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Report to the Chairman, Subcommittee on National Parks and Public Lands, Committee on Interior and Insular Affairs, House of Representatives

February 1992

RANGELAND MANAGEMENT

Interior's Monitoring Has Fallen Short of Agency Requirements

146208

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Resources, Community, and
Economic Development Division

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February 24, 1992

The Honorable Bruce F. Vento
Chairman, Subcommittee on National Parks
and Public Lands
Committee on Interior and Insular Affairs
House of Representatives

Dear Mr. Chairman:

This report responds to your request that we review the Bureau of Land Management's performance in monitoring the impact of grazing use on range conditions and determine whether management actions have been taken in response to the monitoring data collected.

As agreed, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to interested Members of Congress, the Secretary of the Interior, and to the Director, Office of Management and Budget. We will also make copies available to others upon request.

This work was performed under the direction of James Duffus III, Director, Natural Resources Management Issues, who can be reached at (202) 275-7756. Other major contributors to this report are listed in appendix IV.

Sincerely yours,

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Domestic livestock graze almost 270 million acres of federal land in the western United States. Although this grazing has constituted an integral part of western lifestyle and culture since before the turn of the century, its impact on public rangeland conditions has increasingly concerned the Congress. In recent years GAO has issued a number of reports pointing out weaknesses in federal rangeland management and the potential consequences of these weaknesses on range conditions. In particular, GAO reported in June 1988 that conditions were unsatisfactory on more than half of the rangeland for which managers had the information to assess the land's condition. The report recommended that federal range managers identify the land that managers believed was deteriorating or being overgrazed and focus management attention accordingly.

Subsequently, the Chairman, Subcommittee on National Parks and Public Lands, House Committee on Interior and Insular Affairs, asked GAO to follow up on this previous report. As part of this request, the Chairman asked GAO to review the land management agencies' performance in monitoring range conditions and in taking action to change grazing practices when the monitoring data indicated that changes were needed. This report, the last in the series requested by the Chairman, addresses the performance of the Department of the Interior's Bureau of Land Management (BLM) in these two areas. The report is based largely on information obtained from questionnaires sent to nearly 100 BLM field offices responsible for managing public rangelands.

Background

BLM manages about 170 million acres of rangeland in 16 western states. The BLM land is divided into about 22,500 separate grazing units, called allotments, which support more than 4 million head of domestic livestock. BLM authorizes grazing on these allotments through permits that indicate the type of livestock allowed to graze, the period of allowable use, and the authorized level of grazing activity, as measured in animal unit months. (An animal unit month is the amount of forage needed to sustain one cow, one horse, or five sheep for 1 month.)

Permittees currently pay a fee of $1.97 per animal unit month to graze their livestock on the public lands. In recent years, the fee has come under increasing congressional scrutiny. During the fiscal year 1992 Interior Department appropriations-setting process, the House of Representatives passed a bill that would have substantially increased the fee. The Senate rejected this increase. Conferees ultimately agreed to direct the Secretaries

of Agriculture and the Interior to study the issue further and report back to the Congress by April 30, 1992.

Monitoring of allotment conditions is a key component of BLM's grazing management responsibilities. Moreover, in accordance with provisions of the National Environmental Policy Act, grazing environmental impact statements are the cornerstone of BLM's process to establish sustainable authorized grazing levels. Monitoring on a continuous basis is needed to ensure that existing grazing levels and practices are consistent with the land's ability to sustain the activity. If monitoring indicates that overgrazing is occurring, BLM managers are responsible for reducing authorized grazing to a sustainable level.

Under current BLM policy, all grazing level adjustments are required to be based on monitoring data accumulated over several years. In accordance with this policy, BLM established a 5-year time frame—beginning with the issuance of the relevant grazing environmental impact statement—to conduct the necessary monitoring and implement a grazing decision establishing an appropriate grazing level. This deadline has passed on about 14,500 of BLM's 22,500 allotments.

BLM's monitoring consists of collecting data on rangeland conditions, analyzing the data collected, and documenting decisions based on that analysis. Range managers collect both short-term utilization data, which measure actual grazing levels and consumption of annual vegetative growth, and long-term trend data, which measure changes in conditions over time. Although long-term data can indicate problems on the allotment, short-term monitoring data are generally needed to prescribe changes in authorized grazing practices. Likewise, because proposed changes in grazing practices have often been challenged in judicial proceedings, BLM technical guidance emphasizes that the monitoring data and analysis should be thoroughly documented.

Results in Brief

BLM has performed the required monitoring and issued a decision on appropriate grazing levels for only about 20 percent of the 14,500 allotments covered by environmental impact statements issued more than 5 years ago. It has not monitored about 7,200 allotments at all. For the allotments that it has monitored, BLM has generally not analyzed the data and decided on the appropriate grazing levels. BLM range managers cited staff shortages and the associated need to perform higher priority work as important reasons why monitoring had not been more extensive.

GAO's findings in this report are consistent with those in previous reports on BLM's rangeland management program. These reports also found that because important range management functions are not being performed, BLM is hampered in its ability to protect rangelands from damage by ongoing grazing activity and to restore lands damaged by previous activity. Each report pointed out that BLM has insufficient funding and staff to do all the work that needs to be done. Similarly, a 1990 BLM report found that the agency needed a 50-percent increase in its range management budget to accomplish its program management objectives.

Principal Findings

Required Monitoring Not Occurring on Most Allotments

Under agency policy, BLM should have monitored each of the approximately 14,500 allotments covered by environmental impact statements more than 5 years old, analyzed the monitoring data and documented them adequately, and made a grazing decision. For about 50 percent of these allotments, BLM has not conducted any monitoring at all. For another 14 percent, BLM has collected long-term trend data but not the short-term utilization data necessary to support grazing management decisions. In performing its allotment monitoring, BLM has concentrated its attention on its highest priority allotments, as GAO recommended in its 1988 report. While most unmonitored allotments fall in lower priority categories, more than 300 allotments in the highest priority category have also gone unmonitored over at least a 5-year period. BLM officials attribute their inability to perform all needed monitoring largely to staff shortages and the need to concentrate on other rangeland management tasks.

BLM Not Making Decisions With Available Monitoring Data

Even when BLM has collected monitoring data, it has not usually analyzed and acted on the data to make allotment management decisions. Although BLM has compiled either trend or utilization monitoring data, or both, for nearly 7,300 allotments, it has analyzed the data and reached decisions concerning grazing levels or practices for only about 2,700 allotments. When BLM has completed the process, meaningful changes in grazing levels and practices have resulted. In the remaining cases, BLM has generally not analyzed the data to make them useful for decision-making. For example, BLM may have collected forage utilization data but not analyzed them in conjunction with precipitation information; therefore, any conclusions derived from the forage data alone on the appropriateness of grazing levels could be improper.

Grazing Decisions Often Not Adequately Documented

In many cases, BLM decisions have not been documented in conformance with BLM guidance. For over 25 percent of the allotments for which BLM decided to change grazing practices and for about 50 percent of the decisions in which BLM concluded that no change was needed, the available monitoring data and analysis were not adequately documented. The problems GAO noted were similar to those found in a 1990 internal BLM study. Without adequate documentation, BLM decisions may not stand the test of subsequent judicial review if the permittee or other interested party challenges BLM's decision. BLM officials told us that they recognize the importance of adequate documentation, but that it is time-consuming and cannot always be performed with available staff.

Matters for Congressional Consideration

A better balance is needed between the scope of the federal grazing program and the resources available to manage it if BLM is to adequately fulfill all of its rangeland management responsibilities. To achieve this objective, the Congress may wish to consider (1) reducing the scope of the existing grazing program, or (2) funding an increase in BLM's range management resources.

Agency Comments

The Department of the Interior stated that GAO's report was generally accurate. However, Interior disagreed with the report's matters for congressional consideration. According to the Department, several ongoing agency initiatives should improve the efficiency and effectiveness of BLM's resource monitoring. Nonetheless, on the basis of the findings in this and previous GAO reports, GAO continues to believe that closing the gap between BLM's rangeland management responsibilities and the resources available to perform them requires consideration of actions either to reduce the grazing program's scope or to increase available resources.

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Abbreviations

AUM	animal unit month
BLM	Bureau of Land Management
EIS	environmental impact statement
FLPMA	Federal Land Policy and Management Act
GAO	General Accounting Office
IBLA	Interior Board of Land Appeals
NEPA	National Environmental Policy Act
NRDC	Natural Resources Defense Council
PRIA	Public Rangelands Improvement Act

Introduction

Domestic livestock grazing on public rangeland in the West has been an American tradition since the westward migration of early settlers who brought with them cattle, sheep, and horses. Although integral to the western culture, grazing and the lifestyle it has afforded have not been without cost. Through the years, overgrazing on the public land has reduced the land's productive capacity and its value for nongrazing uses, such as wildlife habitat and recreation. Because of the arid conditions prevalent in the West, much of the rangeland on which livestock grazing is permitted is fragile. When too many livestock are continually allowed to graze on the public rangeland, range resources can be damaged or even permanently lost.

Since the 1930s, the Congress has expressed concern over unsatisfactory range conditions and through the passage of several acts has attempted to regulate grazing more vigorously. Despite these legislative initiatives, as we have noted in several previous reports, overgrazing has continued in many locations. The responsibility for managing and protecting most of the public rangeland rests with the Department of the Interior's Bureau of Land Management (BLM).[1] In managing this land, BLM is responsible for determining how much livestock grazing the land can support, monitoring the impact of authorized grazing levels on rangeland conditions, and making adjustments in authorized levels as conditions warrant.

Federal Laws Impacting Livestock Grazing

From its beginning in the 1800s up until 1934, domestic livestock grazing on western public rangeland administered by BLM or its predecessor agencies was largely uncontrolled. This situation changed in 1934 with the passage of the Taylor Grazing Act. The act was enacted to stop injury to the public range by preventing overgrazing and soil deterioration and to provide for its orderly use, improvement, and development. The act authorized the Secretary of the Interior to issue grazing permits[2] for not more than a 10-year period and directed that a fee be charged for grazing privileges.

Despite this early regulatory effort, public rangeland continued to deteriorate. Consequently, in 1976 the Congress enacted the Federal Land Policy and Management Act of 1976 (FLPMA). FLPMA established broad policy guidance under which the public land would be managed. Under the

[1]The Department of Agriculture's Forest Service also manages considerable public rangeland designated as National Forest System land. This land is subject to separate laws and regulations and is not included within the scope of this report.

[2]Authority to use public rangeland for livestock grazing is granted through issuance of either a permit or a lease, depending upon which section of the Taylor Grazing Act authorized the grazing. For the purposes of this report, we will refer to all permits or leases as permits.

act, (1) public land resources are to be inventoried on a periodic and systematic basis; (2) rangeland is to be managed according to principles of multiple use and sustained yield;[3] and (3) one-half of the grazing fee receipts collected by BLM are to be used for on-the-ground rehabilitation, protection, and improvement projects. FLPMA also abandoned the previous policy that the federal government would manage public land as a custodian until the land could ultimately be disposed of. Instead, FLPMA mandated that the land be retained in federal ownership unless disposal served the national interest. The Congress further addressed the issue of public range conditions in the Public Rangelands Improvement Act of 1978 (PRIA). PRIA reaffirmed a national policy commitment to inventory and identify current public rangeland conditions and trends on BLM land and to manage, maintain, and improve the condition of the rangeland so that it becomes as productive as possible for all rangeland values. PRIA supplemented and refined FLPMA's range management provisions and authorized funding for on-the-ground range improvements designed to reverse the widespread downward trend in range conditions.

The National Environmental Policy Act of 1969 (NEPA), along with subsequent related court rulings, has also had a major impact on BLM's rangeland management. NEPA requires BLM, as well as other federal agencies, to prepare environmental impact statements (EISs) for all major federal actions significantly affecting the quality of the human environment. BLM's initial efforts to satisfy this requirement for its grazing program through a single nationwide EIS was successfully challenged in court. Thereafter, separate EISs were required to reflect local geographic conditions.[4] BLM ultimately prepared 142 EISs for all of its rangeland throughout the West, completing the last in 1989. These EISs have become baseline documents that BLM uses to measure subsequent changes in rangeland conditions and to determine the need for changes in approved grazing levels and/or grazing practices.

In a later case,[5] the court supported BLM's position that monitoring data over a period of time were needed to make defensible livestock adjustments. The court further found that it was too early to evaluate the environmental groups' claim that BLM was not taking action to make the

[3]The term multiple use means the management of public lands and their various resource values to best meet the present and future needs of the American people. Sustained yield means the achievement and maintenance in perpetuity of high-level outputs of the various renewable public lands resources consistent with multiple use.

[4]U.S. District Court for the District of Columbia in Natural Resources Defense Council v. Morton, 388 F. Supp. 829 (1974).

[5]Natural Resources Defense Council v. Hodel, 624 F. Supp. 1045 (D. Nev. 1985).

rangeland improvements and grazing level reductions called for in its early EISs. However, the court also said that if BLM did not take action within 5 years after an EIS was issued, a request for a court order requiring such action might be granted.

BLM's Grazing Program

BLM manages about 170 million acres of public rangeland in 16 western states.[6] This land is divided into about 22,500 separate grazing units, called allotments, which support more than 4 million cattle, sheep, and horses. BLM operates under a decentralized management structure, transferring most authority and responsibility to its state offices, which have geographic responsibility for one or more states. Day-to-day BLM operations are the responsibility of 140 resource area offices, which in turn fall under the auspices of 51 district offices.

Grazing is authorized on individual allotments through issuance of operator permits. Each permit defines the kind of livestock allowed to graze, the period of use, and any special use conditions. The permits also specify the allowable livestock grazing level on each allotment, measuring the level in animal unit months (AUMs).[7] The AUMs specified on operators' permits fall into three categories: active-use AUMs, approved nonuse AUMs, and suspended AUMs. Active-use AUMs are currently available for use; approved nonuse AUMs are available to, but not used by, the operator with BLM's approval; and suspended AUMs were formerly available for grazing but are now withheld by BLM. During fiscal year 1990, BLM managed more than 19,000 permits for cattle, sheep, and horses involving about 11 million AUMs.[8]

Livestock operators pay BLM a fee based on the number of AUMs grazed. The grazing fee is calculated annually according to a formula originally established in PRIA and now mandated in Executive Order 12548. The fee is currently set at $1.97 per AUM. The fee formula has in recent years come under increasing congressional scrutiny. During the fiscal year 1992 Interior Department appropriations process, the House of Representatives passed an appropriations bill that included a provision to substantially increase the fee. The Senate rejected this increase. House and Senate conferees directed the Secretaries of Agriculture and the Interior to study

[6]Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming.

[7]An AUM is defined as the amount of forage needed to sustain one cow, one horse, or five sheep for 1 month.

[8]Permits can authorize grazing on more than one allotment.

the issue further and report back to designated committees of the Congress by April 30, 1992.

BLM's Rangeland Monitoring Policy and Process

Rangeland monitoring is a key element of BLM's overall rangeland management, since monitoring forms the basis for establishing appropriate authorized grazing levels. BLM's regulations prohibit grazing use in excess of livestock carrying capacity,[9] as determined through monitoring.

In 1982, BLM issued its present policy outlining its rangeland monitoring program goals and objectives. With adoption of this policy, BLM shifted from the practice of collecting one-point-in-time rangeland inventories to one of continuous monitoring. All grazing level adjustments, either upward or downward, are required to be based on several years' monitoring of grazing use. In accordance with this policy, BLM established a 5-year time frame for making grazing adjustments. On the basis of monitoring results, all allotments are required by BLM to have a grazing management agreement or decision defining the appropriate level of grazing activity,[10] no later than 5 years after issuance of the EIS governing the allotment.

Other elements of BLM's rangeland management policy also call for assigning management categories and priorities to the grazing allotments in order to focus available management resources efficiently. Allotments are identified as belonging to one of three categories. Allotments requiring improvement, called improve allotments, are given the highest priority. Allotments whose existing management is considered satisfactory and should be maintained, called maintain allotments, are next in order or priority. The lowest priority is given to allotments under custodial management, which includes those whose potential for improved productivity is limited.

BLM's rangeland monitoring process consists of the following three elements:

- Collecting data on rangeland conditions.
- Analyzing the data collected.

[9]Livestock carrying capacity means the maximum grazing level that the land can sustain without damage occurring to vegetation or related range resources.

[10]If the permittee does not agree with the grazing change, then BLM issues a unilateral decision covering the needed changes. For purposes of this report, we will refer to all agreements and decisions as decisions.

- Deciding on the authorized level of grazing and/or grazing practices on the basis of the data collected and analyzed.

Data Collection

The first step in the monitoring process is to collect up-to-date data on the condition of the range. To facilitate this process, BLM has issued technical guidance, including manual and reference instructions addressing the need to evaluate systematically the effects of livestock grazing and the extent to which management objectives are being met. The guidance states that four types of monitoring data should be collected: (1) the number of livestock grazing on the allotment, (2) the amount of annual vegetative growth consumed (utilization), (3) measurements of rainfall and temperature, and (4) changes in soils and vegetative conditions over time (trend). The first three types of data are commonly called short-term data. They provide BLM with the information needed to make grazing management decisions within the prescribed 5-year time frame. They also provide the basis to establish allotment carrying capacities. The last type of data (trend data) is collected over the long term and measures whether the rangeland is moving toward or away from its management objectives. While long-term monitoring helps identify allotments where management problems exist, short-term monitoring provides the data necessary to identify specifically what practices need to be changed.

Data Analysis

For the monitoring data collected on an allotment to be useful in making grazing decisions, the data must be analyzed in a format that clearly presents current conditions and trends and the implications for changes in allotment management. BLM's range monitoring instructions and advisory technical guidance also stress the importance of thoroughly documenting the results and conclusions of the data analysis. The guidance includes a format for the documentation and examples of data interpretations that are useful in justifying adjustments in grazing practices that the analysis suggests are needed. The guidance emphasizes that recommended changes in grazing practices be linked to a professional, understandable, and scientifically valid monitoring analysis that has been thoroughly documented in a prescribed format.

BLM's regulations prohibit authorized grazing use from exceeding a sustainable level—the allotment's livestock carrying capacity. Accordingly, the technical guidance states that monitoring analysis must assess carrying capacity. The guidance further provides formulas for calculating carrying capacity. The formulas take into account consumption of forage

(determined through monitoring), forage consumption objectives, current authorized grazing levels, and climate.

Grazing Management Decisions

When sufficient monitoring data have been gathered and appropriately analyzed, evaluated, and documented, they should form the basis for making formal grazing management decisions. If the analysis indicates that the existing grazing level and practices are consistent with the land's carrying capacity and are not leading to declining conditions, the decision can be to continue the existing level and practices. If, however, the analysis demonstrates that the existing level and/or practices are adversely affecting the land, changes can be directed. Common grazing management changes that can be made include changing the authorized livestock grazing level, adjusting the grazing season, installing range improvements such as fences or ponds, changing grazing systems by rotating existing pasture use or other means, changing salt placement, and herding livestock to improve livestock distribution.

Appeals of Management Decisions

Under current BLM regulations (43 CFR 4160.1-.4), a permittee, or other affected interest, has the right to contest any grazing management decision with which he/she does not agree. A protest must be filed within 15 days of a proposed decision. An appeal must be filed within 30 days of the receipt of the final management decision and is first heard by an administrative law judge in Interior's Hearings Division, Office of Hearings and Appeals. The judge is required to listen to the facts presented by both parties and may uphold or change BLM's management decision. Either BLM or the other party may appeal the administrative law judge's decision to Interior's Board of Land Appeals (IBLA). After the IBLA appeal, the injured party may seek recourse in the civil courts. The appeal process can be lengthy and, except when grazing use was authorized on a temporary basis, grazing use may continue at the authorized active use level pending final action on the appeal.

Previous GAO Reports and Testimonies on BLM Rangeland Management

In recent years, GAO has reported and testified on many aspects of BLM's public rangeland management performance.[11] These products have addressed the adequacy of BLM's efforts to (1) restore riparian areas damaged by overgrazing, (2) detect and deter unauthorized grazing activities (trespass), (3) develop and implement resource management plans, and (4) protect and enhance wildlife habitat, among other topics.

[11] A list of these products appears at the end of this report.

Regardless of the aspect of program management being analyzed, the findings in our reports have been remarkably consistent. We have found that because important range management tasks are not being performed, BLM is hampered in its ability to protect rangelands from damage by ongoing grazing activity and to restore lands damaged by previous activity. In every report we have pointed out that BLM has insufficient funding and staff to do all the work that needs to be done. On average each range staff is now responsible for managing 47 grazing permits covering grazing taking place on 392,000 acres of rangeland. A number of staff are responsible for more than 1 million acres each. To do an effective job, BLM requires a significant increase in resources. According to a 1990 BLM report, the agency needed about a 50-percent increase in its range management budget from fiscal year 1989 levels to accomplish its program management objectives.[12]

Objectives, Scope, and Methodology

In June 1988 we reported that federal grazing allotments may be threatened with damage because more domestic livestock—primarily cattle and sheep—were being permitted to graze than range managers believed the land could support.[13] We reported that conditions were unsatisfactory on more than half of the rangeland where managers had the information to assess the land's condition. The report recommended that BLM and the Forest Service ask resource managers to identify all allotments they believed to be overgrazed or in declining condition and to concentrate monitoring and other range management activities on these lands. Subsequently, the Chairman, Subcommittee on National Parks and Public Lands, House Committee on Interior and Insular Affairs, requested that we update our 1988 report, specifically reviewing BLM's and the Forest Service's performance in monitoring the impact of grazing on range conditions and determining whether management actions have been taken in response to the monitoring data collected. This report addresses BLM's performance.[14]

Our review of BLM's range monitoring program covered rangeland located in 16 western states. Because only limited data are centrally available on rangeland conditions and monitoring activities, we developed a questionnaire for completion by BLM range staff to obtain broad coverage

[12]State of the Public Rangelands 1990, United States Department of the Interior, Bureau of Land Management.

[13]Rangeland Management: More Emphasis Needed on Declining and Overstocked Grazing Allotments (GAO/RCED-88-80, June 10, 1988).

[14]Previously we reported on the Forest Service's progress in Rangeland Management: Forest Service Not Performing Needed Monitoring of Grazing Allotments (GAO/RCED-91-148, May 16, 1991).

of the monitoring program. We discussed this questionnaire with BLM officials and pretested it before sending it to BLM resource area office managers. The information presented in this report is based largely on the responses to the questionnaire.

The questionnaire was used to collect information on the number of allotments being monitored as of September 30, 1990; the types of monitoring data being gathered; and the grazing management decisions that had been reached on the basis of analyses of the monitoring data gathered as well as BLM staffing levels and allotment management responsibilities. We sent questionnaires to 95 BLM resource area offices that had prepared all 105 of BLM's 142 EISs for which BLM's 5-year target date for grazing decision-making had been reached. Each office responded fully to our questions. In their responses, BLM range staff noted that 14,464 of BLM's approximately 22,500 allotments were covered by these 105 EISs.

In addition, we visited 11 BLM resource area offices to discuss questionnaire responses in more detail with range conservationists responsible for managing the allotments we reviewed.[15] These offices were chosen judgmentally to follow up on questionnaire responses and obtain geographic diversity and coverage of a variety of allotment priority categories. We also reviewed the area offices' range program management files and interviewed range managers. We discussed the range management program with officials at BLM's Washington, D.C., headquarters and three state offices (Nevada, Montana, and Idaho). Our review was conducted from May 1990 through October 1991 in accordance with generally accepted government auditing standards.

[15]These offices include Bennett Hills, Bruneau, Monument, Owyhee, and Snake River in Idaho; Big Dry and Powder River in Montana; Lahontan and Schell in Nevada; San Juan in Colorado; and Farmington in New Mexico.

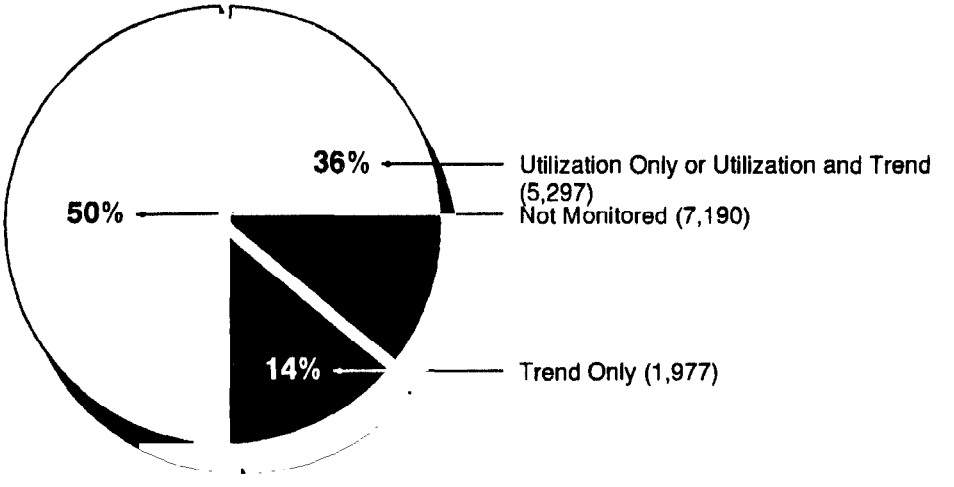
BLM Has Collected Monitoring Data on About Half of Its Allotments

BLM has fallen considerably short of meeting its rangeland monitoring goal of completing monitoring efforts and making grazing management decisions within 5 years after completing its EISs. Monitoring data have been collected on only about half of the more than 14,000 allotments for which the 5-year deadline has passed. Although most allotments that have not been monitored fall in BLM's lowest priority category, several hundred of its highest priority allotments also have not been monitored. BLM range managers attribute their inability to perform all required monitoring in large measure to staffing shortages and to the agency's assignment of higher priority to other range management tasks.

Status of Efforts to Collect Monitoring Data

BLM range managers' responses to our questionnaire showed that no monitoring data had been collected for 7,190 (50 percent) of the 14,464 allotments in our study. For almost 2,000 additional allotments (14 percent), BLM had collected the long-term trend data that may suggest a need for change in grazing management but not the more specific short-term data generally required to identify specific corrective actions. Figure 2.1 breaks down the status of monitoring efforts on all 14,464 allotments for which BLM's 5-year monitoring deadline had elapsed.

Figure 2.1: Summary of BLM Data Collection on 14,464 Allotments



Source: GAO analysis of questionnaire responses.

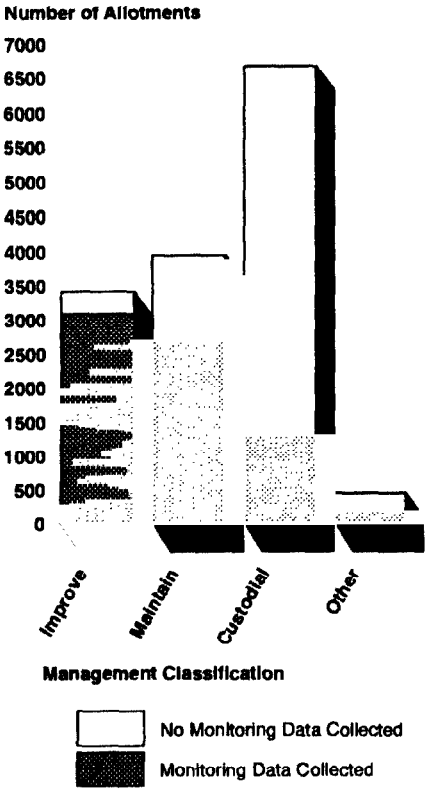
Although slow overall, monitoring progress has varied widely by resource area office. As table 2.1 shows, 15 of the 95 resource area offices in our survey monitored all allotments, at least for utilization or trend. Conversely, 12 resource area offices did not perform any monitoring on more than 75 percent of their allotments. For example, the Farmington Resource Area in New Mexico monitored all of its 132 allotments, for either utilization or trend or both, whereas the Hollister Resource Area in California monitored only 15 percent of its 133 allotments.

Table 2.1: Percent of Allotments Monitored by BLM Resource Area Offices

Percent of allotments monitored	Number of offices	Number of allotments monitored	Number of allotments not monitored
100.0	15	713	0
75.0 - 99.9	19	1,648	248
50.0 - 74.9	23	2,260	1,450
25.0 - 49.9	26	2,058	3,041
0 - 24.9	12	595	2,451
Total	**95**	**7,274**	**7,190**

BLM has appropriately focused its limited monitoring attention on the allotments that it has classified as most in need of improvement (improve category allotments). Even among these highest priority allotments, however, BLM has not completed required monitoring within its 5-year time frame for more than 300 allotments. For allotments classified as custodial, BLM has monitored only about 20 percent. Figure 2.2 depicts BLM's progress in monitoring allotments by BLM management classification.

Figure 2.2: Allotments Being Monitored, by Management Classification



Note: Total allotments: 14,464.

Source: GAO analysis of questionnaire responses.

BLM's progress in monitoring high-priority allotments also varies by resource area office. Table 2.2 shows 64 resource area offices monitored all their improve category allotments while 28 offices did not. Only one office, however, monitored less than 25 percent of its highest priority allotments.

Table 2.2: Percent of Improve Category Allotments Monitored by Resource Area Office

Percent of allotments monitored	Number of offices	Number of allotments monitored	Number of allotments not monitored
100.0	64	1,694	0
75.0 - 99.9	20	1,072	126
50.0 - 74.9	7	310	146
25.0 - 49.9	0	0	0
0 - 24.9	1	9	50
Total	**92**	**3,085**	**322**

Note: Of the 95 resource area offices in our study, 3 have no improve category allotments.

Twenty-seven of the 28 resource area offices that were not monitoring all of their improve category allotments reported that they had begun monitoring lower priority allotments. Seven of these offices had not monitored more than one-quarter of their improve category allotments even though they were monitoring lower priority allotments. Another office, the Dillon Resource Area Office in Montana, had not monitored 47 of its 188 improve category allotments (25 percent) but had monitored 39 of its 46 maintain category allotments (85 percent).

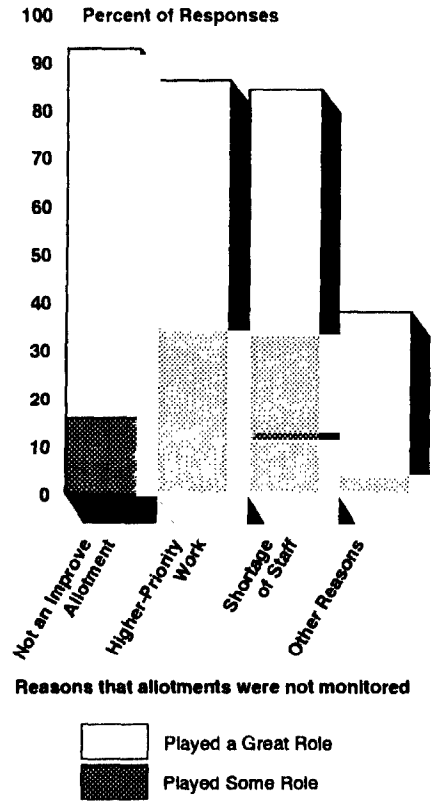
In their questionnaire responses, resource area range managers gave several reasons for monitoring lower priority allotments while some improve category allotments remained unmonitored. The managers noted that some allotments were reclassified from the improve category to a lower priority management category after monitoring began. A range manager at the Dillon Resource Area Office told us that many small allotments were initially misclassified as improve solely on the basis of the riparian areas located on the allotments. In addition, some high-priority allotments had improved enough to be reclassified as maintain category allotments. Other range managers said that lower-priority allotments located near remote improve category allotments were monitored because it was more efficient and economical to monitor all adjacent allotments during field visits than to try to monitor improve category allotments scattered throughout the resource area.

Reasons for Not Completing Required Monitoring

BLM range managers attribute the inability to meet all monitoring requirements primarily to range staff shortages and the need to perform other range management tasks assigned higher priority. Because of inadequate resources and competing priorities, BLM has instructed its resource area offices to focus their monitoring efforts on high-priority improve

category allotments. Accordingly, managers cited lower priority designation as a third reason for not completing monitoring on certain allotments. More than 80 percent of the range managers responded that these three reasons played at least some role in preventing monitoring from occurring on more allotments. Figure 2.3 displays the frequency with which range managers cited these reasons.

Figure 2.3: Reasons Given for Not Collecting Monitoring Data



Note: BLM range managers could give more than one reason. All but two gave at least one reason.

Source: GAO analysis of questionnaire responses.

Responses to our questionnaire showed that a 23-percent reduction in range staff had occurred between 1980 and 1990.[1] These staff reductions have impacted BLM's monitoring efforts. For example, the BLM District Manager in Rawlins, Wyoming, stated that current staffing levels are insufficient to collect data on all high-priority improve category allotments in the two resource areas in the district and are therefore below the levels needed even to begin collecting data on the lower-priority maintain category and custodial category allotments. Responses to our questionnaire indicate that 82 of the 95 BLM range managers believe that range staff and budgetary resources are somewhat inadequate or very inadequate for monitoring.

In addition to staff level reductions, the concentration of remaining staff efforts on other range program priorities has slowed monitoring progress. As stated in a July 1990 BLM Special Evaluation Report by the BLM Montana State Office, monitoring receives lower priority than several other activities, including range administration and implementation of funded range improvement projects,[2] such as fencing and ponds. During our resource area office visits, range managers confirmed that such activities did receive higher priority than monitoring.

[1]This calculation is based on data from 94 resource area offices; one office did not respond to this portion of our questionnaire.

[2]Range administration includes such tasks as scheduling and billing for grazing use.

Shortfalls in Analysis of Monitoring Data Impede BLM's Ability to Make Sound Grazing Management Decisions

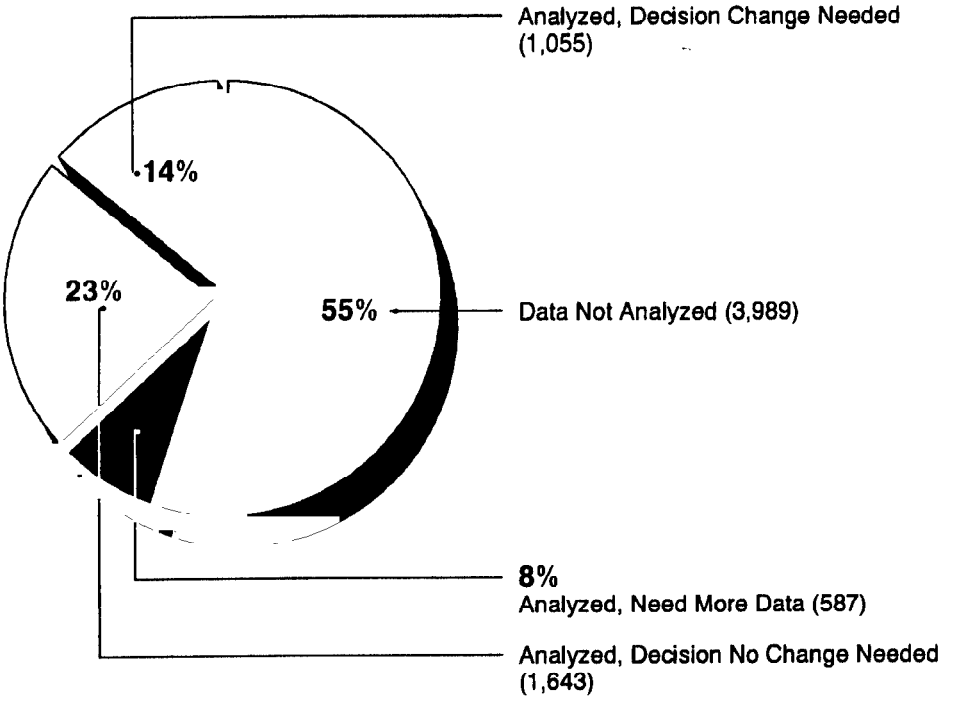
When BLM has collected monitoring data, it has not used them in most cases to change grazing levels and/or practices. For two of every three allotments for which it had collected either utilization or trend data, BLM had not analyzed the data and had not decided whether or what changes in grazing practices were necessary. Range managers attributed their inability to make more use of their monitoring data to insufficient staff, as well as to BLM's management priority setting structure, which emphasizes data collection over more time-consuming data analysis.

Furthermore, in many cases when BLM has collected and analyzed monitoring data and made grazing management decisions, the soundness of its decisions has been uncertain. Contrary to BLM guidance, BLM range managers have frequently not adequately documented the basis for their decisions or linked their decisions to the monitoring data collected. Relatedly, during decision-making BLM has often not established allotment carrying capacities to determine appropriate grazing levels. BLM officials generally acknowledged the importance of these efforts but said that with available staffing, important tasks often could not be performed.

Most Monitoring Efforts Have Not Resulted in Grazing Decisions

When BLM has collected monitoring data, it has generally not performed the analysis necessary to make the raw data useful to decision-making. As a result, BLM has decided to revise grazing practices and/or levels on only 2,698 allotments. This figure represents less than 20 percent of the nearly 14,500 allotments for which the 5-year deadline has passed. Figure 3.1 shows the status of data analysis and decision-making for the nearly 7,300 allotments for which either utilization or trend data, or both, have been collected.

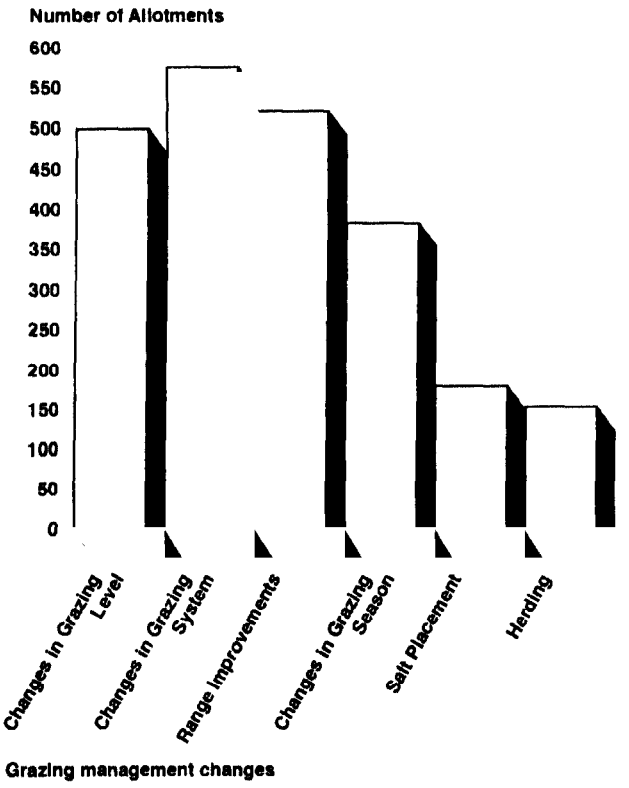
Figure 3.1: Status of Data Analyses on Monitored Allotments



Source: GAO analysis of questionnaire responses.

Out of 2,698 allotments for which monitoring had led to a decision, BLM managers decided not to change grazing practices on 1,643. On the remaining 1,055 allotments, they directed specific changes in grazing levels and/or practices for 904 and are considering changes for the other 151. Figure 3.2 shows that these changes most frequently involved adjustments in grazing levels, grazing systems, and grazing seasons, along with making range improvements.

Figure 3.2: Grazing Management Changes Resulting From Analysis of Monitoring Data



Source: GAO analysis of questionnaire responses.

Of the allotments whose grazing levels were changed, reductions of about 153,700 AUMs were made on 351 and increases of about 32,400 AUMs were made on 146. Forty-four percent of the 153,700-AUM decrease, however, represented approved AUMs that the permittee had not used in the 5 years preceding the reduction. These reductions are nonetheless meaningful, since they establish a new lower maximum grazing level that prevents operators from restoring grazing to the originally authorized level.

Beyond the BLM-directed reductions, grazing levels were also decreased through voluntary nonuse agreements negotiated with livestock operators. Voluntary nonuse agreements represent an alternative means of inducing operators who resist changes in the authorized levels specified on their permits to reduce grazing. According to BLM range managers, some livestock operators believe that changes in their permit will significantly affect the value of their ranch and, consequently, their ability to obtain loans. In such instances, voluntary nonuse agreements enable BLM to reduce actual

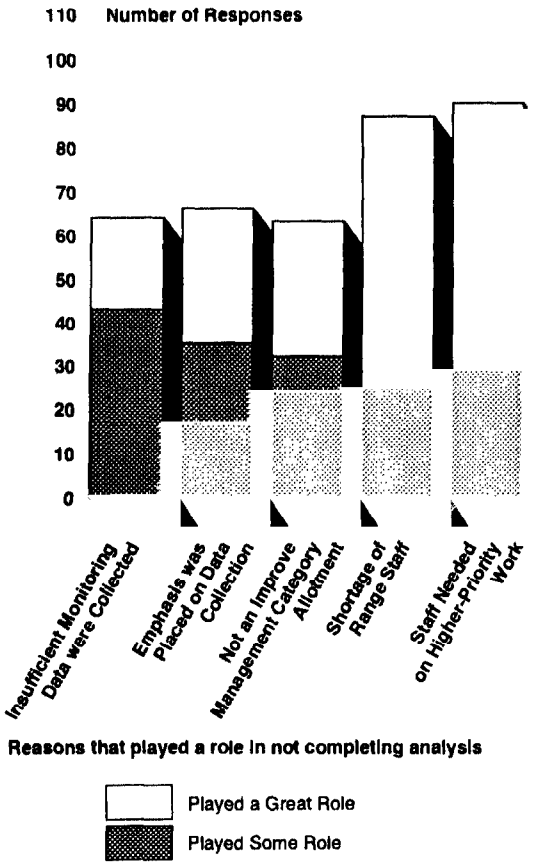
grazing use without going through a lengthy protest and appeal process. Although our questionnaire did not specifically address voluntary nonuse agreements, during follow-up contacts with BLM resource area offices we identified voluntary nonuse agreements totalling 25,500 AUMs.

Appendix I contains a more detailed discussion of the types of grazing management changes made, including reductions of grazing levels through voluntary nonuse.

Range Managers Attribute Lack of Analysis to Insufficient Staff and Higher Priorities

As with the shortfalls in data collection, BLM rangeland managers cited a shortage of available range staff and the need to perform higher-priority tasks as the two primary reasons for their not analyzing and acting on the monitoring data they have collected. Figure 3.3 shows the most common responses given by the BLM resource area offices to our questionnaire.

Figure 3.3: Reasons Most Frequently Given for Not Completing Monitoring Analysis



Source: GAO analysis of questionnaire responses.

Analyzing monitoring data is time-consuming. Our discussions with BLM range managers indicate that some BLM resource area offices have emphasized data analysis and decision-making, while others have not. Because of competing demands on limited staff resources, BLM offices have made trade-offs to accomplish range monitoring objectives. The following examples show the kinds of trade-offs made at the BLM offices we visited.

- The Farmington Resource Area Office in New Mexico has analyzed monitoring data for making grazing management decisions on 122 of its 132 total allotments. Farmington range managers told us that they were able to complete their monitoring analyses by deferring other range management tasks, such as inspecting range improvements and

supervising grazing use, including checking livestock numbers and brands and grazing locations.

- The Snake River Resource Area Office in Idaho has analyzed monitoring data for grazing management decisions on 112 of its 241 allotments. Snake River range managers said that they were able to complete their monitoring analysis by deferring data collection on 89 of their remaining 129 allotments. The allotments not monitored included allotments from all three management priority categories.
- The Schell Resource Area Office in Nevada has analyzed monitoring data for grazing management decisions on only 6 of its 67 allotments. The Schell area office manager said that they had postponed analysis on the remaining allotments because of the extensive effort involved in developing sufficient monitoring data to defend against protests and appeals of the grazing management decisions made on the first six allotments.

BLM cited the general lack of emphasis on analysis in a 1990 evaluation of its range monitoring program in Montana. According to the evaluation, the considerable time devoted to monitoring was resulting in few management actions because the data collected were not analyzed. The evaluation concluded that the main emphasis in monitoring had been on data collection and that more emphasis was needed on data analysis and decision-making.

The BLM evaluation attributed the emphasis on data collection to BLM's workload management process. This process, which is used to budget work planned and account for work accomplished, recognizes workload in terms of monitoring units. Only one monitoring unit credit can be earned annually for each allotment—no matter how extensive the monitoring or the data analysis. To earn a unit of accomplishment towards fulfilling its annual plan, a resource area office need complete only one element of monitoring, such as visiting an allotment to collect data. The process, therefore, provides little incentive to go beyond initial data collection. In fact, the process discourages performing the more time-consuming task of analyzing the data. The BLM evaluation report cited the need to hold staff accountable for accomplishing the whole monitoring process and not just one element of monitoring, such as data collection.

Documentation Often Inadequate to Support Grazing Decisions

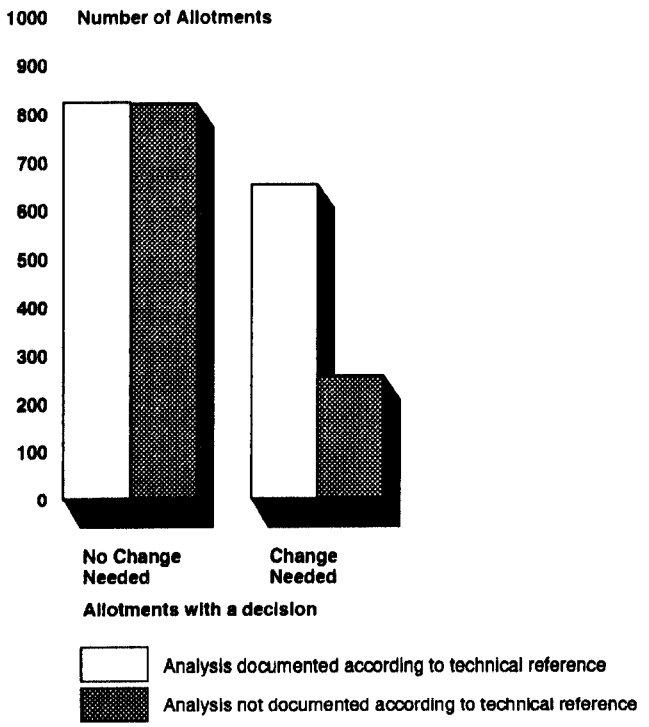
Frequently, when BLM has collected and analyzed monitoring data and has made grazing management decisions, it has not prepared documentation to support its decisions in conformance with its advisory technical guidance. For over half the grazing decisions covered by our questionnaire, the supporting data analyses were either not formally documented or were not

accompanied by an assessment of livestock carrying capacity. By not complying with this guidance, BLM increases its risk of losing court challenges to its decisions.

Monitoring Analyses Not Documented

According to BLM range managers' responses to our questionnaire, analyses of monitoring data were not documented for over 40 percent of the 2,547 allotments with decisions. As figure 3.4 shows, documentation was lacking for over a quarter of the allotments for which BLM had decided to change grazing practices and for about half the allotments for which it had decided that no change was needed.

Figure 3.4: Documentation of Monitoring Analysis on Allotments for Which a Decision Was Made



Note: The total number of allotments excludes an additional 151 allotments for which decisions on the specific changes needed are still being considered.

Source: GAO analysis of questionnaire responses.

BLM officials with whom we spoke generally recognized the importance of good documentation in allotment monitoring. They pointed out, however, that documentation is time-consuming and that with limited staff resources it is often not performed.

The following examples demonstrate the importance of adequately documenting the analysis of monitoring data to support decision-making.

- On the Winnemucca Ranch Allotment in Nevada's Lahontan Resource Area, rancher protests and appeals delayed, for over 10 years, what BLM had determined to be needed reductions in grazing levels. Monitoring data collected over a decade indicated that the allotment was in extremely poor condition and that grazing use was heavy to severe. Nevertheless, the rancher's opposition to changing grazing practices delayed reducing the level of cattle grazing on the allotment until BLM demonstrated the overgrazing with a documented, formal monitoring analysis, including carrying capacity computations. When this analysis was finally prepared and documented, the rancher withdrew his appeal before the Interior Board of Land Appeals (IBLA) and agreed to an 18-percent reduction in the authorized grazing level on the allotment. According to Lahontan range managers, the documented monitoring analysis was a key factor in resolving the protest.
- On the Disappointment Allotment in Colorado's San Juan Resource Area, the rancher appealed BLM's decision to reduce the authorized grazing level by 15 percent. At the hearing before Interior's Office of Hearing and Appeals, BLM presented a documented monitoring analysis, which included a carrying capacity computation, to support its decision. The rancher did not challenge the information presented in the monitoring analysis, and the hearings examiner was able to work out an agreement between BLM and the rancher that achieved the reduction desired by BLM. Officials believed that they could not have sustained their position without the documented monitoring analysis.

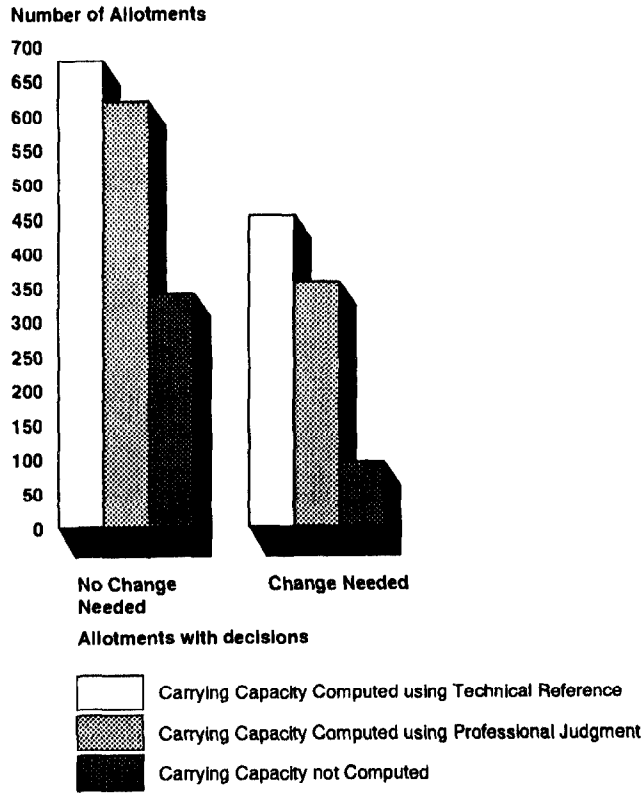
Although not specifically related to livestock grazing, a case at the Hole-in-the-Wall Allotment, in the Lahontan Resource Area, also demonstrates the importance of documented analysis in sustaining BLM land-use decisions. In this case, IBLA upheld BLM's decision to reduce the number of wild horses—at the same time that it ruled against similar decisions on other allotments. Animal Protection Institute of America protests of 11 decisions to reduce the number of wild horses were consolidated into a single case. In ruling in favor of BLM's decision at the Hole-in-the-Wall Allotment, the IBLA judge cited the definitive, well-documented monitoring

analysis as the key factor substantiating the need for a reduction. For the other 10 decisions, the judge concluded that BLM had not established with convincing documentation that removal of wild horses was needed to prevent range deterioration.

Allotment Carrying Capacity Not Computed

The preceding examples show not only the need to support decisions with documented monitoring analysis, but also the importance of assessing grazing levels using scientifically valid carrying capacity computations. Survey responses, however, showed that more than half of the 2,547 completed monitoring analyses did not determine appropriate grazing levels by computing livestock carrying capacity in accordance with the advisory technical guidance that BLM has prepared for use by its range managers. As figure 3.5 shows, range staff often disregarded the guidance and sometimes did not estimate carrying capacity by any method, both for allotments for which changes were made and for those for which they decided no change was needed.

Figure 3.5: Assessment of Allotment Livestock Carrying Capacity in Monitoring Analysis



Source: GAO analysis of questionnaire responses.

At 2 of the 11 BLM offices that we visited, it was customary to disregard the BLM technical guidance for computing carrying capacities. At the Farmington Resource Area Office in New Mexico, range managers told us that they do not use the formula because livestock owners do not understand it. Rather, the range managers used forage utilization data and their personal judgment to determine appropriate grazing levels. At the Monument Resource Area Office in Idaho, range staff said they do not compute carrying capacity because (1) they consider monitoring rangeland trends more meaningful than monitoring forage utilization and (2) forage utilization objectives had not been established for allotments.

Without carrying capacity assessments, the soundness of decisions to adjust or not to adjust grazing levels can be questioned. For example, on the Crater Butte Allotment in Idaho's Monument Resource Area, BLM's grazing EIS had previously reported that 78 percent of the allotment's rangeland was in poor condition. The current monitoring analysis noted

that objectives for the allotment were not being achieved, even though the rancher was resting 25 percent of the allotment's rangeland each year. Furthermore, the trend of conditions on the range was static to downward. Despite these data that seemed to indicate overgrazing, the range manager who prepared the monitoring analysis did not compute a carrying capacity. Instead, he decided not to change the grazing level on the allotment, on the basis of his "professional judgment."

Conclusions and Matters for Congressional Consideration

Conclusions

BLM has in place a monitoring process that, if implemented, would produce meaningful and supportable adjustments to grazing levels and practices. Furthermore, BLM has given priority, as we recommended, to gathering monitoring data on land that was being overgrazed or was deteriorating. Although BLM has made some progress in its monitoring, it has not come close to meeting its goal of monitoring and making grazing decisions on all allotments within 5 years of the completion of the relevant grazing EIS. BLM has not begun to monitor 50 percent of its allotments and has not collected critical utilization data on an additional 14 percent. When BLM has collected all the needed data, it has often not analyzed them and made a grazing decision. Finally, when BLM has made decisions it has not always provided adequate documentation to support them.

BLM rangeland managers point to a shortage of staff and the associated need to balance many competing program management priorities as the primary reasons why they have fallen short of their goals. As we have noted in many previous reports and testimonies, BLM has insufficient resources to perform all the management tasks necessary to effectively manage the current level of grazing activity. At present, each BLM range staff is, on average, responsible for conducting all range management activities on nearly 400,000 acres of land. Besides monitoring, these staff are responsible for permit billing, allotment management planning, trespass enforcement, helping to restore damaged riparian areas, and many other range management activities. Responsibilities have been assigned priorities, but in most cases important tasks simply cannot be performed.

A 1990 BLM report found that about a 50-percent increase in resources over fiscal year 1989 levels would be necessary to accomplish all range management objectives effectively. Unless the scope of BLM's range management duties and the resources available to perform them are brought into better balance, we are not optimistic that BLM can significantly improve its range management.

Matters for Congressional Consideration

A better balance between the scope of the federal grazing program and the resources available to manage it is needed if BLM is to meet all of its rangeland management responsibilities. To achieve this objective, the Congress may wish to consider (1) reducing the scope of the existing grazing program, thereby reducing BLM's range management responsibilities, or (2) funding an increase in BLM's range management resources. One option for offsetting the additional annual appropriations that would be necessary

to increase BLM's range management resources is to increase federal grazing fees.

Agency Comments and Our Evaluation

In commenting on a draft of this report, the Department of the Interior found our report to be generally accurate in its assessment of BLM's overall monitoring performance and appreciated our recognizing BLM's efforts to provide proper rangeland management using available resources. The Department also agreed that BLM's administration of livestock grazing and the grazing fee formula are appropriate matters for congressional consideration. However, the Department disagreed with the matters we presented for the Congress to consider in bringing BLM's rangeland management responsibilities and available budgetary resources into better balance. The Department said that several ongoing agency initiatives should improve the efficiency and effectiveness of BLM's resource monitoring and that a more coordinated approach to rangeland inventory and monitoring could be achieved without adopting the alternatives we offered.

Specifically, Interior disagreed with the prospect of reducing authorized grazing levels so as to reduce BLM's associated management responsibilities. The Department said that reducing the grazing program would simply shift the burden of monitoring and other related management activities to BLM's other rangeland management programs such as the wildlife, wild horses and burros, and watershed programs. We recognize that the various components of the overall range management program are, to a degree, interrelated. However, according to BLM estimates, 60 percent of the agency's range management resources are devoted specifically to managing livestock grazing activity. Reducing the level of grazing to be managed would free more resources to manage the activity that remained. As we have pointed out in many previous reports, these additional resources are badly needed to adequately protect rangeland from damage by ongoing grazing and promote the restoration of lands damaged by previous activity. Each report has pointed out that BLM has insufficient funding and staff to do all the work that needs to be done.

Interior also disagreed with the option in our draft report of increasing the funding for BLM range management by raising grazing fees, saying that adjusting the fees to generate revenue would be arbitrary and only possible within a rather limited range. The Department said that such an increase would have adverse effects on permittees and ranching communities. Furthermore, the Department said that market fluctuations in grazing fee rates

would not provide a stable basis for management of a major national resource.

We recognize that additional budgetary resources could be provided to BLM's rangeland management program without increasing federal grazing fees. However, in today's tight budgetary climate, increasing these fees is an option worth considering as a means of offsetting any necessary additional appropriations. To this end, the Congressional Budget Office estimates, for example, that a grazing fee of $3.48 would produce $16.4 million in additional revenues and a fee of $5.13 would increase proceeds by nearly $30 million.

Interior cites several ongoing initiatives that it expects to improve the efficiency and effectiveness of BLM's resource monitoring. We would like to see BLM's initiatives succeed, but neither the findings in this report nor those in a number of previous related reports we have issued support Interior's belief that it can significantly improve its rangeland monitoring within its current level of available resources. Furthermore, a report prepared by BLM in 1990 concluded that a 50-percent increase in resources would be necessary to accomplish all range management objectives. We believe that the gap between BLM's responsibilities and available resources is simply too large to close through improved efficiency alone.

BLM Grazing Management Changes

Responses to our questionnaire by BLM range managers show that BLM made specific changes in livestock management on the basis of analyses of monitoring data on 904 allotments. Changes are under consideration on an additional 151 allotments. The changes most frequently made include grazing level adjustments, grazing system adjustments, range improvements, and grazing season adjustments. More than one change in grazing management generally was directed for a given allotment.

Grazing Level Adjustments

BLM made grazing level adjustments on 497 allotments, decreasing the amount of authorized grazing by 121,300 AUMs. This decrease represents the net of reductions totaling 153,700 AUMs on 351 allotments and increases totaling 32,400 AUMs on 146 allotments. Of the 153,700-AUM decrease, 44 percent comprised authorized AUMs that the permittees had not used during the 5 years prior to the reductions. In such cases, the unused permitted amounts were suspended to bring authorized grazing levels more in line with the appropriate grazing levels determined through monitoring.

For example, on the Rancho Largo Allotment in New Mexico's Farmington Resource Area, the grazing level was reduced by about 50 percent, from 9,718 AUMs to 4,950 AUMs following completion of a monitoring analysis. None of the reduced grazing authorizations had been used for some time. During the 1983 to 1989 period when monitoring data were collected, the allotment was being grazed at 40 percent of the authorized 9,718-AUM grazing level. The monitoring analysis showed that at the 40-percent grazing level the amount of all grass and forbs species consumed was under the maximum amount allowed under the objectives for the allotments. The authorized grazing level on the operator's permit was adjusted to ensure that actual grazing use remained at the reduced level.

In addition to the 153,700-AUM reduction on operators' permits, grazing levels were decreased by at least another 25,000 AUMs through voluntary nonuse agreements with livestock operators. For example, on the Goose Creek Allotment in Idaho's Snake River Resource Area, the grazing level was reduced by 1,095 AUMs, or 20 percent, on the basis of an analysis of monitoring data. To avoid a protest, the five livestock operators on the allotment were given the opportunity to reduce grazing voluntarily by 20 percent and thereby avoid having a portion of the grazing authorized on their permits suspended. Four of the five operators accepted the voluntary nonuse and entered into a formal agreement whereby their authorized grazing level was reduced by 20 percent for 5 years, at which time the next

monitoring analysis is scheduled to be completed. BLM reduced the grazing level on the fifth operator's permit by 20 percent.

Other Grazing Adjustments

Changes in grazing systems were the most frequent grazing management change made following monitoring analyses. The grazing system adjustments on 574 allotments represent changes in how livestock are grazed on an allotment; they are intended to better distribute grazing use to promote plant vigor and productivity. Such changes may include dividing an allotment into pastures, adding pastures, and rotating use among pastures.

Range improvements, another frequently directed change following monitoring analyses, are often done in connection with a grazing system change. The range improvements, directed on 519 allotments, include the installation of additional fencing, wells, ponds and reservoirs, and the seeding of grass. For example, on the Dempsey Allotment in Idaho's Bennett Hills Resource Area, the grazing system for two pastures was changed to a two-treatment, deferred-rotation system to better distribute livestock use and decrease use on riparian vegetation. Range improvement projects included brush control burns, additional fencing, and a reservoir.

Grazing season adjustments were directed on 281 allotments and involved changing the timing and duration of livestock grazing to reduce grazing use during critical plant growing periods, especially in the spring.

Questionnaire Sent to Range Managers

United States General Accounting Office

GAO

Review of Bureau of Land Management Range Monitoring Program

INTRODUCTION

The U.S. General Accounting Office (GAO) is an agency that assists the U.S. Congress in evaluating federal programs. As part of a congressionally requested review, we are examining the Bureau of Land Management's (BLM) efforts in collecting the rangeland monitoring data upon which livestock grazing management decisions are to be made.

The purpose of this questionnaire is to collect information on: (1) grazing Environmental Impact Statements (EIS), (2) allotments for which your resource area office is gathering information as of September 30, 1990, for use in a monitoring study, and (3) your resource area office's staffing levels and allotment responsibilities. Our study includes only those grazing EISs which were issued prior to 1982 or which have reached the 5-year BLM window for decisions or agreements.

Each questionnaire has two parts. Pages 1 and 2 concern your resource area office. Several questions on pages 1 and 2 seek FY 1980 information. If extensive file searches are necessary to provide FY 1980 information, please give your best estimate. Pages 3 to 8 concern one specific grazing EIS. A label identifying the EIS appears on page 3. If your resource area office has more than one grazing EIS which we wish to include in our study, an additional copy(s) of page 3 to 8 is provided with a label identifying the additional EIS(s).

In addition to collecting data using this questionnaire, GAO staff will be visiting a sample of BLM resource area offices to gain in depth knowledge on questionnaire responses.

Please return your completed questionnaire in the enclosed pre-addressed postage-paid envelope within 2 weeks after receipt. By providing your response within 2 weeks, costly follow ups can be avoided. In the event the envelope is misplaced, return your questionnaire to:

U.S. General Accounting Office
Mr. Richard Griffone
State Fund Building, Suite 900
1275 Market Street
San Francisco, CA 94103-1420

If you have any questions about the survey, please call Mr. Richard Griffone at (415) 556-1473. We appreciate your help and cooperation.

RESOURCE AREA OFFICE INFORMATION

The following questions concern your resource area office's staffing and allotment responsibilities.

1. How many range conservationists and range technician staff were assigned to your resource area office's range program at the points in time specified in the following table? *Please exclude temporary short-term summer hires and volunteers.*

	Number of range conservationists	Number of range technician staff
1. End of FY 1980	370	83[a]
2. End of FY 1985	338	72[a]
3. End of FY 1990	280	71[a]

[a] *One no response*

2. How many grazing allotments was your resource area office responsible for at the points in time specified in the following table?

	Number of grazing allotments assigned
1. End of FY 1980	16,482
2. End of FY 1985	16,839
3. End of FY 1990	16,814

3. What was the active preference on the allotments your resource area office was responsible for at the points in time specified in the following table?

By active preference we mean total preference minus suspended AUMS in total.

	Number of AUMs
1. End of FY 1980	10,783,815[a]
2. End of FY 1985	10,516,614[b]
3. End of FY 1990	10,429,838

a=Three no response. b=One no response.

4. How many federal acres was your resource area office responsible for at the points in time specified in the following table? *(Round to the nearest thousand acres.)*

	Number of federal acres
1. End of FY 1980	130,064,498
2. End of FY 1985	129,348,348[b]
3. End of FY 1990	134,569,981

5. In your opinion, how adequate or inadequate are staff and budgetary resources which are currently available to conduct your resource area office's range monitoring program? *(Check one for each.)*

Staff

42 Very inadequate
41 Somewhat inadequate
8 Neither adequate nor inadequate
3 Somewhat adequate
1 Very adequate

Budgetary Resources

40 Very inadequate
49 Somewhat inadequate
3 Neither adequate nor inadequate
1 Somewhat adequate
0 Very adequate
2 *No response*

6. If in your opinion either the staff or budgetary resources are somewhat or very inadequate, can you please describe some specific examples of how these shortages have affected your monitoring program.

14 No response

GRAZING ALLOTMENT INFORMATION FOR EIS

9. How many allotments (if any) covered by this EIS had active preference adjustments based on the EIS's recommendations prior to collecting additional monitoring data? *(If none enter 0.)*

Number of allotments 1,865

Above is a label which identifies a specific EIS. Questions 7 to 40 concern allotments covered by this EIS.

7. How many allotments managed by your resource area office are covered in the EIS which is identified in the label?

Number of allotments 14,464

8. For the allotments identified in question 7, please indicate the number of allotments which fall into the categories specified in the table below. The monitoring study can be either completed or underway. *(If none enter 0.)*

Type of Monitoring Study	Enter number of allotments			
	Category Improve (I)	Category Maintain (M)	Category Custodial (C)	Other Category
1. Utilization only	366	406	196	42
2. Trend only	412	920	600	45
3. Both utilization and trend	2,307	1,375	509	96
4. No monitoring study for either utilization or trend	322	1,241	5,365	262

Please review your answer to question 8. If you add all the numbers you entered in question 8, the result should equal to your answer in question 7.

Questions 10 to 19 concern allotments covered by this EIS. The total number of allotments in your answers to questions 10, 12, 14, 16, and 19 should equal the total number of allotments included in your answer to question 7. By monitoring we mean utilization and trend data collection. Do not include simply cow counting, use supervision, routine allotment visits, etc.

Questions 10 and 11 concern allotments with no monitoring data collected.

1. How many allotments had no monitoring data collected? *(If none enter 0, then skip to question 12.)*

   7,190 [a]

2. What role (if any) did the following reasons play in describing why no monitoring data was collected? *(Check one for each.)*

Reasons	Check one for each: No role (1)	Some role (2)	Great role (3)	No response (4)
1. Not a management category I (Improve) allotment	3	17	83	5
2. Shortage of range staff	11	36	55	6
3. Staff needed on other higher priority work	7	37	56	8
4. Uncooperative operator/permittee	89	2	0	17
5. Other (Specify)	6	2	37	63

a=108 with 1 or more responses, b=97 with 1 or more responses

Questions 12 and 13 concern allotments with monitoring data collected, but analyses are not yet completed.

3. How many allotments had monitoring data collected, but analyses are not yet completed? *(If none enter 0, then skip to question 14.)*

   3,989 [b]

4. What role (if any) did the following reasons play in describing why analyses are not yet completed? *(Check one for each.)*

Reasons	Check one for each: No role (1)	Some role (2)	Great role (3)	No response (4)
1. Insufficient monitoring data was collected	25	43	21	8
2. Emphasis was placed on data collection	20	35	31	11
3. No additional units of accomplishment are gained	76	5	2	14
4. Not a management category I (Improve) allotment	28	32	31	6
5. Grazing cycle requires additional monitoring data	39	33	14	11
6. Monitoring data gathered is of little or no use	58	27	0	12
7. Shortage of range staff	3	25	62	7
8. Staff needed on other higher priority work	3	29	61	4
9. Uncooperative operator/permittee	76	7	1	13
10. Monitoring study has just been completed	43	35	9	10
11. Other (Specify)	0	3	25	69

Questions 14 and 15 concern allotments where the analysis indicated that insufficient data was collected to support a grazing management change at this time.

14. For how many allotments did the analysis of available monitoring data indicate that *insufficient* data was collected to support a grazing management change at this time? *(If none enter 0, then skip to question 16.)*

587[a]

15. What role (if any) did the following reasons play in describing why insufficient data was collected? *(Check one for each.)*

Reasons	Check one for each: No role (1)	Some role (2)	Great role (3)	No response (4)
1. Little emphasis was placed on data collection	24	16	2	7
2. No additional units of accomplishment are gained	33	8	0	8
3. Not a management category I (Improve) allotment	19	17	6	7
4. Monitoring data gathered is of little or no use	26	15	3	5
5. Shortage of range staff	4	14	23	8
6. Staff needed on other higher priority work	6	12	23	8
7. Uncooperative operator/permittee	37	4	1	7
8. Other (Specify)	1	1	20	27

a=49 with 1 or more responses, b=84 with 1 or more responses, c=four allotments with no response

Questions 16, 17 and 18 concern allotments where the analysis indicated that sufficient data was collected to support that no change in grazing management was needed at this time.

16. For how many allotments did the analysis of available monitoring data indicate that sufficient data was collected to support that *no change* in grazing management was needed at this time? *(If none enter 0, then skip to question 19.)*

1,643[b]

17. Of those allotments specified in question 16, for how many allotments was the analysis a formally documented analysis, interpretation and evaluation (AIE) as described in BLM range monitoring technical reference 4400-7 (pages 34 to 36)? *(If none enter 0.)*

823

18. Of those allotments specified in question 16, for how many allotments did the analysis include a determination of allotment stocking level (carrying capacity) using the following methods? *(If none enter 0.)*

- Computed as described in BLM range monitoring technical reference 4400-7 (appendix 2)

678

- Not computed, but was determined in another manner (e.g., professional judgement, photographs, etc.)

620[c]

Question 19 concerns allotments where the analysis indicated that data was sufficient to support a grazing management change.

19. For how many allotments did the analysis of available monitoring data indicate that the data was sufficient to support a grazing management change? *(If none enter 0.)*

1,055

Please duplicate (xerox) and complete questions 20 to 40 for *each* grazing allotment which you specified in question 19. These allotments have sufficient monitoring data, analyses are completed and the proposed specific grazing decision or agreement indicated that a change in management was needed. If your answer to question 19 is 0 (zero), then skip to question 40.

20. What is the allotment's name for which questions 20 to 40 will be completed?

_____

21. What is the allotment's number? _____

22. How many operators have an active preference on this allotment?

Number of operators 1,545
(7 with no response)

23. What is this allotment management category? *(Check one.)*

575 Improve (I)
236 Maintain (M)
85 Custodial (C)
8 Other category

24. What is the total number of federal acres in this allotment?

Number of federal acres 19,471,839
(2 with no response)

25. Currently, what is the active preference on this allotment?

Number of AUMs 1,537,075

26. On average, about what percent of the active preference has been in non-use in the past 5 years? *(Enter percent.)*

Percent in non-use 19.8 (average)
(5 with no response)

27. Where are the specific measurable management objectives for this allotment documented? *(Check all that apply.)*

444 Land use plan (LUP/RPS)
367 Resource area or district office monitoring plan
391 Individual allotment management plan (AMP)
240 Individual allotment monitoring plan
424 Allotment evaluation report
34 No measurable management objectives were documented ⟶ Skip to Question 29

28. What types of long term and/or short term measurable management objectives were established for this allotment? *(Check one for each.)*

Objectives	Check one for each: Not applicable (1)	Objective met (2)	Objective not met (3)	No response (4)
Short term objectives				
1. Rangeland/upland utilization level	104	515	191	60
2. Riparian utilization level	631	58	103	78
3. Other objectives (Specify)	282	105	37	446
Long term objectives				
4. Raise allotment's condition classification	203	172	418	77
5. Increase production	306	159	309	96
6. Increase riparian diversity	614	63	96	97
7. Other objectives (Specify)	212	120	122	416

29. What types of monitoring data were collected on this allotment in the past 5 years? *(Check all that apply.)*

850 Utilization data
238 Production data
773 Trend data
761 Climatic/Weather data
830 Actual use data
202 Estimated use data

30. How (if at all) was the analysis of the monitoring data documented for this allotment's analysis, interpretation and evaluation? *(Check one.)*

650 An analysis, interpretation and evaluation (AIE) was formally documented in a summary report as described in the BLM range monitoring technical reference 4400-7 (page 34 to 36)
20 This allotment analysis was not documented
234 This allotment analysis was documented in some other manner ⟶ Please describe how it is was documented.

31. Did the allotment analysis of the monitoring data include a determination of this allotment's stocking level (carrying capacity) as described in BLM's range monitoring technical reference 4400-7 (appendix 2)? *(Check one.)*

453 Yes, using technical reference 4400-7
357 No, but carrying capacity was determined using professional judgement
93 Carrying capacity was not determined
1 No response

32. Which of the following were issued for this allotment? *(Check all that apply.)*

Grazing Decision
309 Proposed
215 Final

Grazing Agreement
149 Draft
654 Final

33. Did the decision/agreement for this allotment direct an actual adjustment in the stocking level (increase or decrease in the active preference)? ***Please exclude changes where there was simply a boundary adjustment, a land exchange, or other such administrative action.*** *(Check one.)*

552 Yes, an actual adjustment was directed
352 No actual adjustment was directed ⟶ Skip to Question 39

34. Was the decision/agreement protested or appealed for this allotment? *(Check all that apply.)*

95 A protest was made
45 An appeal was made
449 Neither a protest nor an appeal was made

35. What was the active preference before the decision/agreement was issued and as of September 30, 1990 for this allotment?

Active preference **before** the decision/agreement 976,207

Active preference as of September 30, 1990 854,906

36. What type of (phase-in) adjustment of active preference use has been directed by the grazing decision/agreement for this allotment? *(Check one.)*

279 No phase-in (full force in effect)
150 Phase-in over 1 year
22 Phase-in over 3 years
73 Phase-in over 5 years
27 Other (Specify)

1 No response

37. What change (if any) has resulted from the active preference adjustment directed by the grazing decision/agreement issued for this allotment? *(Check one.)*

AUM Increase Proposed

3 Not implemented ⟶ Skip to Question 39
15 Partially implemented ⟶ Skip to Question 39
131 Fully implemented ⟶ Skip to Question 39

AUM Decrease Proposed

40 Not implemented ⟶ Skip to Question 39
28 Partially implemented
322 Fully implemented

Other Change

12 Other (Specify)

1 No response

38. Of the active preference which was decreased as a result of the decision/agreement, about what percent on average was in *non-use* during the 5 previous years? *(For example, if the active preference was 100, it was reduced by 20, and non-use in the past 5 years averaged 10, then your response would be 10/20 or 50%.)*

Percent in non-use 43.9

39. Did the grazing decision/agreement for this allotment result in any of the following changes in management practices? *(Check all that apply.)*

Management Practices	Check one for each: Was not directed (1)	Was directed, but not implemented (2)	Was directed and partially implemented (3)	Was directed and fully implemented (4)	No response (5)
1. Grazing season change	597	28	24	229	26
2. Grazing system adjustment (e.g., rest rotation)	301	96	164	314	23
3. Salt placement	696	15	24	139	30
4. Herding	772	12	26	114	30
5. Range improvements	370	123	209	187	15
6. Change in kind of livestock	793	1	3	18	89

40. Please provide the following information about the person who completed this questionnaire. This information will assist us if clarification of answers is necessary.

Name_____

Title_____

Telephone number_____

Resource Area Office name_____

Thank you for your assistance!

Comments From the Department of the Interior

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JAN 3 1992

Mr. James Duffus III
Director, Natural Resources
Management Issues
General Accounting Office
Washington, D.C. 20548

Dear Mr. Duffus:

This letter transmits our comments on the General Accounting Office (GAO) draft report entitled, RANGELAND MANAGEMENT: Interior's Monitoring Performance Has Fallen Short of Agency Requirements, (GAO/RCED-92-51). We agree with the draft GAO report that the Bureau of Land Management's (BLM) administration of livestock grazing and the grazing fee formula is an appropriate matter for congressional consideration. In addition, the BLM appreciates GAO's recognition of the BLM's efforts to provide proper rangeland management and monitoring using available resources.

See comment 1.

We have reviewed the draft report and believe it is generally accurate in its assessments of BLM's overall monitoring of livestock grazing on lands administered by the BLM. We disagree with the report's finding that range conditions deteriorated during the period of 1934 through 1976. In fact, rangeland conditions improved during that period. This is shown in the enclosed report State of the Public Rangelands 1990, The Range of Our Vision, in the table "Historical Range Conditions." We also want to note that the BLM does not have a "grazing program." The BLM does have a comprehensive rangeland management program which encompasses administration of livestock grazing in addition to several other aspects of rangeland ecosystem management. This latter point is important because the two recommendations indicate a lack of understanding about how the range program is interrelated with, and supportive of, a variety of multiple uses and rangeland resource values.

GAO Matter for Congressional Consideration: Congress may want to consider reducing the magnitude of the existing grazing program, thereby reducing BLM's range management responsibilities.

Response:

We do not agree with this recommendation. The need for ecosystem management information and expertise for this vital component of our natural resources will continue. Reducing responsibilities within this program would compel other programs like those responsible for wildlife, wild horses and burros, and watershed to assume these roles and responsibilities in order to monitor, protect, and manage public rangelands.

GAO Matter for Congressional Consideration: Congress may want to consider, as part of its deliberations following the joint Agriculture/Interior grazing fee study mandated in the Fiscal Year 1992 Interior Appropriations Act, funding an increase in BLM range management resource with an increase in grazing fees.

2.

Response:

We do not support the concept of basing increased funding for the BLM's range management program on increases in the grazing fee. The first reason is that the BLM supports Executive Order 12456 which affirms the Administration's commitment to the grazing fee formula originally established by the Congress in the Public Rangelands Improvement Act (PRIA). The PRIA formula contains indices which provide for fee adjustments as economic conditions change. Arbitrarily adjusting the fee to generate revenue is only possible within a rather limited range and would generate adverse impacts on dependent users and communities. Further, market fluctuations in grazing fee rates would not provide a stable basis for management of a major natural resource. Management of this important natural resource should be based on a careful assessment of resource needs and priorities.

In an effort to enhance our ability to conduct timely and efficient monitoring, the BLM has developed a strategy of Coordinated Interdisciplinary Resource Monitoring (CIRM). This initiative was reviewed by BLM field personnel in 1991. Final policy and procedural guidance will be issued in 1992 for Bureauwide implementation. Training courses to assist in CIRM implementation are currently being developed. Another related initiative involves determining Desired Plant Communities for all allotments based on land capability analyses and reflecting multiple-use objectives for the management unit. This will provide a much better basis for determining "what to monitor for." The National Public Lands Advisory Council recently helped the BLM to establish a "Blue Ribbon Panel" whose members are developing recommendations to assist BLM in preparing a comprehensive strategy for implementing The Range of Our Vision. This strategy will include the initiatives noted above as well as other aspects of rangeland monitoring. A more coordinated approach to rangeland inventory and monitoring that involves most of the BLM's programs is expected. These changes and a better understanding of ecological concepts by all interested parties will improve the efficiency and effectiveness of BLM's resource monitoring.

Sincerely,

Richard Roldan

David C. O'Neal
Assistant Secretary, Land and Minerals Management

Enclosure

GAO Comment

The following is GAO's comment on the Department of the Interior's letter dated January 3, 1992.

1. Interior has asserted that rangeland conditions improved during the 1934 to 1976 time period. In support of this view, Interior cited statistics from BLM's report entitled State of the Public Rangelands 1990, The Range of Our Vision. However, in 1991 we reported that the studies BLM used to support its view lacked supporting documentation and were produced using different methodologies.[1] Relatedly, BLM's view is inconsistent with FLPMA, which found in 1976 that "a substantial amount of the Federal range lands is deteriorating in quality, and that installation of additional range improvements could arrest much of the continuing deterioration. . . ." Interior also expressed the view that BLM operates a "rangeland management" program not a "grazing" program. As shown by the list of related GAO products at the end of this report, we are sensitive to the fact that grazing is but one of a wide range of BLM public rangeland management activities. It is with this sensitivity of the multiple use of the public land that we have presented our options for congressional consideration regarding how best to achieve these multiple goals with limited resources.

[1]Rangeland Management: Comparison of Rangeland Condition Reports (GAO/RCED-91-191, July 18, 1991).

Major Contributors to This Report

Resources, Community, and Economic Development Division Washington, D.C.

Bob Robinson, Assistant Director
Thomas Heck, Assignment Manager
Alice Feldesman, Social Science Analyst

San Francisco Regional Office

Richard Griffone, Evaluator-in-Charge
Judy Hoovler, Evaluator
Dan Alspaugh, Evaluator

Related GAO Products

Rangeland Management: BLM's Hot Desert Grazing Program Merits Reconsideration (GAO/RCED-92-12, Nov. 26, 1991).

Rangeland Management: Comparison of Rangeland Condition Reports (GAO/RCED-91-191, July 18, 1991).

Rangeland Management: Current Formula Keeps Grazing Fees Low (GAO/RCED-91-185BR, June 11, 1991).

Public Land Management: Attention to Wildlife is Limited (GAO/RCED-91-64, Mar. 7, 1991).

Rangeland Management: BLM Efforts to Prevent Unauthorized Livestock Grazing Need Strengthening (GAO/RCED-91-17, Dec. 7, 1990).

Public Lands: Limited Progress in Resource Management Planning (GAO/RCED-90-225, Sept. 27, 1990).

Rangeland Management: Improvements Needed in Federal Wild Horse Program (GAO/RCED-90-110, Aug. 20, 1990).

California Desert: Planned Wildlife Protection and Enhancement Objectives Not Achieved (GAO/RCED-89-171, June 23, 1989).

Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow (GAO/RCED-88-105, June 30, 1988).

Rangeland Management: More Emphasis Needed on Declining and Overstocked Grazing Allotments (GAO/RCED-88-80, June 10, 1988).

Rangeland Management: Grazing Lease Arrangements of Bureau of Land Management Permittees (GAO/RCED-86-168BR, May 30, 1986).

Management of the Public Lands by the Bureau of Land Management and the U.S. Forest Service (GAO/T-RCED-90-24, Feb. 6, 1990).

Shortfalls in BLM's Management of Wildlife Habitat in the California Desert Conservation Area (GAO/T-RCED-90-1, Oct. 2, 1989).

Change in Approach Needed to Improve the Bureau of Land Management's Oversight of Public Lands (GAO/T-RCED-89-23, Apr. 11, 1989).

Management of Public Rangelands by the Bureau of Land Management (GAO/T-RCED-88-58, Aug. 2, 1988).

Restoring Degraded Riparian Areas on Western Rangelands (GAO/T-RCED-88-20, Mar. 1, 1988).

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