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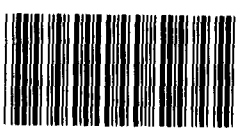
GAO

Response to Congressional Requesters

RANGELAND MANAGEMENT

Assessment of Nevada Consulting Firm's Critique of Three GAO Reports



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Congressional Requesters

The Chairman of the Subcommittee on National Parks and Public Lands, House Committee on Interior and Insular Affairs, and 16 Senators asked GAO to review a January 1992 report by a Nevada consulting firm entitled A Technical Review of U. S. General Accounting Office Rangeland Management and Public Rangelands Reports 1988-1990 and respond to the report's critique of three GAO reports, two of which were issued in June 1988 and one of which was issued in August 1990.[1] The GAO reports addressed programs and activities of the Department of the Interior's Bureau of Land Management (BLM) and the Department of Agriculture's Forest Service to manage the western public rangeland. This correspondence responds to these requests.

We have carefully reviewed both the consulting firm's critique of our reports and our adherence to GAO standards, policies, and procedures. We are confident that our work was performed with due professional care consistent with generally accepted government auditing standards and that our findings are well supported, our conclusions flow logically from the facts, and our recommendations offer reasonable suggestions for addressing the problems we identified.

Appendixes I through III contain our point-by-point responses to the specific charges made in the consulting firm's report. For each GAO report, the consulting firm also highlighted what appeared to be its primary criticisms. These criticisms are discussed below, along with our responses.

Regarding our report on declining and overstocked grazing allotments, the consulting firm claimed that we created an unduly negative picture of rangeland conditions and placed undue emphasis on livestock overgrazing as a cause of declining conditions. We disagree. Our report presented a balanced picture of rangeland conditions and trends based substantially on almost 800 questionnaire responses completed by BLM and Forest Service range managers directly responsible for specific grazing allotments. Our report fully disclosed the amount of land in each land condition category and the amount of land that was declining, stable, or

[1]See Rangeland Management: More Emphasis Needed on Declining and Overstocked Grazing Allotments (GAO/RCED-88-80, June 10, 1988), Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow (GAO/RCED-88-105, June 30, 1988), and Rangeland Management: Improvements Needed in Federal Wild Horse Program (GAO/RCED-90-110, Aug. 20, 1990).

improving. Our report then focused on the grazing allotments that were declining and/or overgrazed because (1) our analysis of range managers' responses demonstrated that overgrazing was the most prevalent cause of declining rangeland conditions; (2) overgrazing can seriously, even permanently, damage the land; and (3) overgrazing is a problem that the agencies can address.

Regarding our report on riparian area restoration, the consulting firm asserted that we prepared our report on the basis of selective, unverified anecdotal information that led us to overstate the magnitude of riparian area restoration needs. It also claimed that we identified livestock overgrazing as the sole source of riparian area damage. These assertions are inconsistent with the facts. Our review included field visits and analysis of a large portion of the riparian restoration projects that had been undertaken at that time. Furthermore, we did not limit our review to an examination of individual projects. To verify that our findings were representative of conditions on public land throughout the West, we examined available agency riparian condition inventory data and interviewed agency experts. This work showed that tens of thousands of miles of riparian areas on public rangeland in the West are in need of restoration. Also, our report identified other activities, such as logging and mining, that can contribute to riparian degradation. However, the report focused on livestock grazing because BLM and Forest Service managers repeatedly stressed that the primary, and in many cases only, cause of damage to rangeland riparian areas is poorly managed domestic livestock grazing.

Regarding our report on the federal wild horse program, the consulting firm asserted that we did not bring to light inadequacies in program management because we focused on problems relating to livestock grazing. This assertion is false. Our report included a substantial discussion of management problems associated with program elements that have no relationship to livestock grazing, including the wild horse adoption program, wild horse sanctuary operations, and the prison halter training program. We devoted substantially more discussion to these issues than to the comparative effects of wild horses and domestic livestock on range conditions. We discussed livestock grazing in our report because during our work it became clear that unsatisfactory range conditions cannot be widely improved by concentrating on wild horse management alone. Domestic livestock substantially outnumber wild horses on the range and consume more forage even in states where wild horse concentrations are highest. Accordingly, we concluded that any

rational range management and range restoration strategy must take into account grazing by domestic livestock as well as by wild horses.

Although each of our reports can stand on its own merits, it is important to note that a number of others have issued reports or reached conclusions similar to ours. These include those by or for Interior's Inspector General, Board of Land Appeals,[2] Wild Horse and Burro Advisory Board, Fish and Wildlife Service, and National Fish and Wildlife Foundation;[3] the Environmental Protection Agency; the President's Council on Environmental Quality; and the Bonneville Power Administration. The State of Nevada's Department of Wildlife has also commented favorably on the quality of our work.

Likewise, both BLM and the Forest Service have recognized the need to address the issues raised in our reports and are taking actions to implement many of our recommendations. For example, the Forest Service has found that nearly one out of every four grazing allotments in its six western regions is considered to be in a declining condition and/or overstocked—a level that is consistent with the data cited in our report—and has developed a detailed action plan for addressing the problem allotments. Similarly, in a December 11, 1991, letter to GAO, the Director of BLM stated:

> Your June 1988 report on our [BLM's] riparian management program was one of GAO's more comprehensive and expert studies of a very relevant issue. While we had some disagreements on a few issues at the time the GAO report was issued, essentially, all of the report's recommendations have been implemented.

BLM and the Forest Service are also in the process of collecting and analyzing the monitoring data needed to make informed grazing decisions, as we recommended.

The validity of our findings, conclusions, and recommendations results from the fundamental soundness of the way we approached and carried out our work:

- We employed proven evaluation methodologies—including statistical sampling, questionnaires, and site visits—to ensure that (1) our findings

[2]The Interior Board of Land Appeals, as part of Interior's Office of Hearings and Appeals, has quasi-judicial and appellate responsibilities for cases brought against BLM.

[3]The National Fish and Wildlife Foundation was established in 1984 to encourage and administer donations of real or personal property in support of activities initiated for the benefit of fish, wildlife, and plant resources. It receives federal funding through a matching grant program.

were based on the best information available at the time we performed our work and (2) technical judgments on such things as the environmental impacts of livestock and wild horse grazing were made by experienced BLM and Forest Service personnel and other knowledgeable individuals, thereby avoiding reliance on GAO's opinions and judgments on technical matters.

- We assessed the agencies' management performance against applicable laws, such as the Federal Land Policy and Management Act and the Public Rangelands Improvement Act, as well as agency regulations and judicial decisions.
- We assigned staff to each of the reviews who (1) had years and, in most instances, more than a decade of experience in evaluating federal programs and activities; (2) collectively possessed the professional proficiency for the tasks required; and (3) were free from any impairments to their independence, such as ties to livestock grazing or public land management interests.
- We subjected drafts of each report to GAO's rigorous internal quality control review procedures, during which (1) an independent, qualified professional not associated with the assignment reviewed the evidence and assessed the support for the findings, conclusions, and recommendations; (2) other qualified professionals also not associated with the assignment evaluated such things as the overall quality of the draft, its consistency with GAO reporting policies and standards, its clarity and tone of presentation, the soundness and convincingness of the positions taken, the constructiveness of the recommendations made, and the responsiveness to the congressional request; and (3) concurrences were obtained, when necessary, from offices within GAO responsible for legal and policy issues.
- We held exit conferences with BLM and Forest Service headquarters and field office officials responsible for the programs or activities being evaluated to discuss the facts disclosed by our work and the implications flowing from them. In addition, we obtained written agency comments on drafts of each report. These comments and our evaluations of them were fully disclosed in the final reports along with changes made to the reports in response to the comments. As previously indicated, both BLM and the Forest Service have accepted the need for management improvements and have taken steps to implement our recommendations.

Our review of the consulting firm's critique showed that, in contrast to our reports, which contain factual information and other data to support our findings, the firm's critique contains little factual data to substantiate its assertions. Instead, the firm's critique misrepresents our reports' findings

to support its positions and challenges the manner in which we presented the facts and the implications that we drew from them.

We recognize that recent initiatives to achieve more balanced stewardship of the public rangeland for the benefit of all users are controversial because they challenge longstanding claims to the control and use of the public land. Our role has been and will continue to be to provide the Congress with objective information on this issue and with constructive options and/or recommendations for improving public rangeland management.

Additional information requested by the 16 Senators relating to the documents we reviewed and the individuals we contacted in preparing our three reports will be provided to each of the requesters under separate cover. The names of the Members of Congress who requested this review are listed at the end of this letter.

J. Dexter Peach
Assistant Comptroller General

List of Requesters

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

The Honorable Hank Brown
The Honorable Richard H. Bryan
The Honorable Quentin N. Burdick
The Honorable Conrad Burns
The Honorable Kent Conrad
The Honorable Larry E. Craig
The Honorable Thomas A. Daschle
The Honorable Dennis DeConcini
The Honorable Pete V. Domenici
The Honorable Slade Gorton
The Honorable Orrin G. Hatch
The Honorable John McCain
The Honorable Bob Packwood
The Honorable Harry M. Reid
The Honorable Steve Symms
The Honorable Malcolm Wallop
United States Senate

Contents

Abbreviations

BLM	Bureau of Land Management
FLPMA	Federal Land Policy and Management Act
GAO	U.S. General Accounting Office
PRIA	Public Rangelands Improvement Act

Specific GAO Responses to Criticisms of GAO Report on Declining and Overstocked Grazing Allotments

The following are GAO's responses to the specific assertions in the consulting firm's critique of our report Rangeland Management: More Emphasis Needed on Declining and Overstocked Grazing Allotments (GAO/RCED-88-80, June 10, 1988). The numbered comments are keyed to an annotated version of the applicable section of the consulting firm's report, which is reproduced on pages 22-26.

1. The consulting firm's criticism of our reliance on the professional views of federal range managers in preparing our report on the condition of the public lands is unfounded. Range condition and trend data for much of the public rangeland are not reliable because up-to-date monitoring data are not available. Concerned about the reliability of the information that was available, we asked professional staff—those assigned responsibility for managing the public rangeland—at Forest Service and Bureau of Land Management (BLM) field offices for their professional opinions on range conditions and trends. (This methodology was fully disclosed in our report.) Our questionnaire asked that the person most knowledgeable about the specific allotment complete the questionnaire and further asked that the respondent consult with other specialists as necessary in preparing the responses. After receiving these responses, we telephoned the respondents when further clarification of the responses was necessary. Finally, we visited 14 BLM field offices and 6 Forest Service field offices to verify and supplement the questionnaire responses. By obtaining information on about 800 allotments from the agency personnel responsible for managing them, carefully reviewing the data, and then verifying the information at 20 field offices, we exercised due professional care to ensure that the information we used and presented was the best available.

2. Contrary to the consulting firm's assertion, overstocking was not the only questionnaire response addressed in our report. The questionnaire asked for well over 100 data items to obtain a full range of information for each sampled allotment. This information included condition, trends, causes for reported conditions, and many other factors. The results were summarized in 12 tables, in chapters 2 through 5 of our report, and covered a broad range of topics, not just overstocking. Seven of the 12 tables (3.1 on p. 27, 3.2 on p. 27, 3.3 on p. 28, 4.3 on p. 36, 5.1 on p. 42, 5.2 on p. 44, 5.3 on p. 45) did present data that dealt in whole or in part with overstocking as an issue because, as we conducted our analysis of the questionnaire responses, overstocking emerged as a significant factor contributing to declining range trends. As table 3.2 on page 27 of our report shows, overstocked allotments had a four times greater chance of

being in decline than allotments that were not overstocked. Because this difference is so large and because overgrazing can lead to serious, even irreparable, damage to the resource base, we believe that our focus on this issue was appropriate not only in the tables but in our conclusions and recommendations as well.

3. Although all of the factors mentioned by the consulting firm (and included in our questionnaire) influence the condition and trends of the public rangeland, range managers cited overstocking (allowing more livestock to graze than the overall land area can support), and livestock distribution problems (livestock overgrazing on specific parts of the allotment) as the most prevalent causes of declining rangeland conditions. Hence, the focus of our report on overgrazing was consistent with the responses we received.

4. Our report's treatment of the questionnaire responses we received was appropriate. Acts of nature (fire, floods, drought, etc.) were cited by agency land managers about 36 percent as often as overgrazing (overstocking or livestock distribution problems on individual allotments) as a reason for ecological range decline; wildlife was cited 13 percent as often; mining was cited 4 percent as often; and wild horses and burros were cited 1 percent as often. Thus, while these other factors can have a negative influence on range conditions, they each played a significantly smaller role than overgrazing. Moreover, unlike factors such as fire, floods, and drought, overgrazing is within the control of the land management agencies.

5. Our methodology for soliciting range managers' views on allotment conditions was sound and the results of the questionnaires are meaningful. The consulting firm's suggestion that BLM managers are not a valuable source of information on range condition is unfounded. In sending our questionnaire to the agencies' field offices, we asked that the person most knowledgeable about the specific allotment complete the questionnaire and suggested that the respondent consult with other range specialists as necessary. The person filling out the questionnaire was asked to disclose how long he/she had been on the field office's range staff and how familiar he/she was with the allotment covered by the questionnaire. About 94 percent of the range specialists responded that they were familiar with the allotment, and 81 percent responded that they had moderate to very great familiarity with it. Only 6 percent responded that they had little or no familiarity with the specific allotment. Furthermore, 65 percent responded that they had been on the field office range staff for more than 5 years. In

chapters 2, 3, and 5, we recognize that data on the condition of the public rangeland are far from complete and that range managers face a formidable task in managing and monitoring their grazing allotments. The results of our questionnaire are presented within this context.

As we stated on page 17 of our report, we chose the questionnaire approach because it was impractical to visit more than a small number of the several hundred field offices where records are maintained and the staff responsible for carrying out the range management programs are located. To ensure that our questionnaire was well focused and appropriately constructed, we sought advice from a variety of sources, including a range research scientist at the University of Nevada, BLM's Rangeland Resources Division Chief, and range staff at BLM and Forest Service headquarters and field offices. The questionnaire we used was pretested at several BLM and Forest Service field offices, and many of the revisions suggested by range managers were incorporated into the final questionnaire.

6. We disagree with the consultant's claim that the responsible agency range managers are not in a position to offer professional judgments on the land's condition. Our questionnaire asked for allotment-specific information from the person who was most knowledgeable about the specific allotment. The respondents were professional range staff who were responsible for the management of the land in question. As discussed earlier, we invested considerable effort to ensure that the data presented were checked for accuracy and were the best available.

7. This statement by the consulting firm misrepresents our report. We did not characterize the lack of information on range conditions as "alarming," as the firm states. On page 20 of our 1988 report we stated that range managers reported that (1) 8 percent of the public rangeland grazing allotments were declining and (2) this fact was cause for alarm because recovery from damage to rangeland can be slow and, in some cases, irreversible. In comment 19 below, we provide an example of the serious and even permanent damage that can be caused by overgrazing. Contrary to the consultant's portrayal, our report recognizes on page 25 that it would be unrealistic to expect the agencies to maintain current, in-depth information on all grazing allotments, given the resources assigned to this work. We further elaborate on this recognition on page 39, where we discuss the magnitude of the range monitoring task. While we did not assert that the lack of data was alarming, others have. For example, in his paper on rangelands presented at a November 1988 conference on natural

resources for the 21st century, the recognized and frequently cited range expert Dr. Thadis Box stated:

> Even more alarming is the revelation that the condition of more than a fourth of our rangeland is simply unknown, that another 40 percent of the data reported is more than 10 years old, and that more than half of grazing allotments do not have management plans. . . .

8. As a general rule, knowledge of range conditions is pertinent for the management of the public rangeland. This was recognized in the Public Rangelands Improvement Act (PRIA). The act found that vast segments of the public rangeland were in unsatisfactory condition and that these conditions presented a high risk of soil loss, desertification, and a host of other negative effects. On the basis of these findings, the act directed the Secretaries of the Interior and Agriculture to update, develop, and maintain an inventory of range conditions and records of range condition trends. We do recognize that for isolated allotments with limited grazing activity, it may be difficult to maintain a current inventory.

9. As the consulting firm states, our report recognized that resource constraints limit rangeland management activity. This fact, in conjunction with the fact that overgrazing can seriously damage the public rangeland, led us to recommend that the agencies focus their limited resources on grazing allotments that are declining and/or overstocked. The Forest Service and BLM agreed with the recommendations in our final report and have taken action on them.

10. Our report did not exaggerate the results of our questionnaire. On pages 22-24 of our report, we fully and fairly disclosed information on range conditions and trends from both of the agencies' most recent reports and from our questionnaire. We discussed the reliability and limitations of the data presented, as well as the upper and lower limits of the projections we made on the basis of our questionnaire responses at the 95-percent confidence level. Thus, our presentation of these data left no room to exaggerate the results. In fact, in discussing the overall trend of range conditions (in the executive summary and in the body of our report) we focused on the 8-percent decline reported to us by range managers (a 7-percent decline reported by BLM and a 9-percent decline by the Forest Service), rather than the 14-percent decline that BLM and the Forest Service had self-reported in their respective 1986 and 1987 reports. Our reporting of the lower figure (8 percent) could be viewed as conservative rather than as exaggerated. Subsequently, in 1990, the Forest Service reported that 24 percent of their allotments were declining and/or overstocked, and BLM

reported that over 11 percent of their rangeland was in a downward trend—figures that are again higher than those cited in our report.

11. As we stated on page 20 of our 1988 report, the fact that 8 percent of the public rangeland grazing allotments were in decline was not alone cause for alarm, but rather that recovery from damage can be slow and, in some cases, irreversible. (See also our responses to comments 13 and 19 below.)

12. Our statement that overgrazing can cause serious and even permanent damage to range conditions is not a contention, but a well-established fact. Although scientific records on the condition of western rangeland in the early 1800s are not available, historical accounts suggest that much of the range was made up of productive, nutritious grasses. Recognizing the opportunities afforded by this apparent abundance, livestock growers brought herds of cattle and sheep in uncontrolled numbers to the public land in the West. Some 19th century observers, such as John Wesley Powell, warned that, because of the arid climate, this rangeland was actually quite fragile and incapable of supporting excessive livestock grazing without severe damage. By the late 1880s, about 19 million cattle and sheep were grazing in the arid West. The resulting overgrazing, together with periodic droughts, permanently changed the face of this rangeland. By the early 1900s, much of the once productive land had been reduced to a desertlike state.

In 1906, the Forest Service started a permit system to regulate grazing. In 1934, the Taylor Grazing Act established a permit system, a purpose of which was to prevent further overgrazing on BLM land. In 1978, PRIA recognized that vast segments of the public rangeland were still in unsatisfactory condition and stated that such conditions (1) present a high risk of soil loss, desertification, and a resultant underproductivity for large acreages of the public land; (2) contribute significantly to unacceptable levels of siltation and salinity in major western watersheds, including the Colorado River; (3) negatively impact the quality and availability of scarce western water supplies; (4) threaten important and frequently critical fish and wildlife habitat; (5) prevent expansion of the forage resource and resulting benefits to livestock and wildlife production; (6) increase surface runoff and flood danger; (7) reduce the value of such lands for recreational and esthetic purposes; and (8) may ultimately lead to unpredictable and undesirable long-term local and regional climatic and economic changes.

Our report disclosed that range trends in recent years have been generally stable to improving. In fact, the statistics cited by the consulting firm were drawn from our report. Nevertheless, we believe that we focused our report appropriately on actions that can be taken to mitigate further deterioration of declining and overstocked grazing allotments because damage to the resource can be long-term or permanent. While these lands play a relatively small role in the production of meat products today, they may be important to future generations. The theme of our report and recommendations was not that these resources should not be used, but rather that BLM and the Forest Service needed to take the actions necessary to ensure that the resources are not abused and are preserved for future generations. The basis for this theme is not a GAO assertion, but rather the legislative mandate of the Federal Land Policy and Management Act (FLPMA), which prescribed that the public land be managed so as to sustain its productive capacity in perpetuity.

13. We disagree that a downward trend of 8 percent is either satisfactory or reason for little concern, particularly when much of the decline is due to human activities. As discussed in comments 3 and 4, while several factors influence range trends, overgrazing was cited as the most prevalent cause of declining range conditions. Damage to arid rangeland can result in serious, even permanent, damage to the resource base. For example, in a July 1990 report to the Environmental Protection Agency entitled Livestock Grazing on Western Riparian Areas, several prominent experts in the field of riparian area restoration reported:

> The extensive deterioration of western riparian areas began with severe overgrazing in the late nineteenth and early twentieth centuries. Native perennial grasses were virtually eliminated from vast areas and replaced by sagebrush, rabbitbrush, mesquite or juniper, and by exotic plants or shallow-rooted native vegetation less suited for holding soils in place. This unleashed natural forces that literally transformed large areas of the western landscape.
>
> Exposed topsoil thousands of years in the making was quickly stripped from the land by wind and water erosion. Runoff was concentrated and accelerated. Unchecked flood flows eroded unprotected streambanks and downcut streambeds. Water tables lowered. Perennial streams became intermittent or dry during most of the year. Formerly productive riparian areas dried out or eroded away. These conditions contributed significantly to desertification—drying out of the land—which has reduced the productivity of an estimated 225 million acres in the West.

In 1980 the United States Department of Agriculture estimated the vegetation on more than half of all western rangelands was deteriorated to less than 40% of potential productivity, and to less than 60% of potential on more than 85% of the rangeland.

In response to our report's recommendations, the Forest Service independently surveyed all of its grazing allotments to identify allotments judged to be declining and overstocked. The results corroborated the information we had reported and confirmed that the emphasis we had placed on declining and overstocked allotments was appropriate.

14. Our review work and report were not based exclusively on the questionnaire. We also reviewed grazing files and extensively discussed individual grazing allotments and grazing practices in general with agency staff at 20 field offices and with both agencies' headquarters staff. Although we reported the questionnaire results in the terms used in the questionnaire, we used other terms to describe the meaning and implications of the data. These observations were based not only on the questionnaire results but also on additional information obtained from in-depth discussions with agency personnel. For example, on page 27 of our report, we reported that, according to survey responses, range managers believed that 18 percent of BLM's and 21 percent of the Forest Service's allotments were overstocked. We then supplemented these data with a brief statement of what the data meant—that one out of five grazing allotments was potentially subject to deterioration because of overgrazing. Table 3.2 substantiated this interpretative statement, showing that overstocked allotments had a four times greater incidence of decline than all other allotments—information that was not known until we obtained and analyzed the questionnaire data. According to the consulting firm, describing these results in terms such as "threatened with further deterioration" constitutes a "sensationalized description." We disagree. Both FLPMA and PRIA describe concerns about the public rangeland in terms of deterioration. Finally, it has long been recognized that overgrazing leads to rangeland deterioration. On the basis of our work and the work of others on the negative effects of overgrazing, we believe that our report in no way presented a sensationalized description of rangeland conditions.

15. Although we agree that endangered species, riparian demands, critical wildlife habitat, wild horses, and other range uses all enter into range management decision-making, we were emphasizing in our report that one way of dealing with overgrazed and declining allotments is through range improvements. Improvements such as fences, water development, and seeding can increase the capacity of the land for livestock grazing. The

data showed, however, that declining and overstocked allotments were receiving about the same relative share of range improvement funding as other allotments.

While the consulting firm characterized our reporting of this fact as nonconstructive criticism, BLM agreed with our final report recommendation on the need to better focus range improvements on declining and overstocked allotments. Furthermore, the Forest Service stated that it would try to ensure balance between maintaining satisfactory conditions in some areas and correcting unsatisfactory conditions in other areas. The Forest Service noted, however, that more improvements were not always the answer and that in some situations the Forest Service simply needed to reduce or eliminate grazing.

16. Contrary to the consulting firm's suggestion, our report fully disclosed the percentage of allotments that were understocked. Table 4.3 on page 36 broke out the percentage of rangeland that was understocked, properly stocked, and overstocked. As stated previously, we focused our report on the allotments that were declining and overstocked because such allotments are vulnerable to further deterioration. In the context of FLPMA's and PRIA's mandates, land that is declining because of controllable activities certainly merits concern and added attention.

17. The assertion that we exaggerated questionnaire results misrepresents our report and is not supported by the facts. In response to our questionnaire, BLM range managers reported that 18 percent of their allotments were overstocked, and the Forest Service reported that 21 percent of their allotments were overstocked. Overgrazing has long been recognized as a major cause of rangeland deterioration. As we indicated in comment 13 above, overgrazing has been linked to rangeland deterioration for almost a century. Since overgrazing has historically been linked to rangeland decline, it is quite reasonable to conclude that overstocked allotments continue to be subject to or threatened by deterioration. Consequently, our reporting on this matter did not exaggerate the facts. As table 3.2 on page 27 of our report shows, the respondents to our questionnaire indicated that there was a significant link between overstocking and rangeland decline.

18. The allegation that we obscured information on BLM land that was stable or improving is simply not true. Our 1988 report (see pp. 22-24) clearly presents information on the condition and trend of the public

rangeland from the results of our questionnaires and from the agencies' most recent reports available at the time of our review.

19. The consulting firm states that the phrase "serious and even permanent damage" used in our report is vague and unduly alarms the report's reader. We believe that this phrasing is entirely appropriate because overgrazing has caused and can continue to cause serious and even permanent damage to the land. The following excerpts from the Council on Environmental Quality's 1981 report entitled Desertification of the United States illustrates the type of damage that overgrazing can cause:

The Rio Puerco [Basin in New Mexico] is, indeed, one of the most eroded and overgrazed river basins in the arid West . . . .

Near the turn of the century, . . . a process of desiccation and erosion had already begun, a process from which the Rio Puerco has yet to recover . . . .

[According to paleobotanist Vorsila Bohrer] Historic overgrazing has created extremely dry conditions for plants due to the removal of litter, loss of soil cover, and the trampling of the ground that prohibits rainfall from reaching the roots of plants . . . .

Climatic change of some sort may have initiated the arroyo cutting, but the damage done by livestock made the land much more vulnerable to erosion once it had begun. Perhaps, therefore, the arroyo cutting has been more severe and longer lasting than it would have been in prelivestock times . . . .

Even though livestock grazing in the Rio Puerco has been reduced significantly since earlier in the century, the land has not yet stabilized. In 1975 the BLM conducted a resource inventory of the public land in the Rio Puerco. It discovered "that forage capacity was inadequate to support overall livestock numbers permitted under the specified grazing privileges." The BLM estimated that 55 percent of the area (270,170 acres) was undergoing "moderate" to "severe" soil erosion . . . .

Instability also characterizes the vegetation of the area. For example, broom snakeweed has invaded some 15,000 acres of deteriorated shortgrass and has become established as the dominant species . . . . Overall, the BLM projects [as of 1981] that the vegetation in the Rio Puerco in "poor" condition will increase from 85,651 acres to 170,703 by the year 2000 . . . . Moreover, it projects that the land suffering "moderate" to "severe" soil erosion will increase to 360,554 acres—73 percent of the public land here . . . .

If the land and plants here finally do stabilize, three factors militate against the swift return of the Rio Puerco to its pregrazing richness. First, . . . the Rio Puerco is a dry area with average annual precipitation ranging from 9 to 14 inches. Dry land recovers very slowly

from abuse. Second, the massive soil erosion that has occurred here over the last 100 years has exposed soils that are less able to support plant life because of their lower organic content. And third, invader species such as broom snakeweed have already become well established because of the competitive edge grazing has given them over more palatable species. They will not disappear naturally. Massive intervention by humans will be necessary if they are to be rooted out and replaced by native species.

This example illustrates that serious and even permanent damage can occur from overgrazing and goes to the heart of our report's message. Because overgrazing can cause serious ecological problems, we recommended that the areas vulnerable to this problem be identified and that appropriate preventative or corrective action be taken. While remedial corrective actions can be taken after damage has been done, they can be very costly, may take decades to complete, and may never fully remediate the damage.

20. Precisely because we realized that we needed professional judgment and knowledge of site-specific resources, we obtained information from the professional range managers responsible for specific grazing allotments through our questionnaire.

21. We disagree with the consulting firm's assertion that GAO does not have an understanding of the legal requirements for maintaining an inventory of range resources. While FLPMA directed that all resources of the public land be inventoried, PRIA specifically addressed the range inventory requirements for the public rangeland. PRIA required the Secretaries of the Interior and Agriculture to update, develop, and maintain on a continuing basis thereafter an inventory of range conditions and record of trends of range conditions on the public rangeland, and to categorize or identify such land on the basis of range conditions and trends. This law further required that such inventories be kept current on a regular basis to reflect changes in range conditions. Thus, the maintenance of an inventory and its categorization of the public rangeland are statutory requirements.

Our report shows that nearly a decade after the PRIA requirements were put in place, current range conditions were not known for 28 percent of BLM's and 23 percent of the Forest Service's public rangeland included in our survey. Our report also recognized the magnitude of the task on pages 21, 25, and 39 and presented the data within this context.

Contrary to the consulting firm's views, our report demonstrates a thorough understanding of range requirements and practices. In this

context, we fully reported the criteria (p. 12), definitions (pp. 22 and 23), actual situation (ch. 2), and limitations (pp. 21, 25, and 39) of maintaining a current inventory of range conditions.

22. The definitions of rangeland conditions used in our report were not devised by GAO. The definitions used were those employed by BLM and the Forest Service and are shown in our report in the footnote on page 22 for BLM and on page 23 for the Forest Service.

23. The consulting firm misrepresents our report. We did not report range condition using the terms "satisfactory" and "unsatisfactory," as the consulting firm states. We reported range condition using the definitions and terms used by the agencies themselves. (See ch. 2.) It should be noted, however, that BLM has historically used the term "satisfactory" to define range in "excellent" or "good" condition, and "unsatisfactory" to define range in "fair" or "poor" condition. Moreover, PRIA refers to land whose productive capacity has been diminished as "unsatisfactory."

24. Contrary to the consulting firm's implication, we fully understand the definition of potential natural community. In fact, the definitions to which the consulting firm refers appear on pages 22 and 23 of our report. We also recognize that the site-specific definition of potential natural community is subject to interpretation. This is why we asked range managers to provide their professional opinions on the condition of the specific grazing allotments for which they had responsibility.

25. We disagree with the consulting firm's assertion that we were incorrect in stating that upward or downward trend in range condition indicates whether rangeland is moving toward or away from specific management objectives. The definition that the consulting firm disputes is included in the footnote on page 20 of our report. The definition of range trend that the consulting firm claims is incorrect is contained in BLM Manual Handbook 4400-1, entitled Rangeland Monitoring and Evaluation. Specifically, the handbook states:

> Trend studies are important in the long term for determining the effectiveness of management actions toward meeting vegetation management objectives. Trend refers to the direction of change and indicates whether rangeland vegetation is being maintained or is moving toward or away from the desired plant community or toward or away from other specific vegetation management objectives [underscoring added].

While the consulting firm contends that trend refers only to changes toward or away from potential natural community, BLM's handbook states that trend also refers to whether vegetation is moving (1) toward or away from the desired plant community (which may be substantially different from the potential natural community) and (2) toward or away from other specific vegetation management objectives (which may also be substantially different from the potential natural community).

26. Our report did not, as the consulting firm's report implies, suggest the need for annual assessments of range condition. In fact, on pages 25 and 39 we specifically recognize that it would be unrealistic to expect that BLM and the Forest Service could maintain current, in-depth information on all grazing allotments. We disagree with the consulting firm that assessments of range condition divert management attention from important tasks such as monitoring. Gathering vegetation information on range condition and trend is an integral component of range monitoring. BLM's Rangeland Monitoring and Evaluation Manual states that trend monitoring is important for determining the effectiveness of management actions towards meeting desired plant community or other specific vegetation management objectives.

The consulting firm's statement that 10-year-old assessments of range conditions are up to date is not shared by all rangeland experts. As stated earlier, Dr. Thadis Box has referred to the large volume of range condition data that are more than 10 years old as an "alarming revelation." The uncertain reliability of public rangeland condition and trend data is discussed on pages 20 and 21 of our report.

Finally, the consulting firm's criticism reflects an internal inconsistency in its report. In this instance, the firm claims that assessments that are 10 years old are recent. However, in criticizing our 1990 report on wild horses, the consulting firm states that information we used, which was compiled in 1988, was "out of date."

TECH. REVIEW OF GAO RANGELAND REPORTS CASE I

CASE I. MORE EMPHASIS NEEDED ON DECLINING AND OVERSTOCKED GRAZING ALLOTMENTS. GAO/RCED 88-80. JUNE 10, 1988.

See comment 1.

The GAO statistics given in this report were compiled from a lengthy questionnaire sent to Bureau of Land Management (BLM) and Forest Service (FS) field personnel. More than 25 percent of the questions on the survey began with the phrase *In your opinion*. All of the data generated from the questionnaire regarding the status of range condition and trend were based upon the *opinion* of the respondent.

SELECTED QUESTIONNAIRE RESPONSES REPORTED BY GAO RESULTED IN A SLANTED VIEW OF RANGELANDS.

See comment 2.

- **ALTHOUGH THE QUESTIONNAIRE ASKED ABOUT MANY CONTRIBUTING FACTORS REGARDING RANGE CONDITION, THE ONLY QUESTIONNAIRE RESPONSE ADDRESSED IN THE GAO REPORT WAS OVERSTOCKING.**

  The questionnaire asked about many factors: **overstocking, livestock distribution, wildlife, wild horses/burros, roads/development, mining/oil/gas operations, recreational activity, acts of nature (fire, floods, droughts, etc.), Noxious [farm] weed infestation, insect infestation, and other,** but reported only on overstocking. GAO was requested to assess the progress that BLM and FS were making to improve public rangeland conditions. An objective analysis of range condition must take into account all factors that interact to affect vegetation such as precipitation, soils, insects, as well as land uses (1, 10, 11, 12, 14, 18, 19, 20, 21, 22, 26, 27, 31, 39, 40, 41, 54). The GAO report focused entirely on the element of livestock grazing, producing an unrealistic portrayal of range condition as if it were only influenced by grazing. **It is unrealistic to assume that no influence other than grazing affected range condition, in either a positive or negative manner.**

See comment 3.

Other technical issues that should have been addressed include the fact that the 1987-88 GAO investigation was conducted following one of the most devastating wildfire years ever recorded. **In 1985 three million acres in the West were burned by wildfire** (15). **Since that time much of the West has been under drought conditions with rangelands receiving less than 50 percent of normal precipitation in some years.** Open pit mining, for gold in particular, has had recent widespread impacts on rangeland particularly throughout Nevada. Wild horse populations have reached extremely high levels and continue to expand at exponential rates. In parts of Utah and Colorado, elk herds have expanded far beyond the capacity of their habitat.

See comment 4.

Each of these factors, as well as many others, contributes to the trend of range condition and was certainly an important consideration at the time the report was prepared. None of these factors, however, were brought forward by GAO.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE I

MISREPRESENTED RESULTS OF THEIR QUESTIONNAIRE LED TO UNJUSTIFIED CRITICISM.

- **INVALID ASSUMPTIONS WERE MADE BY GAO IN INTERPRETING QUESTIONNAIRE DATA.**

GAO's assertion that range managers lack current knowledge of range condition for a sizable portion of the land they manage would be more accurately phrased as "the persons contacted during the course of the GAO questionnaire survey lacked an opinion of how range condition had changed over the last 5-10 years." There is a high probability that the questionnaire respondent may have had no opinion of condition and trend because he or she had been working on the allotment for less than five years. There is an extremely high turnover of BLM and FS range conservationists in field offices (37). In 1980, GAO pointed out that frequent changes in District personnel led to constant orientation problems within land management agencies (16).

See comment 5.

The questionnaire opinion responses are not a measure of the existence of range condition data. It should be noted that the questionnaire was only distributed to agency personnel and did not seek input from many others who would have long-term knowledge of range condition such as researchers, producers, or extension personnel. **This oversight reflects failure in GAO's research techniques rather than a failure of range managers to understand rangeland.**

See comment 6.

More importantly, it should not be portrayed as alarming or adverse that range condition may be unknown for a portion of the public lands. In some cases, knowledge of range condition is not pertinent for its management. Observations of general plant and resource responses can result in excellent range management. Some rangeland, due to its remoteness, steepness, distance from water, and other factors, is not grazed by livestock nor impacted by other human influences. It appears that GAO had some understanding of this concept when they stated it would be "unrealistic to expect that the Bureau and FS could maintain current in-depth information on all grazing allotments given the resources assigned to this work". This concept is critical to understanding management programs on public lands, and could have been supported in the GAO report with GAO's own previous finding in 1980 (16). At that time, GAO concluded that:

See comment 7.

See comment 8.

> *If the Nation cannot afford the level of management now required, then the Congress will need to decide what requirements are least important and delete them. Otherwise, these requirements tend to drain funds from, and dilute the effectiveness of, more important management efforts.*

See comment 9.

Since 1980 the margin between Congressional and judicial demands for public land management and the agencies' ability to service those demands has grown immensely.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE I

See comment 10.

THE RESULTS OF A GAO OPINION QUESTIONNAIRE WERE EXAGGERATED.

See comment 11.

- **GAO FOUND EIGHT PERCENT OF ALLOTMENTS IN DECLINING CONDITION TO BE "PARTICULARLY ALARMING".**

  GAO's repeated contention about livestock grazing as the cause of "serious and even permanent damage" pertains to only eight percent of the public lands. **Based upon the same GAO data, the report could have pointed out that in the opinion of range managers 67 percent of the BLM allotments and 79 percent of the FS allotments sampled are IMPROVING or maintaining status-quo.** The GAO report expounded on the negative aspect.

See comment 12.

  From a range management perspective, as a measure of management performance, eight percent of rangeland in a downward trend is a predictable, satisfactory status and reason for little concern. Range condition varies greatly on rangelands in response to many variables, both with and without human influence. The process of changes in plant communities is called succession. Succession occurs through many pathways creating many different localized variations in plant communities. Even in the complete absence of man, under pristine conditions, a certain percentage of rangeland (in some cases more than eight percent) would always exist in a downward trend status due to causes such as wildfire, periodic drought, flood, or excessive wildlife use; conditions which prevail today (9, 17, 21, 22, 23, 25, 43, 46, 47, 48, 52).

See comment 13.

GOOD RESOURCE MANAGEMENT CONCENTRATES IMPROVEMENT EFFORTS IN AREAS WITH THE GREATEST POTENTIAL FOR POSITIVE RESPONSE.

- **GAO CRITICIZED LAND MANAGERS FOR "NOT CONCENTRATING THEIR RESOURCES ON THOSE GRAZING ALLOTMENTS THAT THEY BELIEVED WERE THREATENED WITH FURTHER DETERIORATION".**

  The GAO questionnaire inquired about changes in ecological status. Ecological status is a measure of resource condition that specifically refers to successional stage (40, 50). The phrase "threatened with further deterioration" did not appear in the questionnaire and has no technical definition. Inconsistencies between wording in the questionnaire, and phrases used to report the questionnaire results, violate survey reporting techniques. This sensationalized description of the questionnaire results plays well into the hands of those who wish to discredit public rangeland grazing.

See comment 14.

  This statement does not take into account the complexity of multiple use management on public lands. Many issues drive the decisions for prioritizing range improvement projects including, but not limited to: endangered species, wild horses, riparian demands, critical wildlife habitat, and cost-sharing agreements to make more efficient use of range improvement funds (33, 49). This type of non-constructive criticism of the management agencies does nothing to expand the knowledge of how to best address range resource problems.

See comment 15.

See comment 16.

See comment 17.

See comment 18.

See comment 14.

See comment 19.

See comment 19.

See comment 20.

See comment 21.

See comment 22.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE I

GAO DID NOT EMPHASIZE THEIR SIGNIFICANT FINDING THAT ONE OUT OF EVERY THREE BLM ALLOTMENTS AND ONE OUT OF EVERY FOUR FS ALLOTMENTS WAS UNDERSTOCKED.

- **THE GAO REPORT EXAGGERATED THE QUESTIONNAIRE RESULTS BY CONCLUDING THAT ONE OUT OF EVERY FIVE ALLOTMENTS WAS "POTENTIALLY SUBJECT TO DETERIORATION" FROM OVERSTOCKING.**

GAO obscured a critically important qualification of their report which recognized that most of the Bureau's rangeland is generally stable or improving. GAO admitted to focusing the report "on that part of the rangeland that is declining or overstocked, because this is the part that is susceptible to serious and even permanent damage if corrections are not made". GAO coined the phrase "potential deterioration". This term was not inquired about in the questionnaire.

The poor choice of words in the GAO report unduly alarmed its readers by alluding to some vague, undescribed but horrible condition of "serious and even permanent damage". These words provoke terrifying images if found in a personal medical report. But, what are the images of "serious and even permanent damage" associated with rangeland? What is GAO's perception of what rangelands should look like?

While rangeland damage in some instances may well be serious, it is doubtful that any damage is indeed permanent. Mineland reclamation illustrates well that the intensity of inputs determines the speed rather than the possibility of recovery in many cases (25).

INVENTORIES OF RANGE CONDITION REQUIRE PROFESSIONAL JUDGEMENT AND KNOWLEDGE OF SITE-SPECIFIC RESOURCES, AND ARE MORE INVOLVED THAN A STANDARD ACCOUNTING PROCESS.

- **GAO'S INTERPRETATION OF THE FLPMA REQUIREMENT TO MAINTAIN A CURRENT INVENTORY OF RANGE CONDITIONS AND TRENDS REFLECTS A LACK OF UNDERSTANDING OF RANGE INVENTORY.**

Maintaining an "inventory of range condition and trend" is very different than the concept of "inventory" for a retail business. Delineation of range condition is a judgement call that must be made by an experienced evaluator. Condition ratings described as poor, fair, good, and excellent do not denote their usual values when used in the context of range management terminology. Excellent is not always more desirable than good. These terms describe intermediate stages of plant community development (40, 41).

The proper interpretation of poor and fair rangeland condition is that the plant community is in an early stage of development. The terms "poor and fair", applied by early range ecologists when the concept of range ecological condition was

See comment 23.

developed, do not necessarily denote unsatisfactory conditions. The unfortunate use of this value-laden terminology has been a constant source of confusion for persons who lack experience with the proper technical interpretation.

See comment 24.

An assessment of range condition is made relative to the concept of what the "potential natural community" (PNC) would be under pristine conditions. The site-specific definition of PNC is subject to professional opinion. Differences of opinion among professionals relative to PNC are not uncommon (25, 27, 39, 40, 50, 51).

See comment 25.

The terms "upward" and "downward" trend in range condition are not "indications of whether rangelands are moving toward or away from specific management objectives" as GAO stated. These terms are descriptors of changes in vegetation toward or away from PNC (31). Succession occurs naturally in both directions based on both factors attributed to man's activities and those that occur naturally and are beyond man's control.

See comment 26.

In arid environments, assessments of range condition that are five years old may very well be current. Assessments that are 10 years old are recent. Changes in condition of arid rangelands occur slowly (1, 13, 25). **Annual assessments of condition are not only unnecessary for good management, but would divert range management attention from more important tasks such as monitoring.**

Specific GAO Responses to Criticisms of GAO Report on Riparian Area Management

The following are GAO's responses to the specific assertions made in the consulting firm's critique of our report Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow (GAO/RCED-88-105, June 30, 1988). The numbered comments are keyed to an annotated version of the applicable section of the consulting firm's report, which is reproduced on pages 35-36.

1. The consulting firm's assertion that our review work was limited in scope misrepresents our work. As we stated on page 14 of our 1988 report, we began our review by meeting with Bureau of Land Management (BLM) and Forest Service officials and requesting from them lists of successful riparian management projects. They provided us with lists of 23 BLM and 12 Forest Service projects, which represented most of the riparian improvement projects under way at that time. Of the total of 35 projects on these lists, we reviewed 15 in detail. We also reviewed 6 additional BLM projects and 1 Forest Service project that agency staff brought to our attention during our field work, for a total of 22 projects. We selected projects located throughout 10 western states to include a wide range of climatic and geographic conditions and to illustrate several different techniques of riparian management.

For each of the 22 projects reviewed, we visited the site with knowledgeable agency personnel, who provided us with the agencies' views on the projects from range management, water, soils, vegetation, and wildlife habitat resource perspectives. We also reviewed project files for each of the 22 projects at the agencies' field offices in the 10 western states and held extensive interviews and discussions with agency managers and their staffs on each of the projects.

To ensure that we received as complete and balanced a view of these projects as possible, we also discussed the projects with many of the livestock operators permitted to graze livestock on the allotments where the projects were located and discussed riparian area management with officials of state livestock associations and with several persons involved in research on riparian area management. During our file review and discussions with agency officials, we documented the reasons why the projects were undertaken, the cause of the damage (which in each case was poorly managed livestock grazing), the before and after conditions of the riparian areas reviewed, the benefits attributable to the projects, and any available information on the condition of riparian areas in each state. Subsequently, we sent a draft of each case study covered in our review to the responsible BLM or Forest Service field office for their review and

comment and made changes recommended by them as needed. Finally, we provided a draft of the entire report to BLM and the Forest Service for their written comments.

Contrary to the consulting firm's assertion, we made extensive efforts to verify that our findings were representative of conditions on the public land throughout the West. As we state in the report, the agencies do not have comprehensive inventories of all riparian areas on their land. However, the information that is available clearly demonstrates that tens of thousands of miles of riparian areas on federal rangeland are in a degraded condition and are in need of restoration. This was the best information available at the time of our review, and the consulting firm provides no information to support any other conclusion. Also, agency officials with whom we spoke clearly indicated that they considered the degraded condition of riparian areas on federal rangeland to be a serious problem and that their successful restoration projects represented only a small fraction of the work that needed to be done to restore these areas to a satisfactory condition.

Further evidence of the need for riparian restoration appears in BLM's 1991 report entitled Riparian-Wetland Initiative for the 1990's. The stated purpose of this initiative is to achieve a proper functioning condition on riparian-wetland areas on BLM land. The plan includes an estimated 1.3 million riparian-wetland acres and 49,000 riparian stream miles in the states administered by the 10 BLM state offices included in our review. BLM estimated that, in these states, only 7 percent of the riparian areas were meeting their objectives and 8 percent were not meeting them. The status of 85 percent of the areas was unknown. BLM estimated that the total cost of carrying out this initiative in these states will be about $57 million.

In keeping with this effort, BLM's budget justification for fiscal year 1991 presented findings and laid out a plan of action for restoring riparian areas, as called for in our report. Likewise, the Forest Service provided us with a status report on the condition of western national forest riparian areas in November 1990. The report showed that an estimated 58,000 miles of riparian areas within livestock grazing allotments do not meet and are not moving toward meeting forest plan objectives.

The livestock operators with whom we spoke were also pleased with the results of the riparian restorations on their allotments. They cited real benefits to their operations resulting from the improvements, such as reduced feed costs attributable to increases in the amount of forage

available, a year-long water supply from creeks that had formerly gone dry part of the year, better utilization of forage available in uplands that had formerly gone underutilized, and improved health of cattle and increased calving rates resulting from the more effective livestock management that was implemented as part of the riparian restoration process.

2. The assertion that our report failed to meet congressional needs is inconsistent with the facts. Our report met both congressional and agency needs. The Subcommittee on National Parks and Public Lands, House Committee on Interior and Insular Affairs, used our findings as the basis for questions at two oversight hearings on public lands grazing management. We also testified at these hearings.[1]

Moreover, both the Department of the Interior and the Forest Service agreed with the recommendations in our report and have initiated efforts to implement our recommendations. In a December 1991 letter to the Comptroller General of the United States, the Director of BLM stated that our June 1988 report on BLM's riparian management program was one of GAO's more comprehensive and expert studies of a very relevant issue. The Director further stated that essentially all of the report's recommendations had been implemented. Numerous BLM and Forest Service field office staff also told us that our report was not only accurate but had helped to generate action to restore degraded riparian areas. Forest Service officials have used the report during training courses on riparian area improvements. The report received additional favorable comment from the Environmental Protection Agency and from the American Fisheries Society. Likewise, the Nevada Department of Wildlife stated that our report was "extremely accurate" in its depiction of both riparian conditions and the cause of deterioration.

The available evidence does not support the consulting firm's blanket assertion. In contrast, our report provides evidence that the type of degradation described is exactly what occurs on federal rangeland riparian areas throughout the West. We witnessed it during our visits, and agency experts also told us that it is, in fact, widespread. The agencies' statistics included in our report demonstrate the extent of the degradation. For example, on pages 36 and 37 of our report, we cite BLM's inventory information that in Colorado 51 percent of the area along the state's 5,300 miles of perennial streams was in poor condition, 39 percent was in fair condition, and only 10 percent was in good condition. For Arizona, BLM

[1]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).

stated that the state's riparian areas were "generally less than satisfactory," and for Idaho, BLM stated that about 80 percent of the riparian area along 11,867 miles of streams was in some stage of degradation. Similarly, assessments provided by the Forest Service also showed that most of the riparian areas assessed were in need of restoration. For example, in one national forest in Arizona, the Forest Service estimated that 80 to 90 percent of the stream riparian areas in the forest were in unsatisfactory condition.

In addition, Department of the Interior Inspector General reports issued after our report have documented the continued degradation of riparian areas by poorly managed livestock grazing. For example, a review of BLM's program management in Colorado found that

> . . . riparian areas continue to be degraded. For example, a January 1989 analysis prepared by the Gunnison Basin Resource Area Office concluded that 60 to 100 percent of the riparian areas were being overgrazed. Overgrazing damaged the riparian areas to the extent that forage production was below normal; plant species composition was undesirable; stream channels and stream banks were unstable, causing erosion; soils were compacted, reducing water infiltration; vegetative cover was reduced, resulting in excessive silt from heavy runoffs; groundwater reservoirs were not able to recharge; and out-of-bank heavy runoffs were not slowed down and dispersed. In addition to degradation of riparian areas, the study showed that 84 percent of the allocated rangelands were in less-than-good condition and that livestock were allowed to graze before forage species were at a growth stage that would tolerate grazing.[2]

Likewise, the Inspector General's report on BLM program management in California states the following:

> Our review disclosed that many riparian areas on public lands continue to be degraded. Resource area personnel estimated that it would cost about $1.1 million [in the area being examined] to repair damage to riparian areas on public lands that was caused by improper grazing. Resource Area personnel identified the following examples of damage to riparian areas:
>
> Personnel of the four resource areas reported that 206 of the 367 miles along perennial streams were damaged by grazing. At an estimated cost for materials at $4,000 per mile, it will cost $824,000 to restore the riparian habitat.

[2]Office of Inspector General, Final Audit Report on Survey of Selected Programs of the Colorado State Office, BLM (Apr. 24, 1990).

Bishop Resource Area personnel stated that about 1,500 acres of aspen groves, which were needed for deer and other wildlife species for raising fawns and feeding, were damaged by grazing. The estimated cost of materials to restore this area was $300,000.

Alturas and Surprise Resource Areas personnel stated that hundreds of miles along spring meadows were damaged by grazing and other uses. The cost to restore this damaged habitat had not been estimated.[3]

3. The consulting firm asserted that factors other than grazing—such as mining, logging, road construction, off-road vehicle use, and wildfires—can damage riparian areas. We agree and recognized in our report that livestock grazing is not the only activity causing riparian area damage. However, during our review, agency experts stressed over and over that the primary, and in many cases the only, cause of damage to rangeland riparian areas was overgrazing by domestic livestock. In this connection, a July 1990 report, Livestock Grazing on Western Riparian Areas, which was produced for the Environmental Protection Agency by three prominent riparian area experts, states that although cultivation, road building, mining, urbanization, logging, and the damming of rivers have impacted riparian values, livestock grazing has had the most geographically extensive effects. The report states that the extensive deterioration of western riparian areas began with severe overgrazing in the late 19th and early 20th centuries and that although rangeland conditions overall have reportedly significantly improved in many areas since 1980, extensive field observations in the late 1980s suggested that riparian areas throughout much of the West were in the worst condition in history. Additional statements in the report also point to damage in riparian areas caused by improper livestock grazing:

Depleted upland vegetation furthers the natural tendency of livestock to concentrate in riparian areas. Even riparian areas in good condition are susceptible to damage by concentrations of livestock at the wrong time, in too great a number, for too long, or any combination of these factors.

When riparian areas are in a deteriorated condition they are far more sensitive to improper livestock grazing. Unless the season, duration and intensity of grazing are controlled, damage can be severe, long-lasting, and in some cases, irreversible. Proper grazing management can restore the long-term productivity of most riparian areas and associated uplands. However, grazing tradition, the vast geographical extent of the problem, and the gap between short-term costs and long-term benefits of improved management, all present significant obstacles to the necessary changes in grazing practices.

[3]Office of Inspector General, Final Audit Report on Survey of Selected Activities of the California State Office, BLM (Mar. 29, 1991).

Improper livestock grazing can result in what are for all practical purposes permanent changes in the landscape and loss of long-term productivity.

Even more recently, in October 1991, a report prepared for the Bonneville Power Administration by three experts in the fields of hydrology, fisheries science, and riparian ecology discussed the effects of livestock grazing on riparian areas in two river basins in eastern Oregon. The report included the following comments:

Elimination of livestock grazing through management or with corridor fencing were generally observed as the most effective means of improving riverine/riparian habitats.

All Allotment Management Plans . . . on public lands should immediately be brought up to date reflecting state-of-the-art grazing strategies necessary to restore riverine/riparian plant species. Any allotment that cannot be managed compatibly with its riverine/riparian ecosystem should be closed.

In all areas where domestic livestock had been removed from riparian systems, dramatic increases in the density, cover, and height of willows and cottonwood were observed. Only one stream reach (i.e., Sheep Creek) was experiencing significant levels of elk utilization. However, willow recovery was still occurring at this site.

4. We disagree with the consulting firm's suggestion that riparian area rehabilitation has not been adequately researched. A number of land management agency personnel have been restoring degraded riparian areas for some time. Some of the most notable examples identified in our review were located in BLM's Prineville, Oregon, district. We cited two of these early successful efforts on pages 26 and 59 of our 1988 report. A staff member at that field office is considered to be a leading expert in BLM on riparian restoration and has provided a great deal of training to people both inside and outside the agency on the subject. He was awarded the prestigious Chevron Conservation Award in 1988 and the Society for Range Management Outstanding Achievement Award in 1991 for his riparian restoration work.

As we were preparing our 1988 report, we were aware that research on riparian area restoration was ongoing. As we state on page 16 of the report, we discussed the subject with several people involved in research on riparian area management during our review. However, agency staff who were implementing riparian restoration projects repeatedly told us—and our observations in the field confirmed—that relatively simple and well-known management techniques were effective in restoring

riparian areas. These mainly consisted of changes in livestock management to limit access to riparian areas—i.e., fencing or changing the time of year when livestock were allowed to use the areas—or providing sources of water away from riparian areas. The important element in successful riparian restoration is to design a solution for an area that takes into account the type of ranching operation involved and the specific characteristics of the area, such as temperature, rainfall, vegetation, and soil type. As the 1990 report to the Environmental Protection Agency states, "Progressive stockmen and land managers have long demonstrated there are no insurmountable technological barriers to restoring and protecting the long-term productivity of western riparian areas and adjacent uplands."

In regard to the consulting firm's comments on the scale of riparian rehabilitation needs, we believe the agency statistics cited previously speak for themselves and show that the need is great. In addition, under the Federal Land Policy and Management Act (FLPMA) and the Public Rangelands Improvement Act (PRIA), deteriorated rangeland is to be restored. Both acts mention the benefits of such restoration to watersheds, wildlife, and recreation, as well as to livestock.

The consulting firm suggests that our report overstates the need to restore damaged riparian areas and that restoration efforts are being conducted in the context of a "liberal" ideology. We disagree. Our report does not reflect a "liberal" ideology, but rather a concern for the proper implementation of FLPMA and PRIA.

5. This discussion misrepresents our report, which did not discuss wild horse impacts. In neither this nor any other GAO report has the assertion been made that wild horses inherently protect the environment.

6. We agree that riparian area research is ongoing. However, as we point out above, agency field personnel are successfully implementing riparian restoration projects. BLM and the Forest Service have begun large-scale initiatives to address known riparian area problems. Perhaps research results will help to resolve some particularly unique or difficult problems, but no such problems were mentioned to us and the consulting firm does not identify any.

7. The charge that our report is unbalanced, nonfactual, and anecdotal is false. With respect to the consulting firm's assertion that our report does not recognize the good work done by the agencies, pages 38 through 41

and page 49 of our report present the agencies' policies and initiatives and some positive actions they have taken on their own and jointly with others, including the Oregon Cattlemen's Association, the University of Montana, and the Izaak Walton League of America. On page 51 of the report, we also acknowledged the efforts of the many dedicated agency staff who have improved riparian areas despite limited resources. In addition, we devoted 33 pages in the report to descriptions of successful riparian restoration projects and gave credit where it was due to agency staff and cooperating ranchers.

The theme of our report is that some very successful riparian restoration efforts have taken place but that much more needs to be done and that serious obstacles to restoration remain, including resource constraints and resistance by livestock permittees. In this regard, an overwhelming majority of BLM field personnel expressed negative views on their own agency's performance in riparian area management. The instances in which agency management had not supported riparian restoration when it was opposed by public land livestock operators outnumbered the instances in which it had supported restoration. Nevertheless, we cited in our report every positive example that we received, in order to provide the "balance" that the consulting firm calls for. Furthermore, we provided every case study cited in our report to the agency officials involved for their review, and we responded to any comments that they gave us. The case studies cited in our report are facts, not "one-sided stories construed as fact," as the consulting firm claims. In contrast, the consulting firm provides no evidence to support its assertions.

CASE II. SOME RIPARIAN AREAS RESTORED BUT WIDESPREAD IMPROVEMENT WILL BE SLOW. GAO/RCED 88-105. JUNE 30, 1988.

As a means of reporting to Congress on the status and potential for improving conditions of riparian areas on public lands, GAO reviewed 22 projects in ten western states. GAO's observations and conclusions based upon this limited review imply that these findings are representative of conditions west-wide on public lands. No attempt was made to verify this assumption.

See comment 1.

GAO'S NARROW SCOPE OF INVESTIGATION PRODUCED A REPORT THAT FAILED TO MEET CONGRESSIONAL NEEDS FOR UNDERSTANDING RIPARIAN AREA CONDITION.

See comment 2.

- **ERRONEOUS CONCLUSIONS MADE BY GAO LEAD THE READER TO BELIEVE THAT LIVESTOCK OVERGRAZING IS THE SOLE SOURCE OF RIPARIAN AREA DAMAGE.**

  GAO depicts as a common occurrence trampled streambanks stripped of vegetation that cause water tables to lower, and change perennial flowing streams into water courses that dry up in summer months. While riparian damage does occur, and has occurred in the past, the scenario of trampled streambanks stripped of vegetation is not the most prevalent condition on public land riparian zones. Certainly the case of perennial streams drying up and becoming intermittent water courses is the exception rather than the rule. However, these are the descriptions that are repeatedly quoted by advocates against livestock grazing on public land. **Livestock grazing is only one of <u>many</u> activities that can, if not properly managed, affect riparian area condition. Mining, logging, road construction, off-road vehicle use, camping, hiking trails, wildfire, storm events, wild horses, beaver, and other wildlife also impact riparian zones** (30, 34, 36).

See comment 3.

RIPARIAN AREA REHABILITATION IS A RELATIVELY NEW DISCIPLINE THAT IS ACTIVELY BEING RESEARCHED.

- **GAO CONCLUDED THAT MANY THOUSANDS OF STREAM MILES STILL NEED TO BE RESTORED, AND THAT *NO MAJOR SCIENTIFIC OR TECHNICAL IMPEDIMENTS NEED TO BE OVERCOME IN ORDER TO IMPROVE RIPARIAN AREAS.***

  GAO failed to recognize that the riparian area improvement projects they observed were the ones attempted first because managers had a good idea of how they could be improved, and there was a high probability that their efforts would be successful (30). Good management first addresses easily solvable problems, and uses information learned from early endeavors to subsequently address more difficult problems (25). This in no way implies that a comparable level of expertise is

See comment 4.

See comment 5.

See comment 6.

See comment 7.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE II

available to address all riparian rehabilitation problems, or that all perceived problem areas have been accurately identified for their potential for rehabilitation (30, 32, 53). The need for riparian rehabilitation is very much an issue of perspective. The GAO report only reflects the most liberal philosophy which holds that all impacts of mankind on nature must be reversed. There are many other viewpoints contrary to this ideology. Therefore, the remaining riparian improvement task is, in all likelihood, much less enormous than GAO describes.

WILD HORSES DO NOT INHERENTLY PROTECT THEIR ENVIRONMENT.

- **MISCONCEPTIONS RESULT FROM GAO's OVER-GENERALIZED DESCRIPTION OF WILD HORSE BEHAVIOR BEING "SOMEWHAT LESS DAMAGING" THAN CATTLE IN RIPARIAN AREAS.**

While it is true that wild horses range widely throughout all types of terrain, the same is true of cattle. **There are no redeeming qualities of wild horses in riparian areas as the GAO report leads the reader to believe.** The notion of cattle doing more damage in riparian areas than wild horses because cattle tend to "camp" rather than watering and "moving on", as horses are purported to do, is misleading and does not occur under all conditions. **Wild horses and burros are known and documented to be territorial and defensive of water holes such as springs and seeps to the detriment of both domestic livestock and wildlife** (28, 35).

RIPARIAN AREA RESEARCH BEING CURRENTLY CONDUCTED WILL DETERMINE HOW TO ACCOMPLISH SUCCESSFUL MANAGEMENT.

- **GAO BASED THE MAJORITY OF ITS EVALUATION OF THE RIPARIAN MANAGEMENT ISSUE UPON SELECTIVE ANECDOTAL INFORMATION.**

As an attempt to establish their objectivity, GAO qualified the presentation of the selected interviews by stating:

> *We did not, as part of our interview, attempt to validate claims made by many BLM staff that top BLM management will not support riparian improvement efforts when those efforts are opposed by ranchers. Therefore we take no position of the accuracy of the claims we heard.*

Surely during the course of their investigations GAO heard some positive comments from BLM and FS employees who take pride in their agencies' work. However, no such accounts were presented. One-sided stories construed as fact in the GAO report have been quoted repeatedly by journalists who also do not fully investigate these claims with qualified sources before writing stories and publishing information. Since the public understandably assumes that GAO deals in facts, it is imperative that GAO produce accurate and balanced reports.

Specific GAO Responses to Criticisms of GAO Report on Wild Horse Program

The following are GAO's responses to the specific assertions made in the consulting firm's critique of our report Rangeland Management: Improvements Needed in Federal Wild Horse Program (GAO/RCED-90-110, Aug. 20, 1990). This report broadly addressed problems throughout the wild horse program, ranging from wild horse removals from the public lands to the ultimate disposal of excess horses. The consulting firm focused its criticism on the narrow portion of the report dealing with the Bureau of Land Management's (BLM) basis for determining how many horses should be removed from the range. The numbered comments are keyed to an annotated version of the applicable section of the consulting firm's report, which is reproduced on pages 50-58.

1. The assertion that we relied on previous reports, which were based on opinions and anecdotal information, is repeated several other times in the consulting firm's critiques of our two other reports. As we explained previously and as we show below, this assertion is not consistent with the facts.

2. This statement is misleading. As our 1990 report clearly points out, we examined wild horse and range management in BLM field offices having jurisdiction over 46 wild horse areas. At each office we sought out evidence of range damage caused by wild horses or evidence of range improvement resulting from wild horse removals. As our report indicates (p. 24), BLM had difficulty providing such evidence. We also visited wild horse herd areas (accompanied by BLM range managers), attempting to observe wild horse impacts firsthand. During these visits we observed few, if any, wild horses, but many domestic livestock, especially around water sites. Our report provides little information on wild horse impacts on public land range conditions because, at the time of our review, little information was available.

3. The statement that wild horse management objectives have not been defined in the multiple-use context is misleading. As set forth in the Federal Land Policy and Management Act (FLPMA) and reaffirmed in the Public Rangelands Improvement Act (PRIA), the public land is to be managed in accordance with two principles—multiple use and sustained yield. While FLPMA does not specifically identify wild horses among multiple-use values, PRIA clearly places wild horse program objectives in the context of multiple uses of the land when it discusses the removal and adoption of "excess wild free-roaming horses and burros which because they exceed the carrying capacity of the range, pose a threat to their own

habitat, fish, wildlife, recreation, water and soil conservation, domestic livestock grazing, and other rangeland values . . . ."

4. The assertion that we made an invalid "assumption" about wild horse program objectives is wrong. At the outset, in performing our work, we did not, as the consulting firm suggests, make our own assumptions about wild horse program objectives or management standards. The assumptions and program management requirements that we used to measure performance—and to which the consulting firm seemingly objects—are established in law and agency operating procedures. Specifically, the objective of removing wild horses to improve the range is set forth in PRIA, which clearly states that if the Secretary of the Interior finds that excess wild horses are on the range "he shall immediately remove excess animals from the range . . . so as to restore a thriving natural ecological balance to the range and protect the range from the deterioration associated with overpopulation [underscoring added]." This language closely parallels that of the Wild Free-Roaming Horses and Burros Act of 1971, which states that wild horses are to be managed "in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands." In preparing our report, we prominently cited and measured against these standards and neither asserted nor implied any other.

5. The consulting firm does not support its assertion that domestic livestock and other range animals are managed at a level to prevent even the risk of damage to the range and that wild horses receive inequitable range management treatment. As our report points out, BLM's wild horse removal decisions may not always have been equitable, but if anything, the agency's decisions were biased in favor of livestock. We found, for example, that BLM was conducting wild horse removals even though data were not available to support the removal decisions. In contrast, BLM has often used the lack of detailed carrying capacity and range monitoring data to explain why it has not reduced authorized domestic livestock grazing even when officials believed that overgrazing was occurring. Moreover, we noted instances in which wild horses were removed from the range only to be replaced by domestic livestock.

The June 1989 decision of the Interior Board of Land Appeals against BLM's proposed 1988 wild horse removals further contradicts the consulting firm's claim of inequitable treatment. The Board found that BLM did not have the data to support a conclusion that the removals would result in a thriving natural ecological balance or prevent further deterioration to the

range. It further ruled that BLM's administrative rationale of removing horses to achieve a population level believed to have existed at a particular time could not be justified.

6. The consulting firm provides no evidence to support the assertion that wild horses can double their populations in 5 years. This statement may or may not be true. During our review we found that estimates of population increase rates varied but that conclusive data to support one estimate against another did not exist.

7. We agree that rangeland animal populations should be controlled at levels consistent with the land's ability to sustain them. This is the theme of our report.

8. According to the consulting firm, our recommendation says that when overgrazing is occurring, both wild horses and authorized livestock grazing should be "reduced in proportion to the number of each species on the range." This characterization does not reflect the context of our recommendation. The full text of our recommendation clearly states that the purpose of the recommendation is to place wild horse removals in the context of a rational strategy of range improvement that includes both wild horses and domestic livestock. This is the identical process called for in the 1992 Wild Horse and Burro Advisory Board recommendations.[1] Furthermore, in recognition of the fact that certain management techniques can be applied to livestock that cannot be applied to wild horses, our recommendation clearly points out that the first step in managing domestic livestock is to adopt more intensive livestock management techniques. We then state that after this step has been taken, where necessary and appropriate, wild horses should be removed and authorized livestock grazing should be reduced.

As our wild horse program report clearly states (p. 27), the draft provided to Interior for written comments called for these removals and reductions to be accomplished "in proportion to the amount of forage each is consuming and the amount of damage each is causing." In phrasing this draft recommendation, we fully comprehended that wild horse and domestic livestock grazing patterns and seasonal presence on the range can differ. As our report also points out (p. 28), we revised this recommendation in response to Interior's written comments that it is difficult to determine how much damage each species is causing and that

[1]Wild Horse and Burro Advisory Board, Recommendations to the Secretary of Agriculture and the Secretary of the Interior (Jan. 30, 1992).

the impact of domestic livestock grazing on range conditions can, under some circumstances, be managed without reducing authorized grazing levels. We continue to believe that in this overall context the thrust of our recommendation is sound and consistent with a rational process of range improvement.

To support its argument on this issue, the consulting firm has prepared a misleading presentation on domestic livestock grazing seasons in wild horse areas that is based on questionable assumptions. The consulting firm asserts that our report fails to recognize that livestock consume much less forage than wild horses because livestock are on the range for only part of the year, whereas, by definition, wild horses are on the range year-round. In this connection, the consulting firm suggests that cattle in wild horse areas are authorized to graze on the public lands for only 3 months of the year and that wild horses grazing year-round would consume four times as much forage as the same number of cattle. The firm then proceeds through a set of mathematical computations to demonstrate the consequences of our recommendation, which, it says, does not consider this fourfold differential.

The consulting firm's assumption of 3-month cattle grazing is not consistent with the facts. Our review of data contained in grazing environmental impact statements for wild horse areas indicated that relatively few allotments authorize cattle grazing for as few as 3 months. Most allotments in these areas authorize grazing for a much longer period, and year-long permitted grazing is not uncommon. In fact, BLM land managers sometimes use the phrase "wild cow operations" to describe grazing practices in these areas. Without this 3-month grazing assumption, which the consulting firm presents as fact, the mathematical presentation loses its validity.

In any event, the objective of our recommendation, which is consistent with that of the Wild Horse and Burro Advisory Board, was to bring grazing by both wild horses and domestic livestock into balance with the land's ability to sustain it. Since domestic livestock consume more forage than wild horses even in wild horse areas, we believe that any rational range management strategy must address grazing by both wild horses and domestic livestock. Focusing exclusively on wild horse removals to achieve the desired balance will not work.

9. Here the consulting firm misrepresents our report by quoting selectively from it. The full text of the statement in our report (p. 21) points out not

only the consequences of removing too few horses, as noted by the consulting firm, but also the consequences of removing too many: namely, a waste of federal funds associated with rounding up and then disposing of the horses.

10. The assertion that we did not realize the significance of our own finding regarding the importance of establishing proper wild horse removal levels is incorrect. We made this observation in our report because we realized the potential consequences of removing too few horses. The available evidence, however, suggested that BLM did not have the data necessary to demonstrate that too many wild horses were on the range. We emphasized this fact in the report because (as the Interior Board of Land Appeals also found) without data, no rational determination can be made concerning whether too many wild horses are on the range.

11. The purpose of this assertion is not entirely clear in the context of the consulting firm's report. However, in establishing a plan of action to address "the vast segments of the public rangelands [that are] producing less than their potential . . . and for that reason are in an unsatisfactory condition," PRIA calls for "an intensive public rangelands maintenance, management, and improvement program." In conducting our work, we measured against such criteria established in law.

12. The consulting firm's report asserts that we based our work on a mistaken premise that FLPMA directed BLM to scientifically manage the land. The consulting firm's opinion on this subject is inconsistent with law, as well as with the official views of the Interior Department, an opinion issued by the Interior Board of Land Appeals, and the most recent findings of the Interior Department's Wild Horse and Burro Advisory Board. For instance, PRIA refers to the need to dispose of "excess free-roaming horses and burros which because they exceed the carrying capacity of the range, pose a threat to their own habitat" and other rangeland values [underscoring added]. PRIA further states that "the Congress . . . hereby establishes and reaffirms a national policy and commitment to: (1) inventory and identify current public rangelands conditions and trends . . . ." In commenting on our report, Interior stated, "We agree that the carrying capacity and range condition of herd areas should be established expeditiously." It further stated that "BLM recognizes the need to accelerate efforts to collect current resource data." Likewise, as we discussed in our report, the Interior Board of Land Appeals ruled in 1989 that quantitative data were needed to justify wild horse removals. Finally, in its January 1992 report, the Wild Horse and Burro Advisory Board stated

that appropriate horse population levels "should be based on and continually verified by habitat monitoring . . . to assure that the combined habitat impacts are within the rangeland capacity and represent a thriving natural ecological balance."

Our 1990 report maintained that data are needed both on range conditions and on the capacity of the land to support grazing activity to provide a basis for determining appropriate wild horse population levels and calculating whether excess horse populations exist. Accordingly, we recommended that BLM expeditiously develop carrying capacity and range condition data in wild horse herd areas. The findings and recommendations in GAO's report are entirely consistent with established views. They do not represent a dogmatic, scientific viewpoint inconsistent with range realities, as the consulting firm suggests.

13. Our report did not call for a quantification of "carrying capacity in absolute mathematical terms." Our report neither recommended, nor implied, the need for such precision. In calling for wild horse removal decisions to be based on carrying capacity and range condition data, we were simply reasserting criteria identified in PRIA and endorsed by the Interior Board of Land Appeals and the Wild Horse and Burro Advisory Board. Interior also agreed with the need for such data in its written comments on our report.

14. This assertion is unfounded. GAO does not have a unique "concept" of rangeland management, as the consulting firm states. Our report characterizes the process spelled out in FLPMA, which calls for the public land to be managed in a harmonious and coordinated manner that will protect its many values in perpetuity. To fulfill this general mandate, FLPMA calls upon the Secretary of the Interior to (1) prepare and maintain a current inventory of all public land and its resource and other values and (2) develop and maintain land use plans. FLPMA directs the Secretary, in preparing these plans, to "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences." Likewise, PRIA calls for an "intensive public rangelands maintenance, management, and improvement program involving significant increases in levels of rangeland management."

Although the citation is not clearly relevant to the assertion it is making, the consulting firm also quotes FLPMA's policy that the public land is to be managed in recognition of the need for food, timber, minerals, and fiber—two of which (food and fiber), the firm says, domestic livestock

provide. While correct to a point, the consulting firm omits reference to other important elements of federal rangeland policy set forth in FLPMA and reaffirmed in PRIA. These elements include the FLPMA mandates to manage the public land

> in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use; . . .
>
> without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output; . . . [and]
>
> [in a fashion that allows for] the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

In short, FLPMA and PRIA mandate a balanced program to protect the land's value for all uses, both now and in the future.

15. As we note in comment 13, GAO does not establish a rigid mathematical formula for developing carrying capacities. In both this report and subsequent reports, we simply refer to standards established in law and accepted by BLM, the Interior Board of Land Appeals, the Wild Horse and Burro Advisory Board, and others. Specifically, BLM regulations prohibit grazing use in excess of the land's carrying capacity. Under these regulations, all grazing level adjustments are to be based on several years' monitoring of grazing use. Our conclusions and recommendations have called on BLM to more effectively implement existing statutory and regulatory standards.

16. According to the consulting firm, we were remiss in not consulting "updated range condition reports" that emphasize the improvement being made throughout the West in range conditions. The firm does not identify the reports being referred to or provide any other evidence to support its claim. However, when making this assertion the industry sometimes points to a BLM report entitled State of the Public Rangelands 1990. This report found that 90.1 million acres of federal rangeland (or about 53 percent of the total) was known to be in fair or poor condition. The report

said this figure was down about 8 percent from land so classified 5 years earlier. Importantly, however, BLM noted in the report that in reality no substantial change should have been expected to occur between 1984 and 1989 and indicated that the slight changes it reported were attributable to different methods of reporting. Accordingly, we remain persuaded that our use in 1990 of range condition information compiled in 1988 was appropriate.

17. Contrary to the consulting firm's charges, at the time of our review, BLM commonly categorized rangeland in poor and fair categories as "unsatisfactory." For example, BLM's Final West HiLine Resource Management Plan and Environmental Impact Statement (1988) states that "under all alternatives, the BLM will maintain the public lands that are in satisfactory (good or excellent) ecological condition [whereas] on public lands with unsatisfactory (fair or poor) ecological condition, BLM will . . . ." Only more recently has BLM replaced such designations with more technical classifications that measure land in terms of its proximity to its potential natural community. However, in its 1990 report on range conditions, BLM still uses the terms "poor," "fair," "good," and "excellent" to describe land conditions. Furthermore, the statutory language in PRIA uses the term "unsatisfactory" to define land that is producing less than its potential.

18. We disagree with the consulting firm's assertion that our report is unduly critical of rangeland in stable condition. We believe the consulting firm's comfort with a situation in which more than 70 percent of allotments are either declining or stable is misplaced. In our view, when (1) more than half of the land (whose condition is known) is in unsatisfactory condition, (2) millions of acres of land are declining, (3) the primary causes of the decline are actions within BLM's control, and (4) the statutory mandate for BLM is to correct this situation "by an intensive public rangelands maintenance, management, and improvement program," such performance is cause for concern. Holding stable at an unsatisfactory level is not consistent with the objectives of PRIA.

19. We submitted our report to outside review, providing a draft to the Department of the Interior for its written comments. We incorporated these comments in their entirety in the final report and noted where they had led us to make changes in our report. When we did not make changes suggested by the agency, we explained our rationale for not having done so. By and large, Interior agreed with the information presented in our report and with our recommendations. While not agreeing with all of our

recommendations, Interior stated that "the recommendations in this audit will help us meet the commitment [to manage the program more humanely and efficiently] in the future."

20. We certainly agree that BLM has experienced problems in the wild horse program. This was the focus of our report, which addressed the full spectrum of program management issues, including wild horse removal decisions, horse adoptions, sanctuaries, and prison halter training.

21. The statement that our report (1) did not surface problems with wild horse management and (2) focused on livestock management problems is inaccurate. We devoted 13 pages in our report to wild horse program management problems, including problems with the adoption program, sanctuary operations, and the prison halter training program. Our treatment of these issues was much lengthier than our treatment of the basis for wild horse removal decisions. Furthermore, to correct these problems, we made a number of recommendations with which the Department of the Interior agreed. Our findings and recommendations in these areas were also consistent with those of the Wild Horse and Burro Advisory Board.

GAO's work on the wild horse program began with a singular focus on the treatment and disposal of wild horses removed from the rangeland. Early in this work, however, it became apparent that many of the problems being experienced in these areas resulted from the removal of more wild horses from the range than could readily be disposed of. As our report states (p. 26):

> By 1985, however, horse removal levels quadrupled to 17,400 horses. The adoption program could not handle this many horses and a large backlog of horses in holding facilities began to build, increasing program costs and generating the need to develop mass disposal alternatives, such as fee-waiver adoptions and sanctuaries. . . .

We concluded, therefore, that a comprehensive review of the wild horse program had to consider BLM's basis for its removal decisions. As discussed earlier, these decisions are to be made in the context of the land's carrying capacity and the need to restore a thriving natural ecological balance to the range. In the 46 herd areas we examined, however, we found that BLM was making most removal decisions without the necessary supporting carrying capacity and range condition data. These findings were consistent with those of the Interior Board of Land Appeals.

During our work it also became clear that BLM could not effectively correct the unsatisfactory range conditions described in PRIA and achieve the thriving ecological balance on the range set forth as a goal in the Wild Free-Roaming Horses and Burros Act by focusing exclusively on wild horse removals. BLM had removed thousands of horses but could not provide us with data to demonstrate what damage wild horses had caused to the range or how the removals had improved the area involved. We also pointed out that domestic livestock substantially outnumber wild horses on the range and consume more forage even in states where wild horse concentrations are highest. In addition, we noted that reductions in levels of forage consumption could potentially be achieved more economically by reducing authorized grazing levels than by removing wild horses. Accordingly, we concluded that any rational range management and range restoration strategy had to address grazing by domestic livestock as well as wild horses. Consistent with this view, the 1992 Wild Horse and Burro Advisory Board report stated that "population control on the various herbivores must be maintained so that there is a reasonable balance with the capacity of the land." In this context, it recommended that Interior "integrate the impacts of wild horses and burros herds and all other major forage consumers so that the combined demand is within the range capacity and represents a thriving natural ecological balance [underscoring added]." We continue to believe that our conclusions and recommendations, along with those of the Wild Horse and Burro Advisory Board, are sound, balanced, and appropriately supported.

The consulting firm also alleged that our report "focused on derogatory statements regarding livestock" and did not surface problems with wild horse management. We are uncertain which statements in our report the consulting firm regards as derogatory. Our report points out that livestock consume more forage than wild horses in wild horse areas and that overgrazing by livestock has been widely recognized. Our report also points out that in some cases the effects of wild horse removals on total forage consumption have been largely negated by increases in authorized domestic livestock grazing levels. We stated that, in these circumstances, without improved livestock management, wild horse removals can be helpful but cannot solve the overgrazing problem. These observations are neither derogatory to, nor supportive of, domestic livestock grazing; they are verifiable facts and rational conclusions based on these facts.

22. The consulting firm provides no evidence to support its assertion that wild horses have destroyed many vegetative communities. While areas on BLM land where such destruction has occurred may exist, BLM officials did

not identify them during our field work. Also, during our field visits we did not observe areas on BLM land where damage was attributable primarily to wild horse activity.

23. The assertion that our report did not address problems with establishing appropriate wild horse population levels is difficult to understand. The primary focus of chapter 2 of our report was BLM's basis for establishing appropriate management levels for wild horse populations.

24. Contrary to the consulting firm's assertion that we failed to examine wild horse census issues during our review, in examining whether excess horses were on the range, we spent considerable effort examining wild horse census methods. We found wide disagreement on the utility of the various census techniques available. Because no consensus emerged on the merits of these approaches, we did not address this issue in our report.

25. We agree that BLM is constantly working to balance "public and political pressures." In fact, in several previous reports, we have pointed out that BLM employees cited such pressure from livestock operators as a reason for not performing needed management tasks.

26. The assertion that we "slandered" BLM employees seriously misrepresents our report. Importantly, the consulting firm provides no support for this statement. At no point have we slandered the professional integrity of BLM employees. In previous reports and testimonies, we have noted, however, that BLM employees' efforts to judiciously manage public land grazing have been hampered by resource constraints and by pressure from politically powerful permittees.[2]

As we stated in our wild horse report and in other reports and testimonies, BLM in the past was deferential to livestock interests and predisposed to

[2]See Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow (GAO/RCED-88-105, June 30, 1988), Rangeland Management: BLM's Hot Desert Grazing Program Merits Reconsideration (GAO/RCED-92-12, Nov. 26, 1991), Rangeland Management: BLM Efforts to Prevent Unauthorized Livestock Grazing Need Strengthening (GAO/RCED-91-17, Dec. 7, 1990), California Desert: Planned Wildlife Protection and Enhancement Objectives Not Achieved (GAO/RCED-89-171, June 23, 1989) and Management of Public Rangelands by the Bureau of Land Management (GAO/T-RCED-88-58, Aug. 2, 1988).

satisfying those interests when making controversial decisions.[3] In the context of our wild horse program review, we observed this orientation in BLM's process for deciding how many horses to remove. We had previously observed the same orientation in BLM's management of the California Desert Conservation Area and in the establishment of riparian improvement projects. In each case, the primary source of our information was BLM field staff themselves. The current BLM Director commented on this widely held internal staff view in a memo distributed to BLM staff in 1989. In this memo, he noted the perception of many BLM staff that top management would not back them up in confrontations with livestock permittees over their stewardship practices. The Director assured the staff that they would have such support in the future. In a later testimony, we cited this memo as a positive step.[4]

27. The assertion that we relied on comments from a wild horse advocacy group to support our view that BLM has often been driven by pressure from livestock permittees misrepresents our report. Our report states that a wild horse advocacy group member quit a BLM advisory committee because that member believed BLM was predisposed to satisfying domestic livestock interests. This member's view was not the support for our observation. As page 18 of our 1990 report indicates, we had expressed our conclusion in many previous GAO products. As we stated in comment 26, the principal sources of support for this conclusion are the viewpoints of BLM field staff. These staff have repeatedly expressed frustration to us about their inability to act as responsible land stewards because of pressure applied by livestock permittees. Again, as previously noted, the Director of BLM recognized this frustration in 1989 and attempted to assure the staff that their efforts would be supported in the future.

28. We are fully aware that rangeland management issues are extremely contentious. Slogans such as "Cattle free in '93" and "Cows galore by '94" demonstrate the hostility that now exists among extreme factions on both sides of the issue. However, on the basis of BLM's previous actions and the opinions of BLM staff, we believe our conclusion that BLM has been deferential to the livestock industry's views is sound and factually based. As we have acknowledged in previous testimony, the current BLM Director

[3]See Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow (GAO/RCED-88-105, June 30, 1988), California Desert: Planned Wildlife Protection and Enhancement Objectives Not Achieved (GAO/RCED-89-171, June 23, 1989), 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), and Public Land Management: Issues Related to the Reauthorization of the Bureau of Land Management (GAO/T-RCED-91-20, Mar. 12, 1991).

[4]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).

has recognized the need for more balanced consideration of all rangeland values and has begun to take corrective action.

29. The consulting firm discusses the importance of democratic rights. GAO recognizes the value of citizen involvement in the democratic process. We have, however, expressed concern about reports of management reprisals against employees who tried to undertake needed land management programs in areas with politically powerful permittees. Finally, we have pointed out that, under current law, federal land is to be managed for multiple purposes and sustained yield and that no single interest is to be treated as paramount.

30. The assertion that we dismissed Interior's comments is false. We directly addressed Interior's comment that we had misunderstood how BLM develops appropriate wild horse population levels on page 56 of our 1990 report. We did not specifically respond to Interior's views on the role of advisory groups because we did not disagree with them. All groups should have the opportunity to participate in BLM's planning process, and BLM land use plans should be subject to public scrutiny and comment.

CASE III. IMPROVEMENT NEEDED IN FEDERAL WILD HORSE PROGRAM. GAO/RCED 90-110. AUGUST 20, 1990.

See comment 1.

See comment 2.

In response to Congressional inquiries concerning BLM's wild horse program, GAO relied heavily upon their own previous reports which were based upon opinions and anecdotal information. No attempt was made to update previously compiled GAO statistics on rangeland condition. Very little information directly pertinent to wild horses as they relate to range condition was compiled for this report.

See comment 3.

THE OBJECTIVES FOR WILD HORSE MANAGEMENT HAVE NEVER BEEN DEFINED IN ACCORDANCE WITH THE MULTIPLE USE INTENT OF FLPMA.

See comment 4.

- **GAO'S ASSUMPTION THAT THE OBJECTIVE FOR WILD HORSE REMOVAL SHOULD BE TO IMPROVE RANGE CONDITION IS INVALID.**

  Normally wild horse removals are made to maintain the wild horse stocking rate in order to reestablish a moderate level of grazing use. When this is the case, the reduction of wild horses will not necessarily result in improved range condition, nor is it always a management objective to do so (17). **Present judicial decisions require resource damage to be documented before horses are removed. All other rangeland animals are managed at a level to prevent even the risk of resource damage.** The GAO report did not acknowledge this inequitable system of management which is a major problem with the current wild horse management program.

See comment 5.

See comment 4.

GAO emphatically pointed out that when wild horse removals were not accompanied by livestock reductions, range conditions had not demonstrably improved. **The primary reason for wild horse removals from rangelands should be to maintain the base breeding herd level by removing the annual population increase. Such management is necessary just to maintain, not improve, existing range condition** (17, 38). This management philosophy has been the premise for controlling wildlife numbers through regulated hunting seasons for several decades. It is now known that wild horses can double their population levels in five years.

See comment 6.

Population numbers for every other rangeland animal besides wild horses are controlled on public lands either through authorized grazing permits for domestic livestock, hunting seasons for game species, or natural short-term population cycles and predation for nongame wildlife species (44). Likewise, as intended by the Wild Horse and Burro Act, wild horses must be controlled through roundups if the demands placed on the resource are to be in balance with its ability to produce.

See comment 7.

See comment 7.

See comment 8.

See comment 9.

See comment 10.

See comment 8.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE III

MANAGEMENT LEVELS OF LIVESTOCK, WILDLIFE, AND WILD HORSES SHOULD BE BASED UPON LAND USE OBJECTIVES AND THE ABILITY OF RANGELAND TO SUPPORT THOSE USES.

- **GAO'S LACK OF UNDERSTANDING FOR BASIC RANGE MANAGEMENT PRINCIPLES WAS CLEARLY EVIDENCED BY THEIR RECOMMENDATION THAT WHEN OVERGRAZING IS OCCURRING BOTH WILD HORSES AND AUTHORIZED LIVESTOCK GRAZING SHOULD BE "REDUCED IN PROPORTION TO THE NUMBER OF EACH SPECIES ON THE RANGE".**

  There are many reasons why GAO's blanket recommendation to reduce livestock grazing and remove wild horses in proportion to the number of each species on the range is not appropriate. Certainly in the case when permitted winter livestock grazing and yearlong wild horse use occur on the same range, reducing winter livestock use during the dormant growing season will not address the problem of repeated wild horse grazing that occurs year after year during the time that plants are growing and are susceptible to damage from overuse (4, 6).

  GAO surfaced a practical and realistic conclusion regarding wild horse management that was pointed out by BLM. Although it is difficult in some cases, it is possible to distinguish forage consumption among wild horses, domestic livestock, and wildlife species. Further, the GAO report correctly concluded that **"this distinction is critical in determining the appropriate mix of animals on the range, as well as the species-specific actions to be taken in responding to degraded range conditions".** The GAO report also correctly pointed out that removing fewer horses than is warranted contributes to continued resource deterioration and "can lead to higher removal costs in the future". Unfortunately, these ideas were not carried forward and emphasized as major findings of the GAO investigation. Evidently, the significance of these conclusions was not fully realized.

  As the following scenario shows, GAO may not have even realized the ramifications of their recommendation as it was proposed. The GAO recommendation is biased against cattle. By implementing GAO's recommended proportional reduction, 22 more wild horses are permitted to remain on the allotment while **the livestock operator unjustly loses authorization to graze 90 less cattle. On this basis, the livestock operator is penalized unduly for utilization directly attributable to wild horses.**

See comment 8.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE III

- EXAMPLE -

Given the scenario that cattle out-number wild horses on an allotment 4:1; 400 cattle are authorized for grazing July 1 through September 30, and 100 wild horses roam the allotment year-round.

Actual use would be:

400 cattle x 3 months	=	1200 Animal Unit Months (AUMs)\[1]
100 horses x 12 months	=	1200 AUMs
TOTAL	=	2400 AUMs

The resulting UTILIZATION FOR HORSES AND CATTLE IS EQUAL and totals 2400 AUMs.

Given in this example that long-term utilization monitoring (at least five years) indicates that the allotment can support and sustain 1500 AUMs, a 900 AUM reduction is necessary.

Since the actual utilization level for horses and cattle is equal in this example, (1,200 AUMs each) the appropriate 900 AUM reduction should be implemented on a 50/50 basis: 450 AUMs for cattle and 450 AUMs for horses should be removed from the range.

The following table shows the results of implementing the appropriate AUM reduction method in contrast to the inappropriate proportional reduction method recommended by GAO.

1/AUM - Animal Unit Month. The amount of dry forage required by one animal unit for one month based upon a forage allowance of 26 pounds per day.

See comment 8.

APPROPRIATE 50/50 PROPORTIONAL REDUCTION[1]

	CURRENT ACTUAL USE (AUMs)	APPROPRIATE REQUIRED REDUCTION (AUMs)	ADJUSTED ALLOWABLE USE (AUMs)	ADJUSTED NUMBER OF ANIMALS ALLOWED	APPROPRIATE NUMBER OF ANIMALS REQUIRED TO BE REMOVED
Cattle	400 Cattle x 3 months = 1200 AUMs	50% of 900 = 450	1200-450 = 750 AUMs	750 AUMs allowed for 3 months (750/3) = 250 cattle	400 cattle current -250 allowed 150 cattle removed
Horses	100 horses x 12 months = 1200 AUMs	50% of 900 = 450	1200-450 = 750 AUMs	750 AUMs allowed for 12 months (750/12) = 63 horses	100 horses current -63 horses allowed 37 horses removed
TOTAL	2400	900	1500		

[1]Actual use for horses and cattle is equal and adjustments should be made on a 50/50 basis.

INAPPROPRIATE GAO 80/20 PROPORTIONAL REDUCTION[2]

	CURRENT ACTUAL USE (AUMs)	INAPPROPRIATE GAO PROPOSED REDUCTION (AUMs)	INAPPROPRIATE ADJUSTED ALLOWABLE USE (AUMs)	INAPPROPRIATE ADJUSTED NUMBER OF ANIMALS ALLOWED	INAPPROPRIATE NUMBER OF ANIMALS REQUIRED TO BE REMOVED
Cattle	400 cattle x 3 months = 1200 AUMs	80% of 900 = 720	1200-720 = 480	480 AUMs allowed for 3 months (480/3) = 160 cattle	400 cattle current -160 cattle allowed 240 cattle removed
Horses	100 horses x 12 months = 1200 AUMs	20% of 900 = 180	1200-180 = 1020	1020 AUMS Allowed for 12 months (1020/12) = 85 horses	100 horses current -85 horses allowed 15 horses removed
TOTAL	2400	900	1500		

[2]The GAO recommendation requires that the reduction be implemented by 80 percent for cattle and 20 percent for horses, a ratio of 4.1 (the proportion of each species on the range)

See comment 11.

See comment 12.

See comment 13.

See comment 14.

RANGELANDS, BY THEIR NATURE, REQUIRE EXTENSIVE RATHER THAN INTENSIVE MANAGEMENT.

▸ **THE MISTAKEN PREMISE OF THE GAO WILD HORSE REPORT IS THAT CONGRESS, THROUGH THE FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA), DIRECTED BLM TO "SCIENTIFICALLY MANAGE" RANGELANDS.**

The GAO report implies that the necessary "scientific approach" requires quantification of carrying capacity in absolute mathematical terms. GAO contends that "thriving ecological balance" cannot be known without knowing carrying capacity, and recommends that BLM expeditiously develop carrying capacity data.

FLPMA does not require BLM to manage rangelands under GAO's concept of a scientific approach. FLPMA does declare it to be a policy of the United States that "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from public lands" (90 stat. 2745;U.S.C. 1701). Domestic livestock provides two of these four needs.

Although theoretically it may seem logical to quantify forage production on rangelands, it is impossible to accurately do so (29). GAO's concept of scientifically managed rangelands based upon absolute quantification of carrying capacity is not supported by most professional range managers and scientists. In the late 1970"s and early 1980's BLM made an extensive effort to conduct range surveys (under the soil-vegetation-inventory method - SVIM) for the purpose of "mathematically" calculating forage allocation. Widespread implementation of this approach resulted in the determination that one-point-in-time surveys to establish carrying capacity are inappropriate for many reasons, a few of which are explained below:

- It is physically infeasible (and would be even if the current staff levels were doubled or quadrupled) to measure vegetation production on vast, remote rangeland areas and meet acceptable standards for sample adequacy to produce results with any degree of statistical reliability at all. Even the most intensive range surveys result in sampling less than one-half of one percent of the actual acreage. **The results from such small sample sizes cannot with any degree of confidence be extrapolated to vast acreages of rangeland and represent the true characteristics of the vegetation** (1, 8, 45).

- Analysis of range survey data must assume that production measured during the inventory year is typical of the long run average, or can be adjusted accordingly. Annual precipitation and resulting forage production on arid rangelands is unpredictable and fluctuates widely between years. Therefore, a "typical year" is not only hard to identify, but also cannot be forecasted for inventory planning purposes (2, 3, 5, 54). Attempts have been made to formulate correction factors to "adjust" data that were not collected during normal conditions. **Such factors must be based upon long-term production data from site-specific locations.**

Such a database does not exist for the vast majority of public rangeland, nor is it a high priority for range research funding to produce one.

- Forage allocation models require accurate data for many variables. In order to develop such a model, forage requirements for all users (livestock, wild horses and wildlife), and proper use levels for all plant species must be known for all kinds of rangeland (5, 42, 45). An animal's preference for eating a particular plant changes in accordance with growing season, growing conditions (such as soil type), and also in relation to the different species with which it grows. Therefore, predicting what an animal may eat must be very site-specific and cannot without verification be extrapolated from one locale to another. However, this data is the required basis for defining that portion of the total vegetation production that is actually forage (not all plants are eaten), and deciding how much of the vegetation can be consumed by which animals while still maintaining the health of the plants.

In other words, **extensive long-term site-specific data is required to determine carrying capacity from range production data as the GAO report recommends.** Even then, **the resulting calculated "number" is no more than an estimate based upon these and numerous other assumptions. The reliability of "the number" is dependent upon the validity of the numerous assumptions made in its derivation, and is still only a starting point from which to monitor the appropriateness of the calculated carrying capacity** (29, 42, 45).

Based upon a well learned lesson on the limitations of forage production surveys from past experience, BLM and FS have progressed beyond the idealistic approach of quantifying carrying capacity for forage allocation. **BLM and FS have implemented a policy of monitoring existing stocking levels and trends of vegetation to determine appropriate grazing levels. This approach is widely supported by range management professionals and the scientific community.** The manpower is not available that would be necessary to conduct a comprehensive forage production survey that would result in only another "starting point".

See comment 15.

See comment 16.

See comment 17.

See comment 16.

TECH. REVIEW OF GAO RANGELAND REPORTS CASE III

GAO REFERENCED THEIR OWN OUT-OF-DATE INFORMATION AND DID NOT INVESTIGATE IMPROVEMENT THAT HAS OCCURRED ON RANGELANDS DUE TO MANAGEMENT SUCCESS.

- **GAO PERPETUATES MISCONCEPTIONS OF THEIR UNSUBSTANTIATED CONCLUSIONS.**

A limited number of opinions of range condition status compiled and reported by GAO in 1988 (GAO/RCED 88-80, previously reviewed in this paper) were cited in the 1990 wild horse report to exemplify a claim of unsatisfactory conditions.

Only after combining the "fair" and "poor" category responses, could the wild horse report state that "over half of the public rangelands remain in unsatisfactory condition." However, range management professionals do not unequivocally consider "fair" condition to be unsatisfactory. Therefore, GAO's emphasis regarding unsatisfactory condition of public lands cannot be substantiated with their own data. If GAO had consulted updated range condition reports available from land management agencies and universities, instead of relying on the statistics they compiled in 1988, they could have emphasized the improvement being made west-wide in range condition.

GAO DATA SHOWED THAT 91 PERCENT OF RANGELAND IS IN STABLE OR IMPROVING CONDITION.

- **GAO'S SERIOUS LACK OF TECHNICAL UNDERSTANDING LED TO UNJUSTIFIABLE CRITICISM OF STABLE CONDITION RANGELAND.**

GAO reported that "nearly 78 percent of the allotments where trend information was available were either stable or declining further". An investigation of this GAO statistic revealed that of the 78 percent reported (generated from the 1988 opinion survey), only nine percent of the allotments were believed to be declining, while 64 percent were considered stable. This lack of differentiation is extremely misleading.

Stable trend cannot be considered unsatisfactory without detailed site-specific interpretation. Stable trend occurs for many reasons, some of which are listed below:

- Existing range condition may be "good" or "excellent" and is not changing. In this case, stable trend is desirable.
- A successional change in plant community may be inconsistent with existing management objectives for multiple use, and stable trend is intentionally managed for.

- Existing conditions may have reached a steady state and no influence (human or otherwise) has occurred to shift plant species composition. If range managers recognize this situation when it occurs, false expectations of improvement by removal of grazing are not fostered (24).

See comment 18.

An outside technical review of the GAO report by nonbiased range professionals would have curtailed many of the serious shortcomings of the GAO report. As it is, GAO must assume responsibility for the misrepresentations in their reports.

See comment 19.

TECHNICAL AND MANAGEMENT INADEQUACIES WITHIN THE BLM WILD HORSE PROGRAM HAVE BEEN ACKNOWLEDGED BY AGENCY PERSONNEL AND OUTSIDE INTERESTS.

See comment 20.

- **SIGNIFICANT EXISTING PROBLEMS WITH WILD HORSE MANAGEMENT DID NOT SURFACE IN THE GAO WILD HORSE REPORT BECAUSE THE REPORT FOCUSED ON DEROGATORY STATEMENTS REGARDING LIVESTOCK.**

See comment 21.

The problems that the GAO should have focused on include the fact that 65 percent of the wild horse budget is spent on adoption and maintenance of horses that are gathered off of rangeland, while only twelve percent of the budget is spent for on the ground management. Wild horses have destroyed many vegetation communities, yet there is little or no monitoring in place to document this damage even though monitoring is a required prerequisite in preventing further damage. The report did not address problems with establishing and enforcing appropriate management levels for wild horse populations, or the fact that legal horse herd areas have yet to be defined 20 years after passage of the Act. There are also very real problems with herd census methods used by BLM that should have been brought forth by GAO.

See comment 22.

These problems were not the focus of the GAO report because the report instead emphasized problems in livestock grazing.

See comment 23.

THE BLM AS A PROFESSIONAL FEDERAL AGENCY MUST CONSTANTLY WORK TO BALANCE AN EVER-CHANGING SLATE OF PUBLIC AND POLITICAL PRESSURES.

See comment 24.

- **THE PROFESSIONAL INTEGRITY OF BLM EMPLOYEES WAS REPEATEDLY SLANDERED BY GAO INSISTENCE THAT THE BLM WAS DRIVEN BY THE WANTS AND NEEDS OF THE LIVESTOCK PERMITTEES.**

See comment 21.

The GAO 1990 Wild Horse report consistently portrayed the BLM as being "more concerned with satisfying livestock interests than with ensuring the long-term health of the range". In support of this accusation, GAO cites the opinion of a member of a wild horse advocacy group, who in no way represents an unbiased interest.

See comment 25.

See comment 26.

See comment 27.

See comment 28.

Had the report pursued both sides of the story, it would also have been reported that the livestock industry believes that BLM and FS policy are driven by the environmental community (7, 49). The GAO report did not point out that wildlife, recreation and wild horse advocacy groups are also powerful special interest groups that wield significant political power to force management changes.

See comment 29.

A large segment of the constituency of western Congressmen is comprised of persons directly and indirectly dependent upon the livestock industry. The strength of democracy is the right of the people to organize and influence the political process through their elected representatives. Instead of depicting the interest and concern of the livestock industry as a problem, GAO should have recognized the value of citizen involvement as a benefit to the democratic process rather than a weakness.

See comment 30.

GAO dismissed BLM's well written response to these accusations by not considering BLM's following valid points:

Advisory groups largely comprised of livestock permittees [refers to Grazing Advisory Boards authorized by the Public Rangeland Improvement Act and reaffirmed by the Secretary of Interior] *are certainly among many groups consulted as part of the planning process.*

There are numerous opportunities for public input prior to final decisions. Wild Horse Interest Groups - along with other affected interests - routinely participate in the planning process.

Adjustments of use on the public lands, particularly when those uses involve a re-allocation of resources, have a number of legal, social, economic, and political impacts. The evaluation of impacts and analysis of alternatives are quite complicated and should be subject to public scrutiny and comment.

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