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NATURAL RESOURCES

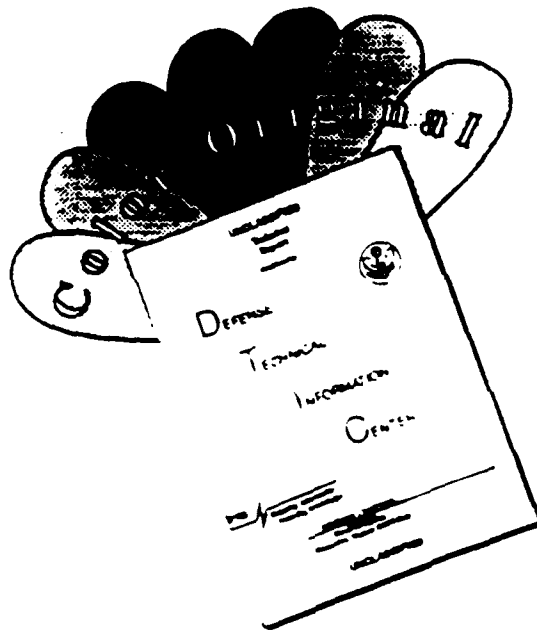
Defense and Interior Can Better Manage Land Withdrawn for Military Use



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**National Security and
International Affairs Division****B-254114****April 26, 1994****The Honorable John Glenn
Chairman, Subcommittee on Military Readiness and
Defense Infrastructure
Committee on Armed Services
United States Senate****The Honorable Dave McCurdy
Chairman, Subcommittee on Military Installations and Facilities
Committee on Armed Services
House of Representatives**

The Military Lands Withdrawal Act of 1986 removes from public use until the year 2001 more than 7 million acres of land and devotes them to the military services for training and weapons and equipment testing purposes.¹ The Chairman of the former Environmental Restoration Panel, House Committee on Armed Services, requested that we review the experiences of Department of Defense (DOD) and federal resource agencies in jointly managing the withdrawn lands. As agreed with your offices, we examined the experiences at all six sites named in the act to determine whether (1) resource management activities have constrained military operations, (2) military operations have constrained resource management activities, and (3) there are opportunities to improve resource management programs at the six locations.

Background

The withdrawn lands, which have been under military control since the 1940s and 1950s, include six sites: (1) Fort Greely Maneuver Area and Air Drop Zone and (2) Fort Wainwright's Yukon Maneuver Area, both in Alaska; (3) Goldwater Air Force Range in Arizona; (4) Nellis Air Force Range and (5) Bravo-20 Bombing Range, both in Nevada; and (6) McGregor Range in New Mexico. Military training at the sites includes air activities, such as pilot training in air-to-air combat, and bombing and ground activities, such as troop and vehicle maneuvers. Air activities occur above the sites and some contiguous public and private lands while ground maneuvers and bombing occur within site borders. (Appendixes I to V further describe these sites.)

¹If the military wants to continue using withdrawn lands after 2001, it must (1) prepare an environmental impact statement consistent with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et. seq.) and (2) apply for an extension of the withdrawal in accordance with the Department of the Interior regulations.

The law defines how DOD and the Department of the Interior agencies are to operate in managing the resources of lands controlled by the military.² Military needs have priority over resource management. DOD is authorized to establish military uses on the lands without consulting with Interior, and Interior's resource management activities require DOD concurrence. The law requires Interior to develop a resource management plan after consultation with DOD. It also requires both Interior and DOD to enter into an agreement to implement the resource management plans. Interior's Bureau of Land Management (BLM) has primary resource management responsibilities at all six sites.³ Another Interior agency, the U.S. Fish and Wildlife Service (FWS), manages two national wildlife refuges that have airspace under military control (Goldwater Range in Arizona and the Nellis Range complex in Nevada).⁴

Results in Brief

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The results of resource management at the six military training sites have been mixed. Military operations have not been hampered, but military commanders at five of the sites said that they changed some training activities to accommodate concerns for wildlife. At one site, however, officials expressed concern about meeting future training needs because of the environmental constraints the Army must meet.

Although military operations have not been hampered, those operations have constrained resource management activities, but lack of information on resource conditions prevents an overall assessment of the impacts. Five of the six sites we visited had resource management plans, but only about half of the planned actions had been initiated as of November 1993. Three sites had access restrictions that made it difficult for BLM to carry out resource management activities. These restrictions and the overall military presence led BLM to assign a low priority to resource management on military lands. At three sites, BLM allocated considerably less money to manage lands used for military training than other lands BLM is responsible for.

²Resource management includes activities such as wildlife and habitat protection, recreation and hunting programs, evaluation and protection of historic and prehistoric properties, and granting of grazing and mineral leases.

³BLM manages the lands' resources pursuant to the Federal Land Policy and Management Act of 1976 and other applicable laws.

⁴Withdrawn lands within a National Wildlife Refuge unit are to be managed according to the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et. seq.).

All six sites have opportunities to improve resource management by enhancing cooperation between BLM and the military or by strengthening mechanisms to monitor the progress of planned resource management actions. Resource management at the Goldwater Range—where well over half of the actions in the site's approved resource management plan were either completed or under development—is an example of effective cooperation between a BLM office and the military. BLM monitoring of planned actions at the Nellis Range provided a record of accomplishments and areas requiring further effort.

Resource Management Activities Did Not Constrain Military Operations

Officials at each site—including officials responsible for training, operations, airspace, and environmental management—expressed no concerns about the effects of resource management activities on current military operations. Military officials said that all current training objectives were being met and training missions had not been adversely affected by adjustments to accommodate resource management.

A primary reason why military operations were not constrained by resource management activities is that the act allows the military to restrict public access without the concurrence of the Department of the Interior or local land-managing agencies. Such restrictions are based on a determination by the Secretary of the Army, Navy, or Air Force that military operations, public safety, or national security require restricted access.

Although military operations have priority over resource management activities, military officials in charge of training operations said they had adjusted operations to enhance or protect resources at most locations. For example, some sites had established special flight altitude restrictions to reduce wildlife and habitat disturbances. In addition, aircraft routes had been developed to avoid sensitive areas, such as wildlife habitat. At the Alaska sites, the number of training flights had been reduced during prime moose calving and hunting seasons. At the Goldwater Range, where military airspace overlies the Cabeza Prieta Refuge, Marine Corps pilots flew specific low-level routes, but the refuge manager authorized them to fly at low altitudes only during a twice-annual training course. The refuge manager said efforts to eliminate these flights altogether were overruled by the Secretary of the Interior.

Current military operations notwithstanding, officials at the McGregor Range in New Mexico expressed concern about meeting future training

needs. For example, McGregor officials were considering expanding training in a grassland area of the McGregor Range, called Otera Mesa, which contains sensitive habitat for plants and wildlife. However, the Army's assessment of the possible environmental impacts from a 1993 training exercise involving wheeled vehicles on the mesa received substantial negative public comment primarily because of the lack of data on the cumulative environmental effects of military operations.

Military Operations Have Constrained Resource Management Activities

The military presence at the sites strongly affects BLM's strategy for resource management. BLM efforts in planning and implementing projects to enhance protection and use of site resources for non-military uses such as recreation, grazing, and mining were often restricted by the military. For example, BLM area managers said that, among all lands they managed, the sites had a relatively low funding priority because of BLM's lower expectations for resource management in those areas. The military programs coordinator at BLM headquarters told us that because of the complications brought about by the military presence, BLM has preferred that the military services, rather than BLM, manage the sites' resources.

Resource management was limited by access restrictions, which varied in degree from site to site. For example, the entire 41,000-acre Bravo-20 Range was off limits to BLM staff due to hazardous unexploded ordnance. At the 3-million acre Nellis Range, BLM officials cited several difficulties in visiting areas crucial to management of a wild horse and burro program. To enter the area without an Air Force escort, managers were required to obtain DOD security clearances. Even with those clearances, their access generally was limited to weekends and excluded certain site areas. Although access at other sites was less restrictive, BLM managers were not permitted in target areas or in areas outside of target zones during military operations. Resource management activities constrained by military operations included both the planning and implementation of resource management actions.

Developing Resource Plans

BLM prepared the required resource plans for five of the six sites. The agency did not prepare a plan for the Bravo-20 Bombing Range because military restrictions on access and the quantity of unexploded ordnance on the site made resource management activities inappropriate. Goldwater, Nellis, and McGregor ranges have resource plans in place with agreements between the military and BLM offices on plan implementation.

The plans for the Fort Greely and Yukon Maneuver Areas were in draft form as of November 1993.

BLM's resource plans generally addressed between 8 and 16 resources and included "decisions" for each resource to be accomplished over a 15-year period. Decisions generally (1) stated a policy or described a general goal that required no specific BLM action or (2) identified specific actions to accomplish. For example, the plan for the Nellis Range named 16 resources, including visual resources (scenery) and wild horses and burros. BLM's plan for visual resources calls for no specific management actions because visual resources are not currently affected by other activities or operations. In contrast, the decisions for wild horses and burros set forth seven actions, such as creating a wild horse inventory, developing water sources, and conducting wild horse gathers.

Implementing Resource Plans

The resource plans for the 5 sites contained a total of 225 decisions. Table 1 shows that 100 decisions (44 percent) did not require further BLM action, while 125 (56 percent) did.

Table 1: Summary of BLM Resource Decisions and Required Actions at Five Military Training Areas

Military range	BLM decisions		Status of decisions requiring actions		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Greely	18	7	5	1	1
Yukon	13	5	4	1	0
Goldwater	23	36	14	11	11
Nellis	21	26	14	9	3
McGregor	25	51	25	12	14
Total	100	125	62	34	29

Note: BLM did not develop a resource management plan for the Bravo-20 Bombing Range.

*Represents a policy decision or general goal requiring no BLM action under the present conditions.

Of the 125 decisions requiring further action, 63 had been started or completed, and 62 had not—due to access restrictions and a lack of available funding, according to BLM managers. Examples of decisions that BLM had deferred are wildlife surveys on the Alaska ranges, development and implementation of habitat management plans on portions of the McGregor Range, and taking inventory of water resources on the

Goldwater Range. Implementation was underway for decisions, such as updating a vegetation map for a portion of the Goldwater Range, resolving issues regarding a historical cabin on an Alaska range, and monitoring riparian areas on the Nellis Range complex.

Decisions involving completed actions included both continuations of past practices and new actions. For example:

- On the McGregor Range, BLM continued past practices to monitor its grazing program.
- On the Nellis Range, BLM designated a landmark as an Area of Critical Environmental Concern, providing additional protection from damage or use.
- On the Alaska ranges, BLM established fire management areas and designated fire suppression sites.
- On the Goldwater Range, BLM surveyed cultural sites and constructed fencing to protect ancient designs called petroglyphs on the desert floor. Figure 1 is an aerial photograph showing vehicle damage to the petroglyphs that occurred before the fence was erected.

Figure 1: Petroglyphs on the Goldwater Range Fenced to Prevent Further Vehicle Damage



BLM officials said the military presence on the sites affected BLM decisions to fund resource projects. They said that due to military restrictions on site activities, BLM has been reluctant to devote funding to the sites. Although comparable data were not available at all sites, we found that

BLM spent a relatively small portion of its funds on some military sites.⁵ For example, the Alaska sites accounted for almost 12 percent of the land managed by the Steese/White Mountains District Office, but BLM allocated those sites only about 1 percent of the fiscal year 1992 area budget, according to estimates of the area manager. At the McGregor Range, BLM spending on withdrawn lands was proportional to its spending on other federal lands. McGregor Range represents about 23 percent of the land managed by the Caballo Resource Area Office, and BLM allocated it about 21 percent of the area office's funding in fiscal year 1992. The military also funded resource management activities on the sites, in part to meet the requirements of environmental laws such as the National Environmental Policy Act.

Impact of Military Operations on Resource Conditions Is Unknown

Military operations can affect the physical condition of the sites' natural and cultural resources. However, the limited data on the effect of military operations fall short of baseline data required to measure changes in resource conditions. The largely anecdotal information on resource conditions at the six sites indicates that military operations benefited some resources, harmed others, and had unknown effects in other cases.

BLM and military officials said that certain resources benefited from the military's presence. For example, BLM officials said that reduced public access on Goldwater Range and other restrictions on off-road vehicles resulted in less vandalism and damage to sensitive soils than would have occurred otherwise. Figure 2 shows a typical view of the Sonoran Desert on the Goldwater Range.

⁵BLM does not always account for resource management expenses on the withdrawn lands separately from its other lands. For example, local BLM officials in Phoenix said they could not estimate their fiscal year 1992 resource management expenses on the Goldwater Range.

Figure 2: View of Sonoran Desert on Goldwater Range



In contrast, soils and vegetation were clearly adversely affected in the sites' various bombing range impact areas that contain unexploded ordnance and are generally not available for recreation or other secondary uses. The most extreme case was Bravo-20, considered so hazardous due to unexploded Navy ordnance that virtually no resource management has occurred. Figure 3 shows a prominent rock outcrop on Bravo-20 called Lone Rock, a primary bombing target.

Figure 3: View of Lone Rock Bombing Target and Surrounding Terrain on Bravo-20

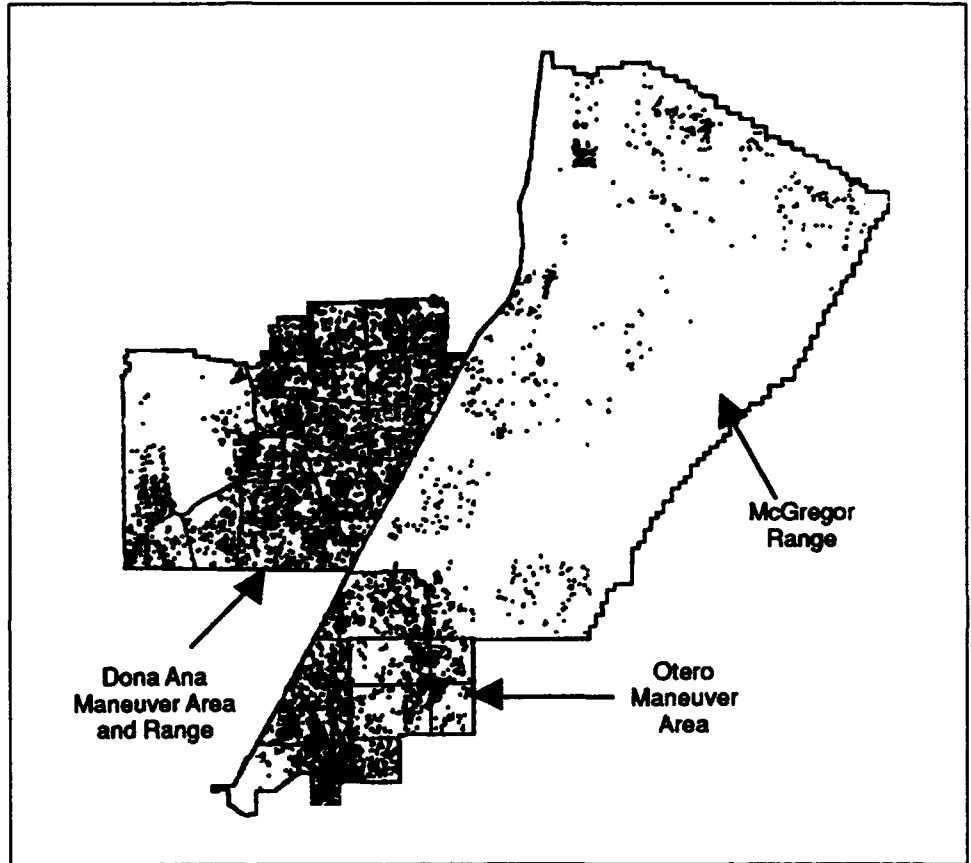


The unknown impact of military operations pertains to certain threatened or endangered wildlife species. For example, the Sonoran Pronghorn Antelope and the Lesser Long-Nosed Bat, both endangered species, are present on the Cabeza Prieta National Wildlife Refuge, which underlies the Goldwater Range's airspace. Concern about the effects of aircraft noise from overflights on these species' habitat areas has prompted assessment studies by FWS and the Air Force, but as of November 1993, the studies had not shown harm.⁶

Figure 4, which shows the location of cultural artifact sightings, such as pottery and tool fragments, in and around McGregor Range illustrates the potential risks to cultural artifacts at that site. A Fort Bliss archaeologist said the large number of identified cultural artifacts outside the site reflects extensive surveys in those areas. He said little survey work has occurred on McGregor Range, but he expects the same density of cultural artifacts within McGregor site boundaries.

⁶According to FWS, assessments of the effects of aircraft noise on the Lesser Long-Nosed Bat and the Sonoran Pronghorn Antelope occurred in order to comply with Section 7 of the Endangered Species Act.

Figure 4: Map of McGregor Range and Surrounding Area Showing High Density of Cultural Artifact Sites in Areas Surveyed



Opportunities for Improving Interagency Cooperation and Agency Specific Management

Interagency Cooperation

The requirement of the Military Lands Withdrawal Act that DOD and Interior agencies consult and agree on plans to manage resources necessitates close cooperation between those agencies, a cooperation that would be consistent with DOD goals articulated in May 1993 by the Deputy

Under Secretary of Defense (Environmental Security).⁷ However, we found little evidence that top managers of military services and Interior agencies had taken steps to ensure effective cooperation in managing resources at the six sites.

We found many instances of interagency difficulties in implementing resource management plans. Although the McGregor Range plan calls for BLM to manage eight different resources such as wildlife, vegetation, and cultural resources, the Chief of Fort Bliss' Directorate of Environment said Fort Bliss officials viewed BLM's role as limited to managing the cattle grazing program, assisting with fire suppression if requested, and helping to administer recreation activities. The range planner at Fort Bliss said the Army is reluctant to share authority with BLM because of concerns that BLM's plans could restrict future military training activities at the McGregor Range.

FWS officials at Nellis Range said that the military was generally uncooperative in resource management. They said that the Air Force constructed military roads, targets, and facilities on the refuge without informing the Refuge Manager. FWS officials also said that Air Force bombing outside of approved areas—which had occurred three times since 1979—damaged a rainwater catchment for bighorn sheep. In addition, they said that, without consulting with FWS managers, the Air Force had stored on the refuge some tank targets contaminated by depleted uranium.⁸ Air Force officials at Nellis said they had no record of coordinating with FWS regarding these matters and they were uncertain whether or not coordination had occurred.

We found very little interaction or cooperation between the military and BLM at the Alaska sites. For example, an Army Range Manager said that he had a good working relationship with BLM, but this relationship was based on only two telephone calls with BLM in 6 years. BLM officials said they saw little reason to work closely with the military since the ranges did not represent unique resource values, considering the abundant resources in Alaska and low public use at the sites.

⁷At hearings before the Subcommittee on Military Installations and Facilities, House Committee on Armed Services, the Deputy Under Secretary of Defense (Environmental Security) said that DOD wanted to create environmental partnerships to help ensure responsible environmental performance in defense operations.

⁸For a discussion of issues associated with handling depleted uranium during the Persian Gulf War, see Operation Desert Storm: Army Not Adequately Prepared to Deal With Depleted Uranium Contamination (GAO/NSIAD-93-90, Jan. 29, 1993).

The most cooperative relationship between the military and BLM occurred on the Eastern section of the Goldwater Air Force Range, where BLM Lower Gila Resource Area and Air Force officials worked together on several projects, sharing both funds and expertise. BLM conducted archaeological projects with Air Force financial support. BLM's archaeologist said that archaeological surveys on the range outnumbered those off range because of the Air Force's financial support. Together, the Air Force and BLM also put up visitor information signs on the state highway crossing the site and fences along the range boundary to control livestock. Air Force and BLM managers used a videotape to publicly promote their "partnership in the desert."

BLM and Air Force environmental managers said that their joint work took more time than working independently. Air Force officials said that the public would be more likely to accept resource management strategies on military ranges if agencies like BLM were involved.

Individual Agency Efforts

Efforts to Develop Information on Resource Conditions

None of the sites we visited had comprehensive information about resource conditions and the effects of military operations on those conditions. Although the National Environmental Policy Act requires agencies to evaluate the environmental effects of their major operations, the site environmental impact statements and assessments we reviewed discussed resource conditions in only general terms. Military officials at three sites (Nellis, Goldwater, and McGregor) agreed that more information on resource conditions was needed. At most of the six sites, however, officials said that developing more comprehensive information was either too costly or had not been a priority.

The Army has known of the importance of developing information on resource conditions since before the Military Lands Withdrawal Act was passed in 1986. For example, the Army's environmental impact statement prepared in 1977 for the eventual withdrawal of the McGregor Range acknowledged the need to develop information on resource conditions. However, not until 1993 did officials at the site begin planning for the development of baseline data on McGregor Range. In May 1993, Army officials met with several agencies to reach agreement on what baseline data should be developed on McGregor Range. Their goal is to have

essential data available for future McGregor Range environmental impact statements.⁹

Developing information on resource conditions is consistent with a recent Interior initiative to inventory plant and wildlife species in the United States. The National Biological Survey will inventory plants and animals to better understand the ecological health of all ecosystems.

Controls Over Implementing Resource Plans

Several BLM offices lacked formal mechanisms to monitor the progress of planned resource management actions. Although lack of formal monitoring does not preclude BLM offices from making progress, such monitoring can provide greater assurance of successful resource management. At the Goldwater, Greely, and Yukon sites, BLM staff had no formal mechanism to monitor work. Alaska site BLM officials said that they are awaiting approval of the sites' resource management plans before implementing a formal monitoring system at Greely and Yukon. At Goldwater, BLM officials said they did not see a current need for an implementation schedule or tracking system.

More formal controls existed at Nellis and McGregor sites, including the use of priorities for implementing actions and preparing funding requests and periodically summarizing resource management accomplishments. For example, the Nellis implementation schedule allowed managers to track accomplishments and included, for many actions, a measuring system defining units of accomplishment, such as miles of fence built or number of wild horses removed. These approaches appeared to recognize accomplishments and areas requiring greater effort.

Recommendations

To better achieve the objectives of the Military Lands Withdrawal Act, DOD and Interior need to cooperate more fully to plan and implement resource management projects at the sites. To develop a more cooperative relationship and strengthen DOD's resource management, we recommend that the Secretary of Defense direct the Secretaries of the Air Force, Army, and Navy to

- improve liaison activities with Interior agencies to ensure that local BLM and FWS officials have reasonable access to withdrawn lands and military managers and

⁹The Military Lands Withdrawal Act requires that an environmental impact statement be prepared by November 1998 if the secretary of the military department concerned intends to seek renewal of the withdrawal when it expires in 2001.

-
- **develop improved baseline data to assess the cumulative effects of current and proposed military operations on range natural resource conditions.**

To strengthen Interior's management under the act, we recommend the Secretary of the Interior direct the Director of BLM to improve internal controls over military range programs by

- **establishing schedules and milestones for implementing actions called for in resource management plans and**
- **more closely monitoring implementation milestones and actions accomplished.**

Agency Comments

DOD fully agreed with our report and recommendations. DOD plans to improve BLM and FWS access to the sites and to maintain open communication with BLM and FWS officials to ensure that natural resource management requirements are carried out. DOD also will develop baseline data by 1998 that could be used to assess the cumulative effects of military operations at the sites.

Interior generally agreed with our report and recommendations. Interior added clarifying comments concerning cooperative efforts with DOD, baseline data, and BLM funding priorities at military sites. In addition, Interior said that BLM will issue improved guidance concerning the implementation and monitoring of resource management plans.

The scope and methodology for our review are discussed in appendix VIII. Unless you publicly announce its contents earlier, we plan no further distribution of the report until 30 days after its issue date. At that time, we will send copies to appropriate congressional committees, the Secretaries of Defense, the Army, the Navy, the Air Force, and the Interior, and the Director of the Office of Management and Budget. We also will make copies available to others upon request.

Please contact me at (202) 512-8412 if you or your staffs have any questions concerning this report. Major contributors to this report are listed in appendix IX.



Donna Heivilin, Director
Defense Management and NASA Issues

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Abbreviations

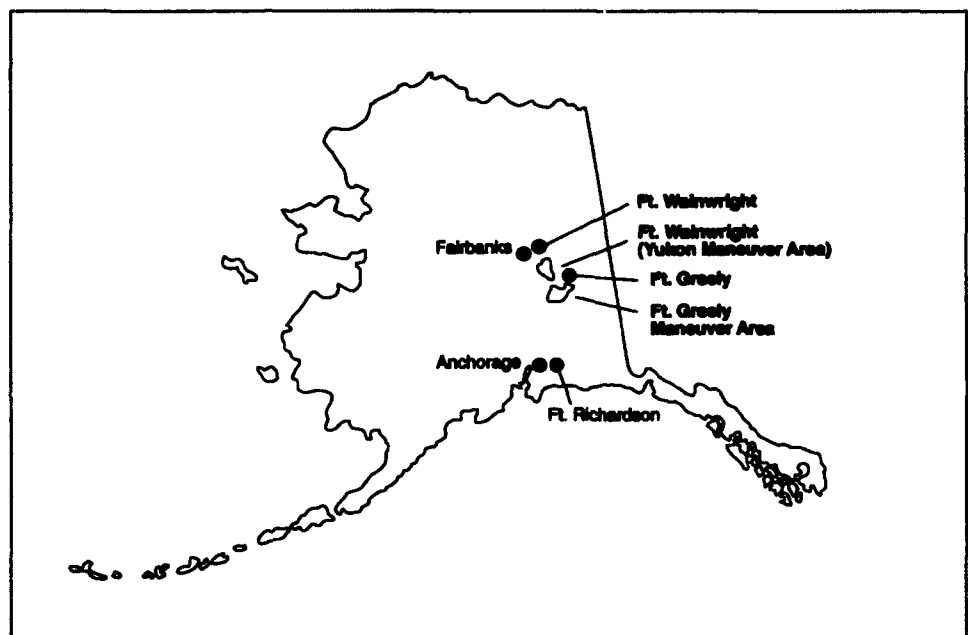
BLM	Bureau of Land Management
DOD	Department of Defense
FWS	Fish and Wildlife Service
NAS	Naval Air Station

Fort Greely Maneuver Area and Yukon Maneuver Area, Alaska

Background

The Fort Greely Maneuver Area and Air Drop Zone and the Fort Wainwright Yukon Maneuver Area are separate sites located near Fairbanks in interior Alaska (see fig. I.1). Together, the two comprise about 872,000 acres. The two sites were withdrawn from public use for military purposes in 1961.

Figure I.1: Location of Greely and Yukon Range Land Areas, Alaska



The areas are characterized by low hills in the Yukon site and by lake dotted, rolling country and rugged mountainous terrain in the Fort Greely site (see fig. I.2).

**Appendix I
Fort Greely Maneuver Area and Yukon
Maneuver Area, Alaska**

**Figure I.2: The Range at Yukon
Maneuver Area**



The two sites, and the military airspace above them, are administered principally by the Army through three Alaska installations—Forts Wainwright, Greely, and Richardson. However, both sites are used by two military branches—the Army and the Air Force. Army training officials said they primarily use the ranges for light infantry operations¹ and for glacier and mountaineering training. The Army also tests the effect of cold weather on military equipment (winter temperatures drop as low as -63 degrees Fahrenheit.) The Air Force uses the sites for such training as air-to-ground bombing and strafing exercises in designated target areas. In addition to using the areas for their separate activities, the Army and the Air Force also use the sites for joint combat training.

The Bureau of Land Management (BLM) officials of the Steese/White Mountains District Office in Fairbanks said they direct BLM activities within the sites, with planning assistance provided by BLM's Alaska State Office in Anchorage. Except for locations specifically designated for bombing and strafing, they said the sites are generally open to the public for recreational and subsistence fishing and hunting.

¹According to Army officials, "light" designates that operations are conducted primarily by infantry troops and vehicles, without the use of tanks, tracked vehicles, and other heavy equipment.

Status of Actions Under the Military Lands Withdrawal Act

As of November 1993, neither site had a resource management plan that had been signed by BLM and the Army. According to BLM's planning team leader in Alaska, BLM's resource management plans had been completed but not formally adopted.

Although the plans were not adopted, officials said all parties had been proceeding as if the plans were in place. The plan for Fort Wainwright's Yukon Maneuver Area contains 18 management decisions in 12 resource categories, including fish and wildlife, cultural resources, minerals, and fire management (see table I.1). More than two-thirds of the decisions were statements of policy. Statements of policy require no additional actions to be implemented by BLM in their management of the site. The plan called for specific actions in five areas—access, fire management, forestry, cultural resources, and fish and wildlife. Actions were not completed in any of the five areas.

Table I.1: Status of Decisions in Yukon
 Maneuver Area Resource Management
 Plan as of November 1, 1993

Resource	BLM decisions		Status of decisions requiring actions		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Lands	1	0	0	0	0
Minerals	2	0	0	0	0
Vegetation	1	0	0	0	0
Fish and wildlife	0	1	1	0	0
Recreation	2	0	0	0	0
Cultural resources	1	1	1	0	0
Visual resources	1	0	0	0	0
Forestry	0	1	1	0	0
Trespass	1	0	0	0	0
Rights of way	1	0	0	0	0
Access	3	1	1	0	0
Fire management	0	1	0	1	0
Total	13	5	4	1	0

*Represents a policy decision or general goal requiring no BLM action under the present conditions.

The draft plan for the Fort Greely Area covered the same resource categories (see table I.2). It calls for a total of seven actions to be taken. One of the seven actions (a fire management plan) had been completed, and another (resolution of issues regarding an historical cabin) was under

**Appendix I
Fort Greely Maneuver Area and Yukon
Maneuver Area, Alaska**

way. The remaining five actions, including monitoring of caribou calving and development of a wildlife habitat management plan, had not been started.

Table I.2: Status of Decisions in Greely Maneuver Area Resource Management Plan as of November 1, 1993

Resource	BLM decisions		Status of decisions requiring actions		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Lands	1	0	0	0	0
Minerals	2	0	0	0	0
Vegetation	1	0	0	0	0
Fish and wildlife	0	2	2	0	0
Recreation	2	1	1	0	0
Cultural resources	0	2	1	1	0
Visual resources	1	0	0	0	0
Forestry	0	1	1	0	0
Trespass	1	0	0	0	0
Rights of way	1	0	0	0	0
Access	9	0	0	0	0
Fire management	0	1	0	0	1
Total	18	7	5	1	1

*Represents a policy decision or general goal requiring no BLM action under the present conditions.

The BLM planning team leader said that while ongoing BLM and Army management of the lands will reflect the policy decisions made in the plans, there is little likelihood that all of the actions will be completed soon because BLM does not give the military withdrawals a high funding priority. For example, in fiscal year 1992, BLM allocated less than 1 percent of the district's staff years and less than 1 percent of district funding to the withdrawn lands, which account for almost 12 percent of the land the district manages. District officials said that actions in the plans were of low priority because (1) the sites had low levels of non-military use and (2) their resources were not unique in Alaska.

The Steese/White Mountains District Office did not have a formal system to track annual implementation of the resource management plans, according to BLM officials. They said they are awaiting approval of the resource management plans before tracking implementation.

The Army also conducts resource management activities on the two Alaska sites. Officials at Fort Greely and Fort Wainwright said most of these efforts are related to environmental cleanup.

Effect of Resource Management on Military Operations

Overall, resource management had not affected military operations on the two sites, according to military officials. They said they had adjusted their operations to accommodate some resource concerns—for example, reducing operations during moose calving seasons and canceling operations during annual moose hunts. However, military officials including training directors and range operations officials said resource management activities had not constrained military operations or prevented the achievement of training objectives.

Effect of Military Operations on Resource Management

The overall effect of military operations on the sites' resources is unknown, because of a lack of available data. BLM officials said they believed that military operations had no significant effects on natural resources or resource management, and none of the BLM officials we interviewed expressed concerns about resource conditions at the sites. However, neither the BLM nor the Army had formally assessed resource conditions or the effect of military activities on resources.

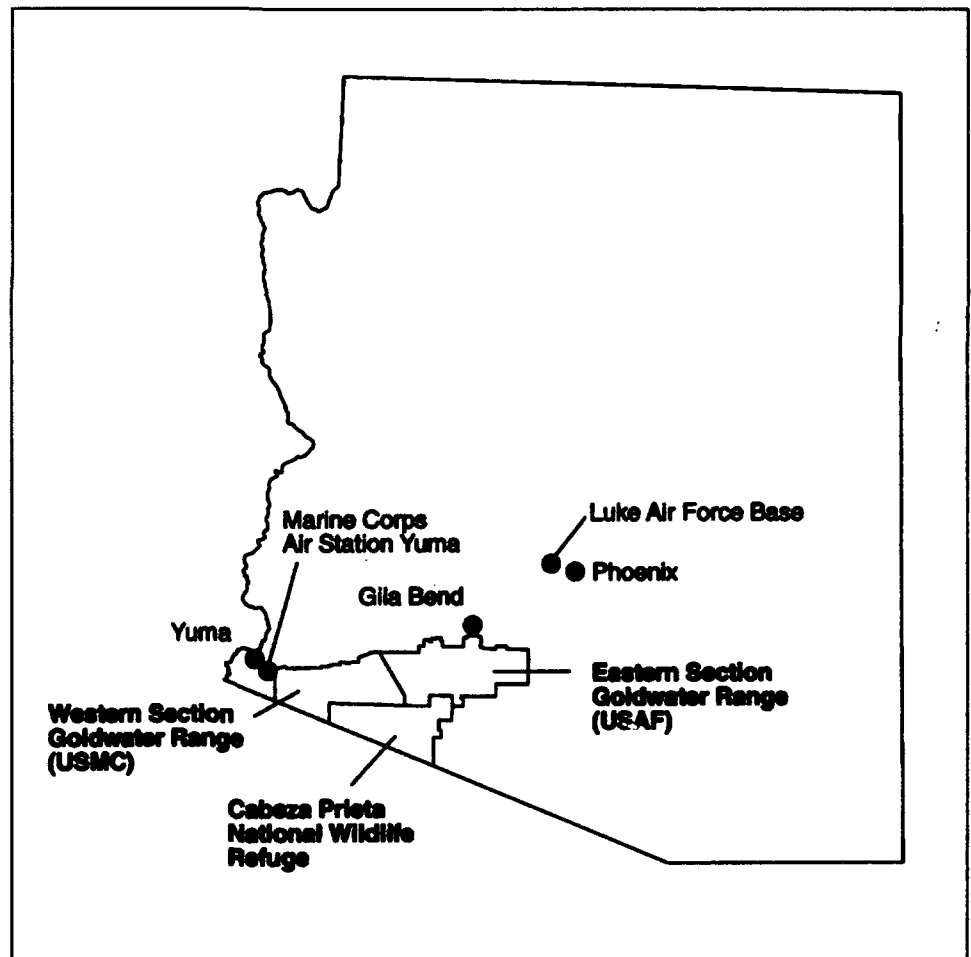
BLM's district manager said that for all practical purposes, resource management at the sites was Army-managed, since so little BLM staff time and funds were allocated to the sites. BLM district managers said that they would favor transferring resource management at the sites to military control if BLM's staffing and funding levels are not increased to more adequately address the resource issues on the lands. The Chief of the Training Division for the U.S. Army Garrison, Alaska, said that the management arrangement with BLM today was no different from the arrangement before 1986, when BLM involvement was required by the act.

Barry M. Goldwater Air Force Range, Arizona

Background

The Barry M. Goldwater Air Force Range, the second-largest land-based military range in the U.S., occupies about 2.7 million acres of Sonoran desert in the southwestern corner of Arizona (see fig. II.1). Since 1941, this training facility has been used for air-to-air combat practice and bombing mock airfields and other targets. Approximately one-third of the range lies within the Cabeza Prieta National Wildlife Refuge, which was established in 1939 to protect the Desert Bighorn Sheep. The Organ Pipe Cactus National Monument area adjoins the southeast corner of the site.

Figure II.1: Location of Goldwater Air Force Range Land Area, Arizona



The range is divided into three distinct administrative sections — Eastern, Western, and the Cabeza Prieta National Wildlife Refuge—with military

Appendix II
Barry M. Goldwater Air Force Range,
Arizona

administration divided between the Air Force and the Marine Corps. The Air Force is the overall military administrator of the site through Luke Air Force Base in Arizona, and schedules military use and controls public access in the site's Eastern section. According to the Air Force, in 1992, the Eastern section hosted about 45,000 sorties (takeoffs and landings) and was utilized about 75 percent of the time. The Marine Corps controls public access in the Western section. According to the Marine Corps, the section hosted over 11,000 sorties and was in use 352 days in 1992.

The range is characterized by rugged mountain ranges and broad valleys (see fig. II.2). Natural resource management is divided between BLM, which manages the Eastern and Western sections, and the U.S. Fish and Wildlife Service (FWS), which manages the wildlife refuge. BLM manages the Eastern section from its Phoenix district office and the Western section through its Yuma district office. FWS management of the refuge is carried out by a manager and staff in Ajo, Arizona.

Figure II.2: The Goldwater Air Force Range



Status of Actions Under the Military Lands Withdrawal Act

BLM issued a resource management plan for the Goldwater Range in 1989.¹ BLM's plan was based on a 1986 plan developed by the University of Arizona under a contract with the Air Force. A BLM official said the plan was modified to reflect BLM's regulations, address specific land use management requirements mandated by the Federal Land Policy and Management Act of 1976 and Public Law 99-606, and generate specific management actions for resources assigned to BLM's jurisdiction. BLM's plan describes specific management steps for 12 resource categories, including water, soils, wildlife, cultural resources, and recreation (see table II.1). The plan calls for 36 specific actions, such as managing desert tortoise habitat, monitoring water table levels, and developing visitor use maps.

Table II.1: Status of Decisions in Goldwater Range Resource Management Plan as of November 1, 1993

Resource	BLM decisions		Status of decisions requiring action		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Land uses	4	1	0	0	1
Soils	1	2	1	0	1
Water	2	3	2	1	0
Botanical resources (vegetation)	1	2	0	2	0
Wildlife	1	5	0	3	2
Recreation	7	7	5	2	0
Cultural resources	0	2	0	0	2
Visual resources	2	1	0	0	1
Roads and vehicle use	4	3	1	1	1
Areas of critical environmental concern/other	0	7	2	2	3
Wild horses and burros	0	3	3	0	0
Fire management	1	0	0	0	0
Total	23	36	14	11	11

*Represents a policy decision or general goal requiring no BLM action under present conditions.

¹The Military Lands Withdrawal Act requires Interior to develop and implement resource management plans. At Goldwater Range, BLM developed the plan for the withdrawn lands. The FWS manages Cabeza Prieta National Wildlife Refuge lands, which were not withdrawn by Public Law 99-606, under an overall refuge management plan.

Of the 36 actions called for in the resource plan, BLM had completed 11 and started an additional 11. For example, BLM had completed actions to create a cultural resources plan, assess cultural resource sites, and designate the Tinajas Altas Mountains and the Mohawk Mountains and Sand Dunes as areas of critical environmental concern. BLM had started but not completed efforts to inventory endangered plants and update a vegetation map of the site.

Some of the actions involved activities conducted jointly by BLM and the military services. For example, the Air Force helped fund archaeological projects, allowing BLM to complete more archeological surveys within the range than on similar BLM land off site, according to a BLM archaeologist. The Air Force and BLM also developed interagency agreements for joint construction of visitor information signs on the state highway crossing the site and for fencing that prevents trespassing livestock from entering prescribed areas of the range. These joint efforts are promoted as a "partnership in the desert" by BLM and Air Force officials in a videotape shown to site visitors. BLM officials told us they had also undertaken some joint management efforts with the Marine Corps, including fencing ancient Native American petroglyphs to protect these cultural resources from damage by wheeled military vehicles, placing public information signs at site entrances, creating visitor access permit procedures, and conducting joint surveys of bighorn sheep and water holes. BLM had not started 14 actions called for in the plan. These include, for example, creating an inventory of water resources, inventorying the burro population, and preparing a burro capture-and-removal plan.

In addition to providing assistance with items in BLM's plan, the Air Force and the Marine Corps conduct additional natural resource-related work through military environmental management programs at Luke Air Force Base and Marine Corps Air Station, Yuma. Actions undertaken by the military include a study of plant life.

Neither the Phoenix nor Yuma BLM offices had a formal system to track annual implementation of the resource management plan, according to BLM officials. Officials at Phoenix and Yuma said they saw no need for such a system, since there is a BLM review of management plans every 5 years.

Effect of Resource Management on Military Operations

Overall, resource management had little effect on military operations at the range. Air Force officials said they knew of no significant effect, and they had been able to accomplish training objectives within constraints of environmental programs. Similarly, a Marine Corps range official said that

resource management programs had not caused any significant delays or mission cancellations. He said the Marine Corps had also made some adjustments to accommodate natural resource requirements, such as not flying below a certain minimum altitude over the Cabeza Prieta Wildlife Refuge, or not flying along specific routes, but these adjustments had not precluded meeting training requirements successfully.

BLM and Air Force officials said that their joint management of natural resources was more time-consuming than single-agency management. While the Air Force funds most of the natural and cultural resources projects on the range, Air Force officials said that joint management benefited the military because the public was more likely to accept range management strategies with the involvement of agencies like BLM and FWS. According to the manager of BLM's Lower Gila Resource Area, joint management has significantly changed the way the military has done business. Under the joint management arrangement, he said, military actions on the Goldwater Range are conducted in a more open public forum and are therefore subject to agency and public oversight.

Effect of Military Operations on Resource Management

The effect of military operations on resource management is unclear, primarily because of limited data. Neither Air Force nor BLM officials had comprehensive information on the condition of site resources or the effects of military operations on those resources. A primary concern about negative effects of military operations centered on the issue of aircraft noise. However, military officials at both Luke Air Force Base and the Noise and Sonic Boom Impact Technology Center at Wright-Patterson Air Force Base said that without baseline data on animal populations, no conclusions could be drawn about the long-term effects of aircraft noise. Officials indicated that the Air Force, BLM, and contractors are still assessing the effects on wildlife of noise from military operations.

The manager of the Cabeza Prieta Wildlife Refuge said that although he did not have conclusive data, he believed aircraft overflight was a "harmful" use of the refuge due to wildlife disturbance and displacement. During 1993, under the terms of an agreement between the Marine Corps and the refuge that certain refuge uses would require the manager's approval, the manager said he decided not to allow Marine Corps use of low-level refuge airspace during a military training exercise. However, he said he was overruled by the Secretary of the Interior. The refuge manager said another concern was that jets sometimes flew below the established minimum altitudes over the refuge. Air Force officials said their radar

system could track aircraft altitude in airspace over the refuge if needed, but that they had received very few complaints from the refuge and there are gaps in radar coverage.

On the other hand, BLM officials and the refuge manager said that military use of the Goldwater Range may have benefited some natural resources, in that restricted public access may have reduced detrimental public-use effects. For example, BLM officials said the reduction of off-road vehicle use had resulted in less disturbance of soils and vegetation than would have occurred without military restrictions.

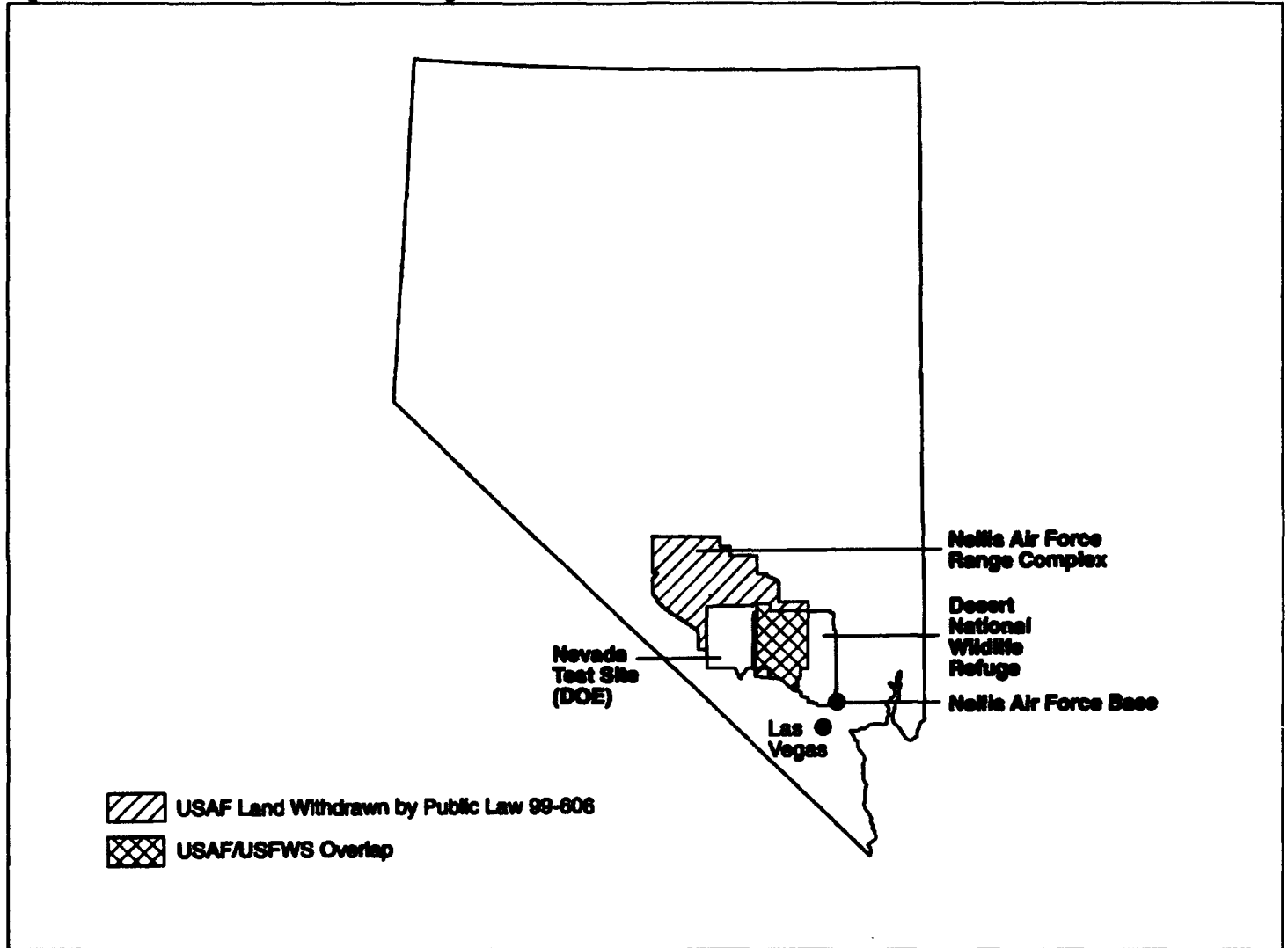
While the effect of military operations on natural resources was unclear, military operations had not adversely affected resource management routines. BLM and FWS officials said that although their work on the site is restricted to breaks in military operations, this had not prevented them from accomplishing needed activities. For example, BLM officials told us that most of the site is not used for active targeting by the military, and as a result, is largely open for resource managers' use. In addition, BLM officials said that joint military/BLM resource management—including sharing expertise and funding—enabled BLM to make good progress implementing resource plan activities. BLM officials said that under this joint arrangement, BLM primarily provided staff and the Air Force or Marine Corps provided the funding. However, neither the Phoenix or Yuma District offices could provide data to compare expenditures for resource management on the Goldwater Range site with expenditures for non-military areas.

Nellis Air Force Range, Nevada

Background

The Nellis Air Force Range, established in 1940, is the largest land-based military range in the United States, occupying about 3 million acres of high Nevada desert near Las Vegas, Nevada (see fig. III.1). Over one-fourth of the site lies within the Desert National Wildlife Refuge, established in 1936 to protect the Desert Bighorn Sheep. Air and ground-based military activities, including pilot training, combat exercises involving units from several countries, and various test and evaluation activities, occur on both the refuge and on the remaining three-fourths of the site. In fiscal year 1989, approximately 60,000 takeoffs and landings occurred on the Nellis Air Force Range. The site is bordered by other federal lands, including the Department of Energy's Yucca Mountain site, which is for potential storage of high-level nuclear waste, and the Energy Department's Nevada Test Site, which is used for nuclear program testing and development.

Figure III.1: Location of Nellis Air Force Range Land Area, Nevada



The site's terrain is characterized by mesas, lake basins, and rugged, isolated mountain ranges (see fig. III.2).

Figure III.2: The Nellis Air Force Range



The Air Force, the overall administrator for the range, schedules Air Force use and controls public access to the site. In addition to the Air Force, the Sandia National Laboratory uses portions of the site to test and develop weapons, and Energy Department's Yucca Mountain site and Nevada Test Site use portions of the site in conjunction with their activities.

Natural resource management activity is divided between BLM and FWS, with BLM managing natural resources on all lands other than the Desert National Wildlife Refuge and FWS managing natural resources on the refuge. BLM's management is done through its Las Vegas District and Caliente Resource Area Offices; FWS' through a refuge manager and staff in Corn Creek, Nevada, and a project leader in Las Vegas.

Status of Actions Under the Military Lands Withdrawal Act

In February 1992, BLM issued a resource plan describing specific decisions for 16 resource categories, such as management of wildlife habitat, areas of critical environmental concern, and wild horses (see table III.1).¹ At the time of our review, BLM and the Air Force had agreed formally on their respective roles in implementing the plan. BLM had also developed an implementation schedule for the actions with a mechanism enabling managers to track accomplishments and, for many actions, a measuring system defining "units of accomplishment."

¹The Military Lands Withdrawal Act requires Interior to develop and implement resource management plans. At the Nellis Range complex, BLM developed the plan for the withdrawn lands. The FWS manages Desert National Wildlife Refuge lands, which were not withdrawn under Public Law 99-606, under an overall refuge management plan.

**Appendix III
Nellis Air Force Range, Nevada**

Table III.1: Status of Decisions in Nellis Range Resource Management Plan as of November 1, 1993

Resource	BLM decisions		Status of decisions requiring action		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Lands	4	0	0	0	0
Minerals	0	1	0	0	1
Vegetation	0	5	3	2	0
Wildlife	0	8	4	4	0
Recreation	1	0	0	0	0
Cultural resources	3	0	0	0	0
Visual resources	3	0	0	0	0
Forestry	1	0	0	0	0
Access	1	0	0	0	0
Wild horse and burro	0	8	4	3	1
Areas of critical environmental concern	1	1	0	0	1
Natural area	1	0	0	0	0
Livestock grazing	1	3	3	0	0
Soil, water, air	3	0	0	0	0
Wilderness	1	0	0	0	0
Fire management	1	0	0	0	0
Total	21	26	14	9	3

*Represents a policy decision or general goal requiring no specific BLM actions under the present conditions.

BLM's plan calls for 26 specific actions, such as constructing fencing, removing burros, and developing water sources for wild horses. As of November 1993, BLM had completed its work on three of these actions. It had removed over 1,400 wild horses and had designated a portion of the Timber Mountain Caldera National Monument as an area of critical environmental concern, which BLM's Resource Area Manager said provided the monument additional protection from damage or misuse. BLM had started work on nine other actions, including preliminary surveys and monitoring of riparian areas, initiating project proposals and designs for water sources, and designing grazing-related water development, pipelines, and corrals for livestock management of the Bald Mountain allotment. BLM had not started the remaining 14 actions, which include conducting an inventory of wildlife habitat and monitoring livestock grazing use levels for the Bald Mountain allotment.

In addition to BLM's resource management on the site, Nellis Air Force Base conducts its own natural resource-related activities through its environmental management unit. The unit spent over \$1 million for range environmental management activities in fiscal year 1992, including wildlife studies, remediation of prior range contamination, and compliance with environmental laws.

Effect of Resource Management on Military Operations

Overall, the level of resource management occurring to date had no substantive effect on military operations on the site, according to Air Force officials. They said no resource management activities, including those conducted by BLM or FWS had caused significant delays or mission cancellations.

However, the Air Force had adjusted some of its operations to accommodate resource protection. Air Force officials said they established training air routes and altitude restrictions partly to avoid sensitive resource areas and located target areas away from sensitive areas, primarily placing targets on the desert floor in dry lake basins.

Effect of Military Operations on Resource Management

Available data indicate that military operations are having some negative effects on resources, but the data are too limited to draw overall conclusions, according to Air Force officials. The information on negative effects is contained in the Special Nevada Report, a contractor-prepared document assessing military land use in Nevada for the Air Force, Navy, and Interior Departments. The report, which is a compilation of existing literature, concludes that while military activities on the site could affect the survival of species such as the threatened Desert Tortoise, the overall effects of military operations on natural resources cannot be determined based on available information. The report also cites negative effects on cultural resources caused by heavy ordnance contamination, training activities, and construction of roads and military facilities.

BLM officials said they had conducted very few resource management activities on the range. They said that although the management actions are to be implemented over a 20-year period, progress even on this timetable has been slow. BLM managers cited limited funding and access restrictions as two reasons for the slow progress.

- BLM's manager of the Caliente Resource Area said the lands within the range generally have a lower funding priority than other lands the area

office manages. This is the case, he said, because the military presence leaves the land largely inaccessible and, in some locations, contaminated with unexploded bombs and other military equipment. As a result, the public-use options are limited, and BLM's expectations for the future use and management of the lands are lower than its expectations for using land outside the military withdrawal. Available cost data support this statement, in that BLM lands within the site account for about 41 percent of the lands managed by the Area office but received only about 28 percent of the Area office's expenditures (\$159,296 out of \$574,356 in fiscal year 1992). BLM's Nevada State office provided most of that funding (\$148,666) specifically allocated for wild horse gathering.

- BLM officials told us it is more difficult to visit the BLM-managed lands on the range than similar BLM lands not under Air Force control. For example, BLM employees must obtain the Department of Defense (DOD) security clearances to enter range areas crucial to BLM's management of its horse and burro program without an Air Force escort. Even with proper clearances, BLM officials said they were generally restricted to weekend access on some portions of the range. They had no access to other range areas, even on weekends and holidays.

The FWS refuge officials cited the same limitations of funding and access and also provided us with a list of incidents and general conduct of the Air Force and Energy that they believed impeded resource management and, in some cases, violated the terms of their working agreement. These incidents included the following:

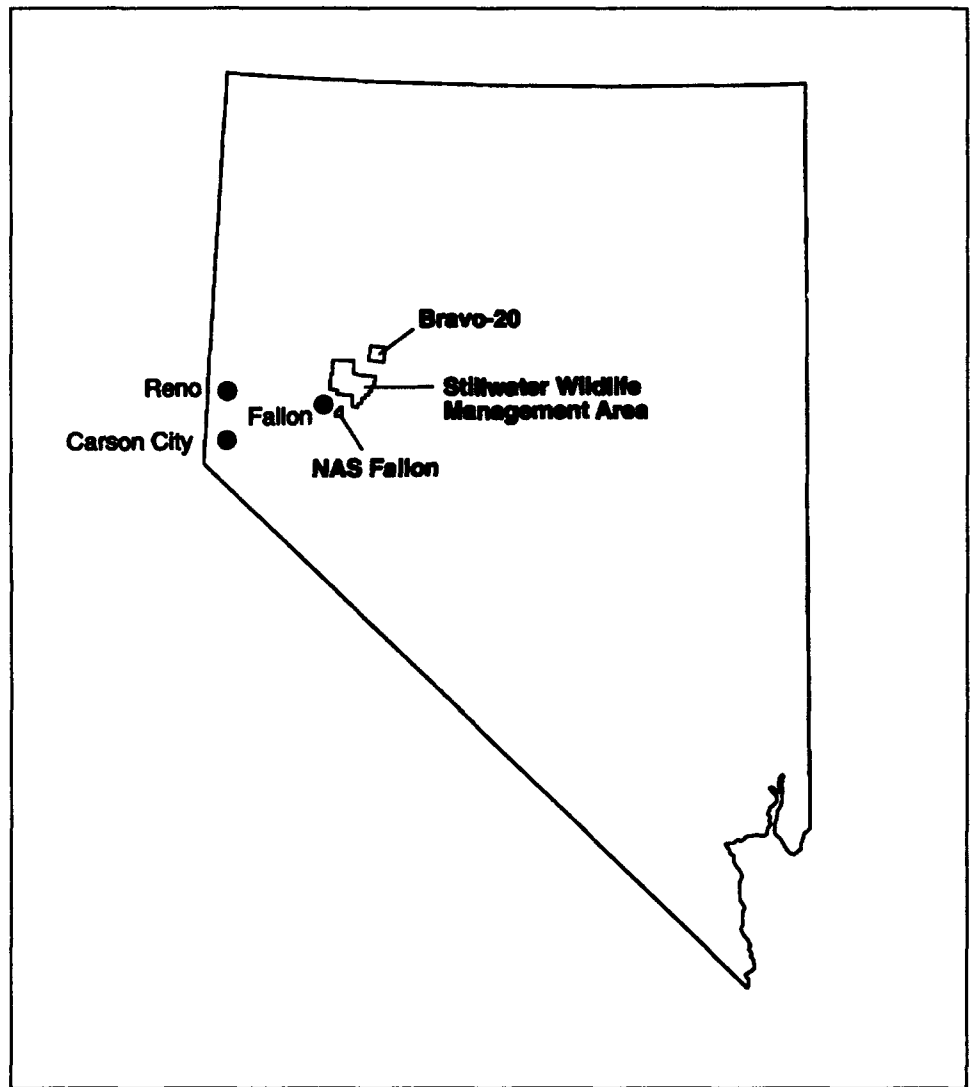
- The Air Force constructed and relocated military roads, targets, and facilities on the refuge without coordinating with the refuge manager or obtaining FWS approval, as required by their agreement.
- The Air Force conducted air-to-ground bombing outside of approved areas. On three occasions since 1979, this bombing in unapproved areas involved a catchment for drinking water for sheep.
- The Air Force left tank targets on the refuge that were contaminated by depleted uranium shells. Although the Nuclear Regulatory Commission issued the Air Force a permit for the use of depleted uranium, according to FWS, it was never consulted about storing the contaminated tank targets on the refuge.
- Energy's use of some portions of the refuge resulted in FWS personnel being denied access to some refuge areas, including a 23,680-acre Research Natural Area. This area is legally protected from all disturbances. Because of the access restrictions, refuge staff were not able to monitor the area or ensure that it remains undisturbed.

Bravo-20 Bombing Range, Nevada

Background

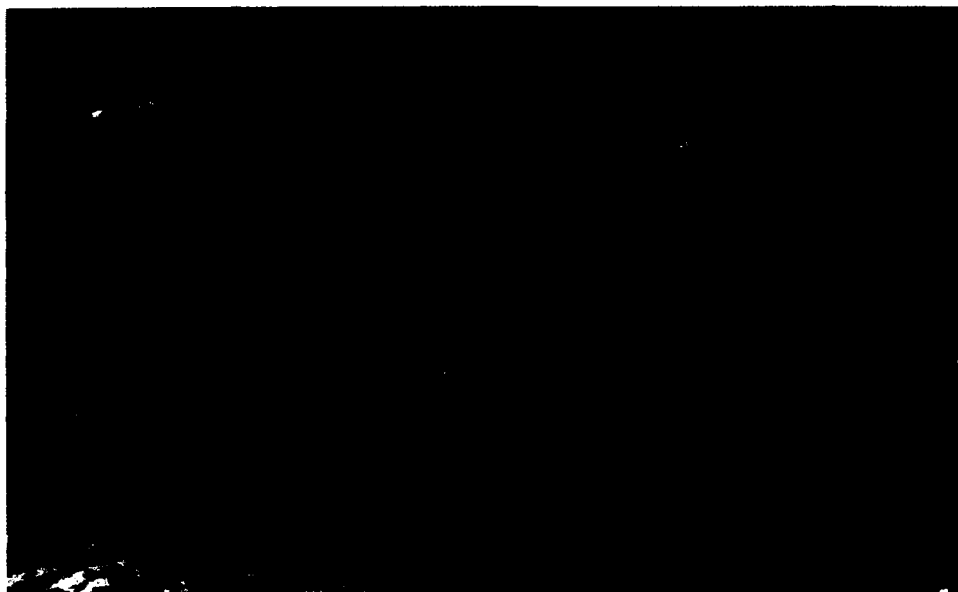
The Bravo-20 Bombing Range comprises about 41,000 acres in western Nevada about 80 miles northeast of Reno (see fig. IV.1). It is used for a variety of bombing and gunnery training. The range lies within the 3-million acre Lahontan Resource Area and about 7 miles north of the 200,000-acre Stillwater Wildlife Management Area, which includes the Stillwater National Wildlife Refuge and the wetland areas around it.

Figure IV.1: Location of Bravo-20 Bombing Range Land Area, Nevada



The site is primarily a dry lake bed with sandy, alkali soil and little vegetation (see fig. IV.2). About half of the land is withdrawn public land, and the remaining half, previously leased, was obtained by the Navy in 1982 through condemnation procedures.

Figure IV.2: The Bravo-20 Bombing Range



The Navy administers the range through Naval Air Station (NAS) Fallon, located near Fallon, Nevada, which also administers other ranges in the area. The Navy uses Bravo-20 for live ordnance and gunnery training, laser target practice, and to jettison unsafe ordnance. The Navy conducts about 650 training flights per month on the range.

According to BLM's Lahontan Resource Area manager, BLM is responsible for resource management on the range as well as other lands it manages within the Lahontan Resource Area. He manages the area from the Carson City District Office. FWS manages the Stillwater Wildlife Refuge through a refuge manager and staff in Fallon.

Status of Actions Under the Military Lands Withdrawal Act

BLM has not developed a resource management plan for the range. On May 27, 1988, the director of BLM's Nevada office issued a decision that a resource management plan was unnecessary because the range is used for live ordnance practice, is closed to the public, and is therefore not

available for the resource management purposes identified in the Military Lands Withdrawal Act. Also cited in this decision was the amount of unexploded ordnance on the range. A 1980 Environmental Assessment Report on Bravo-20 stated that 60-75 unexploded bombs may have escaped detection each year since 1950. Many of these unexploded bombs lie below the surface. BLM managers told us they also consider the range too dangerous for BLM employees or the public to enter.

Because no resource plan exists, officials at NAS Fallon have not developed agreements with BLM that address how to conduct resource management on the range. However, they have eight agreements in place with BLM, FWS, and other organizations to address issues such as overflight of public lands by training aircraft and procedures for removing ordnance dropped outside Navy ranges.

NAS Fallon has its own natural resource management plan for the areas it manages. However, the natural resource director at NAS Fallon said that resource management activities will not be conducted on Bravo-20. The 1991 plan took into account NAS Fallon and all four of NAS Fallon's ranges. The plan contains 72 proposed actions in 4 resource areas—land management, including cultural and historical, fish and wildlife, urban forestry and outdoor recreation. According to NAS Fallon's natural resource director, none of the proposed actions are to be implemented on Bravo-20. However, he said the Navy does conduct environmental evaluations of proposed activities on Bravo-20 in accordance with the National Environmental Policy Act, except within the high impact area.

Although the Navy has excluded Bravo-20 from natural resources actions, it is planning for cultural resource surveys on portions of the range. The Navy and FWS are collaborating to develop a model that would allow them to predict where cultural resources may be found throughout all of NAS Fallon's ranges. The natural resource director at NAS Fallon said that as part of this model, the Navy will survey 5 percent of the lands within Bravo-20 in 1994, excluding the high impact areas.

Effect of Resource Management on Military Operations

Military operations on Bravo-20 have not been affected by resource management activities, because BLM and the Navy are not managing resources on Bravo-20. In addition, according to the NAS Fallon assistant range manager and range operations planning officer, current training programs have not been modified or affected due to any resource management concerns.

Effect of Military Operations on Resource Management

As can already be seen from the explanation above, military operations have a significant effect on the extent to which resource management can occur on the site. The type of training and the existence of unexploded ordnance have caused both BLM and the Navy to conclude that resource management activities are too dangerous to conduct on the site.

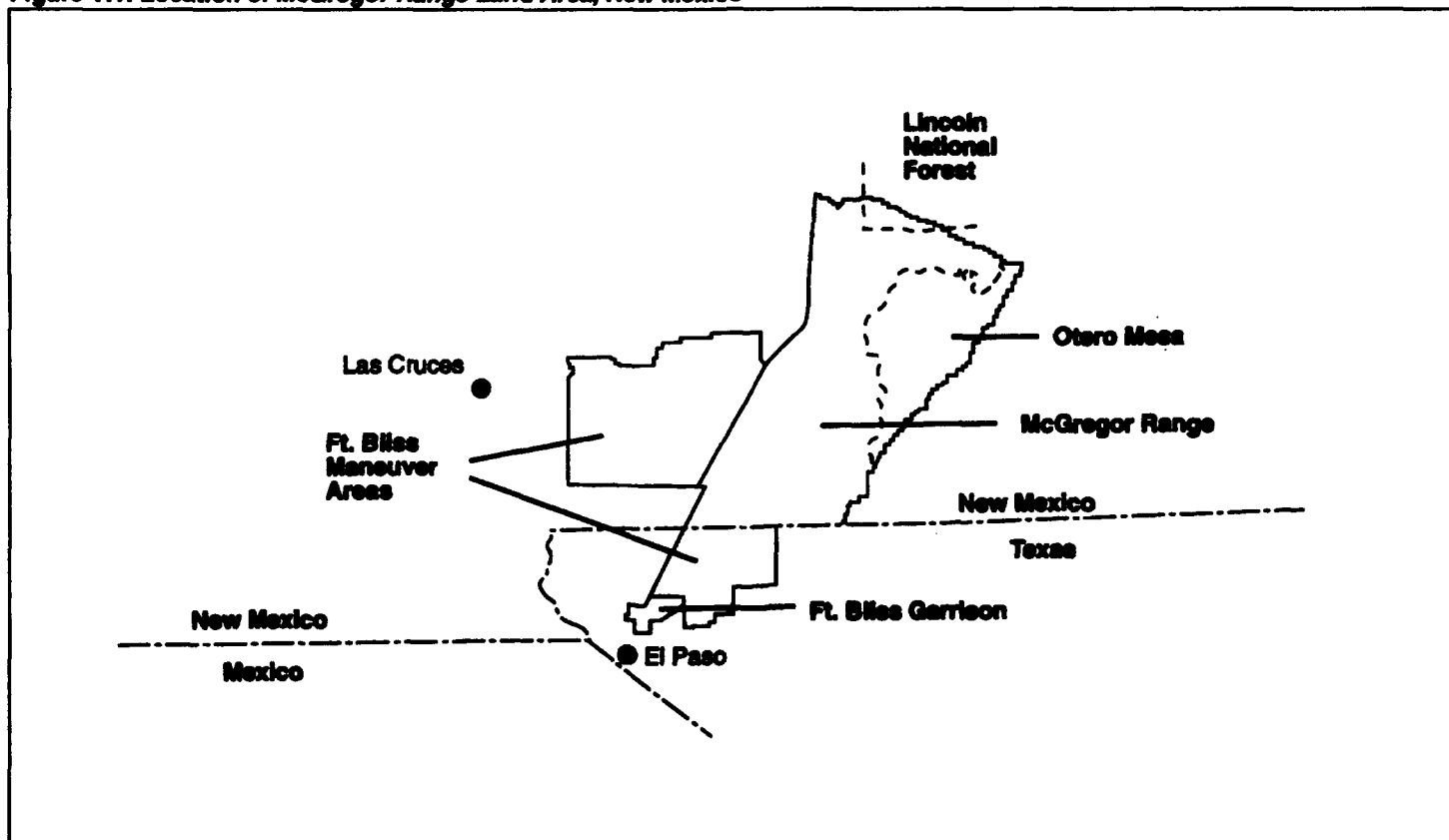
Aircraft flying to Bravo-20 from NAS Fallon also affect resource management on nearby FWS areas. In a 1990 report to the Director on the effects of secondary uses on its refuges, FWS officials listed military air exercises as "harmful" at the Stillwater refuge because the exercises created major wildlife disturbances from noise as well as air and fuel pollution. The manager of the Stillwater Wildlife Management Area said that in the past Navy planes had dumped fuel within refuge boundaries. However, he said that fuel dumping has not been a problem since he met with NAS Fallon and Nevada officials in the late 1980s. He also said the Navy has been responsive to limiting low overflights over the refuge.

McGregor Range, New Mexico

Background

The McGregor Range is located in south-central New Mexico, northeast of El Paso, Texas (see fig. V.1). Originally withdrawn from public domain in 1957 for Army use as an artillery and missile firing range, the range is now a site where U.S. and Allied personnel train in the use of air defense weapon systems, including missiles and conventional air defense weapons. The range is also used for gunnery, bombing, and tactical training for helicopters and fixed-wing aircraft and for troop and vehicle ground maneuvers. Its southwest corner is a maneuver area used by tanks and other vehicles.

Figure V.1: Location of McGregor Range Land Area, New Mexico



The range includes about 700,000 acres that vary from flat valley floor to foothills and from rolling grasslands to steep mountainous terrain. Most of the acreage is withdrawn public land, but about 72,000 acres is Army

fee-owned land and about 18,000 acres is U.S. Forest Service land. The range contains a rich assortment of wildlife and other natural and cultural resources, including mule deer and antelope herds, a large area of rare black grama grass, and prehistoric cultural sites. The Otera Mesa area of the range, in particular, has been identified by environmental groups as a location with potentially sensitive habitat areas for plants and wildlife (see fig V.2).

**Figure V.2: The Otera Mesa on the
McGregor Range**



The Army administers military operations on the McGregor Range through Fort Bliss, Texas. Personnel at the Fort Bliss coordinate training operations and control access to the range.

BLM is the land management agency with responsibility for withdrawn public lands on the McGregor Range. It carries out its work on the McGregor Range through the Caballo Resource Area of the Las Cruces District Office. BLM also manages lands adjacent to the McGregor Range, as does the U.S. Forest Service.

Status of Actions Under the Military Lands Withdrawal Act

BLM issued a resource management plan for McGregor Range in September 1990. The plan, designed to cover a 15-year period, included 51 specific action items for 8 categories of resources, including wildlife, livestock grazing, recreation, and cultural resources (see table V.1). BLM's state director and the Fort Bliss chief of staff also signed an agreement setting out the policies, procedures, and responsibilities for implementing the resource management plan. The plan includes an implementation and monitoring strategy in which BLM staff are to annually identify funding priorities, document completed activities, and prepare a report summarizing results.

**Table V.1: Status of Decisions in the
McGregor Range Resource
Management Plan as of November 1,
1993**

Resource	BLM decisions		Status of decisions requiring action		
	No action needed*	Action needed	Not started	Started but not completed	Completed
Lands, realty, access	0	2	0	0	2
Minerals	9	4	0	0	4
Soil, water, air	0	8	5	2	1
Vegetation	0	5	2	2	1
Livestock grazing	11	6	1	3	2
Wildlife	2	19	13	5	1
Recreation	2	3	1	0	2
Cultural resources	1	4	3	0	1
Total	25	51	25	12	14

*Represents a policy decision or general goal requiring no specific BLM actions under the present conditions.

Of the 51 specific actions called for in the plan, BLM had implemented 14 as of November 1993. For example, with regard to minerals, BLM completed steps that would open a portion of the range for mineral and geothermal leases. The Caballo Area manager said BLM offered leases adjacent to McGregor Range to test the level of interest, but because they did not find interested bidders, they have no current plans to offer the McGregor leases. In addition, the Fort Bliss range planner said the Army is concerned that oil and gas exploration would be in conflict with training activities. For the grazing program, which BLM administers on portions of the range, BLM conducted annual monitoring studies of the condition of the vegetation to help ensure that overgrazing does not occur.

For the other resource categories included in the plan, BLM's actions have been more limited. For example, although BLM's plan calls for substantial activity to inventory and monitor wildlife and to develop and implement habitat management plans, less progress has been made in this area. The manager of BLM's Caballo Resource Area said that his office was beginning to prepare plans, starting with the foothills area of the range, that would tie together the management of several resources, including soil, water, habitat, and vegetation. He said that this planning approach will allow BLM to look at present and future range uses and make better management decisions about the entire ecosystem. He added that implementing the resource management plan is usually based on more current resource assessments, and some decisions may not be implemented exactly as described in the plan.

Army staff at Fort Bliss are also involved in resource management activities. For example, the Army has completed a master plan for the range and, according to the range planner, is developing natural resource and cultural resource management plans for Fort Bliss, both of which are expected to include the range. The range planner at Fort Bliss said these plans are being done to ensure compliance with the National Environmental Policy Act and in preparation for the draft environmental impact statement, required by November 1998 for continued withdrawal of the range beyond the period specified in the 1986 act.

Effect of Resource Management on Military Operations

Overall, resource management has not adversely affected military activities on McGregor Range. Discussions with scheduling officials, the range planner, staff responsible for natural and cultural resource issues at Fort Bliss, Army officials who conduct training on the range, and BLM's area manager indicated that training objectives are accomplished. None suggested that a training objective was not met due to resource management constraints.

Several officials expressed concerns, however, about meeting future training needs because of the environmental constraints the Army must meet. For example, Fort Bliss officials are considering expanding training activities on the Otera Mesa area of the range. According to the range planner, the Commander of the 3rd Armored Cavalry Regiment asked Fort Bliss to develop this area for tank maneuvers to provide more realistic long-range tank engagement scenarios. Although Fort Bliss' current strategy is not to allow tracked vehicles on the mesa, it is considering the area for increased truck and troop maneuvers. However, there has been

strong public concern about protecting Otera Mesa. For example, the Army's assessment of the possible environmental impacts from a 1993 training exercise involving Army, Air Force, Navy, and Marine personnel received substantial negative public comment primarily because of the lack of data on the cumulative environmental effects of military operations on the mesa. Fort Bliss officials said they will prepare an environmental impact statement to address potential future uses of the mesa, but they are unsure what training activities ultimately will be allowed.

Effect of Military Operations on Resource Management

The effect of military operations on resource management is unclear, primarily because of limited data. According to Fort Bliss and BLM officials, they have no baseline data on the condition of natural and cultural resources on McGregor, nor have they studied the cumulative effects of military operations on those resources. Although Fort Bliss acknowledged the need to develop baseline data in 1977 as part of an environmental impact statement for withdrawing the land, Fort Bliss officials said the information was never developed. Officials at Fort Bliss are now planning to develop this baseline data as part of the natural resource management plan currently under development. Additionally, the baseline data is expected to be part of the 1998 environmental impact statement the Army must complete in order to seek an extension of the withdrawal from Interior.

In the absence of comprehensive data on resource conditions, officials are of the opinion that military operations both benefit and adversely affect resources. Benefits occur, they said, because military activity restricts public access and thus provides less opportunity for vandalism, damage to soils, and similar effects. In addition, the water rights acquired by Fort Bliss provide water for wildlife that would not otherwise be available on the range, and both mule deer and antelope have flourished. Potential harmful effects cited by those we spoke with included hazards to wildlife, plants, and soils from missiles and other debris falling in the impact area of the range; vehicle maneuvers which impact soils, damage plants, and disturb wildlife; and increased frequency of range fires.

While the effect of military operations on natural and cultural resources was unclear, military operations had a definite effect on the level of resource management activities. The Chief of Fort Bliss' Directorate of Environment said Fort Bliss officials viewed BLM's role on the range as limited to managing the grazing program, assisting with fire suppression if requested, and possibly helping to administer recreation activities. The

range planner at Fort Bliss said the Army does not share authority with BLM because of a widespread feeling that BLM wants to implement multiple-use activities without regard to the Army's training needs. BLM's Caballo Area manager said he recognizes the Army's authority to limit multiple uses on McGregor, but the Withdrawal Act requires him to develop and implement appropriate resource uses and protections.

BLM expenditures for resource management indicate that the McGregor Range is receiving a proportionate share of BLM funds. According to data provided by BLM, the McGregor Range represents about 23 percent of the land managed by the Caballo Area and in fiscal year 1992 received about 21 percent of the area's funding.

Comments From the Department of Defense



ECONOMIC SECURITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3300 DEFENSE PENTAGON
WASHINGTON, DC 20301-3300



25 MAR 1994

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "NATURAL RESOURCES: Defense and Interior Can Improve Management Under Public Law 99-606," dated February 2, 1994 (GAO Code 392754/OSD Case 9588). The DoD concurs with the report.

The DoD agrees that liaison activities with Department of Interior agencies should be improved. To that end, the Office of the Secretary of Defense will ensure that the Military Departments continue to refine agreements with Department of Interior agencies so that needed access by Interior officials is assured. The DoD also agrees that baseline data is needed to assess the cumulative effects of current and proposed military operations on range and natural resource conditions. In conjunction with the requirements of Public Law 96-606, by 1998, the Services will be developing baseline information that will enable the assessment to be accomplished.

The detailed DoD comments on the report recommendations are provided in the enclosure. The Department appreciates the opportunity to comment on the draft.

Sincerely,

Robert E. Bayer
Deputy Assistant Secretary of Defense
for Economic Reinvestment and
Base Realignment and Closure

Enclosure



GAO DRAFT REPORT - DATED FEBRUARY 2, 1994
(GAO CODE 392754) OSD CASE 9588

NATURAL RESOURCES: DEFENSE AND INTERIOR CAN IMPROVE
MANAGEMENT UNDER PUBLIC LAW 99-606

DEPARTMENT OF DEFENSE COMMENTS ON
THE GAO RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Secretaries of the Army, Navy, and Air Force to improve liaison activities with Interior agencies to ensure that local Bureau of Land Management and U.S. Fish and Wildlife Service officials have reasonable access to withdrawn lands and military managers. (p. 17/GAO Draft Report)

DOD RESPONSE: Concur. The Office of the Secretary of Defense will ensure that the Military Departments continue to refine agreements with Department of Interior agencies that will provide them access consistent with their needs for timely, on-site management of withdrawn public domain lands. Major commands and installations which have withdrawn lands under their control will maintain open communication with Bureau of Land Management and U.S. Fish and Wildlife officials to ensure that natural resources management requirements are carried out. When access is requested by any of these officials, arrangements are made by the commanding officer of the base for their visit including stopping activities which may be dangerous. In addition, visitors will be escorted to ensure their safety.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Secretaries of the Army, Navy, and Air Force develop improved baseline data to assess the cumulative effects of current and proposed military operations on range and natural resource conditions. (p.17/GAO Draft Report)

DOD RESPONSE: Concur. As part of the Environmental Impact Statement process required by Public Law 99-606, to be completed by 1998, baseline data will be developed which could be used to assess the cumulative effects of military operations. For example, the Army is currently implementing its Land Condition Trend Analysis Program on approximately 60 installations. That program provides a baseline inventory of natural and cultural resources and monitors trends and conditions as the land is used. The data is then used to make management decisions. The Navy will also be developing baseline data by 1998 for the Bravo 20 Range managed by Fallon Naval Air Station as part of the Environmental Impact Statement process required by Public Law 99-606. The western portion of the Goldwater Range is part of the ongoing multi-year Environmental Impact Statement process for the complete complex of ranges scheduled or managed by the Marine

Now on p. 14.

Now on pp. 14-15.

Appendix VI
Comments From the Department of Defense

Corps Air Station, Yuma, Arizona. Key Interior agencies are participating in this process, providing significant input in the scoping and document evaluation stages. When completed, that document will form a comprehensive baseline for natural and manmade conditions, will examine all significant current operations in regard to site specific impacts and overall effects on the range complex and adjacent areas. For other withdrawn lands, the primary Department of Interior agencies will be invited to participate in the comprehensive environmental planning required for renewals and reviews under the Federal Lands Policy Management Act of 1976. That will provide a logical and time responsive process for ensuring baseline data requirements. The Air Force has undertaken initiatives to inventory wetlands, endangered species, and archeological sites at the Nellis and Goldwater Ranges. These inventories will be used to prepare integrated management plans to ensure proper stewardship. In addition, Goldwater Range is preparing a Troop Orientation Video to inform military personnel of the existence of sensitive resources on the range and the importance of protecting the resources.

Comments From the Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

MAR 24 1994

Mr. Frank C. Conahan
Assistant Comptroller General
General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

We appreciate the opportunity to review the draft General Accounting Office (GAO) report in response to Congressman Richard Ray who requested that the GAO examine the experiences of the Department of Defense (DOD) and other Federal resource agencies that jointly manage lands withdrawn for military use under Public Law 99-606. We find the report substantially accurate and reflective of the current situation. However, a few points were overlooked which reflect upon understanding the partnership between the DOD and the Bureau of Land Management (BLM) at the subject military installations.

Partnership

In the context of Public Law 99-606, the combined efforts and funding of the military services and the BLM should be analyzed, not just the BLM contribution. The military services provide the bulk of the funding while the BLM primarily provides the expertise of its personnel at each of the subject installations. Although this partnership was documented throughout most of the report, it was substantially overlooked in the Alaska portion of the report.

In addition, the BLM and the DOD partnership has been expanding at the national level as a result of Public Law 99-606 and similar legislation, which mandate a partnering of our agencies and express the desire of the Administration that the agencies work together to capitalize on each other's strengths. The BLM has established the position of "Military Programs Coordinator" to provide a single point of contact for all military issues in the BLM. The Army Environmental Center (AEC) and the BLM are negotiating a Memorandum of Understanding (MOU) on mutual resource management support, and the AEC has requested that a BLM employee be located at the AEC as a liaison. In addition, the BLM is considering a U.S. Army Corps of Engineers liaison to be assigned within the BLM headquarters.

Base Line Data

The report mentioned a lack of base line data; but in the context of the subject installations, a lack of base line data is not critical. The installations have been in use since the 1940's and 1950's. Generally, the military impacts during the decades have resulted in a new base line; and it is this base line which must be identified. Any proposed significant changes in the military training regime are

**Appendix VII
Comments From the Department of the
Interior**

2

measured against this current base line, and the impacts are addressed in individual environmental impact statements (EIS's). It is anticipated that base line data will be developed as a part of the withdrawal extension EIS's, unless completed earlier.

Priorities

Generally, resource management issues on existing military installations, where the training regime is not changing, are not critical. Public access to military installations is controlled, which greatly limits public use impacts on these lands. In addition, the military services manage installation resources with emphasis on mitigating the impacts of the military's use of these lands and resources. Therefore, in the context of the full spectrum of the BLM management responsibilities, military installations have been and will remain a rather low priority for allocations of scarce financial and human resources.

To address the more significant natural resource impacts of military use on the subject installation and surrounding lands, we anticipate an increase in partnering for studies among the BLM, the National Biological Survey, and the DOD agencies.

Recommendation: Establish and monitor schedules for implementing actions called for in resource management plans (RMP's).

The BLM Manual Section 1617.3, Resource Management Plan, Approval, Use, and Modification, provided guidance concerning the implementation and monitoring of RMP's. However, the guidance was subsequently determined to be inadequate. New guidance was prepared as BLM Manual Section 1630, Using Resource Management Plans, and Handbook H-1630-1, Using Resource Management Plans, which were ready for release last summer. The new guidance was not released because a new effort was initiated to revise the planning regulations and all related manual sections and handbooks.

In response to the findings and recommendations in the subject report, the BLM will issue BLM Manual Section 1630 and Handbook H-1630-1 as interim guidance by the end of March 1994. Final guidance will be issued pending complete revision of the BLM planning regulations. The responsible official is the Assistant Director for Support Services.

If you have any questions concerning our response, please call Lee Larson, BLM Audit Liaison Officer, at (202) 452-5168 or Dwight Hempel, Military Programs Coordinator, at (202) 452-7778.

Sincerely,



Bob Armstrong
Assistant Secretary, Land and
Minerals Management

Scope and Methodology

To develop information on DOD activities at each range, we obtained available documentation on military operations, resource conditions, and resource management activities. We interviewed military officials responsible for planning and scheduling activities on the ranges and those responsible for natural and cultural resource programs. We also interviewed selected officers from operational units that were using the sites to train troops. We visited or observed conditions at all the sites except Bravo-20, where substantial photographic evidence on site conditions was available.

To determine Interior's resource management activities, we interviewed and obtained available documentation from BLM District Office officials with direct responsibilities for resource management at each site. We also interviewed and obtained documentation from FWS officials at the two National Wildlife Refuges which have airspace under military control.

Our work was conducted at the locations listed in table VIII.1.

Table VIII.1: Withdrawn Lands Under Military Lands Withdrawal Act and Responsible Managers

Range	Responsible military base	Responsible BLM office(s)	Responsible FWS office
Greely	Fort Greely, Alaska	Steese/White Mountains District Office, Alaska	—
Yukon	Fort Wainwright, Alaska	Steese/White Mountains District Office, Alaska	—
Goldwater	Luke Air Force Base, Arizona Marine Corps Air Station Yuma, Arizona	Phoenix and Yuma District Offices, Arizona	Cabeza Prieta National Wildlife Refuge, Arizona
Nellis	Nellis Air Force Base, Nevada	Las Vegas District Office, Nevada	Desert National Wildlife Refuge, Nevada
Bravo-20	Naval Air Station Fallon, Nevada	Carson City District Office, Nevada	—
McGregor	Fort Bliss, Texas	Las Cruces District Office, New Mexico	—

In addition, we conducted work in Washington, D.C., at the office of the Deputy Under Secretary of Defense for Environmental Security (formerly Deputy Assistant Secretary for Environment) and the headquarters offices for the Air Force, Army, Navy, BLM, and FWS. We conducted our work from

**Appendix VIII
Scope and Methodology**

**December 1992 through November 1993 in accordance with generally
accepted government auditing standards.**

Major Contributors to This Report

**National Security and
International Affairs
Division, Washington,
D.C.**

**David R. Warren
Uldis Adamsons**

**Seattle Regional
Office**

**William R. Swick
Drummond E. Kahn
Brent L. Hutchison
Stanley G. Stenersen
Desiree W. Whipple**