0	0	0	0	No
0	0		1	1,320	0	0	0	0	
0	0		8	2,216	0	0	0	0	
0	0		5	872	0	0	0	0	
0	0		9	10,059	0	0	0	0	
0	0	0	7	1,860	0	0	0	0	Yes
0	0		5	17,544	0	0	0	0	
0	0		13	10,629	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0	200	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0	0	5	3,040	0	0	0	0	Yes
0	0	67	0	0	0	0	0	0	Yes
0	0	148	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		10	8,660	0	0	0	0	
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Colorado (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Needle Rock N.A.	80	80	0	0	0	0
North Sand Hills N.A.	791	791	0	0	0	0
Oil Spring Mountain	17,740	17,740	0	0	0	0
Papa Keal	1,020	1,020	0	0	0	0
Peterson Draw	5,160	5,160	0	0	0	0
Powderhorn P.A.	53,300	50,420	0	960	1,920	0
Rare Lizard And Snake N.A.	443	443	0	0	0	0
Redcloud Peak	42,585	40,575	0	280	1,730	0
San Luis Hills	10,240	10,240	0	0	0	0
Sand Castle	1,644	1,644	0	0	0	0
Sewemup Mesa	20,800	20,800	0	0	0	0
Skull Creek	13,739	13,513	0	0	0	226
Slumgullion Slide	1,640	1,640	0	0	0	0
South Piney Creek	870	870	0	0	0	0
Sparling Gulch/Friends Creek	1,840	1,840	0	0	0	0
Squaw/Papoose Canyons	4,611	4,611	0	0	0	0
Tabeguache Creek	7,908	7,908	0	0	0	0
Tepee Draw	5,490	5,490	0	0	0	0
The Palisade	26,050	26,050	0	0	0	0
Troublesome	8,250	8,250	0	0	0	0
Vale of Tears	7,420	7,420	0	0	0	0
Weber Mountain	6,303	6,303	0	0	0	0
Weminuche Contiguous	1,605	1,605	0	0	0	0
West Needles Contiguous	1,240	1,240	0	0	0	0
Whitehead Gulch	2,085	2,085	0	0	0	0
Willow Creek	13,368	13,274	0	0	0	94
Windy Gulch	12,274	12,274	0	0	0	0
Zapata Creek	720	720	0	0	0	0
State total	728,591	718,255	471	2,360	7,065	440

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		4	1,328	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		4	5,160	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	900	0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		1	1,158	0	0	0	0	No
0	0		7	5,165	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		11	2,101	0	0	0	0	
0	0		3	2,680	0	0	0	0	
0	0		4	5,490	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		5	3,760	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		10	6,963	0	0	0	0	
0	0		3	4,093	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0	1,315	140	110,737	0	0	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Table I.4: Idaho

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Appendicitis Hill	22,540	21,900	640	0	0	0
Battle Creek	32,820	31,540	1,240	40	0	0
Bear Den Butte	9,700	9,700	0	0	0	0
Big Jacks Creek	56,273	54,833	1,280	40	0	0
Big Willow Spring	6,211	6,211	0	0	0	0
Birds of Prey N.A.	26,713	26,713	0	0	0	0
Black Butte	4,002	4,002	0	0	0	0
Black Canyon	5,400	5,400	0	0	0	0
Black Canyon	11,011	10,371	640	0	0	0
Borah Peak	4,520	3,880	640	0	0	0
Boulder Creek	2,570	1,930	640	0	0	0
Box Creek	440	440	0	0	0	0
Bruneau River	108,246	104,406	3,840	0	0	0
Burnt Creek	25,620	24,980	640	0	0	0
Cedar Butte	36,340	35,700	640	0	0	0
China Cup Butte N.A.	160	160	0	0	0	0
Conant Valley Islands	235	235	0	0	0	0
Corral-Horse Basin	49,820	48,500	1,280	40	0	0
Crystal Lake	9,027	9,027	0	0	0	0
Deep Creek-Owyhee River	72,720	70,160	2,560	0	0	0
Deer Creek	8,127	7,487	640	0	0	0
Duncan Creek	10,645	10,005	640	0	0	0
Eighteen Mile	24,922	24,922	0	0	0	0
Friedman Creek	10,133	9,773	40	320	0	0
Goldburg	3,290	3,290	0	0	0	0
Gooding City of Rocks East	14,743	14,743	0	0	0	0
Gooding City of Rocks West	6,287	6,287	0	0	0	0
Grandmother Mountain	17,449	17,289	0	160	0	0
Great Rift (Grassland Kipuka)	374,400	355,850	18,550	0	0	0
Hawley Mountain	16,790	15,510	1,280	0	0	0
Hell's Half Acre	68,920	66,200	2,560	160	0	0
Henry's Lake	350	350	0	0	0	0
Jarbidge River	77,738	75,118	2,540	80	0	0
Jerry Peak	46,790	46,150	640	0	0	0
Jerry Peak West	13,530	13,530	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		7	17,493	0	0	0	0	No
0	0		7	10,565	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	120		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		2	3,040	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		4	3,920	0	0	0	0	Yes
0	0		21	28,500	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		1	6	0	0	0	0	No
0	0		12	46,037	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		5	16,730	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		12	7,595	0	0	0	0	Yes
0	0		0	0	0	0	0	0	Yes
0	0		3	2,685	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		2	17,493	0	0	0	0	No
0	0		3	3,850	0	0	0	0	No
0	0		12	6,316	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		7	42,995	0	0	0	0	Yes
0	0		0	0	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Idaho (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Juniper Creek	13,150	13,150	0	0	0	0
King Hill Creek	30,629	29,309	1,280	40	0	0
Lava	24,320	23,680	640	0	0	0
Little City of Rocks	6,515	5,875	640	0	0	0
Little Deer	34,171	33,531	640	0	0	0
Little Jacks Creek	60,200	58,040	1,920	240	0	0
Little Owyhee River	25,240	24,600	640	0	0	0
Little Wood River	4,385	4,385	0	0	0	0
Lower Salmon Falls Creek	3,500	3,500	0	0	0	0
Marshall Mountain	5,804	5,804	0	0	0	0
Middle Fork Owyhee River	14,820	14,180	640	0	0	0
North Fork Owyhee River	51,390	49,470	1,920	0	0	0
Owyhee Canyon	21,875	21,875	0	0	0	0
Owyhee River Canyon	225,660	214,380	1,280	0	10,000	0
Petticoat Peak	11,298	11,298	0	0	0	0
Pine Creek Islands	155	155	0	0	0	0
Pole Creek	24,749	24,509	0	240	0	0
Raven's Eye	69,030	67,110	1,920	0	0	0
Sand Butte	22,072	20,792	1,280	0	0	0
Sand Mountain	21,740	21,100	640	0	0	0
Selkirk Crest	720	720	0	0	0	0
Shale Butte	15,968	15,968	0	0	0	0
Sheep Creek East	5,050	5,050	0	0	0	0
Sheep Creek West	11,680	11,680	0	0	0	0
Shoshone	6,914	6,914	0	0	0	0
Snowhole Rapids	5,068	5,068	0	0	0	0
South Fork Owyhee River	43,950	42,510	1,280	160	0	0
Squaw Creek Canyon	10,780	10,780	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		7	12,140	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		2	3,520	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		4	1,320	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	480	0	0	0	0	
0	0		8	9,946	0	0	0	0	Yes
0	0		2	26	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		6	6,575	0	0	0	0	No
0	0		0	0	0	0	0	0	Yes
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		1	1,760	0	0	0	0	
0	0		0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	No
0	0		15	32,746	0	0	0	0	
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
 Summary of BLM Data on Nonfederal Land
 and Mineral Rights in Wilderness
 Study Areas**

Idaho (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Table Rock Islands	380	380	0	0	0	0
Upper Deep Creek	11,510	11,510	0	0	0	0
West Fork Red Canyon	12,970	12,970	0	0	0	0
White Knob Mountains	9,950	9,950	0	0	0	0
Worm Creek	40	40	0	0	0	0
Yatahoney Creek	10,030	9,990	0	40	0	0
State total	1,994,195	1,926,865	55,650	1,560	10,000	0

(continued)

**Appendix I
 Summary of BLM Data on Nonfederal Land
 and Mineral Rights in Wilderness
 Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		4	221	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	1,370	0	0	0	0	No
0	0		1	40	0	0	0	0	No
0	0		2	4,370	0	0	0	0	
0	120		152	281,742	0	0	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Table I.5: Montana

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Antelope Creek A	12,350	12,350	0	0	0	0
Antelope Creek B	2,750	2,750	0	0	0	0
Axolotl Lakes	7,844	7,804	0	40	0	0
Beaver Meadows	595	595	0	0	0	0
Bell and Limekiln Canyons	9,810	9,650	0	160	0	0
Big Horn Tackon	4,550	4,550	0	0	0	0
Billy Creek	3,450	3,450	0	0	0	0
Bitter Creek	61,032	59,112	1,280	640	0	0
Black Sage	5,976	5,976	0	0	0	0
Blacktail Mountains	17,479	17,479	0	0	0	0
Bridge Coulee	5,900	5,900	0	0	0	0
Buffalo Creek	5,650	5,650	0	0	0	0
Burnt Lodge	13,750	13,750	0	0	0	0
Burnt Timber Canyon	3,955	3,955	0	0	0	0
Centennial Mountain P.A.	22,414	21,774	640	0	0	0
Cow Creek	34,690	34,050	640	0	0	0
Dog Creek South	5,150	4,900	0	0	0	250
East Fork Blacktail Deer Creek	6,230	6,230	0	0	0	0
Elkhorn	3,792	3,642	0	150	0	0
Ervin Ridge	10,200	10,200	0	0	0	0
Farlin Creek	1,139	1,139	0	0	0	0
Henneberry Ridge	9,806	9,806	0	0	0	0
Hidden Pasture Creek	15,509	15,509	0	0	0	0
Hoodoo Mountain	11,380	11,380	0	0	0	0
Humbug Spires P.A.	11,480	11,320	0	160	0	0
Musselshell Breaks	8,600	8,600	0	0	0	0
North Fork Sun River	520	520	0	0	0	0
Pryor Mountain	16,927	16,927	0	0	0	0
Quigg West	4,257	4,257	0	0	0	0
Ruby Mountains	28,251	26,611	640	1,000	0	0
Seven BlackfootA	3,950	3,950	0	0	0	0
Seven BlackfootB	4,850	4,850	0	0	0	0
Seven BlackfootC	12,090	11,450	640	0	0	0
Sleeping Giant	8,681	6,131	0	0	0	2,550
Square Butte N.A.	1,947	1,947	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	1	820	0	0	0	0	No
0	0	0	1	940	0	0	0	0	No
0	0	30	1	1,400	0	0	0	0	No
0	0		1	640	0	0	0	0	
0	0	3	4	4,280	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	1	395	0	0	0	0	No
0	0	0	55	48,250	0	0	0	0	No
0	0	0	5	4,125	0	0	0	0	No
0	0	109	15	12,860	0	0	0	0	No
0	0	0	4	5,120	0	0	0	0	No
0	0	0	5	4,960	0	0	0	0	No
0	0	0	3	3,610	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		6	4,620	0	0	0	0	
0	0	9	7	8,610	0	0	0	0	No
0	0	0	3	730	0	0	0	0	No
0	0	0	4	4,120	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	9	5	2,105	0	0	0	0	Yes
0	0	2	0	0	0	0	0	0	No
0	0	16	1	240	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		5	5,000	0	0	0	0	
0	0	169	0	0	0	0	0	0	Yes
0	0	0	6	4,120	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	35	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	0	7	14,550	0	0	0	0	No
0	0	0	5	4,715	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		3	2,960	0	0	0	0	
0	0		0	0	0	0	0	0	

(continued)

Appendix I
Summary of BLM Data on Nonfederal Land
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Montana (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Stafford	4,800	4,800	0	0	0	0
Terry Badlands	48,970	43,450	1,280	3,000	0	920
Tobacco Root Tackons	880	860	0	20	0	0
Twin Coulee	6,870	6,870	0	0	0	0
Wales Creek	11,580	11,580	0	0	0	0
Woodhawk	8,100	8,100	0	0	0	0
Yellowstone River Island	53	53	0	0	0	0
Zook Creek	8,440	8,440	0	0	0	0
State Total	466,647	452,317	5,120	5,170	0	3,720

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
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Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	3	170	0	0	0	0	No
0	320	0	4	6,730	0	0	0	0	No
0	0		2	900	0	0	0	0	
0	0	166	0	0	0	0	0	0	No
0	0		3	2,420	0	0	0	0	
0	0	0	1	120	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	1	1,600	0	0	0	0	No
0	320	548	162	151,110	0	0	0	0	

^aTotal ownership means ownership of surface and subsurface rights

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Table I.6: Nevada

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Alder Creek	5,142	5,142	0	0	0	0
Antelope	87,400	87,400	0	0	0	0
Arrow Canyon Range	32,853	32,853	0	0	0	0
Augusta Mountain	89,372	89,372	0	0	0	0
Badlands	9,426	9,426	0	0	0	0
Black Rock Desert	319,594	319,594	0	0	0	0
Blue Eagle	59,560	59,560	0	0	0	0
Blue Lakes	20,508	20,508	0	0	0	0
Bluebell	55,665	55,665	0	0	0	0
Bonnie Claire Flat	66,800	66,800	0	0	0	0
Burbank Canyons	13,395	13,395	0	0	0	0
Calico Mountains	67,647	67,647	0	0	0	0
Carson-Iceberg	550	550	0	0	0	0
Cedar Ridge	10,009	10,009	0	0	0	0
China Mountain	10,358	10,358	0	0	0	0
Clan Alpine Mountains	196,128	196,128	0	0	0	0
Clover Mountains	84,935	84,935	0	0	0	0
Delamar Mountains	126,257	126,257	0	0	0	0
Desatoya Mountains	51,433	51,313	0	120	0	0
El Dorado	11,069	11,069	0	0	0	0
Evergreen	2,834	2,834	0	0	0	0
Fandango/Morey	61,060	61,060	0	0	0	0
Far South Egans	53,224	53,224	0	0	0	0
Fish & Wildlife #1	8,991	8,991	0	0	0	0
Fish & Wildlife #2	22,002	22,002	0	0	0	0
Fish & Wildlife #3	16,516	16,516	0	0	0	0
Fortification Range	41,615	41,615	0	0	0	0
Fox Mountain Range	75,404	75,404	0	0	0	0
Gabbs Valley Range	79,640	79,600	0	40	0	0
Garrett Buttes	11,100	11,100	0	0	0	0
Goshute Canyon	35,609	35,594	0	15	0	0
Goshute Canyon N.A.	12,655	12,655	0	0	0	0
Goshute Peak	69,770	69,770	0	0	0	0
Granite Springs	23,400	23,400	0	0	0	0
Heusser Mtn. Bristlecone Pine	480	480	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		3	8,200	0	0	0	0	
0	0	24	23	23,850	0	0	0	0	No
0	0		10	21,208	8	17,395	0	0	
0	0		0	0	0	0	0	0	
0	0		6	19,560	6	12,026	0	0	
0	0	148	9	31,524	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		5	14,765	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	6	4	3,464	0	0	0	0	No
0	0		1	280	0	0	0	0	
0	0		12	17,842	5	8,939	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	202	10	15,656	0	0	0	0	No
0	0		16	18,827	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		6	31,873	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		6	7,199	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		4	8,300	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Nevada (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
High Rock Lake	62,382	61,902	0	0	0	480
Ireteba Peaks	13,374	13,374	0	0	0	0
Job Peak	90,209	90,209	0	0	0	0
Jumbo Springs	3,811	3,811	0	0	0	0
Kawich	54,880	54,320	0	560	0	0
LaMadre Mountains	56,967	56,967	0	0	0	0
Lahontan-Cutthroat Trout N.A.	12,978	12,978	0	0	0	0
Lime Canyon	30,747	30,747	0	0	0	0
Little Humboldt River	42,653	42,213	0	440	0	0
Meadow Valley Range	185,744	185,744	0	0	0	0
Million Hills	9,599	9,599	0	0	0	0
Mormon Mountains	162,887	162,887	0	0	0	0
Mount Grafton	73,496	73,216	0	280	0	0
Mount Limbo	23,702	23,702	0	0	0	0
Mount Stirling	64,650	64,650	0	0	0	0
Mountain Meadow N.A.	22	22	0	0	0	0
Muddy Mountains	96,170	96,170	0	0	0	0
Nellis	5,718	5,718	0	0	0	0
North Black Rock Range	30,791	30,791	0	0	0	0
North Fork Little Humboldt	69,683	69,683	0	0	0	0
North Jackson Mountains	26,457	26,457	0	0	0	0
North McCullough Mountains	47,166	47,166	0	0	0	0
Pahute Peak	57,529	57,529	0	0	0	0
Palisade Mesa	99,550	99,550	0	0	0	0
Park Range	47,268	47,268	0	0	0	0
Parsnip Peak	88,523	88,175	0	280	0	68
Pigeon Spring/Sylvania Mountains	3,575	3,575	0	0	0	0
Pine Creek	24,000	24,000	0	0	0	0
Pine Creek Canyon N.A.	240	240	0	0	0	0
Pinyon-Joshua Research N.A.	640	640	0	0	0	0
Pole Creek	12,969	12,969	0	0	0	0
Poodle Mountain	142,050	142,050	0	0	0	0
Quail Spring	12,225	12,225	0	0	0	0
Queer Mountain	81,550	81,550	0	0	0	0
Rawhide Mountain	64,360	64,360	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		7	13,203	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	319	4	12,074	0	0	0	0	Yes
0	0	100	10	20,316	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	9	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		6	6,530	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	21	2	3,897	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	92	8	5,828	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	70	1	160	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0	1	21	40,078	0	0	0	0	No
0	0		1	2,560	0	0	0	0	
0	0		4	8,729	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	90	90	4	8,057	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	913	7	9,785	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Nevada (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Red Spring	7,847	7,847	0	0	0	0
Resting Springs Range	3,850	3,850	0	0	0	0
Riordan's Well	57,002	57,002	0	0	0	0
Roberts	15,090	15,090	0	0	0	0
Rough Hills	6,885	6,685	0	200	0	0
Selenite Mountains	32,041	32,041	0	0	0	0
Shoshone Ponds N.A.	1,240	1,240	0	0	0	0
Shoshone Pygmy Sage N.A.	160	160	0	0	0	0
Silver Peak Range North	33,620	33,620	0	0	0	0
Simpson Park	49,750	49,670	0	0	0	0
South Egan Range	97,356	96,916	0	360	0	80
South Jackson Mountains	60,211	60,211	0	0	0	0
South McCullough Mountains	56,623	56,623	0	0	0	0
South Pahrocs Range	28,600	28,600	0	0	0	0
South Pequop	41,090	41,090	0	0	0	0
South Reveille	106,200	106,200	0	0	0	0
Stillwater Range	95,227	94,607	0	620	0	0
Sunrise Mountain N.A.	10,240	10,240	0	0	0	0
Swamp Cedar N.A.	3,200	3,200	0	0	0	0
Table Mountain	36,358	35,958	0	400	0	0
The Wall	38,000	38,000	0	0	0	0
Tobin Range	13,107	13,107	0	0	0	0
Virgin Mountain N.A.	6,560	6,560	0	0	0	0
Weepah Spring	61,137	61,137	0	0	0	0
White Rock Range	23,625	23,625	0	0	0	0
Worthington Mountains	47,633	47,633	0	0	0	0
State total	4,563,618	4,559,595	0	3,315	0	628

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	6	5,654	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		8	20,456	0	0	0	0	
0	0		1	640	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	80		3	700	0	0	0	0	
0	0		15	27,557	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0	130	7	14,138	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		5	4,775	0	0	0	0	
0	0	359	17	27,714	0	0	0	0	Yes
0	0		8	12,296	1	2,492	0	0	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		2	2,380	0	0	0	0	
0	0	0	10	6,095	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	640	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		4	2,870	0	0	0	0	
0	80	2,484	277	479,689	20	40,854	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Table I.7: New Mexico

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Aden Lava Flow	25,287	23,857	0	0	1,430	0
Ah-Shi-Sle-Pah	6,563	6,563	0	0	0	0
Alamo Hueco Mountains	16,712	13,830	0	200	0	2,682
Antelope	21,390	20,710	680	0	0	0
Big Hatchet Mountains	67,838	60,019	1,920	46	0	5,853
Blue Creek	16,176	14,896	1,280	0	0	0
Brokeoff Mountains	33,126	31,606	1,520	0	0	0
Cabezon	8,118	8,118	0	0	0	0
Carrizozo Lava Flow	10,240	10,240	0	0	0	0
Cedar Mountains	14,911	14,911	0	0	0	0
Chamisa	11,091	1,920	0	0	0	9,171
Continental Divide	73,861	68,761	3,420	1,680	0	0
Cooke Range	20,248	19,608	640	0	0	0
Cowboy Spring	6,699	6,699	0	0	0	0
Culp Canyon	10,937	10,937	0	0	0	0
Devil's Backbone	8,904	8,904	0	0	0	0
Devil's Den	320	320	0	0	0	0
Devil's Reach	860	860	0	0	0	0
Eagle Peak	44,542	32,748	80	840	10,874	0
El Malpais N.A.	209,351	72,107	19,236	24,115	1,280	85,054
Empedrado	9,770	9,410	0	360	0	0
Florida Mountains	22,446	22,336	80	30	0	0
Gila Lower Box	8,675	8,555	0	120	0	0
Guadalupe Canyon N.A.	4,146	3,692	0	0	454	0
Horse Mountain	5,032	5,032	0	0	0	0
Ignacio Chavez	32,248	10,246	0	0	0	22,002
Jornada Del Muerto	32,427	31,147	1,280	0	0	0
La Lena	11,590	10,310	1,280	0	0	0
Las Uvas Mountains	11,107	11,067	0	40	0	0
Little Black Peak	15,712	15,072	640	0	0	0
Little Rimrock	10,065	4,250	0	280	0	5,535
Lonesome Ridge	3,342	3,342	0	0	0	0
Manzano	845	845	0	0	0	0
Mathers N.A.	362	362	0	0	0	0
McKittrick Canyon	200	200	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	7	14,631	0	0	0	0	No
0	0		5	4,265	0	0	0	0	
0	0	10	1	400	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	3	6	7,605	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	No
0	0	0	6	6,244	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	4	1,709	0	0	0	0	No
0	0	29	43	15,796	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	92	0	0	0	0	0	0	Yes
0	0	18	8	5,840	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	1	3,760	0	0	0	0	No
960	6,599	8	0	0	0	0	0	0	No
0	0	0	8	3,600	0	0	0	0	No
0	0	263	51	17,681	0	0	0	0	Yes
0	0	3	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	2	733	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	10	4,323	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	4	2,137	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	0	4	2,382	0	0	0	0	
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

New Mexico (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Mesita Blanca	19,637	16,492	0	160	2,985	0
Mudgetts	2,941	2,941	0	0	0	0
Ojito	12,719	11,919	640	160	0	0
Organ Mountains	7,323	7,144	0	40	0	139
Petaca Pinta	11,704	4,925	39	40	0	6,700
Pinyon	12,829	5,353	0	40	0	7,436
Presilla	8,680	8,680	0	0	0	0
Rimrock	31,852	11,464	642	1,573	0	17,810
Rio Chama (Navajo Peak)	12,305	11,985	0	320	0	0
Robledo Mountains	12,946	12,811	0	0	135	0
Sabinosa	16,080	15,760	0	320	0	0
San Antonio	8,330	7,050	1,280	0	0	0
Sand Canyon	8,860	3,608	0	0	0	5,210
Sierra Ladrones	46,561	42,688	1,960	373	1,540	0
Sierra de las Canas	12,998	12,838	0	160	0	0
Stallion	25,518	24,238	1,280	0	0	0
Veranito	7,206	7,206	0	0	0	0
West Potrillo Mountains/ Mt. Riley	169,236	155,105	12,051	0	2,080	0
State total	202,866	925,687	49,948	30,897	20,778	167,592

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Federal ownership of minerals—state/private ownership of minerals		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	0	0	0	0	0	0	No
0	0		4	1,280	0	0	0	0	Yes
0	0	0	1	610	0	0	0	0	No
0	0	85	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	No
0	0		1	716	0	0	0	0	No
0	0	2	1	1,282	0	0	0	0	Yes
0	363		0	0	0	0	0	0	No
0	0	0	3	2,144	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	3	2	1,680	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	42		0	0	0	0	0	0	No
0	0	71	0	0	0	0	0	0	Yes
0	0	7	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0	103	33	88,409	0	0	0	0	Yes
960	7,004	697	205	187,232	0	0	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

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Summary of BLM Data on Nonfederal Land
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Study Areas

Table I.8: Oregon

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Abert Rim	23,760	23,280	0	0	480	0
Alrich Mountain	9,395	9,395	0	0	0	0
Alvord Desert	220,480	177,000	0	4,460	9,600	29,420
Alvord Peak	15,295	14,655	0	80	560	0
Badlands	32,261	32,221	0	40	0	0
Basque Hills	141,780	137,220	0	520	4,040	0
Beaver Dam Creek	19,220	19,140	0	0	80	0
Blitzen River	56,030	51,890	0	160	2,100	0
Blue Canyon	12,740	12,700	0	40	0	0
Bowden Hills	59,640	56,140	0	0	3,500	0
Brewer Spruce N.A.	210	210	0	0	0	0
Bridge Creek	14,580	14,060	0	40	480	0
Camp Creek	19,040	18,360	0	0	680	0
Castle Rock	6,200	5,560	0	0	640	0
Cedar Mountain	33,680	31,440	0	80	2,160	0
Chopaka Mountain	5,613	5,518	0	95	0	0
Clarks Butte	31,490	31,450	0	0	40	0
Cottonwood Creek	8,660	8,500	0	0	160	0
Cougar Well	19,475	17,315	0	800	1,120	0
Devil's Garden Lava Bed	29,640	28,720	0	0	920	0
Diablo Mountain	114,952	107,920	640	1,170	5,222	0
Disaster Peak (NV-020-859)	31,730	30,490	0	40	1,200	0
Douglas Fir N.A.	590	590	0	0	0	0
Dry Creek	23,500	22,540	0	0	960	0
Dry Creek Buttes	1,920	1,920	0	0	0	0
Dry Creek Buttes	51,800	49,880	0	0	1,920	0
East Alvord	22,240	21,600	0	0	640	0
Fifteen Mile Creek	51,100	48,460	0	80	2,560	0
Fish Creek Rim	16,750	16,070	0	40	640	0
Four Craters Lava Bed	12,600	11,960	0	0	640	0
Gerry Mountain	20,700	19,980	0	0	720	0
Gold Creek	13,600	12,920	0	0	680	0
Guano Creek	10,350	10,350	0	0	0	0
Hampton Butte	10,760	10,600	0	160	0	0
Hawk Mountain	69,640	68,360	0	0	1,280	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of land—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	7	13,620	0	0	0	0	
0	0	30	0	0	0	0	0	0	
0	0	0	4	9,360	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	7	0	0	0	0	0	0	
0	1,880	0	0	0	0	0	0	0	
0	0	11	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	240	0	1	1,680	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	18	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	100	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	190	3	7,940	0	0	0	0	
0	0	0	8	24,640	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	12	23,200	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	3	6,120	0	0	0	0	
0	0	0	0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Oregon (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Hawksie Walksie (Sage Hen Hills)	8,520	8,520	0	0	0	0
Heath Lake	20,450	20,100	0	0	350	0
High Steens	69,665	65,420	320	2,125	840	0
Home Creek	26,315	25,120	75	1,120	0	0
Homestead	6,641	6,321	0	320	0	0
Honeycombs	39,000	39,000	0	0	0	0
Jordan Craters	27,980	27,560	0	80	340	0
Little Blitzen Gorge	9,440	9,240	0	0	200	0
Little Sink N.A.	80	80	0	0	0	0
Lookout Butte	99,560	99,560	0	0	0	0
Lost Forest N.A.	8,000	8,000	0	0	0	0
Lower John Day	19,992	19,352	0	640	0	0
Lower Owyhee Canyon	74,840	71,940	0	1,460	1,400	0
Lower Stonehouse	22,400	21,000	0	760	320	0
Mahogany Ridge	29,450	27,210	0	1,760	400	0
Malheur River-Bluebucket Creek	5,560	5,560	0	0	0	0
McGraw Creek	1,465	1,465	0	0	0	0
Mount Diablo	5,200	5,200	0	0	0	0
Mountain Lakes	320	320	0	0	0	0
North Fork	11,225	10,745	0	480	0	0
North Pole Ridge	6,489	6,249	0	240	0	0
North Sisters Rocks	3	3	0	0	0	0
Oregon Canyon	42,640	40,400	0	0	2,240	0
Orejana Canyon	24,600	24,600	0	0	0	0
Owyhee Breaks	13,460	13,100	0	360	0	0
Palomino Hills	54,560	50,560	0	0	4,000	0
Pueblo Mountains	71,670	69,310	0	440	1,920	0
Red Mountain	14,810	14,730	0	80	0	0
Rincon	103,885	97,545	0	120	6,220	0
South Fork of the Donner and Blitzen Range	38,450	35,850	0	680	1,280	0
Saddle Butte	86,120	81,300	0	0	4,820	0
Sand Dunes	16,360	16,000	0	0	360	0
Sand Hollow	8,791	8,091	0	0	700	0
Sheep Mountain	7,240	7,040	0	200	0	0
Sheepshead Mountains	53,720	51,120	0	40	2,560	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	960	38	13	57,722	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	85	0	0	0	0	0	0	
0	0	51	2	7,170	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	2	5,760	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	5	15,440	0	0	0	0	
0	40	0	0	0	0	0	0	0	
0	320	0	1	1,560	0	0	0	0	
0	80	8	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	7	6,640	0	0	0	0	
0	0	0	3	5,720	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	190	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	7	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	300	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	640	0	2	7,440	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	12	8	7,320	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Oregon (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Soda Mountain	5,410	5,410	0	0	0	0
Solcum Creek	7,600	7,600	0	0	0	0
South Fork	20,071	19,391	0	440	240	0
Spaulding Reservoir	69,970	69,530	0	440	0	0
Sperry Creek	5,360	5,360	0	0	0	0
Spring Basin	6,022	5,982	0	40	0	0
Squaw Ridge Lava Bed	28,660	27,700	0	320	640	0
Steelhead Falls	3,114	3,114	0	0	0	0
Stonehouse	8,250	8,090	0	160	0	0
Strawberry Mountain	180	180	0	0	0	0
Strawberry Mountain	720	720	0	0	0	0
Strawberry Mountain	208	208	0	0	0	0
Table Mountain	40,520	38,600	0	0	1,920	0
Thirtymile	7,538	7,538	0	0	0	0
Twelve Mile Canyon	28,320	26,960	0	360	1,000	0
Upper Leslie Gulch	3,000	3,000	0	0	0	0
Upper West Little Owyhee	63,260	58,660	0	160	4,440	0
West Peak	8,500	7,900	0	0	600	0
Western Juniper Research N.A.	4,855	4,855	0	0	0	0
Wild Horse Basin	12,140	12,100	0	40	0	0
Wildcat Canyon	34,600	32,720	0	0	1,880	0
Willow Creek	31,990	28,810	0	880	1,300	0
Winter Range	15,440	14,800	0	0	640	0
Zwagg Island	5	5	0	0	0	0
State total	2,646,055	2,505,258	1,035	21,550	83,632	29,420

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	2	7,072	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	21	14	15,072	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	3	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	7	0	0	0	0	0	0	
0	0	8	0	0	0	0	0	0	
0	0	7	0	0	0	0	0	0	
0	0	0	8	17,370	0	0	0	0	
0	0	0	3	10,440	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	4	6,610	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	1,000	0	0	0	0	0	0	0	
0	0	0	5	11,440	0	0	0	0	
0	0	0	0	0	0	0	0	0	
0	5,160	1093	117	269,336	0	0	0	0	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Table I.9: Utah

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Beartrap Canyon	40	40	0	0	0	0
Behind the Rocks	13,275	12,635	640	0	0	0
Blue Hills/Mount Ellen	90,145	81,725	8,420	0	0	0
Bookcliffs Mountain Browse N.A.	400	400	0	0	0	0
Bridger Jack Mesa	5,930	5,290	640	0	0	0
Bull Mountain	11,800	11,800	0	0	0	0
Bullet Canyon	8,520	8,520	0	0	0	0
Burning Hills	68,036	61,550	6,486	0	0	0
Butler Wash	26,751	24,190	2,561	0	0	0
Canaan Mountain	51,829	47,140	3,889	160	0	0
Carcass Canyon	50,397	46,711	3,046	0	640	0
Cedar Mountains	54,444	50,500	0	3,944	0	0
Cheesebox Canyon	16,050	15,410	640	0	0	0
Coal Canyon	65,828	61,430	4,398	0	0	0
Conger Mountains	22,320	20,400	1,920	0	0	0
Cottonwood Canyon	11,330	11,330	0	0	0	0
Cougar Canyon/Tunnel Spring	15,968	15,968	0	0	0	0
Crack Canyon	27,255	25,335	1,920	0	0	0
Daniel's Canyon	2,475	2,475	0	0	0	0
Dark Canyon P.A.	62,680	62,040	640	0	0	0
Death Ridge	68,603	62,870	4,453	0	1,280	0
Deep Creek	3,320	3,320	0	0	0	0
Deep Creek Mountains	72,375	68,910	3,209	256	0	0
Desolation Canyon	317,479	289,650	26,751	40	1,038	0
Devil's Canyon	9,610	9,610	0	0	0	0
Devils Garden N.A.	640	640	0	0	0	0
Dirty Devil	62,919	61,000	1,919	0	0	0
Escalante Canyons N.A. (Tract I)	360	360	0	0	0	0
Escalante Canyons/The Gulch (Tract II-IV)	130,757	119,300	11,457	0	0	0
Fiddler Butte	78,218	73,100	5,118	0	0	0
Fifty Mile Mountain	161,145	146,143	12,983	0	2,019	0
Fish Creek Canyon	50,930	46,440	4,490	0	0	0
Fish Springs Range	55,700	52,500	3,200	0	0	0
Floy Canyon	81,027	72,605	8,382	40	0	0
Flume Canyon	54,612	50,800	3,812	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	1	40	0	0	0	0	No
0	0	154	8	1,508	0	0	0	0	Yes
0	0	360	21	17,932	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	20	2	910	0	0	0	0	Yes
0	0	51	3	1,979	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	23	8	1,690	0	0	0	0	Yes
0	0	0	5	2,290	0	0	0	0	Yes
640	0	0	2	2,320	0	0	0	0	Yes
0	0	133	5	1,676	0	0	1	2,545	Yes
0	0	3	2	2,205	0	0	0	0	Yes
0	0	38	1	480	0	0	0	0	Yes
0	0	0	7	5,145	0	0	0	0	Yes
0	0	251	3	2,500	0	0	0	0	Yes
0	0	48	1	80	0	0	0	0	Yes
0	0	0	1	320	0	0	0	0	No
0	0	1,748	5	7,720	0	0	0	0	Yes
0	0	0	6	1,910	0	0	0	0	No
0	0	0	1	15	0	0	0	0	No
0	0	0	21	10,770	0	0	1	6,330	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	51	14	38,442	0	0	0	0	Yes
0	0	34	71	88,165	0	0	0	0	Yes
0	0	27	1	425	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	873	19	15,012	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	1,100	19	9,630	0	0	0	0	Yes
0	0	350	12	21,600	0	0	0	0	Yes
0	0	3,254	9	4,180	0	0	0	0	Yes
0	0	0	74	4,640	0	0	0	0	No
0	0	131	0	0	0	0	0	0	Yes
0	0	4	9	13,695	0	0	0	0	Yes
0	0	237	6	2,252	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Utah (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Fremont Gorge	2,540	2,540	0	0	0	0
French Spring/Happy Canyon	25,640	25,000	640	0	0	0
Goose Creek Canyon	89	89	0	0	0	0
Grand Gulch P.A.	109,840	105,520	4,320	0	0	0
Horseshoe Canyon	21,820	20,500	800	520	0	0
Horseshoe Canyon (SOUTH)	40,722	38,800	1,922	0	0	0
Howell Peak	27,359	24,800	2,559	0	0	0
Indian Creek	6,870	6,870	0	0	0	0
Jack Canyon	8,180	7,500	640	0	0	0
Joshua Tree N.A.	1,040	1,040	0	0	0	0
King Top	92,338	84,770	7,568	0	0	0
LaVerkin Creek Canyon	567	567	0	0	0	0
Link Flats N.A.	912	912	0	0	0	0
Little Rockies	41,901	38,700	3,201	0	0	0
Lost Spring Canyon	3,880	3,880	0	0	0	0
Mancos Mesa	56,561	51,440	5,121	0	0	0
Mexican Mountain	62,208	59,600	2,608	0	0	0
Middle Point	6,630	5,990	640	0	0	0
Mill Creek	9,780	9,780	0	0	0	0
Moquith Mountain	15,470	14,830	640	0	0	0
Mount Hillers	20,504	20,000	504	0	0	0
Mount Pennell	74,377	74,300	77	0	0	0
Mud Spring Canyon	41,756	38,075	3,681	0	0	0
Muddy Creek	33,960	31,400	2,560	0	0	0
Mule Canyon	5,990	5,990	0	0	0	0
Negro Bill Canyon	7,620	7,620	0	0	0	0
North Escalante Canyon N.A. (V)	760	760	0	0	0	0
North Fork Virgin River	1,040	1,040	0	0	0	0
North Stansbury Mountains	10,480	10,480	0	0	0	0
Notch Peak	55,609	51,130	4,479	0	0	0
Orderville Canyon	1,750	1,750	0	0	0	0
Paria-Hackberry	150,223	135,822	14,001	400	0	0
Parunuweap Canyon	32,053	30,800	1,253	0	0	0
Phipps Death Hollow N.A.	45,290	42,731	2,559	0	0	0
Pine Canyon	10,890	10,890	0	0	0	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
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Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	0	0	0	0	0	0	No
0	0	89	3	2,240	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	0	14	4,625	0	0	0	0	No
0	0	21	4	1,980	0	0	0	0	Yes
0	0	81	10	7,840	0	0	0	0	Yes
0	0	176	12	20,106	0	0	0	0	Yes
0	0	18	0	0	0	0	0	0	Yes
40	0	0	5	1,840	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	205	3	2,040	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	25	0	0	0	0	0	0	Yes
0	0	0	2	780	0	0	0	0	Yes
0	0	2,438	30	52,280	0	0	0	0	Yes
0	0	176	16	14,864	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	76	4	1,937	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	385	6	6,730	0	0	0	0	Yes
0	0	113	10	6,604	0	0	0	0	Yes
0	0	0	11	6,220	0	0	0	0	Yes
0	0	303	0	0	0	0	0	0	Yes
0	0	2	1	120	0	0	0	0	No
0	0	185	9	2,784	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	7	0	0	0	0	0	0	Yes
0	0	6	3	4,180	0	0	0	0	Yes
0	0	175	3	8,672	0	0	0	0	Yes
0	0	1	0	0	0	0	0	0	Yes
0	0	39	25	19,180	0	0	0	0	Yes
0	0	0	1	30	0	0	0	0	Yes
0	0	0	2	560	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Utah (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Red Butte	804	804	0	0	0	0
Red Mountain	19,195	18,250	905	40	0	0
Road Canyon	56,196	52,420	3,776	0	0	0
Rockwell	9,150	9,150	0	0	0	0
San Rafael Reef	63,199	59,170	4,029	0	0	0
Scorpion	37,164	35,884	1,280	0	0	0
Sheiks Flat	3,140	3,140	0	0	0	0
Sids Mountain	88,081	80,530	6,951	600	0	0
Slickhorn Canyon	45,390	45,390	0	0	0	0
Spring Canyon	4,433	4,433	0	0	0	0
Spruce Canyon	22,544	20,350	2,194	0	0	0
Steep Creek	23,941	21,896	1,907	0	138	0
Swasey Mountain	55,013	49,500	5,513	0	0	0
Taylor Creek Canyon	35	35	0	0	0	0
The Blues	19,670	19,030	640	0	0	0
The Cockscomb	10,080	10,080	0	0	0	0
The Watchman	600	600	0	0	0	0
Turtle Canyon	36,939	33,690	3,249	0	0	0
Wah Wah Mountains	45,342	42,140	3,202	0	0	0
Wahweap	148,006	134,400	13,606	0	0	0
Westwater Canyon	32,280	31,160	1,120	0	0	0
Winter Ridge	45,023	42,462	2,561	0	0	0
State total	3,546,042	3,302,567	231,680	6,000	5,115	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	2	330	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	0	25	4,243	0	0	0	0	No
0	0	36	0	0	0	0	0	0	Yes
0	0	1,006	14	20,619	0	0	0	0	Yes
0	0	0	2	3,200	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	803	9	6,282	0	0	0	0	Yes
0	0	0	0	0	0	0	0	0	Yes
0	0	0	3	660	0	0	0	0	Yes
0	0	0	2	360	0	0	0	0	Yes
0	0	82	5	6,720	0	0	0	0	Yes
0	0	112	16	28,726	0	0	0	0	Yes
0	0	0	1	53	0	0	0	0	No
0	0	0	6	800	0	0	0	0	Yes
0	0	22	1	440	0	0	0	0	Yes
0	0	0	1	160	0	0	0	0	No
0	0	0	7	9,840	0	0	0	0	Yes
0	0	62	2	707	0	0	0	0	Yes
0	0	21	20	11,009	0	0	0	0	Yes
0	0	23	0	0	0	0	0	0	Yes
0	0	0	11	4,180	0	0	0	0	Yes
680	0	15,578	638	523,593	0	0	2	8,875	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Table I.10: Wyoming

Wilderness study area	Total acreage	Total ownership of land and minerals ^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Adobe Town	87,600	84,430	640	0	2,530	0
Alkali Basin/East Sand Dunes	12,800	12,800	0	0	0	0
Alkali Creek	10,780	10,100	0	680	0	0
Alkali Draw	17,630	16,990	640	0	0	0
Bennett Mountains	5,722	5,722	0	0	0	0
Bobcat Draw Badlands	18,430	17,150	1,280	0	0	0
Buffalo Hump	10,300	10,300	0	0	0	0
Cedar Mountain	21,570	21,570	0	0	0	0
Copper Mountain	6,858	6,858	0	0	0	0
Devils Playground/Twin Buttes	23,841	22,561	0	0	1,280	0
Dubois Badlands	4,520	4,520	0	0	0	0
Encampment	3,380	3,380	0	0	0	0
Ferris Mountains	22,655	22,495	0	160	0	0
Fortification Creek	13,059	12,419	640	0	0	0
Gardner Mountain	6,423	6,423	0	0	0	0
Honeycomb Buttes	42,044	40,764	640	0	640	0
Honeycombs	21,260	21,000	0	0	260	0
Lake Mountain	13,865	13,865	0	0	0	0
McCullough Peaks	25,850	24,570	640	0	640	0
Medicine Lodge	7,740	7,740	0	0	0	0
North Fork Powder River	10,089	10,089	0	0	0	0
Oregon Buttes	5,700	5,700	0	0	0	0
Owl Creek	710	710	0	0	0	0
Prospect Mountain	1,099	1,099	0	0	0	0
Raymond Mountain	34,456	32,936	1,320	200	0	0
Red Butte	10,630	10,190	0	0	440	0
Red Creek Badlands	8,660	8,020	640	0	0	0
Red Lake	9,515	9,515	0	0	0	0
Sand Dunes	27,309	26,509	640	160	0	0
Scab Creek P.A.	7,636	7,636	0	0	0	0
Sheep Mountain	23,250	22,210	0	0	1,040	0
South Pinnacles	10,800	10,800	0	0	0	0
Sweetwater Canyon	9,056	9,056	0	0	0	0
Sweetwater Rocks	6,316	5,956	0	0	360	0
Sweetwater Rocks	12,829	12,749	0	40	40	0

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0	0	47	25,470	0	0	0	0	Yes
0	0		12	5,340	0	0	0	0	Yes
0	0		6	3,790	0	0	0	0	
0	0		5	4,960	0	0	0	0	Yes
0	0		7	3,843	0	0	0	0	
0	0	0	7	8,590	0	0	0	0	No
0	0		5	4,070	0	0	0	0	Yes
0	0		24	15,584	0	0	0	0	
0	0		1	160	0	0	0	0	
0	0		21	18,050	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		5	15,927	0	0	0	0	Yes
0	0	0	3	1,840	0	0	0	0	No
0	0	0	0	0	0	0	0	0	No
0	0		14	5,840	0	0	0	0	Yes
0	0		20	6,018	0	0	0	0	
0	0		14	3,370	0	0	0	0	Yes
0	0	0	12	5,157	0	0	0	0	No
0	0		3	9,045	0	0	0	0	
0	0	0	2	150	0	0	0	0	No
0	0		3	1,490	0	0	0	0	Yes
0	0		2	430	0	0	0	0	No
0	0		0	0	0	0	0	0	
0	0		3	1,000	0	0	0	0	Yes
0	0	0	20	6,800	0	0	0	0	No
0	0		7	4,070	0	0	0	0	Yes
0	0		12	3,840	0	0	0	0	Yes
0	0		31	15,658	0	0	0	0	Yes
0	0		1	320	0	0	0	0	No
0	0	0	25	8,720	0	0	0	0	No
0	0		6	3,970	0	0	0	0	Yes
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		2	1,726	0	0	0	0	

(continued)

**Appendix I
 Summary of BLM Data on Nonfederal Land
 and Mineral Rights in Wilderness
 Study Areas**

Wyoming (continued)

Wilderness study area	Total acreage	Total ownership of land and minerals^a			Federal ownership of land—state/private ownership of minerals	
		Federal	State	Private	State	Private
Sweetwater Rocks	7,041	7,041	0	0	0	0
Sweetwater Rocks	6,429	6,429	0	0	0	0
Trapper Creek	7,200	7,200	0	0	0	0
Whiskey Mountain	487	487	0	0	0	0
White Horse Creek	4,002	4,002	0	0	0	0
State total	579,541	563,991	7,080	1,240	7,230	0
Grand total	26,280,479	24,535,389	584,056	470,066	178,074	485,707

(continued)

**Appendix I
Summary of BLM Data on Nonfederal Land
and Mineral Rights in Wilderness
Study Areas**

Federal ownership of minerals—state/private ownership of land		Number of mining claims ^c	Number and acres of oil and gas leases ^b		Number and acres of geothermal leases ^b		Number and acres of coal leases ^b		Areas where mineral development is projected to occur ^d
State	Private		Leases	Acres	Leases	Acres	Leases	Acres	
0	0		0	0	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		6	4,899	0	0	0	0	
0	0		0	0	0	0	0	0	
0	0		1	100	0	0	0	0	Yes
0	0	0	327	190,228	0	0	0	0	
5,100	22,087	42,923	2,312	2,669,526	30	51,709	2	8,875	

^aTotal ownership means ownership of surface and subsurface rights.

^bAll leases issued after the passage of the Federal Land Policy and Management Act of 1976.

^cMining claim information developed and summarized at the time of our review.

^dDevelopment projections completed at the time of our review.

Comments From the Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

1245 (342)

JUN 9 1987

Mr. J. Dexter Peach
Assistant Comptroller General for
Resources, Community, and
Economic Development Programs
General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

This is in reference to the General Accounting Office (GAO) draft report entitled Federal Land Management: Nonfederal Land and Mineral Rights in BLM's Wilderness Areas Could Pose Problems transmitted to the Departmental Audit Coordinator by your letter of May 4, 1987. As you requested, we have completed our review comments on the draft report within the specified 30-day period.

Our overall comment on the report is that it accurately and factually presents the situation that confronts the Bureau of Land Management (BLM) in dealing with non-Federal lands and interests located in BLM wilderness areas. As your report indicates, the magnitudes of the acreages involved could, and do, frequently pose management problems for the BLM. The Department agrees with the findings and recommendations contained in your report and will implement the specific recommendations you have made.

We wish to express our appreciation for the manner in which the GAO staff, both at the Washington Office and the Los Angeles Regional Office, conducted this study. Their professional manner and cooperative efforts in working with the BLM staff are to be commended. With the approach taken by GAO in this study, the recommendations are very viable in terms of implementation by the Secretary and the BLM.

Our comments on the report are set forth below.

General

Throughout the report, wherever the term(s) "land and minerals rights" is used, it would be preferable to use the term "interests," rather than "rights." Interests is a more inclusive descriptor of the nature of the various tenure and ownership arrangements that may be involved.

Throughout the report, wherever the qualifier "861" wilderness study areas is used, it should be "860." A study area in Colorado (Needle Creek) has been deleted from wilderness study status.

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Specific (References are to page numbers of the draft report)

1. Page 3, Background, paragraph 1, first sentence - change sentence to read: "FLPMA requires that the Secretary's wilderness recommendations"
2. Page 4, Principal Findings, paragraph 2, last sentence - change sentence to read: "BLM instructed its State Offices to exclude, where possible, non-Federal land when drawing the boundaries of the areas to be recommended for wilderness."
3. Page 5, Recommendation to the Secretary of the Interior, second sentence - change sentence to read: "Therefore, GAO recommends that the Secretary direct BLM to provide the Congress, on a request basis originated from them, with available analyses regarding such non-Federal land and mineral interests for any wilderness legislative proposals being considered by the Congress."
4. Page 18, paragraph 1 - change sentence to read the same as noted in item 2 above.
5. Page 21, paragraph 2, sentence 4 - insert clarifying term "(i.e., privately owned)" after the word "patented."
6. Page 23, paragraph 2, last sentence - change sentence to read: "Generally, ownership of subsurface minerals is accompanied by the right to use as much of the surface as is reasonably necessary to gain access to and develop these minerals."
7. Page 23, paragraph 3, both sentences - change in part to read: ". . . original land patent or conveyance document." Change in part to read: ". . . variations in conveyance documents"
8. Page 28, top of page, add an additional explanatory sentence, as follows: "The reason for this is that close working relationships and cooperative efforts have been established by BLM and the various State land departments."
9. Page 30, top of page, last sentence - change word "similar" to term "approximately equal."
10. Page 31, last paragraph - suggest changing to read as follows:

"BLM officials told us that they anticipate encountering many of the same problems in acquiring non-Federal land and mineral interests within wilderness study areas when they are designated as wilderness that they are now facing in the 23 designated areas. Furthermore, they believe that attempts to acquire private minerals to prevent development could be costly and difficult since there are few market transactions involving the sale of mineral interests which may only have prospective values for development. Thus, establishing a mutually agreeable value between the

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BLM and the owner can be a major problem because of the many unknown and speculative values of mineral property. Moreover, methods to determine fair market value of mineral interests, in the absence of market transactions, are very difficult to determine from a mineral value appraisal standpoint even though the valuation methodology has been proven. As appraisals are estimates of value, they are subject to dispute or question by both owners and professional appraisers. Because of the speculative or, in some cases, the unknown nature of subsurface mineral interests, particularly when there are no available market data, it could be necessary to perform exploratory drilling to determine the extent of any mineral values. Such drilling activities could be costly and involve surface disturbance activities which could destroy the very wilderness values for which the interests are being considered for acquisition."

11. Page 33, paragraph 2, sentence 3 - insert clarifying words as follows:
". . . for solitude and primitive and unconfined recreation."
12. Page 33, last paragraph, sentence 1 - delete words: "wilderness study reports containing."
13. Page 35, paragraph 1, sentence 2 - substitute term "is conveyed from" for the word "leaves."
14. Page 35, last paragraph, last sentence - change word "deeded" to "conveyed."
15. Pages 36 and 37, paragraph starting at bottom of page 36 and continuing to top of page 37 should be supplemented as follows: ". . . study reports where acquisition by purchase with the use of appropriated funds is proposed."
16. Page 39, first paragraph. The statement that ". . . none of the draft environmental impact statements covering wilderness study areas within their states discussed potential mineral development as required by the November 1986 memorandum," is in error. Several statements in Arizona (e.g., Phoenix, Lower Gila) contain such information. Suggest the word "none" be changed to "certain." This change in wording would then be consistent with the statement made in the last sentence of this same paragraph.

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Thank you for the opportunity to review the draft report, and, with the changes we suggest above, we feel the report is a commendable effort at dealing with a most difficult problem for the BLM. If we may be of additional assistance on this report or other matters, please feel free to contact us.

Sincerely,



Deputy Assistant Secretary, Land and
Minerals Management

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