

Chapter 4

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

IMPLEMENTATION OF PUBLIC LAND STANDARDS FOR HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING

Public land standards and livestock grazing guidelines, together with other existing decisions in the RMPs will provide a framework for future decisions. Each standard has a corresponding set of indicators that will be collectively evaluated to make an assessment on the achievement of the standard in the mapping unit of the ecological site. Standards apply to all public lands; however, because resources and staffing are limited, it will be necessary to set priorities for the areas where standards will be assessed.

Livestock grazing guidelines will be applied to ranges where assessments indicate that the standards are not being met and livestock grazing is believed to be a contributing factor in not meeting the standard.

ANALYSIS APPROACH

For this analysis, the most basic question appears to be "How many acres does BLM manage where the standards are not being met?" This determination varies by standard and alternative.

The BLM has a variety of resource data, but has not inventoried the public lands to determine if the proposed standards are being met or not. For example, BLM does not maintain any human dimension data. For the Fallback Alternative there were no human dimension factors to consider, while the RAC Alternative had a Sustainable Communities and Human Dimension Standard and the County Alternative requires a balance between human dimension and biological resources.

A second fundamental question is related to thresholds. Some of the rangelands may have passed through a threshold and will not meet the standard through public land use management alone. For example, some acres are now dominated by brush and or trees. These acres may not meet the standard through use management alone. Some form of brush control will be needed for the standard to be met.

A third fundamental question is how many allotments could be affected by the grazing guidelines?

A fourth fundamental question is what additional activities may need to be adjusted for the standards to be met? This is important because it will determine what activities may be impacted by establishing a standard or guideline.

The BLM asked each field office to provide information on the four fundamental questions. For example, the FOs estimated 480 allotments for the Fallback Alternative, 428 allotments for the RAC Alternative and 287 for the County Alternative would have grazing guidelines applied to at least a portion of the allotment. Additionally, each field office provided supplemental information to assist in assessing the scope of impact the various activities. The RMPA/EIS team then used the field office estimates as a basis for analysis.

This RMP Amendment/EIS presents a sufficient range of scenarios and assessments to allow the reader to determine what it would take to implement the standards and guidelines and what the potential impacts would be.

In addition to the standards and guidelines assessed, a few existing RMP decisions are proposed to be changed as shown in Appendix B. The RMPA/EIS team reviewed the proposed changes, assessed any potential impacts and included them as part of the analysis, as appropriate. Any potential impacts from changes to RMP decisions are discussed.

Economic Impact Assessment

The potential cumulative economic impacts were determined from implementation of the standards and guidelines for three alternatives: RAC Alternative, County Alternative, and the Fallback Alternative.

The total grazing permits/leases projected by each county to be impacted by each of the three

alternatives was determined by the BLM field offices. This analysis focuses solely on those allotments that did not meet the standards for any number of reasons as estimated by the BLM. There were 480 allotments not meeting the Fallback standards, 428 allotments not meeting the RAC standards and 287 allotments not meeting the County standards. For the purposes of this analysis, the allotments were treated as the number of ranches impacted. The BLM identified the county location of each ranch; based upon the county location, a ranch budget region was identified and the size of the ranch for each region was determined from the BLM actual authorized animal unit months (AUMs) and the percentage of public land identified for that allotment to ascertain the size of the total ranch in order to categorize the ranch into the historic ranch budget sizes. These representative published ranch budgets associated with the number of AUMs, land tenure pattern and production characteristic by size were then used as the baseline from which all impacts or changes were measured. Published ranch budgets were not available for all ranch sizes in each region; to bridge this gap, adjacent region's budgets for the missing size as well the most similar budgets for that region was used to develop an approximation for a representative ranch budgets as the baseline encompassing the four principle ranch budget areas where BLM lands occur within New Mexico.

A single point in time reference suffers from the large volatile fluctuations of market prices over shadowing the effects and ramification of the event being analyzed; an example would be analyzing a high performance year such as 1994 for the range livestock industry would overstate impacts associated with a change in AUMs, the opposite is true of the price trough in 1987 which would understate the impacts. A 12 year cattle price cycle exists; therefore, an average budget was constructed for both prices, costs, and production characteristics associated with drought and prices. The average production and price cycle was built for the 18 representative ranch budgets and became the baseline from which impacts were quantified.

Individual Ranch Analysis

The developed 10 year average ranch budgets function as the baseline; the ranches not meeting the standards for each alternative were identified by region and distributed as a percent by ranch size. The range

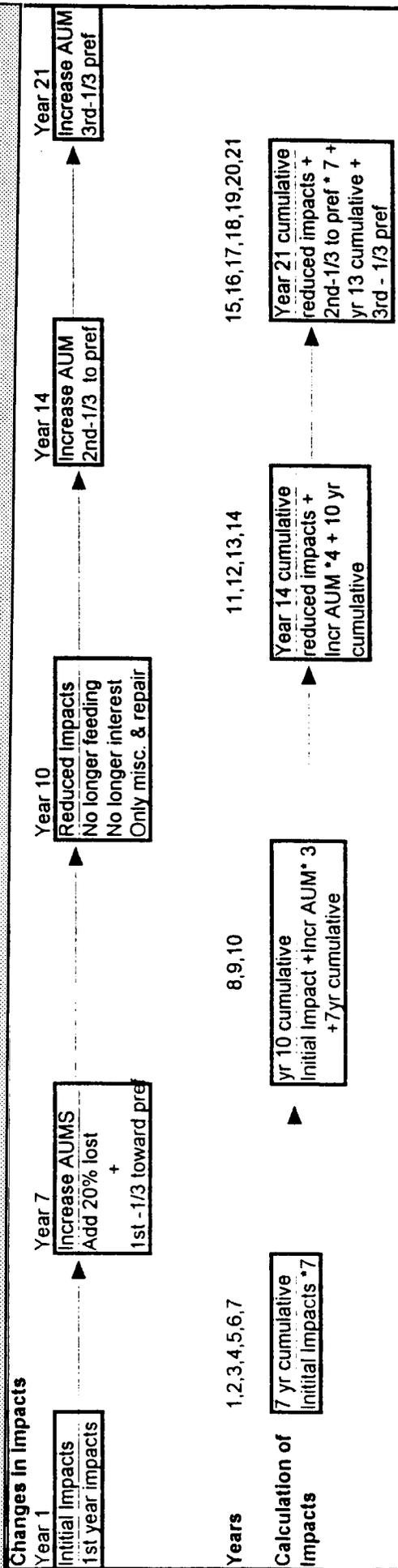
livestock industry was then directly involved by making recommendations for each representative ranch size for those ranches not meeting the standard. A ranch template was constructed for each ranch and subsequently modified to improve livestock distribution or forage production by means of fence construction, water locations, drinkers and pipelines or by brush control practices. It was assumed that some of the ranches not meeting the standard could not achieve the standard without a reduction in AUMs; therefore, each alternative had an option of either no BLM AUM reductions or a 20% reduction in BLM AUMs. It was also assumed that 20% of the recommended improvements were installed followed by a year of growing season deferment until the full regime was in place on the ranch by the 10th year after initiating the practices. Associated variable costs of operating and maintaining the ranch with the recommended improvements were developed for each ranch size for the 4 major ranching regions of the State.

Range improvements are long-term investments in the basic land resource that require years to yield a positive return to amortize the dollars invested. The initial impacts and ranch progression were diagramed and presented in Figure 4-1. The AUM reductions and/or change in variable costs and additional interest payments were put in place in year one with no further change in costs or AUM numbers until year 7 when the initial reduction was returned to the ranch and one-third of the difference between actual authorized AUMs in 1996 and a specific numeric target for the allotment were restocked. An additional 1/3 increase toward the specific numeric target would be realized in year 14 and completely implemented 21 years after placement of the improvements. These additional AUMs would be partially allocated to livestock as the ecological condition of the allotment improved in terms of productivity, diversity, and residual biomass due to the response from the improvements. Investment costs, variable costs and the value of production were developed for each ranch size and region. The costs and returns were the individual ranch level impacts from implementation of the three alternatives.

Industry Impacts

The number of ranches impacted is the critical link between the individual firm or ranch and the impact to the industry. Aggregating the ranch impact by the

**FIGURE 4-1
INITIAL IMPACTS AND RANCH PROGRESSION**



number of ranches determined to be out of compliance and not meeting the standards by either the riparian, upland, or biotic standards was the mechanism to determine the total magnitude of AUMs lost/or gained and additional costs/returns incurred.

Methodology

With the identification of ranches affected by region (see map 4-1), as shown in Figure 4-2 and an average budget for each ranch size within each region, impacts to the ranches needed to be identified. This was done with the help of industry representatives and the BLM. The BLM and ranchers cooperatively identified the improvements that were most probable for an allotment in each region to achieve the standard. With this information the industry representatives estimated, as a percentage, the increased variable costs that would be associated with the improvements recommended. These percentages were then applied to the average budget for that particular region and ranch size. At this point there were two options applied to the analysis for all three alternatives:

1. That all of the allotments not meeting the standard could be improved without a reduction in AUMs. Ranches would attempt to feed their way out of the forage deficiency and that the allotment would improve.
2. That some of the allotments would require the removal of AUMs for that allotment to improve and meet the standard. For this option all allotments, not meeting the standard, were analyzed with the removal of 20% of the authorized AUMs.

It should be recognized that both are unlikely and that the real impact would be some point between the two options. After implementing these two options into the analysis, three additional options for the previous 2 options for each alternative, were analyzed for each region, ranch size, and AUM reduction, they were:

1. That the BLM would provide all of the funding for the establishment of the improvements to bring the allotment to standard.

2. That the BLM would provide the funding for the materials and the ranch would provide the labor of constructing the improvement.

3. That the ranch would provide all of the funding for the establishment of the improvements to bring the allotment to standard.

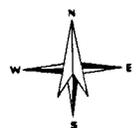
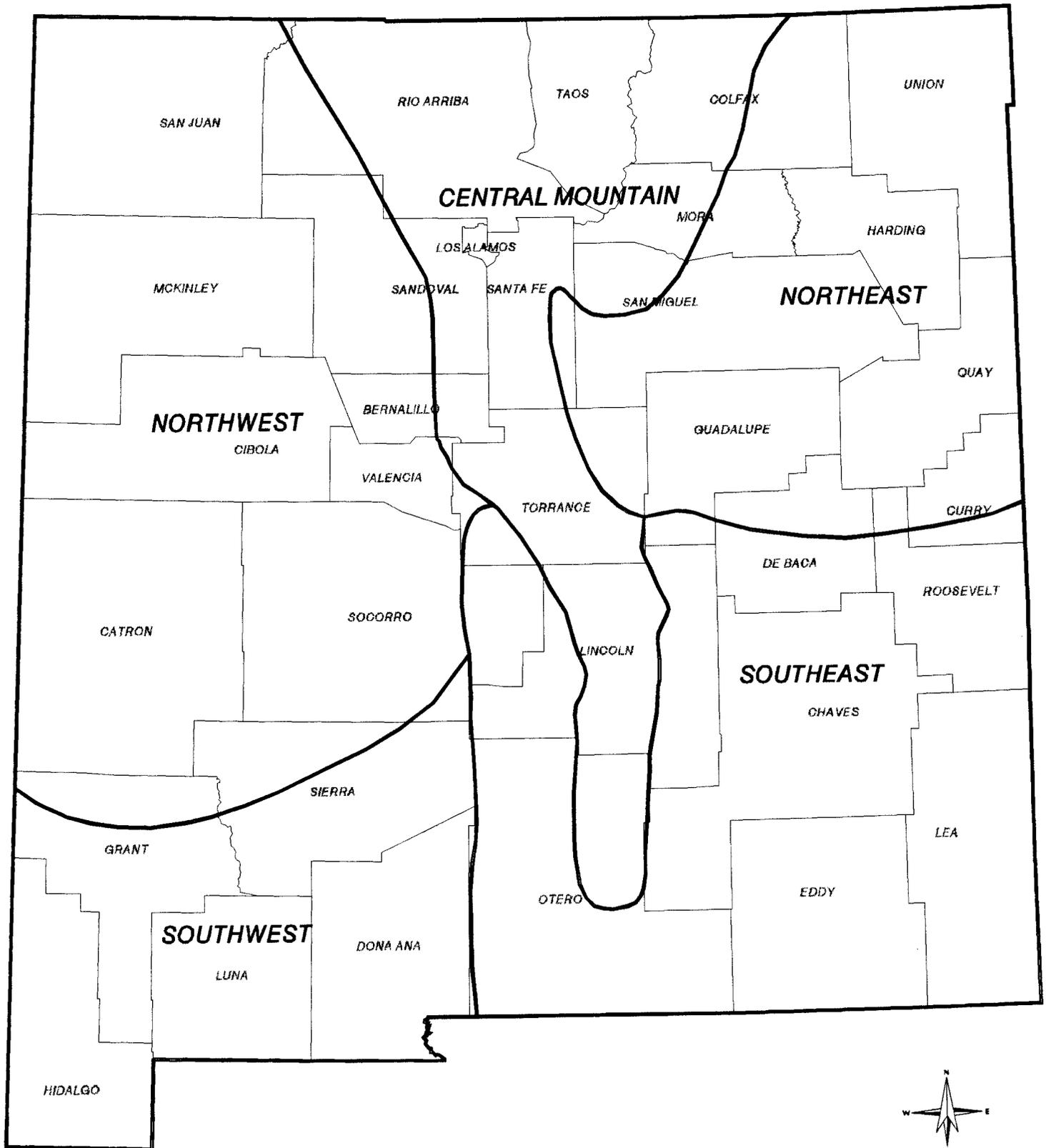
These three options were considered because of the limited funding available to the BLM for range improvements. Neither of the options are likely; but, some combination of all three is most probable to happen.

Another possibility considered in the analysis was that with increased regulation and operating costs to the ranch, some of the ranches would sell the base property for development and no longer use the federal permit. For additional analysis it was assumed that 22%¹ of the ranches not meeting the standard would convert to real estate rather than shoulder the cost of additional improvements and regulation. These ranches, including the permit/lease, were assumed as permanent losses and no longer maintained in production. Although it is possible that the federal permits/leases may be purchased by another ranch, it was not considered in this analysis due to the insecure tenure of federal permits. When 22% of the impacted ranches not meeting the standard were removed, the same assumptions that applied to the scenario that no ranches quit were applied to the remaining 78% of these ranches.

After the baseline budgets and adjusted budgets were created for all assumptions and options, the differences were identified and used as an input into the representative sectors as a change to the sector to identify total economic impacts to the New Mexico economy (in the I-O model). These changes in management were calculated to quantify the total economic impacts of the initial or first year impacts

¹Percent of ranches identified in "Economic Characteristics of the Western Livestock Industry" as ranches in New Mexico that would convert to real estate with the loss of federal AUMs.

Map 4-1. Cow / Calf Ranching Areas in New Mexico

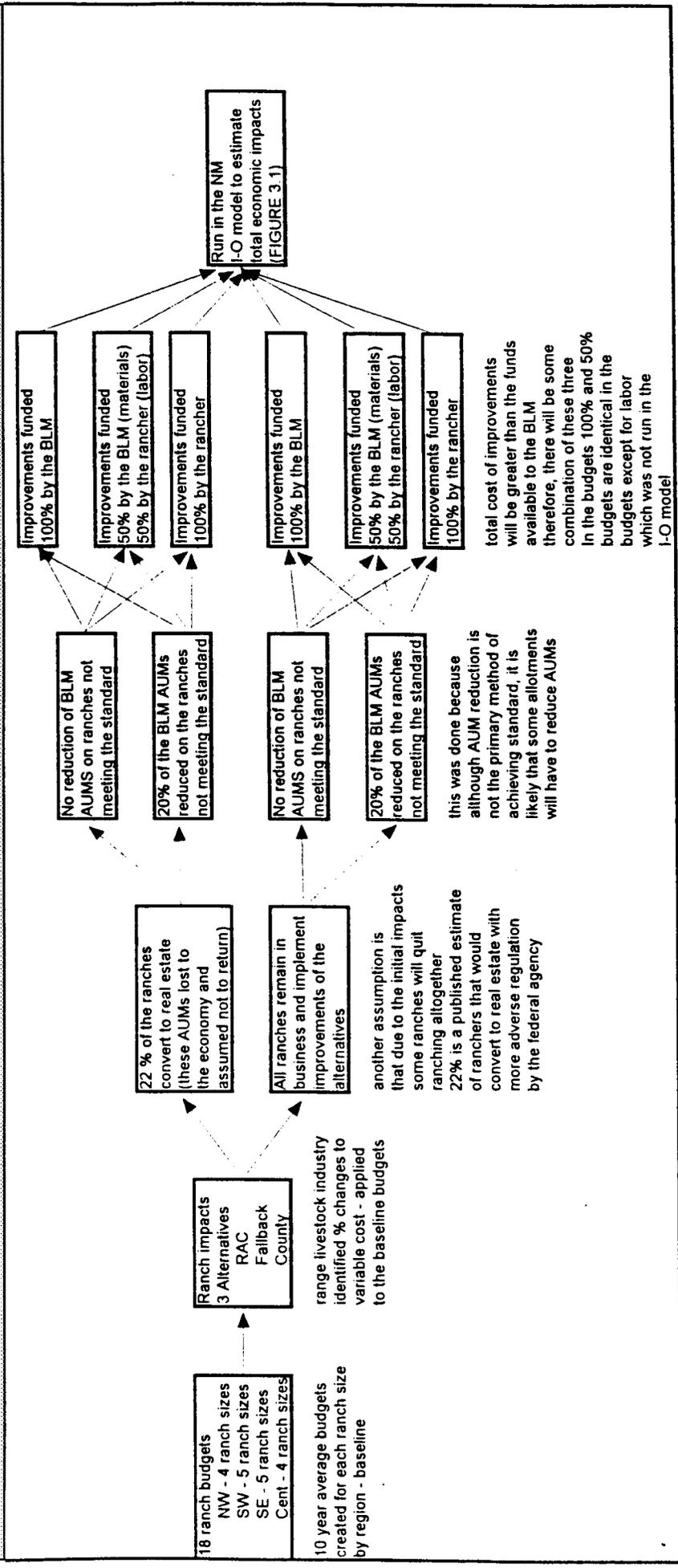


Produced by the New Mexico State Office Geographic Sciences Team, Bureau of Land Management, August 08, 1998

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Source : New Mexico State University
 Agricultural Experiment Station
 College of Agriculture and Home Economics
 Research Report 724:
 "Range Livestock Cost and Return Estimate for New Mexico 1994"

**FIGURE 4-2
OUTLINE OF METHODOLOGY**



to the State of New Mexico. The initial impacts were then aggregated over a seven year period to determine the cumulative impacts of implementation of the guidelines for the first seven years. In year seven it was assumed that the allotment had improved to the point that 1/3 of the difference between authorized AUMs and a specific numeric target of AUMs would be allowed on the allotment, plus the reauthorization of any AUMs removed. The initial impacts continued to year 10, because it was assumed that full implementation of the improvement would be completed at that point. At this time the economic impacts to the State would be less severe, because the only permanent change in the spending pattern of the range cattle industry would be the maintenance and repairs of the additional improvements. In the 14th year an additional 1/3 of the AUMs toward the specific numeric target would be authorized for the allotments that previously did not meet the standards. And the final 1/3 of the specific numeric target of AUMs would be authorized in the year 21 after the initial identification of the allotment not meeting the standard.

After the initial analysis of economic impacts of allotments not meeting the standard, it was determined that the analysis was incomplete. The allotments that currently met the standard were held constant in the analysis, instead of increasing in grazing capacity. This provided an incomplete picture of the cumulative economic impacts to the State of New Mexico. Those allotments, because they met the standard should not be penalized, but should also move towards historic numeric target levels. Therefore, the analysis was completed by moving all allotments in the State, after 7 years of monitoring, to historic numeric target levels. The same stair step methodology was used, with 1/3 of the AUMs being authorized every 7 years.

Also, after the initial analysis an error in the initial methodology was also discovered. When a ranch had a 20% reduction in AUMs, those animal units created a negative economic impact to the economy and in year 10 those AUMs were re-authorized for the ranch. This was initially calculated as a negative impact for 10 years and then to year 21 it was a positive impact. However, this is an incorrect interpretation, because the re-authorization of those AUMs was only bringing the ranching unit back to the baseline animal units,

equal to those in the scenario when no AUMs were reduced.

Human Dimension

Background

The Cooperating Agency Counties in this BLM/State NEPA EIS process have enacted ordinances that require the Counties to develop coordinated environmental assessments with Federal agencies. The County assessment would be developed with a special emphasis on analyzing social, cultural and economic impacts from government proposed actions (See Appendix F: The National Environmental Policy Act of 1969, as amended NEPA). The County ordinances require coordinated assessments that are consistent with the concepts of the mini-NEPAs provided for under Council on Environmental Quality Regulations (CEQ 40 CFR §1506.2 b). The County mini-NEPAs are designed to reduce duplication of effort in the environmental analysis processes (NEPA 40 CFR §1506.2).

Focus

This Human Dimension analysis examines regions, communities and groups in New Mexico that may potentially be impacted by the alternatives. The Human Dimension analysis is composed of the following three sections:

- financial
- social
- cultural

The foundation for looking at the Human Dimension impacts is resource use. Where there will be a change in resource use by an existing resource user(s) there may be Human Dimension impacts. Potential changes in resource use are primarily identified in the livestock grazing sector because guidelines are proposed for livestock grazing but not for other activities.

Potential impacts on ranch operations would result from livestock operation changes, increased costs of range improvements, and/or herd reductions. Because specific ranches affected could not be identified nor

the degree of impact quantified, scenarios were developed to look at possible livestock grazing practice adjustments from implementation of the guidelines for livestock grazing. As resource use would change, employment, economic activity, personal income and finance are impacted.

The social and cultural analysis presented for each of the alternatives in this chapter focuses on possible impacts on ranching communities that utilize the public land.

ASSUMPTIONS FOR ANALYSIS

1. Disturbance from authorized uses would not necessarily prevent or preclude a site from meeting the standard. However, where proposed disturbance might result in the site not meeting the standard, any and every opportunity to improve the condition would be taken through stipulations on permitted uses and other means so that the overall trend is upward and the activity can be approved.

2. The demand for public lands for a variety of uses will continue to increase.

3. Existing laws will continue in effect, and use authorizations will continue to be issued by BLM.

4. BLM staffing will remain the same.

5. Monitoring levels of authorized activities will remain the same.

6. The short-term is considered to be 5 years and the long-term is 20 years.

7. The NMDGF will control the increase in elk populations.

8. In 20 years a specific numeric target would be reached.

9. No debt load for the ranchers.

NO ACTION (PRESENT MANAGEMENT) ALTERNATIVE

VEGETATION

Upland Vegetation

Under the No Action Alternative, management of vegetation on public lands within New Mexico would continue, consistent with existing RMP decisions and guidance. The rate of change due to management would continue as in the recent past. Vegetation in early seral stages would continue to be enhanced through the implementation of allotment activity plans and other activity-level plans (such as Habitat Management Plans or Coordinated Resource Management Plans). These plans would continue to be developed, and would continue to implement grazing systems, construction of range improvements to redistribute grazing pressure, and vegetation treatments to improve the ecological status of a particular allotment or pasture of a grazing allotment. In the short-term, brush control would improve the ecological status on approximately 103,000 acres. In the long-term, brush control would improve the ecological status on approximately 410,000 acres. Most of this effort would likely be aimed at the roughly 5 to 6 million acres in the mid- and late upper- early seral stages. In terms of vegetation types affected, most of the areas needing management are those that were formerly grasslands and are now dominated by desert scrub and juniper savannah types. Additionally, some shinnery oak control may be necessary to restore Great Plains tall- and mid- grass types, especially where needed for wildlife concerns such as the lesser prairie chicken. These areas are located in MLRAs 36, 42, and 70.

Riparian Vegetation

BLM would continue its management of riparian vegetation. Heightened public interest regarding riparian areas and endangered species issues would likely continue to push riparian area management into the forefront of BLM management activities. The result of this management priority would likely be renewed effort to restore, as much as possible, the 154 BLM riparian segments not in proper functioning condition. This would happen regardless of whether BLM enacts new rangeland health standards and grazing program

guidelines, or which standards and guidelines BLM enacts. In the short-term, improvement in functional condition is expected on approximately 20 riparian segments. In the long-term, improvement in functional condition is expected on approximately 58 segments.

SOILS

Under current direction, with intense management, there would be a continued slow improvement over the long-term in upland soil conditions where soils are more productive, such as Mollisols, Alfisols, and moderately fine textured Entisols. On poorer sites, and with less intensive management, there would be little or no change over the long-term in the health of the upland soils except in response to drought or additional moisture conditions. No changes are expected for either case over the short-term.

WATER

In the long-term, continued implementation of BMPs to reduce NPS pollution and riparian area management would promote reductions in erosion and sediment production from public lands and slowly improve water quality. There would be less sediment, nutrients, salts, and biological contaminants in the water. The cycle of apparent arroyo filling is expected to continue, which would support riparian restoration, in turn improving water quality by acting as a filter for many pollutants.

While water quality affected by public land uses might improve, it is not expected that any of the water quality-limited stream reaches identified by the state would improve enough to meet state standards solely from this action. The impacts on those water quality-limited stream reaches from non-public land uses and sources of pollutants would also have to be reduced to help meet state standards.

GRAZING ADMINISTRATION

Each field office has an approved RMP which provides a framework for managing and allocating public land and resources over a 20-year period. The decisions of the RMP to improve rangelands and manage grazing use on public lands were based on the principles of multiple use and sustained yield. Decisions include actions such as developing LAPs, constructing range improvements, manipulating vegetation, and developing grazing systems and other actions. Staff

levels vary, as do priorities, funding, policy, and level of interest and involvement from government agencies and interest groups.

Under the No Action Alternative, RMP decisions would continue. Priorities have been established based on the selective management approach, using the "M", "I", and "C" classification categories. At this time 6.7 million acres falls into the "I" category. BLM has been successful in resolving issues and meeting goals under existing RMP decisions and guidance. Much can be attributed to the cooperation and stewardship of many grazing permittees. An average of two allotments-or 80,000 acres per year-have improved from category "I" to category "M" because of meeting allotment objectives. In the long-term (over 20 years) 40 allotments are expected to improve from the "I" to "M" category. This would reduce the acreage in the "I" category from 6.7 million acres to 5.1 million acres.

LAPs are expected to be developed on 60 to 100 allotments affecting 1.6 million acres over the next 20 years on "I" allotments. Three to five plans per year may be developed in the short-term and approximately 60 to 100 plans over the long-term (20 years). In developing AMPs through consultation, coordination, and cooperation with permittees, management actions regarding rest and deferment adjustment in livestock numbers, seasons of use, and range improvements are considered that best meet resource needs with a minimum of impact on the permittees. Monitoring efforts on these allotments are intensified.

Under the No Action Alternative, livestock use levels are expected to remain approximately at the 7-year average. However, fluctuation in use levels can be expected due to a variety of factors such as weather conditions and the price of livestock. Future use levels have been projected based on seven years of data (1990 to 1996) from the Grazing Authorization and Billing System. During the 1996 grazing year, 1,502,516 AUMs were authorized in New Mexico. The long-term projection, however, is expected to be around 1,696,981 AUMs-the average of the seven years. This is 166,222 AUMs more than were authorized in 1996.

An improvement in ecological condition can be expected in the long-term. Vegetation treatments would improve the ecological status on 103,000 acres in the

short-term and on approximately 410,000 acres in the long-term.

It is anticipated that the ecological condition of the rangelands would continue to improve, because of the improving soil and vegetation resource. This would also contribute to the improvement of the riparian areas by decreasing the speed of runoff and sediment.

Riparian and wetland habitat areas are given high priority for protection and improvement. Grazing management practices such as fencing and grazing systems are designed to meet or restore riparian and water quality needs in 154 riparian segments that are not in proper functioning condition. There would be segments of riparian habitat where current grazing practices would be adjusted to achieve riparian standards. In the short-term, functional condition on 20 riparian segments would be expected to improve. In the long-term, improvement in functional condition would be expected on 58 segments. Vegetation and litter in the riparian zone should respond and increase. The increase in canopy cover and litter should decrease the runoff and sediment, and improve the water quality.

WILD HORSES

Under the No Action Alternative, the wild horse herd will be managed as stated in the Socorro RMP. The 1985 Herd Management Area Plan amendment reflects the new appropriate management level of 50 wild horses. Monitoring studies will be conducted annually to assess the forage condition and population. Based on the monitoring data, wild horses will be water trapped and removed from the area when necessary. The removed wild horses would be shipped to an adoption site or facility to await adoption.

The grazing system and water facilities developed through the AMP of 1968 have benefitted the wild horses. Pastures are grazed by cattle for 2 to 5 months and then rested from 7 to 10 months. Monitoring data show the allotment to be in fair to good condition with a static trend. Improvement in upland vegetation composition and cover should continue.

Approximately 10-20 wild horses are located in each pasture grazed year-round. Horses are not rotated or

moved from pasture to pasture as are cattle and therefore do not provide vegetation with complete rest.

Studies show a moderate to high use when wild horse numbers reach 50 and above. In the long-term, the fair to good range condition should remain static or improve as long as the appropriate management level of 50 is maintained and balanced with grazing and other uses.

Under the No Action Alternative, the wild horses in the Farmington field office would be managed at the optimum level of 60 head. The Forest Service would determine the time and number of wild horses to remove if such action becomes necessary. Maintaining the herd level at its optimum numbers would help maintain the range in proper condition and balanced with other uses.

WILDLIFE

For all MLRAs, full implementation of existing RMPs under this alternative would have a slow, long-term benefit on most wildlife species.

36 - New Mexico and Arizona Plateaus and Mesas

Big Game

The development and implementation of LAPs identifying goals and objectives for vegetative land treatments and water developments would maintain or slightly improve wildlife habitat for big game species over the long-term. Natural events (fire, flooding, etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife. Mule deer and elk are the primary big game species benefitting from these actions. A slight increase in the deer population would be expected through improving the quality and quantity of browse on upland sites, and creating new fawning areas. Elk are currently increasing in numbers; however, any increase would be controlled by the NMDGF. The quality of habitat would maintain or slightly improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to the current emphasis on riparian management. However, due to the small percentage of riparian habitat located on public land and other limiting factors that affect big game populations, no measurable increase in populations is expected.

Off-highway vehicle use can potentially increase the number of roads on public land, resulting in degradation of big game habitat and increasing wildlife harassment and displacement. Under current management, road closures are slowly being implemented, but not to the degree necessary to reduce off-highway vehicle impacts.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, through land treatments and proper grazing practices, resulting in a benefit for some upland wildlife species. The continued construction of water developments would favor upland game bird species.

Again, current management would slightly improve upland and nongame habitat conditions in the long-term, particularly in areas where vegetative treatments are proposed and for those species dependent upon riparian areas that are in an upward trend in condition.

Waterfowl

Current waterfowl management is closely associated with riparian management, and would improve over the long-term, with current BLM's emphasis on riparian management.

Fisheries

Habitat quality for resident fisheries would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved over the long-term.

37 - San Juan River Valley Mesas and Plateaus

Under current management, vegetative treatments (chemical and fire) would change the overall plant composition within the sagebrush and desert shrub community, benefitting local big game populations. Implementation of range improvements defined in the RMPs and LAPs would slowly improve antelope and mule deer habitat through increasing water distribution and improving forage availability and quality.

The quality of habitat would maintain or slightly improve over the long-term for riparian-dependent big game species (deer, furbearers, etc.) due to the current emphasis on riparian management. However, because

of the small percentage of riparian habitat located on public land and other limiting factors that affect big game populations, little increase in populations is expected.

Allowing public access, while controlling OHV use and protecting wildlife habitat, is a major concern for most field offices. Off-highway vehicle use can potentially increase the number of roads on public land, resulting in degradation of big game habitat and increasing wildlife harassment and displacement. Under current management, road closures are slowly being implemented, but not to the degree necessary to reduce off-highway vehicle impacts.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, through land treatments and proper grazing practices, resulting in a benefit for some upland wildlife species. The continued construction of water developments would favor upland game bird species.

Again, current management would slightly improve upland and nongame habitat conditions in the long-term, particularly in areas where vegetative treatments are proposed, and for those species dependent upon riparian areas that are in an upward trend in condition.

Special management for raptor nesting areas would continue. Small changes in the overall landscape, while still protecting nest sites, would increase the prey base for raptors.

Waterfowl

Current waterfowl management is closely associated with riparian management, and would slightly improve over the long-term with BLM's current emphasis on riparian management.

Limiting factors associated with waterfowl management are the lack of functioning riparian areas on private lands. Waterfowl primarily migrate into the state during the winter months through the central flyway.

Fisheries

Habitat quality for resident fisheries would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved over the long-term.

39 - Arizona and New Mexico Mountains

Big Game

The BLM manages very little public land of this type. However, there are several areas having LAPs identifying wildlife goals and objectives and allowing vegetative land treatments and water developments. These projects, along with controlled grazing, would maintain slightly improve wildlife habitat for big game species over the long-term. The southwestern part of the state has a very active fire season. These natural events can be beneficial to resident elk herds by creating open meadow areas and increasing the amount of forage.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, from land treatments and proper grazing practices; resulting in a benefit for most upland and nongame wildlife species.

Waterfowl

Waterfowl habitat would improve with respect to riparian improvements. Waterfowl and riparian habitat improvements would gradually be enhanced over the long-term. However, since the majority of waterfowl are migratory, no measurable change in populations are anticipated.

Fisheries

Habitat quality for resident fisheries would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

41 - Southeastern Arizona Basin and Range

A small percentage of this MLRA exists on BLM lands and the Coues' whitetail deer occupies this corner of southwestern New Mexico. Over time, current management would continue to maintain or improve wildlife habitat.

42 - Southern Desertic Basins, Plains, and Mountains

Maintenance of desert ecosystems is very critical, yet difficult to manage, due to climatic conditions and the recent expansion of human activities that can potentially alter habitat components critical to some desert species.

Big Game

The development and implementation of LAPs that identify management objectives and provide forage plant needs, vegetative land treatments, water development, and cooperative management efforts would continue to slowly improve big game habitat over the long-term. Natural events (fire, flooding etc.) that created a mosaic within the landscape and diversify the plant community would also benefit wildlife. A slight increase in the deer population would be expected because of improving the quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and other land owners.

Competition for food and space between mule deer and the Iranian ibex would continue under current management practices. Oryx would continue to move off the White Sands Missile Range and may potentially displace mule deer and antelope because of their size and aggressive behavioral patterns.

The quality of habitat would maintain or slightly improve over a long period for riparian-dependent big game species (turkey, deer, and furbearers) due to the current emphasis on riparian management. However, due to the small percentage of riparian habitat located on public land and other limiting factors that affect big game populations, no measurable increase in populations is expected.

Upland Game and Nongame Species

Upland sites would gradually improve over the long-term through land treatments and proper grazing practices, resulting in a benefit for scaled quail, Gambel's quail and dove populations. The continued construction of water developments would favor upland game bird species.

Waterfowl

Limiting factors associated with waterfowl management are the lack of functioning riparian areas, agricultural fields, and the conversion of grain crops to cotton and chile located on private lands within the Rio Grande and Pecos Valley areas. Waterfowl primarily migrate into the state during the winter months through the central flyway. Current waterfowl management is closely associated with riparian management, and would slightly improve over the long-term with current BLM's emphasis on riparian management.

Fisheries

Habitat quality for resident fisheries would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved over the long-term.

48 - Southern Rocky Mountains

The BLM manages very little public land within this MLRA. However, there are several areas that have management plans identifying wildlife goals and objectives and allowing vegetative land treatments and water developments. These projects, along with controlled grazing, would maintain or slightly improve wildlife habitat for big game species over the long-term.

51 - High Intermountain Valleys

Big Game

Rocky Mountain elk would continue to be a key wildlife species within the Taos field office. Critical winter range would be improved through prescribed fires in the San Antonio, Pot, and Montoso mountains and Habitat Management Plans that outline goals and objectives for big game species. Pronghorn antelope exist throughout these Special Management Areas and would benefit along with the elk from these goals and objectives.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, through land treatments and proper grazing practices, resulting in a benefit for scaled quail, mourning dove, Merriam's turkey, numerous raptors and migratory bird populations. The continued construction of water developments would favor upland game bird species.

Waterfowl

The limiting factors associated with waterfowl management are the lack of functioning riparian areas. Waterfowl primarily migrate into the state during the winter months through the central flyway. Current waterfowl management is closely associated with riparian management and would slightly improve over the long-term with BLM's current emphasis on riparian management.

Fisheries

Habitat quality for resident fisheries would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved.

70 - Pecos/Canadian Plains and Valleys

Big Game

Vegetative land treatments, increased water developments, and cooperative management efforts would continue to improve big game habitat. Mule deer are continuing to spread throughout the MLRA, but overall populations are declining in this MLRA and statewide. The development and implementation of LAPs that identify management objectives and provide forage plant needs, vegetative land treatments, and water developments would maintain or slightly improve wildlife habitat for big game species over the long-term. Natural events (fire, flooding, etc.) That created a mosaic within the landscape and diversify the plant community would

also benefit wildlife. A slight increase in the deer population would be expected. Due to improving the quality and quantity of browse on upland sites, and

creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and landowners.

Upland Game and Nongame

Upland sites would gradually improve over the long-term through land treatments and proper grazing practices outlined in Habitat Management Plans and LAPs, resulting in a benefit for scaled quail and dove populations. The continued construction of water developments would favor upland game bird species. With the current regional emphasis on the decline of prairie chicken populations, current grazing management practices would need to be amended to address special habitat requirements needed for sustainable populations.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved over the long-term.

77 - Southern High Plains

Big Game

The BLM manages very little public land within this MLRA. However, current RMP decisions would improve wildlife habitat by identifying wildlife goals and objectives and allowing vegetative land treatments and water developments.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, through land treatments and proper grazing practices, resulting in a benefit for most upland and nongame wildlife species.

Waterfowl

Waterfowl habitat would improve with respect to riparian improvements. Waterfowl and riparian habitat improvements would gradually be enhanced over the long-term. However, since the majority of waterfowl are migratory, no change in populations is anticipated.

SPECIAL STATUS SPECIES

Under the No Action Alternative, management of special status species on public lands within New Mexico would continue consistent with existing RMP decisions and guidance (including the results of the statewide Section 7 consultations for each RMP). The rate of change due to management would continue as in the recent past. Special status species management would continue through the implementation of LAPs and other activity level plans (such as Herd Management Area Plans and Coordinated Resource Management Plans). These plans would continue to implement grazing systems, construction of range improvements to redistribute grazing pressure, and vegetation treatments to improve the ecological status of a particular allotment or pasture of a grazing allotment.

In the short-term, brush control would improve the ecological status on approximately 103,000 acres. In the long-term, brush control would improve the ecological status on approximately 410,000 acres. Most of this effort would likely be aimed at improving the roughly 5 to 6 million acres in midseral and upper early-seral areas. In terms of vegetation types affected, most of the areas needing management are those areas that were formerly grasslands and are now dominated by desert scrub and juniper savannah types of the woodland biome in MLRAs 36, 42, and 70. Some shinnery oak control may be necessary to restore Great Plains tall- and mid-grass types where needed for wildlife concerns such as the lesser prairie chicken. These activities would benefit many of the 55 species that occur within the woodland and desert biomes. Of concern when implementing livestock grazing practices is that the approximately 4,285,000 acres in areas of late seral and PNC ecological status not decline due to redistribution of grazing patterns. These areas, in many cases, provide suitable habitat to support special status species with late seral habitat requirements. Conversely, brush control activities may have only partial benefit to special status species, where the species require late-seral to PNC habitat conditions, and the improvement capability is only to mid-seral due

to past erosion and soil loss.

The BLM's priority in the near future would likely be continued restoration of riparian habitats. In the short-term, improvement in functional condition is expected on approximately 20 riparian segments. In the long-term, improvement in functional condition is expected on approximately 58 segments. This will benefit many of the 76 species associated with these habitats, including the southwestern willow flycatcher. Improvement of many areas would be limited by the fragmented distribution of BLM riparian areas and the lack of coordinated watershed management efforts.

RECREATION

Recreational visitor use would continue to increase, particularly in areas where urban visitors recreate. Developed recreation sites would be especially have increased use. The recreational use levels are not expected to be impacted by rangeland management practices.

It is expected that the present conflicts between livestock use and the developed recreational area at the Wild Rivers Recreation Area would be resolved over the next five years. As additional recreational sites are developed, livestock are expected to be excluded.

The BLM is expected to resolve livestock grazing conflicts on riparian areas. In the long-term, an additional 58 riparian segments are expected to improve in condition. This would improve the quality of visits for recreationalists on the public lands.

The 1,600,000 acres within Category "I" allotments would improve to the "M" category, improving the quality of the visit for recreational visitors.

WILDERNESS

Under the No Action Alternative the existing situation would continue in wilderness areas and wilderness study areas. Livestock grazing practices would be constrained by existing wilderness study area management guidelines. Range improvements to facilitate livestock grazing management would be authorized only where they are consistent with the wilderness area and wilderness study area management guidelines. Existing resource conditions and trends would be expected to remain the same.

CULTURAL RESOURCES

Under existing management, cultural resources are protected by law from the effects of new development of livestock facilities; however, loss of, and damage to, cultural resources continues to occur due to increased public access, erosion, and cattle trampling resulting from livestock grazing and development of associated facilities. Efforts by the BLM continue in cooperation with permittees and lessees to improve cattle distribution, thereby reducing the intensity of impacts in localized areas.

PALEONTOLOGY

Under present management, paleontological resources are protected by law from the effects of new development; however, loss of, and damage to, paleontological resources continues to occur due to increased public access, erosion, and cattle trampling. Efforts by the BLM continue in cooperation with permittees and lessees to improve cattle distribution, thereby reducing the intensity of impacts in localized areas.

REALTY/LAND USE

Applications for all land and realty actions are considered by BLM on a case-by-case basis. The majority of realty actions require short-term use of the lands with long-term productivity being restored upon rehabilitation of disturbed areas (USDI, BLM, Roswell RMP, 1994). However, there are permitted actions such as access roads, which result in disturbances over the long-term, decreasing the productivity of that area for the life of that project. Each project proposal contains mitigation measures to minimize or avoid impacts. The requirements for reclamation and rehabilitation are covered in project components along with stipulations required by BLM. This process mitigates or avoids impacts while allowing for a variety of uses on public lands.

Local areas are impacted by land and realty activities creating both short- and long-term surface disturbance by reducing vegetative cover and forage, increasing erosion or sediment load, degrading wildlife habitat, and increasing the potential for the introduction or spread of noxious weeds. Stipulations, if complied with and successful, would mitigate impacts on a local basis by reducing soil erosion and sediment load, restoring

ground cover, restoring diversity of plant species, protecting threatened and endangered or special status species and their habitats, minimizing the introduction or spread of noxious weeds, and protecting important cultural or historic resources. The impacts associated with land and realty surface disturbing activities would continue under the No Action Alternative.

MINERAL RESOURCES

The primary objective of the BLM minerals program is to provide consumptive use of the resource as needed by a productive society. The development and sale of the various mineral resources also provides a source of income for the mineral owner and the developer. Any impact that may affect availability of mineral resources, impede their development, or make development less profitable, would be a concern to anyone who uses mineral products or derives their income from the development or sale of mineral production.

Under the No Action Alternative, public lands currently open to mineral entry or mineral leasing would remain open. Minerals resources would be managed consistent with existing laws and regulations governing their development. Statutory rights of current mineral lessees, claimants, and permit holders would not be affected. Developers of public minerals would continue to be subject to standards that reduce soil erosion, protect fresh water supplies, reduce vegetative disturbance offsite, and safeguard wildlife populations. As provided for in existing mineral development laws and regulations, variations in management style, environmental situations, and public preferences would continue to affect the cost and timing of development. Specific development operations may even be denied under these current conditions.

Saleable Minerals

If no public land health standards are implemented, no additional impacts on the development, sale, and use of public mineral materials would be created. The development scenarios described in current RMPs would continue unchanged. Under the existing mineral material regulations found in 43 CFR Part 3600.0-4, the BLM has discretion to deny the digging and development of new sites. Under the No Action Alternative, the discretion to deny use of mineral materials would remain available; however, no mineral operation would be denied due to the application of a

land health standard. By not issuing land health standards, there would be no additional criteria on which a BLM Authorized Officer might deny mineral material use permits. The use of federal mineral material pits and quarries would continue to be subject to existing standards that protect the environment.

Locatable Minerals

The management of mining claims is subject to the Mining Law of 1872. Under this statute, the non-mechanized casual use of a claim, and mining operations disturbing less than five acres per year, are not subject to a BLM authorization. Most of the claims on public land in New Mexico are mined by this type of operation; therefore, no restrictive conditions and impacts would result from any of the alternatives. Under the No Action Alternative, reclamation standards and requirements for the larger mine plans would not be changed. The mines permitted by BLM would continue to be subject to current environmental degradation standards. There would be no additional restrictive conditions applied to future mine plan permits. In addition to these federal requirements, operations on mining claims are subject to the New Mexico Mining Act of 1993, which sets similar or stricter standards for environmental protection and the reclamation of mined lands. There would be no need to alter the meaning or the determination of unnecessary and undue degradation in the management of locatable and salable mineral resources.

Leasable Minerals

The leasing of mineral resources on public land would not change under any of the alternatives. Under the No Action Alternative, the environmental standards imposed on the development of leasable minerals would not be reduced or made more restrictive. Leasable minerals are currently held to a high environmental protection standard. These standards are applied at the permitting stage to minimize environmental damage and preserve natural conditions during development operations. They can be found in such documents as *Oil and Gas Surface Operating Standards* (the Gold Book), right-of-way handbooks, and RMPs. Strict environmental standards for location and mining of coal leases are found in the Federal Coal Leasing Amendments Act of 1976 and Surface Mining Control and Reclamation Act of 1977. The No Action Alternative would result in no change to the reasonable

foreseeable development scenarios for oil and gas leases that are forecast in the current RMPs. No delay or relocation of oil and gas permits would occur due to the potential application of standards.

NATIVE AMERICAN CULTURAL ISSUES

Native American concerns would continue to be protected under the law as stated in Chapter 3.

ECONOMIC CONDITIONS

Current conditions, as described in Chapter 3, are expected to continue.

HUMAN DIMENSION

Financial Impacts

Currently, public land ranch operations for all size classes are meeting their financial thresholds for production. All but two ranches that do not meet the financial threshold for risk could do so if resources were available to increase production (see page 3-60).

Local governments and schools are supported by the tax base created from the private land portions of the ranch, livestock taxes, fees and expenses, maintenance and capital improvements.

Social and Cultural Impacts

Selection of this alternative would result in continued positive improvements in the social and cultural environment.

RAC ALTERNATIVE (PROPOSED ACTION)

Additional analysis due to a change in the RAC Alternative between the draft and final

Following the release of the draft RMPA/EIS and comments received from the public, the RAC made changes to the RAC Alternative. Most changes were of a clarification nature not affecting the impact analysis that was in the draft, however the change dealing with facilities located in riparian areas was more than a clarification and resulted in a change in the meaning of that guideline. As a result of the change in the RAC Alternative guideline on riparian facilities, each Field Office looked at how the existing facilities and the riparian areas would be impacted.

The following analysis of impacts is based on the guideline modification made. It was determined that seven facilities (drinking tubs) located near riparian areas would need to be modified by having float valves added. There would be no effect to the water available in the tubs for livestock use. There would be a cost of approximately \$30.00 per tub for materials, plus the time of the Field Office staff to install each float valve. There would also be a small increase in maintenance costs for those permittees to ensure that each valve is functioning properly. The benefit to the riparian area is more water would remain on-site to maintain its values .

VEGETATION

Upland Vegetation

Under the RAC Alternative hereafter the Proposed Action, the focus of management and the application of grazing guidelines would occur on public lands not meeting the standard due to grazing. Management changes would include more water, fencing, land treatments, and possible deferment on areas not meeting the standard. In the short-term, little improvement would be expected. However, in the long-term, measurable improvement in vegetative cover and composition would be expected due to grazing management practices. Additionally, vegetation would be enhanced through the use of mechanical and chemical manipulations in both the short- and long-

term. These improvements would occur mostly within the desert and woodland biomes in MLRAs 36, 42, and 70.

Riparian Vegetation

Under the Proposed Action, riparian communities and vegetation on 112 riparian segments classified as nonfunctional and functional at risk with a downward trend or where the trend is not apparent (stable), would not meet the standards. These areas are affected, at least in part, by grazing activities. Management efforts in the short-term would improve 16 segments. Seven of the segments are projected to improve to proper functioning condition. In the long-term, 52 segments are projected to improve. Of this total, 25 areas would improve to proper functioning condition. Improvement of many areas is limited by the fragmented distribution of BLM riparian areas and the lack of coordinated watershed management efforts.

SOILS

With intense management under the Proposed Action, there would be a continued slow improvement over the long-term in upland soil conditions where soils are more productive, such as Mollisols, Alfisols, and moderately fine textured Entisols. On poorer sites and with less intensive management there would be little or no change over the long-term in the health of the upland soils except in response to drought or additional moisture conditions. No changes are expected for either case over the short-term. There would be more overall improvement than either the No Action or County Alternatives due to implementation of grazing management guidelines on more acres, than for those alternatives. Over half of the uplands not meeting the standard for this alternative are in MLRA 42; however, the soil response to management in this MLRA would be slow. More profound response would come from the better sites such as those in MLRA 36 (norther part), 39, 41, 48A, 70 (northern part), and the gently sloping uplands of MLRA 77.

WATER

In the long-term, continued implementation of BMPs to reduce NPS pollution and riparian area management would promote reductions in erosion and sediment production from public lands and slowly improve water quality. There would be less sediment, nutrients, salts,

and biological contaminants in the water. The cycle of apparent arroyo filling is expected to continue which would support riparian restoration, in turn improving water quality by acting as a filter for many pollutants.

While water quality affected by public land uses might improve, it is not expected that any of the water quality-limited stream reaches identified by the state would improve enough to meet state standards solely from this alternative. The impacts on those water quality-limited stream reaches from non-public land uses and sources of pollutants would also have to be reduced to help meet state standards.

GRAZING ADMINISTRATION

Under the Proposed Action, livestock use levels are expected to remain approximately at the seven-year average over the short-term, similar to the No Action Alternative. Adjustments in livestock numbers are expected to be upward on some allotments and downward on others. Adjustments are not expected to be large, either upward or downward because in general, current permits and leases are consistent with grazing capacities established through BLMs rangeland monitoring program. However, fluctuation in use levels can be expected due to a variety of factors such as weather conditions and the price of livestock. As forage conditions and lands improve in health and begin to properly function, increases in livestock use can be expected. The long-term AUM projection statewide is expected to be around 1,968,341 AUMs.

Implementing the guidelines would be similar to BLM's the No Action Alternative. The livestock management practices may include deferment, adjusting livestock numbers, changing season of use, modifying or developing range improvements, and conducting vegetative land treatments. There would be segments of riparian habitat where current grazing practices would be adjusted to achieve the riparian standard.

Under this alternative, 428 permittees could be affected. Smaller ranching operations that have to make modifications in use or management would be affected more than larger ranching operations because smaller ranchers have fewer resources and flexibility. Permittees most affected by the guidelines would be those with small one-pasture allotments where it may be necessary to defer grazing during critical periods of

plant growth or regrowth. As a result, the permittee may be burdened financially by having to lease private pasture, improve the private lands, add fencing to create an additional pasture or partner with another allotment. There are also the additional costs associated with the handling of livestock for gathering and transporting.

WILD HORSES

Impacts on the Socorro wild horse herd from the implementation of the Proposed Action would be similar to the No Action Alternative, with the exception that the Socorro RMP decisions would be in conformance with the standard for rangeland health. Based on monitoring data, the area is in fair to good condition with a static trend and meets the standard. The existing resource condition would improve as in the No Action Alternative as long as the appropriate management level of 50 head is maintained and balanced with livestock grazing and other uses.

Impacts on the Farmington herd would be similar to the No Action Alternative.

WILDLIFE

Implementing the proposed standards and guidelines under the Proposed Action would benefit wildlife in the short- and long-term in both upland and riparian areas. The improvement of riparian habitats currently functioning at risk with a downward trend would benefit wildlife, since these areas are the most diverse and productive areas. The construction of livestock management facilities outside of the riparian/wetland area would protect and improve riparian and wildlife habitats. Over the long-term, standards and guidelines would help ensure that site-specific, as well as landscape-level habitat needs are considered when developing LAPs. The proposed standards and guidelines would allow for a slight increase in actual AUMs over the long-term, but would consider and protect critical wildlife resources. Livestock would be used as a management tool to help restore and maintain sustainable habitats, increase biological diversity and vegetative productivity, and promote proper functioning uplands and riparian areas.

The field offices have identified oil and gas leasing

development and rehabilitation, Rights-of-ways and off-highway vehicle and other uses as other causes for not meeting the biotic standards. These activities and associated decisions would not be resolved under the proposed grazing guidelines, but RMP decisions would be commensurate with public health standards, thereby ensuring wildlife management issues and concerns would be recognized and evaluated to maintain and protect wildlife habitat.

36 - New Mexico and Arizona Plateaus and Mesas

Long-term benefits to big game would occur under the Proposed Action by utilizing restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the standard due to grazing practices. Mule deer and elk are the primary big game species benefitting from these actions. There would be an increase in the deer population through improving the quality and quantity of browse on upland sites, and creating new fawning areas. Predation can reduce fawn survival in nutritionally healthy deer populations. Elk are currently increasing in numbers, but would be controlled by the NMGF.

The quality of habitat would improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to the proposed emphasis on riparian management. However, due to other limiting factors (drought) and hunting regulations, no measurable increase in populations are expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use can potentially increase the number of roads on public land, degrading big game habitat and increasing wildlife harassment and displacement. Under this alternative and associated standards for erosion and wildlife habitat, road closures would be implemented.

Upland Game and Nongame

Upland sites would improve over the long-term more rapidly from land treatments and proper grazing practices, resulting in benefits for most upland wildlife species. The continued construction of water

developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

37 - San Juan River Valley Mesas and Plateaus

Long-term benefits to big game would occur from the Proposed Action by utilizing restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the standards due to grazing practices.

The quality of habitat would improve over the long-term for riparian-dependent big game species (deer, furbearers, etc.) due to the emphasis on riparian management. However, due to the small percentage of riparian habitat located on public land and other limiting factors that affect big game populations, no measurable increase in populations are expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use could potentially increase the number of roads on public land, resulting in degradation of big game habitat and increasing wildlife harassment and displacement. Under this alternative and associated standards for erosion and wildlife habitat, road closures would be implemented.

Upland Game and Nongame

Upland sites would improve over the long-term due to land treatments and proper grazing practices, resulting in benefits for most upland wildlife species.

The continued construction of water developments would favor upland game bird species.

Special management for raptor nesting areas would continue. Small changes in the overall landscape while still protecting nests sites would increase the prey base for raptors.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

39 - Arizona and New Mexico Mountains

Big Game

The BLM manages very little public land within this MLRA. Under this alternative, there are several areas where the standards and guidelines would improve wildlife habitat. Upland improvement projects along with controlled grazing would improve wildlife habitat for big game species over the long-term. The southwestern part of the state has numerous natural fire occurrences. These natural events can be beneficial to resident elk herds by creating open meadow areas and increasing the amount of forage.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, resulting in a benefit for most upland and nongame wildlife species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

41 - Southeastern Arizona Basin and Range

A small percentage of this MLRA exists on BLM lands. Upland habitat would be improved under the Proposed Action, resulting in improving Coues' whitetail deer habitat in the Southwestern corner of New Mexico.

42 - Southern Desertic Basins, Plains, and Mountains

Long-term benefits to big game would occur from this

alternative by utilizing restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the standards due to grazing practices.

The Proposed Action would rectify historic land use practices that have caused problems such as the dewatering of streams and springs and altering or displacing big game species. Implementation of proper grazing practices, vegetative land treatments, increased water developments, and cooperative management efforts would have long-term benefits to big game habitat. Natural events (fire, flooding, etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife.

There would be a slight increase in the deer population through improving the quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and other land owners.

Competition for food and space between mule deer and the Iranian ibex would continue under this alternative. Oryx would continue to move off the White Sands Missile Range and may potentially displace mule deer and antelope because of their size and aggressive behavioral patterns.

The quality of habitat would improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to emphasis on riparian management. However, because of the small percentage of riparian habitat located on public land and other limiting factors that affect big game populations, no change in populations can be expected.

Upland Game and Nongame

Upland sites would gradually improve in the short-term and fully recover in the long-term, from land treatments and proper grazing practices, resulting in a benefit for scaled quail, Gambel's quail, and dove populations. The continued construction of water developments would benefit upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

48 - Southern Rocky Mountains

A small percentage of this MLRA exists on BLM lands. Upland habitat would improve under the Proposed Action, resulting in improvement of some wildlife habitat within the MLRA.

51 - High Intermountain Valleys

Big Game

Long-term benefits to big game would occur from the Proposed Action by utilizing restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices. Rocky Mountain elk would continue to be a key wildlife species within the Taos field office. Critical winter range would be improved through implementation of the proposed standards and guidelines.

Upland game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, benefitting scaled quail, mourning dove, Merriam's turkey, and numerous raptors and migratory bird populations. The continued construction of water developments would benefit upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

70 - Pecos/Canadian Plains and Valleys

Big Game

Short- and long-term benefits to big game would result from the Proposed Action through utilizing restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices.

Implementation of guidelines that identify proper grazing practices, vegetative land treatments, and water developments would improve wildlife habitat for big game species over the long-term. Natural events (fire, flooding etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife. There would be a slight increase in the deer population through improving the quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and land owners.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, benefitting scaled and bobwhite quail, mourning dove and numerous raptors, and migratory bird populations. The continued construction of water developments would benefit upland game bird species.

With the current regional emphasis on the decline of lesser prairie chicken populations, the Proposed Action would have short- and long-term benefits on approximately 24,000 acres of prairie chicken habitat that would address special habitat requirements.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public-land resident fisheries habitat over the long-term would be improved.

77 - Southern High Plains

Big Game

The BLM manages very little public land within this MLRA; however, the Proposed Action would improve wildlife habitat by establishing livestock management guidelines that would be compatible with wildlife resources.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, benefitting most upland and nongame wildlife species.

Waterfowl/Fisheries

Habitat quality for waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

SPECIAL STATUS SPECIES

Under the Proposed Action, the focus of management and application of grazing guidelines would occur on land not meeting the biotic standard, and public land not meeting the upland standard, due to current grazing practices. It is more efficient to manage an entire pasture than to manage a small portion of a pasture. Managing the smaller portion would likely incur large costs for fencing, establishment of water sources, and other management facilities. These areas are contained primarily within the desert biome of MLRAs 36, 37 and 42 and the grassland biome of MLRA 70. There would be benefits to a portion of the 95 species occurring in the improved areas of the desert and grassland biomes managed under this alternative. This alternative would project threatened and endangered species by making sure that the approximately 4,285,000 acres in areas of late-seral and PNC ecological status not decline in ecological condition. These areas, in many cases, provide suitable habitat to support special status species with late-seral habitat requirements.

The greatest benefits to special status species resulting from this alternative would be the improvement of riparian conditions on 16 riparian segments in the short-term and 52 riparian segments in the long-term. Many of the 76 special status species associated with public land riparian areas and their aquatic systems would benefit from improvements in riparian condition under this alternative.

Areas past the threshold of improvement have lost the capability to recover toward PNC within the long-term of this analysis, even in the absence of grazing. In some cases, the PNC has shifted toward a different community. Even with chemical or mechanical manipulation, these areas may never reestablish a community like the lost native community. This is due to the change in ecosystem functionality occurring with the combined impacts of soil loss and vegetative community shifts associated with major disruptions caused by past land use practices and climatic change. Examples of these are former desert grasslands which are now mesquite sand dunes and creosote bush/desert pavement communities of the Chihuahuan Desert MLRA 42. Special status species that formerly used these areas would have differing abilities to recolonize these habitats as the relative condition improves with subsequent management. Some species, such as obligate grassland species like Baird's sparrow, may never be able to return to former habitats. Other areas, such as the shinnery oak/dunes areas of MLRAs 42, and 70 retain a profound capability to return to previous grassland dominance, and the ability to support grassland species, such as the lesser prairie chicken.

RECREATION

Recreational visitor use would continue to increase, particularly in areas where urban visitors recreate. Developed recreation sites would be especially subject to increased use. The recreational use levels on a statewide basis are not expected to be impacted by the standards or the livestock grazing guidelines. The Proposed Action would provide for increased management of off-highway vehicle use on 4,600 acres in MLRA 36 and 7,300 acres in MLRA 42. Although these areas may be important to off-highway vehicle visitors frequenting them, on a statewide basis they represent a small percent of the total public land acreage.

Increased recreation supervision would occur on 10,600 acres in MLRA 36, 500 acres in MLRA 37, and 400 acres in MLRA 42, where recreational activities are keeping the area from meeting the upland standard.

Considering that there may be overlap on many of the acres identified as having recreation conflicts with the standards, the additional restrictions would occur on less than 11,100 acres—a minor impact to the recreational

use of the public lands on a statewide basis.

It is expected that the present conflict between livestock use and the developed recreational area at the Wild Rivers Recreation Area would be resolved over the next five years. As additional recreational sites are developed, livestock are expected to be excluded.

The BLM would be expected to resolve livestock grazing conflicts on riparian areas. In the long-term, an additional 52 riparian segments are expected to improve in condition, improving quality of visits for recreationalists on the public lands.

Not all of the acres are failing to meet the standards due to livestock grazing. However, many acres are expected to have an improved quality of visits for recreationists due to the improved native vegetation and animal communities.

WILDERNESS

Where sites not meeting the standard are included in WAs or WSAs, they would be expected to be a high priority for improved management. The review of WAs and WSAs to determine if they meet the standards should help determine what management changes could be needed.

However, in WAs and WSAs, the Wilderness Act and BLM management guidelines for these areas would limit some of the tools available for management. For example, the range improvements that are normally applied to support improved livestock grazing management and land treatment techniques may not be permitted in WAs and WSAs. However, if the WAs and WSAs meet the standards, there would be no impact wilderness values.

CULTURAL RESOURCES

Under the Proposed Action damage to or loss of archaeological sites in both upland and riparian areas due to erosion would be reduced, commensurate with reductions in erosion. Location of future livestock facilities away from riparian-wetland areas may reduce future damage to archaeological sites, often concentrated in these areas; however, facilities already located near these areas would continue to contribute to archaeological site damage.

PALEONTOLOGY

Under the Proposed Action damage to or loss of paleontological sites in both upland and riparian areas due to erosion would be reduced, commensurate with reductions in erosion.

REALTY/LAND USE

Local areas are impacted by land and realty activities creating both short- and long-term surface disturbances by reducing vegetative cover and forage, increasing erosion or sediment load, degrading wildlife habitat, and increasing the potential for the introduction or spread of noxious weeds. Stipulations, if complied with and successful, would mitigate impacts on a local basis by reducing soil erosion and sediment load, restoring ground cover, restoring diversity of plant species, protecting threatened and endangered or special status species and their habitats, minimizing the introduction or spread of noxious weeds, and protecting important cultural or historic resources. The impacts associated with land and realty surface disturbing activities would continue under the Proposed Action.

The implementation of standards and guidelines under this alternative may require closer scrutiny of future surface-disturbing activities. This may require additional field checks in areas that have been identified as not meeting standards. Projects in areas not meeting the standards would be monitored as needed to ensure compliance with stipulations, especially those including reclamation and rehabilitation. In areas where reclamation efforts have been determined to be unsuccessful, coordination with BLM, authorized users, and allottees may be necessary to determine the cause and identify remedies for the failed reclamation and rehabilitation.

Additional work may be needed to bring disturbed areas up to prescribed standards, which could increase the companies' costs on individual projects if they are required to implement new or additional mitigation measures on future projects. Allottees may have to move livestock to other pastures or adjust AUMs or seasons of use if it is determined that grazing needs to be deferred in a disturbed area to allow ample time for plant regrowth. These changes would be determined by BLM on a case-by-case basis in coordination with the allottee.

If the Proposed Action standards were adopted, emphasis would be placed on reseeding disturbed areas with native plant species. Currently, reseeding is required on disturbed areas, but standard seed mixtures established locally by BLM offices are used. Current seed mixtures are not limited to native species but do include species that can provide plant cover, stabilize the soils, provide desired forage for wildlife, are suitable to soil and climate conditions, and are readily available. The companies' cost of reclaiming a disturbed area may increase if native seed sources are required. Costs also would be affected by the availability of seed.

If the standards and guidelines go into effect, it is anticipated that the BLM, in some areas of the state, would receive increased applications for land exchanges or sales. However, due to the length of time it takes to complete land ownership adjustments, it is not expected that the number of exchanges or sales completed each year would greatly increase from the number currently processed. Any public lands disposed of through exchange or sale would no longer be managed by the BLM and therefore would not be subject to the standards and guidelines. Work is expected to continue on acquiring easements and upgrading or closing existing roads as identified through the land use planning process, (e.g., the existing RMPs).

MINERAL RESOURCES

Implementation of the Proposed Action would not affect the availability of mineral resources. Under this alternative, BLM would not amend mineral resource decisions in the existing land use plans. The existing statutes and regulations under which federal mineral resources are developed place legal or regulatory constraints on the application of public land health standards. Because a relatively high environmental standard already applies to mineral resource development, the application of the proposed standards should have no additional effects on most mineral operations. Impacts would occur if more restrictive conditions for use and rehabilitation of disturbed areas are applied as part of use authorizations or permits. The potential impacts of these variations are discussed below.

Salable Minerals (Mineral Materials)

Application of the proposed standards would not

change the way existing mineral material sites are used and developed. However, depending on the condition of the land relative to a proposed standard, an Authorized Officer might deny the use of new sites. Because no areas would be closed to this type of mineral entry, any denial of new development would have to be justified on a permit-by-permit basis; therefore, it is not possible to locate or quantify the extent of this impact. Because the regulatory discretion to deny mineral material disposal for environmental reasons currently exists, the future implementation of proposed standards should not cause more denials than without the standards.

Locatable Minerals

The application of public land health standards would be limited and constrained by the Mining Law of 1872 and the regulations in 43 CFR Part 3809. The standards may supply additional criteria for developing larger mines. There are few operations of this type on public land in New Mexico. As stated under the No Action Alternative, these operations are currently subject to federal environmental degradation standards and strict standards of the State Mining Law. Therefore, development of mining claims would not be held to higher standards, and the application of the proposed standards would not make the operations more or less profitable.

The "small miner" operations are subject to an unnecessary and undue degradation standard the same as larger permitted mines. This standard implies that "necessary and due" degradation is allowed to continue. Unnecessary and undue determinations by BLM are based on proficient operations of a similar character, effects on other resources and land uses, and proposed mitigation and reclamation measures. As long as a miner is not creating unnecessary and undue degradation, and BLM does not change the regulatory meaning, the public land health standards would have no impact on their operations.

Leasable Minerals

Leasing decisions would not change; therefore, the implementation of public land health standards would not affect the leasing of mineral resources. Lease applications and expressions of interest in a lease would not be turned down or otherwise be impacted by the proposed standards. The BLM is not proposing to close any additional acreage to leasing, and is not

proposing to change existing land use decisions by increasing the amount of acreage where leases would be issued with a no-surface occupancy stipulation. Lease rights and the right to access the minerals would not be affected. The proposed standards would not cause additional impacts on current permit holders. Additional no surface-occupancy conditions could not be imposed by BLM on existing leases without negotiating such a change in the lease instrument with the lessee.

There could be potential impacts in those situations where BLM has the discretion to impose seasonal restrictions (or delay), or to vary the specific location of a site. These impacts are germane to the oil and gas program where BLM may relocate proposed well sites up to 200 meters and restrict drilling operations up to 60 days per year without affecting lease rights. This discretion already exists, and could become more frequent as BLM takes action to improve public land health. The potential impacts would be caused by delays, increased cost of access, and disruption of development plans. Based on lease rights and the existing environmental standards which are applied to leasable mineral operations, the proposed standards should not cause additional permit denials. It would not be necessary to deny lease permits based on a standard because standards already exist to mitigate impacts caused by leasable mineral development. Leasable mineral development would not be subject to new or higher standards than those which currently exist.

The potential impacts to mineral development would relate to timing and the exact location of a site, and could vary reclamation procedures from those in current use. This, in and of itself, would not affect the ultimate production of recoverable mineral reserves. There would be no discernible change in mineral resource production due to implementation of the public land health standards. There would be no change in the amount of acreage made available for mineral development, and no discernible effect on revenue generated by mineral commodity sales.

NATIVE AMERICAN CULTURAL ISSUES

Native American concerns would continue to be

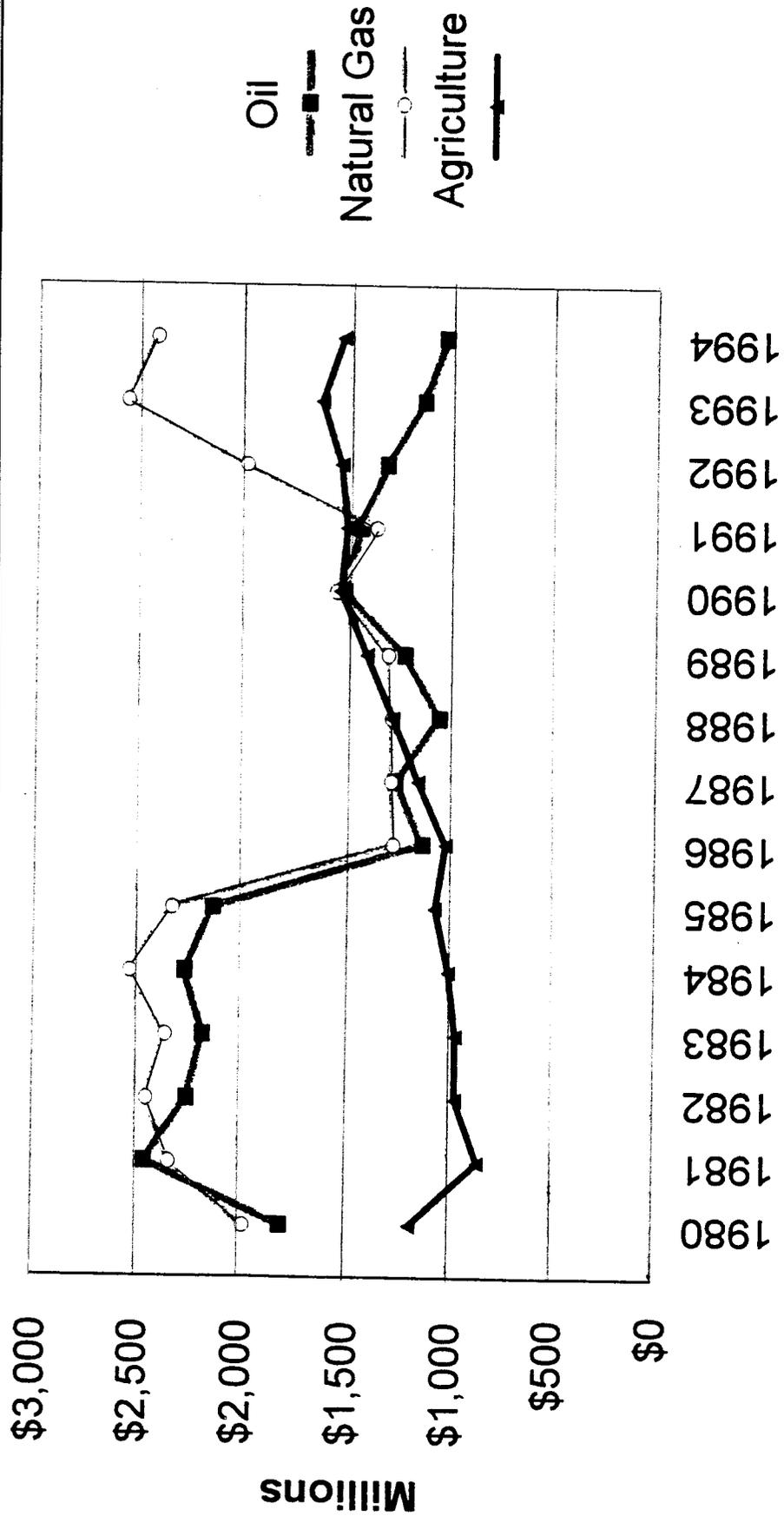
protected under the law as stated in Chapter 3. Emphasis on the use of native plant species and improved habitat would ensure continued or enhanced availability of plant and animal species traditionally used by Native Americans, to the extent that these measures are effective.

ECONOMIC

The analysis in this section refers to the state of New Mexico in terms of economic impact; however, the impacts will be most imposing upon counties with greater than 10% BLM land ownership. Counties with greater than 10% BLM land include 17 counties (Table 3-10), this is over one half of the counties within New Mexico. The primary endogenous sectors associated with BLM lands include oil, gas, and agriculture. Of these sectors, agriculture has proven through time to be the most stable (Figure 4-3). This sector is comprised primarily of individuals and families with sufficient diversity to have enterprises broad enough to capture a favorable market price for one or several agriculture commodities. Whereas, oil and gas sectors are, on the majority, large corporations concentrated in a single commodity. Both sectors are dependent upon a natural resource, but the families in agriculture have an investment that forces them to ride out the price cycles, rather than idling livestock, equipment, and land during the trough portions of the price cycle. Therefore, economic impacts from implementing guidelines associated with grazing standards on BLM land, are essentially imposed upon the stable portion of New Mexico's rural counties,

FIGURE 4-3

NM OIL AND GAS SALES VALUE AND CASH RECEIPTS FOR AGRICULTURE (ALL COMMODITIES)



Oil/Gas data from NMEMNRD
 Ag data from NMDA & USDA

which comprise more than half of the State's counties.

The initial (first year) total economic impacts to the state of New Mexico economy were negative regardless of the alternative, assumptions, and options. The major difference between the assumption that all ranches stayed in business and 22% of them converted to real estate was the loss of 22% of the AUMs from the economy. Also, the assumption that 20% of the AUMs would be removed from allotments, that did not meet the standard, had a greater negative impact than the no AUM reduction option, because of the loss of the value of production from the reduced AUM's in addition to the operational adjustments the allottee was forced to make. In the case where the BLM provided 100% and 50% of the funding for the improvements the economic impacts were identical, because the BLM provided funding for the materials in both cases. Under the option of the rancher funding 100% of the improvements necessary to meet the standards; title to structural range improvements authorized by a Cooperative Agreement for Range Improvements would be shared by the United States and cooperators in proportion to the actual amount of their respective contributions to the initial construction to provide the rancher the necessary incentive to install the specific improvements. Title to no structural range improvement(s) authorized by Cooperative Agreement would be in the United States.

Under RAC Alternative and the scenario that all ranches stayed in business, the least economic impact was when there were no AUM reductions. The initial loss of economic activity (Table 4-1, Table 4-2) was \$4 million of which approximately \$1 million of the loss was in personal income. An initial loss of 25.73 FTEs was also estimated under this alternative. As compared to the \$19.8 million loss when 20% of AUMs were reduced and 22% of the ranches converted to real estate. These impacts were for a single year and were aggregated over a seven year period to quantify the cumulative impacts to year seven.

Year 10 cumulative impacts included an authorization of additional AUMs, which allowed the ranch unit to restock any AUMs that were reduced plus 1/3 of the AUMs toward a specific numeric target. The analysis revealed that it required a minimum of 10 years after the initial reductions to yield a positive return in employment when all of the ranches stayed in business. The minimum impacts after 10 years occurred when none of the ranches converted to real estate, no AUMs reduced, and the ranch financed the

improvements. The greatest economic loss occurred when there was a 20% reduction in AUMs and BLM financing of improvements under the scenario of 22% of ranches not meeting standard and converting to real estate.

After the tenth year of implementation of the guidelines, the negative impacts due to implementation of improvements lessened to only maintenance and repairs under the RAC Alternative. The year to year economic impacts changed from all negative to positive impacts in FTEs, but personal income continued to decline, because the range livestock sector expenditures were still larger than the baseline due to repairs and maintenance which more than offset the increase to the wholesale sector.

In year 14 under the RAC Alternative, it was assumed another 1/3 of the specific numeric target AUMs were authorized on the BLM permits/leases that had previously not met the standard. This continued the positive trend in economic impacts. Minimum impacts (Table 4-1) occurred when there were no reduction of AUMs and the rancher funded 100% of the improvements. These impacts included: losses of \$20 million in economic activity, losses of almost \$7.6 million in personal income, and a gain of 2.7 FTEs. The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the BLM funded the cost of improvements (Table 4-2). These impacts included: a loss of almost \$131.5 million in economic activity, a loss of \$21.8 million in personal income, and a loss of 104 FTEs.

Year 21 was the final year of analysis; it was assumed that the allotment should have achieved an ecological condition surpassing the standards and the allotment would be operated at the full AUM specific numeric target. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions. Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-1

Table 4-1: RAC Alternative - Economic Impacts (cumulative)				
All range livestock- no ranches converting to real estate				
Year 1	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(4,133,000)	(4,126,000)	(11,533,000)	(11,523,000)
Personal Income	(827,000)	(1,050,000)	(1,979,000)	(2,229,000)
Employment	(27.66)	(25.73)	(105.28)	(101.69)
Year 14	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(21,141,000)	(20,097,000)	(24,179,000)	(24,081,000)
Personal Income	(5,559,000)	(7,635,000)	(6,349,000)	(8,849,000)
Employment	.80	2.73	7.82	11.41
Year 21	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	21,275,000	22,319,000	74,520,000	74,617,000
Personal Income	357,000	(1,800,000)	8,388,000	5,888,000
Employment	54.84	56.77	61.86	65.45

Table 4-2: RAC Alternative - Economic Impacts (cumulative)				
All range livestock ranches w/22% converting to real estate				
Year 1	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(14,104,000)	(14,098,000)	(19,840,000)	(19,834,000)
Personal Income	(2,312,000)	(2,485,000)	(3,205,000)	(3,401,000)
Employment	(131.00)	(128.50)	(190.01)	(187.24)
Year 14	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(114,402,000)	(114,345,000)	(131,511,000)	(131,442,000)
Personal Income	(18,954,000)	(20,691,000)	(21,872,000)	(23,827,000)
Employment	(92.21)	(89.71)	(104.29)	(101.52)
Year 21	RAC, No BLM AUM Reduction		RAC, 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(57,988,000)	(57,931,000)	(46,285,000)	(46,216,000)
Personal Income	(9,944,000)	(11,744,000)	(8,335,000)	(10,290,000)
Employment	(16.79)	(14.29)	(28.87)	(26.10)

and 4-2). An important assumption in the analysis was that allotments not meeting the standard would be operated at a specific numeric target of AUMs at the end of 21 years, without this assumption all impacts would be negative.

Under the RAC Alternative the range for economic activity was between a loss of almost \$58 and a gain of \$74.6 million. Personal income varied from a loss of almost \$12 to a gain of \$8 million. The range for jobs were expected to vary from a loss of 29 FTEs and a gain 66 FTEs.

Revised Economic Analysis

This analysis recalculated the economic impacts after the methodology modifications. It includes the allotments meeting the standard moving towards a specific numeric target along with the allotments that did not meet the standard. This assumes that all BLM allotments within the State of New Mexico are grazing at the historical numeric target levels by year 21.

Under this modified methodology the initial (year 1) and Year 7 impacts are identical to the impacts before the modification. However, after year 7 the negative impacts are less than the initial analysis due to the additional allotments moving toward a specific numeric target.

In year 14 under the RAC Alternative, it was assumed another 1/3 of the specific numeric target AUMs were authorized on all of the BLM permits/leases. These impacts included: gains of \$9 million in economic activity, losses of almost \$3 million in personal income, and a gain of 44 FTEs (Table 4-3). The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the rancher funded the cost of improvements (Table 4-4). These impacts included: a loss of almost \$142.5 million in economic activity, a loss of \$25.3 million in personal income, and a loss of 47 FTEs.

Year 21 was the final year of analysis; it was assumed that the allotment should have achieved an ecological condition surpassing the standards and the allotment would be operated with full historic

numeric target AUMs. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions.

Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-3 and 4-4). An important assumption in the analysis was that all of the allotments would be operated at the specific numeric target AUMs at the end of 21 years, without this assumption all impacts would be negative.

Under the RAC Alternative the range for economic activity was between a loss of almost \$58 and a gain of \$80 million. Personal income varied from a loss of almost \$12 to a gain of \$9 million. The range for jobs were expected to vary from a loss of 29 FTEs and a gain 125 FTEs.

HUMAN DIMENSION

Financial, Social and Cultural Impact Analyses

The RAC Alternative has four standards, one of which is Sustainable Communities and Human Dimension. The Sustainable Communities and Human Dimension Standard is on equal footing with the three physical and biological standards.

Financial Impacts

Based on the analysis of the four New Mexico regions, the ranches not meeting the standard that have a heavy dependency on public lands would be most affected by the BLM management changes. These ranchers may not be able to sustain their ranch operations into the next year. The affected ranchers would be less able to meet their overhead expenses, especially given their increased costs of improvements and maintenance.

Faced with short-term financial loss the rancher's options to reduce substantial financial risk are:

Table 4-3: RAC Alternative - Economic Impacts (cumulative)

All range livestock-no ranches converting to real estate

Year 1 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(4,133,000) (4,126,000)	(11,533,000) (11,523,000)
Personal Income	(827,000) (1,050,000)	(1,979,000) (2,229,000)
Employment	(28) (26)	(105) (102)
Year 7 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(28,930,000) (28,878,000)	(80,728,000) (80,660,000)
Personal Income	(5,792,000) (7,351,000)	(13,853,000) (15,603,000)
Employment	(28) (26)	(105) (102)
Year 10 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(33,053,000) (32,980,000)	(76,786,000) (76,688,000)
Personal Income	(7,002,000) (9,229,000)	(13,879,000) (16,380,000)
Employment	(5) (3)	0 4
Year 14 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	8,101,000 9,144,000	(65,577,000) (65,479,000)
Personal Income	(998,000) (3,073,000)	(12,605,000) (15,105,000)
Employment	42 44	67 71
Year 21 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	79,757,000 80,801,000	6,642,000 6,721,000
Personal Income	9,452,000 7,324,000	(2,360,000) (4,860,000)
Employment	96 98	121 125

Table 4-4: RAC Alternative - Economic Impacts (cumulative)

All range livestock ranches w/22% converting to real estate

Year 1 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(14,104,000) (14,098,000)	(19,840,000) (19,834,000)
Personal Income	(2,312,000) (2,485,000)	(3,205,000) (3,401,000)
Employment	(131) (129)	(190) (187)
Year 7 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(98,725,000) (98,685,000)	(138,882,000) (138,834,000)
Personal Income	(16,186,000) (17,402,000)	(22,437,000) (23,805,000)
Employment	(131) (129)	(190) (187)
Year 10 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(129,916,000) (129,859,000)	(170,143,000) (170,074,000)
Personal Income	(21,251,000) (22,989,000)	(27,572,000) (29,527,000)
Employment	(97) (94)	(111) (108)
Year 14 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(85,161,000) (85,104,000)	(111,864,000) (142,460,000)
Personal Income	(14,392,000) (16,129,000)	(23,322,000) (25,277,000)
Employment	(52) (49)	(50) (47)
Year 21 Capital Outlay	RAC, No BLM AUM Reduction 50 & 100% BLM 100% Rancher	RAC, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher
Economic Activity	(57,988,000) (57,931,000)	(46,285,000) (46,216,000)
Personal Income	(9,944,000) (11,744,000)	(8,335,000) (10,290,000)
Employment	(17) (14)	(29) (26)

find additional off ranch income
find private land to rent for livestock, if available
large ranches could sell off their assets
acquire other government lands to use, if available
reduce size of operations
sell their land and water rights (liquidate)

Financial Impacts by Region: The remainder of this section discusses financial impacts by region, summary financial threshold tables and summary. The financial threshold analysis is based on the 10-year-average (See Appendix D).

Central Mountain Region: The extra-small ranch not meeting the standard would no longer meet the Financial Threshold for Production; therefore, grazing on the BLM permit portion would not be financially viable, at least for the short-term. The small, medium, and large ranches not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin of 80%, 34%, and 22% respectively) (Table 4-5). These ranches not meeting the standard would be able to meet the Financial Threshold for Risk (Table 4-6). The affected large ranches could continue financial activity associated with the BLM permit, assuming there are no reductions in BLM AUMs, and/or the rancher is not required to bear the costs of improvements.

Northwest Region: The small ranches not meeting the standard would no longer meet the Financial Threshold for Production; therefore grazing on the BLM permit portion would not be financially viable, at least for the short-term. The extra-small, medium, and extra-large ranches not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin of 78%, 49%, and 50%, respectively) (Table 4-5). The ranches not meeting the standard would not be able to meet the Financial Threshold for Risk (Table 4-6).

Southeast Region: All five ranch categories not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin: extra-small-68%; small-60%; medium-48%; large-42%; and extra-large-36%) (Table 4-5). However, only two of the ranch sizes not meeting the standard would be able to meet the Financial

Threshold for Risk (large and extra-large) (Table 4-6). The affected large and extra-large ranches could continue financial activity associated with the BLM permit, assuming there are not reductions in BLM AUMs, and/or the rancher is not required to bear the cost of improvements. Only the extra-large ranch could continue financial activity associated with the BLM permit if either BLM AUMs are reduced, or the rancher is required to bear the cost of improvements, but not both.

Southwest Region: All five ranch categories not meeting the standard could still meet the Financial Threshold for Production (Table 4-5), but at a much reduced level (losses of gross margin: extra-small-55%; small-60%; medium-46%; large-31.5%; and extra-large-22%). The ranches not meeting the standard would not be able to meet the Financial Threshold for Risk (Table 4-6). If a 20 percent reduction in BLM AUMs is added to the management changes, all financial activity would probably cease from affected BLM permits on all small ranches not meeting the standard as well. The affected medium, large, and extra-large ranches could continue financial activity associated with the BLM permit if either AUMs are reduced, or the rancher is required to bear the cost of improvements, but not both.

Financial Summary: The RAC Alternative has a potential negative effect on the current condition of ranch operations. The majority of classes of public land ranches have the potential to be put at financial risk. In the short-term, this alternative would be less adverse financially to the affected ranchers than the Fallback Alternative, but more adverse than the County Alternative. In addition to financial impacts to the individual ranchers, local governments and agencies would potentially lose taxes and fees from reduced numbers of livestock, private property assessments and improvements. In the long-term, financial stability is dependent upon mitigation measures to reduce the financial burden on the ranchers, as well as local governments and agencies.

Social Impacts

The foundation for determination of the affects to social indicators can best be evaluated by looking at economic and financial information. Quantification of social impacts is not possible due to lack of being able to identify specific lands not meeting the standards.

Synopsis Table 4-5 RAC Alternative				
Affected ranches not meeting the standard, Financial Threshold for Production				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Not Meeting	Meeting	Meeting	Meeting
Small ranches	Meeting	Not Meeting	Meeting	Meeting
Medium ranches	Meeting	Meeting	Meeting	Meeting
Large ranches	Meeting	--n/a--	Meeting	Meeting
Extra-large ranches	--n/a--	Meeting	Meeting	Meeting

Note: The information in the above table assumes: 1) there will be not reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

Synopsis Table 4-6 RAC Alternative				
Affected ranches not meeting the standard, Financial Threshold for Risk				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Not Possible	Not Possible	Not Possible	Not Possible
Small ranches	Not Possible	Not Possible	Not Possible	Not Possible
Medium ranches	Not Possible	Not Possible	Not Possible	Meeting
Large ranches	Meeting	--n/a--	Meeting	Meeting
Extra-large ranches	--n/a--	Not Possible	Meeting	Meeting

Note: The information in the above table assumes: 1) there will be no reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

Thus, the level of impact at the individual, family and community level can not be determined at this time. Based on economic and financial data available, only the direction of impact can be estimated. Table 4-7 shows the expected direction for social effect indicators on rural communities with dependence on public land grazing.

Based on these estimates, this alternative could have short-term adverse impacts on the affected ranches. The degree and intensity of impacts would be greater than the County Alternative but less than the Fallback Alternative.

Family Stability

Family stability is the ability of the family to function in harmony without family strife, such as domestic violence and divorce. One of the greatest impacts to family stability is the loss of livelihood, according to empirical social research (Blehar, 1979 and Fagin and Little, 1984). With the loss of employment, the breadwinner is relegated from a position of dignity and worth to low self esteem (Borrero, 1980).

For those ranches that have lands that do not meet the standards and have to adjust their grazing operations to be in concert with the grazing guidelines, the additional costs of range improvement construction, rotating livestock or finding additional pasture would result in additional costs and less return to support the

family, in the short-term. Depending on the individual family’s circumstances, impacts to ranch families could be far reaching. A potential exists for a ranch family to be put at financial risk and some ranchers might go out of business. This could put the family through a threshold where divorce, crime, suicide, alcohol and family violence break down family stability. Where the family has more stress than it can endure, the family might leave the rural community or perhaps reduce its role in the community.

A reasonable projection of family stability is personal income (Branch, et al., 1982). Based on the economic analysis, the statewide personal income generated from public land livestock grazing is expected to initially drop, but then increase under this alternative. For those families that are resilient enough to make it through the short-term, they would have improved financial resources. The family stability would be expected to improve in the long-term.

Rural Community Stability

Rural community stability is the capacity of the rural community to absorb the rate and magnitude of change. Employment provides a measure of the impact on rural community stability (Branch, et al., 1982). The exact impacts on employment can not be determined at this time. According to the Economic Impact Analysis discussed in the previous section the potential short-term employment loss from the RAC

Table 4-7 Direction of Social Indicators based on RAC Alternative			
Social Indicators	Short-term	Long-term	Measurement
Family Stability	Downward	Upward	Personal Income
Rural Community Stability	Downward	Upward	Employment and Census
Local Government Stability	Downward	Upward	County Budget
Agricultural Land Use	Downward	Upward	Total Acres

Alternative is 190 jobs. These jobs are hired help; most of these ranches are family run operations with the family contributing most of the labor. Over 400 ranches could be put at financial risk under the RAC Alternative. Based on typical ranch characteristics, if the average ranch family size is 3 members, and on the average 2.5 family members work on the ranch (Fowler, 1993); multiply that times 400 ranches for a total of 1000 family jobs that would be potentially adversely affected. Combining the family jobs with the wage jobs, 1190 jobs could potentially be affected.

Small isolated communities are more vulnerable due to weaker links to centers of political and economic influence and a less flexible job base. Because of this, the smaller communities are more likely to experience unemployment, increased poverty, and social disruption (Range Reform '94). Social mobility, eroding the agrarian way of life, and out-migration of moderate to low income and/or ethnic minority groups and communities could be accelerated. If employment losses are concentrated in a few communities and if other factors contribute to low community resistance, the result may be a less stable community. However, if employment impacts are dispersed statewide, the destabilization to the rural communities would be less. Rural community stability could improve in the long-term, through increased employment.

Local Government Stability

Local government stability is the ability to provide services such as education, medical care, emergency services, environmental services, law enforcement, fire protection, water, roads, and waste services. In rural counties, these services are often dependent upon land value, agricultural production and the taxes they generate. When these services can no longer be provided due to the loss of revenues, adjustments in the quality or quantity of services must be made. This may result in a community passing through a threshold for local government services, as typically schools are consolidated with larger school systems when budgets are not adequate. When schools are consolidated, their ability to foster community cohesiveness declines (Jobs 1986).

A reasonable measure of local government stability is employment, agricultural products and agricultural land. They provide a tax base for the county budget. Statewide, employment generated from public land

livestock grazing is projected to drop in the short-term. The degree of impact to local government would depend on whether the effects are concentrated or dispersed among communities. The local government stability could be expected to improve in the long-term with an improved tax base.

Agricultural Land Use

Agricultural land use is the total acres of land devoted to producing crops and raising livestock. Under this alternative, it is expected that at least some of the ranchers could find the short-term impacts to their livestock grazing operations too great and they would select the option to go out of business rather than continue livestock grazing operations. Thus, a reduction in acreage of agricultural land use could be expected in the short-term. In the long-term, the ranches could be sold to new livestock operators and as land conditions improve, the land use devoted to agriculture could increase.

Cultural Impacts

If changes impact the traditions, heritage, attitudes, beliefs and values, the culture is affected. For this analysis cultural impacts cannot be quantified and are best evaluated by looking at feedback information. The following two methods are utilized in this analysis:

- public polls
- public comments

In a poll conducted by the University of New Mexico's Public Policy Center, a substantial majority (over 75%) of New Mexico citizens believe it to be moderately to extremely important to preserve ranching as a way of life in the State. However, the same poll identified that 49 percent view environmental preservation as the top priority and 22 percent view recreational use as the top priority. Thus, approximately 71 percent would support a program that provides for environmental enhancement or recreational opportunities.

Rural Values, Attitudes and Beliefs

Most of the public land ranches in New Mexico are family run businesses, originating from three land based cultures (Hispanic, Native American and Anglo-Celtic) discussed in Chapter Three. Where reduced revenues

force individuals from their traditional manner of living, the ranch operation is impacted adversely. This affects the extended families, which in turn, affects the ranching based cultures. The sense of place with its association with a sense of well-being and community stability would be reduced for the ranching communities if adverse impacts are concentrated.

The rural communities of the arid southwest are made up of people who share beliefs and values which are, if not embodied by, closely linked to the culture of ranching (Smith, 1997) People who ranch rely on their interaction with the public lands for the centering and stabilizing of the lifeway. As the individuals who ranch are displaced by increased economic pressures and/or the demand for changing uses, the values of the communities as a whole begin to fade in the descent toward a more homogenous national monoculture. This can be particularly important for Native American and Hispanic ranchers from Northern New Mexico where livestock operations tend to be vulnerable due to their small size. Additionally, the Anglo-Celtic culture cannot exist without grazing cattle in the highlands (McWhiney, 1988).

Of the commentors on the Draft RMPA/EIS reflecting rural or agricultural values, approximately 72 percent supported the County Alternative. They expressed that it is important to have the Human Dimension Standard but expressed concerns over short-term economic impacts from the RAC Alternative. They supported the County Alternative because of its greater emphasis on the Human Dimension.

Environmental Values, Attitudes and Beliefs

The poll conducted by the University of New Mexico's Public Policy Center found that 49 percent of New Mexico citizens believe environmental preservation to be the top priority. Based on their commitment that environmental preservation is their number one priority, it is reasonable to group these individuals into a culture.

Of the commentors on the Draft RMPA/EIS reflecting environmental values are important, approximately 47 percent supported the Fallback Alternative. They expressed concern that the Human Dimension Standard of the RAC Alternative placed too much emphasis on short-term economic considerations and they preferred the Fallback Alternative.

Conclusion

Both rural and environmental interests have suggested other alternatives, but view the RAC Alternative as being more satisfactory than another alternative. Thus, both view the RAC as a middle ground alternative.

Table 4-8 shows the expected direction for cultural indicators. The RAC Alternative provides for maintenance of ranching as a way of life in the State and for physical and biological environmental enhancement and improved recreational resources on the lands currently not meeting the standards. Therefore, the alternative provides for the maintenance and improvement of qualities that a majority of the New Mexico citizens value.

Table 4-8
Consistency with Cultural Indicators - RAC Alternative

Cultural Indicators	Short-term/Long-term	Measurement
Rural Values, Attitudes and Beliefs	Neutral	Comments
Environmental Values, Attitudes and Beliefs	Neutral	Comments

COUNTY ALTERNATIVE

VEGETATION

Upland Vegetation

Under the County Alternative the focus of management and the application of grazing guidelines would occur on public lands that do not meet the standard due to grazing. Changes in management would include fencing and chemical treatments as well as possible deferment on areas not meeting the standard. In the short-term, little improvement would be expected. However, in the long-term, measurable improvement in vegetative cover and composition would be expected due to grazing management practices. Additionally, vegetation would be enhanced through the use of mechanical and chemical manipulations in both the short- and long-term. These improvements would occur mostly within the desert and woodland biomes in MLRAs 36, 42, and 70.

Riparian Vegetation

Under the County Alternative, riparian communities and vegetation on 112 riparian segments, which are classified as non-functional and functional at risk with a downward trend or where the trend is not apparent (stable), would not meet the standards. These areas are affected, at least in part, by grazing activities. Management efforts in the short-term would improve 13 segments. Of this total, six segments would improve to proper functioning condition. In the long-term, 26 areas would improve to proper functioning condition. Improvement of other areas would be limited by the fragmented distribution of BLM riparian areas and the lack of coordinated watershed management efforts.

SOILS

With intense management under this alternative, there would be a continued slow improvement over the long-term in upland soil conditions where soils are more productive, such as Mollisols, Alfisols, and moderately fine textured Entisols. On poorer sites, and with less intensive management, there would be little or no change over the long-term in the health of the upland soils except in response to drought or additional moisture conditions. No changes are expected for either case over the short-term. There would be slightly more overall improvement than the No Action Alternative due

to implementation of grazing management guidelines.

Over half of the uplands not meeting the standard for this alternative are in MLRA 42; however, the soil response to management in this MLRA would be slow. More profound response would come from the better sites such as those in MLRAs 36 (northern part); 39, 41, 48A, 70 (northern part); and the gently sloping uplands of MLRA 77. These expected gains could actually be slower or less than those described for the No Action Alternative if the human cultural and economic dimensions of this alternative are given equal or greater weight than achieving overall public land health.

WATER

In the long-term, continued implementation of BMPs to reduce NPS pollution and riparian area management would promote reductions in erosion and sediment production from public lands and slowly improve water quality. There would be less sediment, nutrients, salts, and biological contaminants in the water. However, under this alternative, the improvement in water quality from public lands would be balanced with human dimension aspects. The cycle of apparent arroyo filling is expected to continue, which would support riparian restoration, in turn improving water quality by acting as a filter for many pollutants.

While water quality affected by public land uses might improve, it is not expected that any of the water-quality limited stream reaches identified by the state would improve enough to meet state standards solely from this action. The impacts on those water quality-limited stream reaches from non-public land uses and sources of pollutants would also have to be reduced to help meet state standards.

GRAZING ADMINISTRATION

Under the County Alternative, livestock use levels are expected to remain approximately at the seven-year average over the short-term, similar to the No Action Alternative. Adjustments in livestock numbers are expected to be upward on some allotments and downward on others. Adjustments are not expected to be large, either upward or downward because in general, current permits and leases are consistent with grazing capacities established through BLMs' rangeland monitoring program. Statewide, AUM adjustments are expected to balance out over the long-term. However,

fluctuation in use levels can be expected due to a variety of factor, such as weather conditions and the price of livestock. The long-term AUM projection statewide is expected to be around preference, which is 1,968,341 AUMs.

Implementing the guidelines in the County Alternative would be similar to BLM'S current management under the No Action Alternative. The livestock management practices may include rest or deferment, adjusting livestock numbers, changing seasons of use, modifying or developing range improvements, and vegetative land treatments. There would be segments of riparian habitat where current grazing practices would be adjusted to achieve riparian standards. In the short-term, functional condition on 13 riparian segments would be expected to improve. In the long- term, improvement in functional condition would be expected on 26 segments. Vegetation and litter in the riparian zone should respond and increase on the segments improved. The increase in canopy cover and litter should decrease the runoff and sediment, and improve the water quality.

Under this alternative, 287 permittees could be affected. On the majority of the larger allotments, modifications in use will have only minor impact on ranching operations, however, smaller operations may be affected more. Permittees most affected by the guidelines would be those with small one-pasture allotments where it may be necessary to defer grazing during critical periods of plant growth or regrowth. As a result, the permittee may be burdened financially by having to lease private pasture, improve private lands, add fencing to create an additional pasture, or partner with another allotment. There are also the additional costs associated with the handling of livestock for gathering and transporting.

WILD HORSES

Impacts on the Socorro wild horse herd from the implementation of the County Alternative would be similar to the No Action Alternative, with the exception that the RMP decision would be in conformance with the standard for rangeland health. Based on monitoring data, the area is in fair to good condition with a static trend and meets the standard. The existing resource condition would improve as in the No Action Alternative, as long as the AML of 50 is maintained and balanced with livestock grazing and other uses.

Impacts on the Farmington wild horse herd would be the same as under the No Action Alternative.

WILDLIFE

Implementing the County Alternative standards and guidelines would benefit wildlife in the short- and long-term in both upland and riparian areas by applying grazing guidelines. The improvement of riparian habitats currently functioning at risk with a downward trend would benefit wildlife, since these areas are the most diverse and productive areas.

The County Alternative would seek a balance between biological resources and human dimension concerns. The BLM would work cooperatively with the Department of Game and Fish to address wildlife population increases to assure no resource change or damage acquires and that existing uses of resources are protected.

While wildlife would be considered on the allotment level it does not provide for a review at the landscape level when developing LAPs.

36 - New Mexico and Arizona Plateaus and Mesas

Long-term benefits to big game would occur from the County Alternative when compared to the existing situation because it would improve upland habitat currently in poor condition or that is not meeting the standard due to grazing practices. However because this alternative utilizes less restrictive guidelines on livestock grazing than the Proposed Action it would not be as beneficial to upland habitat. Mule deer and elk are the primary big game species benefitting from these actions. There would be an increase in the deer population resulting from improving the quality and quantity of browse on upland sites, and creating new fawning areas.

Elk are currently increasing in numbers. Under the County Alternative the elk numbers and potential increases in elk would be balanced with human dimension needs. The BLM would work cooperatively with the NMDGF to address wildlife populations so that no resource damage would occur and grazing preference could be achieved.

The quality of habitat would improve (but to a lesser degree than the Proposed Action over the long-term for riparian-dependent big game species (turkey, deer, and furbearers). However, due to other limiting factors (drought) and hunting regulations, no measurable

increase in populations would be expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use could potentially increase the number of roads on public land, resulting in the degradation of big game habitat and increased wildlife harassment and displacement. Under the County Alternative and associated standards for erosion and wildlife habitat, road closures would continue.

Upland game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices on the acres that are not meeting the standards, resulting in a benefit for most upland wildlife species. The continued construction of water developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Over the long-term, public land-resident fisheries habitat would be improved.

37 - San Juan River Valley Mesas and Plateaus

Long-term benefits to big game would occur from the County Alternative when compared to the existing situation because it would improve upland habitat currently in poor condition or not meeting the standards due to grazing practices. However, because this alternative utilizes less restrictive guidelines on livestock grazing than the Proposed Action it would not be as beneficial to upland habitat.

The quality of habitat would improve but to a lesser degree than the Proposed Action over the long-term for riparian-dependent big game species (turkey, deer, and furbearers). However, due to other limiting factors (drought) and hunting regulations, no increases in populations would be expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use could potentially increase the number of roads on public

land, resulting in degradation of big game habitat and the increase of wildlife harassment and displacement. Under the County Alternative and associated standards for erosion and wildlife habitat, road closures would be continue.

Upland Game and Nongame

Upland sites would improve over the long-term on the acres that are not meeting the standard from land treatments and proper grazing practices, resulting in a benefit for most upland wildlife species. The continued construction of water developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land resident fisheries habitat over the long-term would be improved.

39 - Arizona and New Mexico Mountains

Big Game

The BLM manages very little public land within this MLRA. Under the County Alternative, there are several areas where the standards and guidelines would improve wildlife habitat. Upland improvement projects, along with controlled grazing, would improve wildlife habitat for big game species over the long-term. The southwestern part of the state has a very active fire season. These natural events can be beneficial to resident elk herds by creating open meadow areas and increasing the amount of forage.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and guidelines for grazing practices, resulting in a benefit for most upland and nongame wildlife species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public-land resident fisheries habitat would be improved over the long-term.

41 - Southeastern Arizona Basin and Range

A small percentage of this MLRA exists on BLM lands. Upland habitat would be improved under the County Alternative, thereby improving Coues' whitetail deer habitat in the southwestern corner of New Mexico.

42 - Southern Desertic Basins, Plains, and Mountains

Long-term benefits to big game would occur from the County Alternative by utilizing guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting county standards due to grazing practices. Management of wildlife resources and objectives would be balanced with established RMP livestock forage allocations.

The County Alternative would help rectify historic land use practices that have caused problems such as the dewatering of streams and springs and altered or displaced big game species. Implementation of grazing guidelines, vegetative land treatments, increased water developments, road closures, and cooperative management efforts would have long-term benefits to big game habitat. Natural events (fire, flooding, etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife.

There would be a slight increase in the deer population from improving the quality and quantity of browse on upland sites, and creating new fawning areas. Management of wildlife resources and objectives would be balanced with established RMP livestock forage allocations. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and land owners.

Competition for food and space between mule deer and the Iranian ibex would continue under the County Alternative. Oryx would continue to move off the White Sands Missile Range and may displace mule deer and antelope by their size and aggressive behavioral

patterns.

The quality of habitat would improve, but to a lesser degree than the Proposed Action over the long-term for riparian-dependent big game species (turkey, deer, and furbearers). However, due to other limiting factors (drought) and hunting regulations, no measurable increase in populations can be expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use can potentially increase the number of roads on public land, resulting in the degradation of big game habitat and the increase of wildlife harassment and displacement. Under the County Alternative and associated standards for erosion and wildlife habitat, road closures would continue to be implemented.

Upland Game and Nongame

Upland sites would gradually improve in the long-term from land treatments and grazing management practices, resulting in a benefit for scaled quail, Gambel's quail, and dove populations. The continued construction of water developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public-land resident fisheries habitat over the long-term would be improved.

48 - Southern Rocky Mountains

A small percentage of this MLRA exists on BLM lands. Upland habitat would improve under the County Alternative, resulting in the improvement of some wildlife habitat within the MLRA.

51 - High Intermountain Valleys

Big Game

Under the County Alternative, management of wildlife resources and objectives would be balanced with established RMP livestock forage allocations. Long-term benefits to big game would occur from improving upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices. Rocky Mountain elk would continue to be a key wildlife species within the Taos field office. Critical winter range would improve through the implementation of the county standards and guidelines.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, resulting in a benefit for scaled quail, mourning dove, Merriam's turkey, numerous raptors, and migratory bird populations. The continued construction of water developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public-land resident fisheries habitat over the long-term would be improved.

70 - Pecos/Canadian Plains and Valleys

Big Game

Long-term benefits would result from the County Alternative when compared to the existing situation because it would improve upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices. However, because this alternative utilizes the less restrictive guidelines on livestock grazing than the Proposed Action it would not be as beneficial to upland habitat. The development and implementation of LAPs that identify management objectives consistent with the counties' standards and guidelines would allow vegetative land treatments and water developments to maintain or slightly improve wildlife habitat for big game species over the long-term. Natural events (fire, flooding, etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife. There would be a slight increase in the deer population from improving the

quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and land owners.

Upland Game and Nongame

Upland sites would gradually improve over the long-term, from land treatments and grazing practices outlined in the County Alternative standards and guidelines would result in benefits to scaled quail and dove populations. The continued construction of water developments would favor upland game bird species.

The habitats and populations of candidate, sensitive, rare, New Mexico State listed, or other special status categories should be managed in accordance with state law. If special habitat management actions are required, the BLM would conduct a private sector impact assessment to balance the needs of the species with the impacts of the private sector.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public-land resident fisheries habitat over the long-term would be improved.

77 - Southern High Plains

Big Game

The BLM manages very little public land within the MLRA. Under the County Alternative, management would remain the same as current management (the No Action Alternative). RMP decisions would improve big game habitat by identifying goals and

objectives that allow vegetative land treatments and water developments.

Upland Game and Nongame

Upland sites would gradually improve over the long-term from land treatments and grazing practices identified in the county guidelines, improving the habitat for most upland and nongame wildlife species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land - resident fisheries habitat over the long-term would be improved.

SPECIAL STATUS SPECIES

Under the County Alternative, the focus of management and application of grazing guidelines would occur on public lands not meeting the biotic and upland standards, due to current grazing practices. These areas are contained primarily within the desert biome of MLRAs 36, 37 and 42 and the grassland biome of MLRA 70. There would be benefits to a portion of the 95 special status species occurring in the improved areas of the desert and grassland biomes managed under this alternative. Of concern when implementing livestock grazing practices is that areas of late-seral and PNC ecological status not decline due to redistribution of grazing patterns. These areas, in many cases, provide suitable habitat to support special status species with late-seral habitat requirements.

Also of concern in this alternative are the approximately 112 riparian segments that do not meet the proposed standards, due, at least in part, to livestock grazing. The greatest benefits to special status species resulting from this alternative would be the improvement of riparian conditions on 13 riparian segments in the short-term and 26 riparian segments in the long-term. Many of the 76 special status species associated with riparian areas and their aquatic systems would benefit from the improvement in riparian condition.

Areas past the threshold of improvement have lost the capability to recover toward PNC within the long-term of this analysis, even in the absence of grazing. In some cases, the PNC has shifted toward a different community. Even with chemical or mechanical manipulation, these areas may never reestablish a community like the lost native community. This is due to the change in ecosystem functionality occurring with the combined impacts of soil loss and vegetative

community shifts associated with major disruptions caused by past land use practices and climate change. Examples of these are former desert grasslands which are now mesquite sand dunes and creosote bush/desert pavement communities of the Chihuahuan Desert in MLRA 42. Special status species that formerly used these areas would have differing abilities to recolonize these habitats as the relative condition improves with subsequent management. Some species, such as obligate grassland species like Baird's sparrow, may never be able to return to former habitats. Other areas, such as the shinnery oak/dunes areas of MLRAs 42 and 70 retain profound capability to return to previous grassland dominance, and the ability to support grassland species such as the lesser prairie chicken.

RECREATION

Under the County Alternative, recreational visitor use would continue to increase, especially in areas where urban visitors recreate. Developed recreation sites would particularly experience increased use. The recreational use levels on a statewide basis are not expected to be impacted by the standards and guidelines.

The County Alternative would provide for increased management of off-highway vehicle use and less road proliferation on approximately 4,600 acres in MLRA 36 and 7,300 acres in MLRA 42. Although these areas may be important to off-highway vehicle visitors that frequent the areas, on a statewide basis, they represent a small percent of the public land acreage.

Increased recreation supervision would occur on approximately 10,600 acres in MLRA 36 and 500 acres in MLRA 37 where recreational activities are keeping the area from meeting the upland standard. Additionally, recreation management would increase on 12,600 acres in MLRA 36 not meeting the biotic standard.

Considering that there may be overlap on many of the acres identified as having recreation conflicts with the standards, the additional restrictions would occur on less than 33,700 acres. This would not be a detectable impact on the recreational use of the public lands on a statewide basis.

It is expected that the present conflicts between livestock use and the developed facilities at the Wild

Rivers Recreation Area would be resolved over the next five years. As additional recreational sites are developed, livestock are expected to be excluded.

The BLM would be expected to resolve livestock grazing conflicts on riparian areas. In the long-term, an additional 26 riparian segments are expected to improve in condition, thereby improving the quality of the visit for recreationists on the public lands.

Not all of the acres are failing to meet the standards due to livestock grazing. However, many acres are expected to have an improved quality of visits for recreational visitors due to the improved native vegetation communities.

WILDERNESS

The County Alternative standards emphasize improving the natural systems in balance with the local community's social and economic needs.

Where sites not meeting the standard are included in WAs or WSAs, they would be expected to be a high priority for improved management. The review of WAs and WSAs to determine if they meet the standards should help determine what management changes are needed.

However, in WAs and WSAs the Wilderness Act and BLM management guidelines for these areas would limit some of the tools for management. For example, the range improvements that are normally applied to support improved livestock grazing management and land treatment techniques may not be permitted in WAs and WSAs. However, if the WAs and WSAs meet the standards, there would be no impact on wilderness values.

CULTURAL RESOURCES

Damage to or loss of archaeological sites in both upland and riparian areas due to erosion would be reduced, commensurate with reductions in erosion.

PALEONTOLOGY

Damage to or loss of paleontological sites in both upland and riparian areas due to erosion would be reduced, commensurate with reductions in erosion.

REALTY/LAND USE

Local areas are impacted by land and realty activities creating both short- and long-term surface disturbances by reducing vegetative cover and forage, increasing erosion or sediment load, degrading wildlife habitat, and increasing the potential for the introduction or spread of noxious weeds. Under the County Alternative, restoring the forage base to reduce impacts on the livestock industry would be an objective. If stipulations are approved, complied with and successful, they would mitigate impacts on a local basis by reducing soil erosion and sediment load, restoring ground cover, restoring diversity of plant species, protecting threatened and endangered or special status species and their habitats, minimizing the introduction or spread of noxious weeds, and protecting important cultural or historic resources. The impacts associated with land and realty surface-disturbing activities would continue under the County Alternative.

The implementation of standards and guidelines may require closer scrutiny of future surface-disturbing activities, such as requiring additional field checks in areas that have been identified as not meeting a standard. Projects in areas not meeting the standards would be monitored as needed to ensure compliance with stipulations, especially those dealing with reclamation and rehabilitation. In areas where reclamation efforts have been determined to be unsuccessful, coordination with the BLM, authorized users, and allottees may be necessary to determine the cause, and identify remedies for the failed reclamation and rehabilitation.

Additional work may be necessary to bring disturbed areas up to prescribed standards. This could increase companies' costs on individual projects if they are required to implement new or additional mitigation measures on future projects. Allottees may have to move livestock to other pastures or adjust AUMs or season of use if it is determined that grazing needs to be deferred in a disturbed area to allow ample time for plant regrowth. These changes would be determined on a case-by-case basis in coordination with the allottee. Although not required, if the county standards are adopted, emphasis would be placed on reseeding disturbed areas with native plant species. Currently, reseeding is required on disturbed areas, but standard seed mixtures established locally by BLM are used. Current seed mixtures are not limited to native species but include species that can provide plant cover, stabilize soils, provide desired forage for wildlife, are suitable to soil and climate conditions, and are readily available. The companies' cost of reclaiming a disturbed

area could increase if native seed sources are required. Costs would also be affected by the availability of seed.

If the County Alternative standards and guidelines go into effect, it is anticipated that the BLM would receive increased applications for land exchanges or sales. However, due to the staffing and budget demands and the length of time it takes to complete land ownership adjustments, it is not expected that the number of exchanges or sales completed each year would greatly increase from the number currently processed. Any public lands disposed of through exchange or sale would no longer be managed by the BLM and therefore would not be subject to the standards and guidelines. Work is expected to continue on acquiring easements or upgrading or closing existing roads as identified through the land use planning process, (i.e., RMPs).

MINERAL RESOURCES

Under the County Alternative, impacts on mineral resources would be the same as the for the Proposed.

NATIVE AMERICAN CULTURAL ISSUES

Native American concerns would continue to be protected under the law as outlined in Chapter 3.

ECONOMIC

The analysis in this section refers to the state of New Mexico in terms of economic impact; however, the impacts will be most imposing upon counties with greater than 10% BLM land ownership. Counties with greater than 10% BLM land include 17 counties (Table 3-10), this is over one half of the counties within New Mexico. The primary endogenous sectors associated with BLM lands include oil, gas, and agriculture. Of these sectors, agriculture has proven through time to be the most stable (Figure 4-1). This sector is comprised primarily of individuals and families with sufficient diversity to have enterprises broad enough to capture a favorable market price for one or several agriculture commodities. Whereas, oil and gas sectors are, on the majority, large corporations concentrated in a single commodity. Both sectors are dependent upon a natural resource, but the families in agriculture have an investment that forces them to ride out the price cycles, rather than idling livestock, equipment, and land during

the trough portions of the price cycle. Therefore, economic impacts from implementing guidelines associated with grazing standards on BLM land, are essentially imposed upon the stable portion of New Mexico's rural counties, which comprise more than half of the state's counties.

The initial (first year) total economic impacts to the state of New Mexico economy were negative regardless of the alternative, assumptions, and options. The major difference between the assumption that all ranches stayed in business and 22% of them converted to real estate was the loss of 22% of the AUMs from the economy. Also, the assumption that 20% of the AUMs would be removed from allotments, that did not meet the standard, had a greater negative impact than the no AUM reduction option, because of the loss of the value of production from the reduced AUM's in addition to the operational adjustments the allottee was forced to make. In the case where the BLM provided 100% and 50% of the funding for the improvements the economic impacts were identical, because the BLM provide funding for the materials in both cases. Under the option of the rancher funding 100% of the improvements necessary to meet the standards; title to structural range improvements authorized by a Cooperative Agreement for Range Improvements would be shared by the United States and cooperators in proportion to the actual amount of there respective contributions to the initial construction to provide the rancher the necessary incentive to install the specific improvements. Title to no structural range improvement(s) authorized by Cooperative Agreement would be in the United States.

Under County Alternative and the scenario that all ranches stayed in business, the least economic impact was when there were no AUM reductions. The initial loss of economic activity (Table 4-9, Table 4-10)

Table 4-9: County Alternative - Economic Impacts (cumulative)

All range livestock- no ranches converting to real estate				
Year 1	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(1,666,000)	(1,660,000)	(6,777,000)	(6,772,000)
Personal Income	(326,000)	(476,000)	(1,139,000)	(1,303,000)
Employment	(12.40)	(10.33)	(62.25)	(59.92)
Year 14	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(3,170,000)	(3,114,000)	(7,047,000)	(6,990,000)
Personal Income	(1,401,000)	(2,897,000)	(2,389,000)	(4,026,000)
Employment	7.00	9.07	17.24	19.64
Year 21	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	25,272,000	25,328,000	60,841,000	60,898,000
Personal Income	2,599,000	1,104,000	7,558,000	5,921,000
Employment	43.62	45.69	53.86	56.26

Table 4-10: County Alternative - Economic Impacts (cumulative)

All range livestock ranches w/22% converting to real estate				
Year 1	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(8,578,000)	(8,574,000)	(12,580,000)	(12,605,000)
Personal Income	(1,369,000)	(1,804,000)	(2,010,000)	(2,147,000)
Employment	(80.47)	(78.80)	(119.64)	(118.22)
Year 14	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(63,765,000)	(63,721,000)	(81,403,000)	(81,655,000)
Personal Income	(10,095,000)	(14,442,000)	(13,194,000)	(14,559,000)
Employment	(47.91)	(46.24)	(58.56)	(57.09)
Year 21	County No BLM AUM Reduction		County 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(16,942,000)	(16,899,000)	(18,279,000)	(18,532,000)
Personal Income	(2,376,000)	(6,772,000)	(3,106,000)	(4,470,000)
Employment	17.35	19.02	6.70	8.17

was almost \$1.7 million of which approximately a \$476,000 loss in personal income. A total loss of 10.3 FTEs was estimated under this alternative. As compared to the \$12.6 million loss when 20% of AUMs were reduced and 22% of the ranches converted to real estate. These impacts were for a single year and were aggregated over a seven year period to quantify the cumulative impacts to year seven.

Year 10 cumulative impacts included an authorization of additional AUMs, which allowed the ranch unit to restock any AUMs that were reduced plus 1/3 of the AUMs toward preference. The analysis revealed that it required a minimum of 10 years after the initial reductions to yield a positive return in employment when all of the ranches stayed in business. The minimum impacts after 10 years occurred when none of the ranches converted to real estate, no AUM reductions, and the ranch financed the improvements. The greatest economic loss occurred when there was a 20% reduction in AUMs and BLM financing of improvements under the scenario of 22% of ranches not meeting standard and converting to real estate.

After the tenth year of implementation of the guidelines, the negative impacts due to implementation of improvements lessened to only maintenance and repairs under this alternative. The year to year economic impacts changed from all negative to positive impacts in FTEs, but personal income continued to decline, because the range livestock sector expenditures were still larger than the baseline due to repairs and maintenance which more than offset the increase to the wholesale sector.

In year 14 under the County Alternative, it was assumed another 1/3 of preference AUMs were authorized on the BLM permits/leases that had previously not met the standard. Minimum impacts (Table 4-9) occurred when there were no reduction of AUMs and the rancher funded 100% of the improvements. These impacts included: losses of \$3.1 million in economic activity, losses of \$2.9 million in personal income, and a gain of 9 FTEs. The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the Rancher funded the cost of improvements (Table 4-10). These impacts included: a loss of almost \$82 million in economic activity, a loss of \$14.6 million in personal income, and a loss of 57 FTEs. Year 21 was the final year of analysis; it was assumed that the allotment should have achieved an ecological condition surpassing the standards and

the allotment would be operated with full preference AUMs. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions. Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-9 and 4-10).

Revised Economic Analysis

This analysis recalculated the economic impacts after the methodology modifications. It includes the allotments meeting the standard moving towards preference along with the allotments that did not meet the standard. This assumes that all BLM allotments within the State of New Mexico are grazing at the historical preference levels by year 21.

Under this modified methodology the initial (year 1) and Year 7 impacts are identical to the impacts before the modification. However, after year 7 the negative impacts are less than the initial analysis due to the additional allotments moving toward preference.

In year 14 under the County Alternative, it was assumed another 1/3 of preference AUMs were authorized on all of the BLM permits/leases. Minimum impacts (Table 4-11) occurred when there were no reduction of AUMs and the rancher funded 100% of the improvements. These impacts included: gains of \$30 million in economic activity, gains of \$2.3 million in personal income, and a gain of 53 FTEs. The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the Rancher funded the cost of improvements (Table 4-12). These impacts included: a loss of almost \$71 million in economic activity, a loss of \$12.6 million in personal income, and a loss of 8 FTEs.

Year 21 was the final year of analysis; it was assumed that the allotment should have achieved an ecological condition surpassing the standards and the allotment would be operated with full preference AUMs. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized

Table 4-11: County Alternative - Economic Impacts (cumulative)

All range livestock - no ranches converting to real estate				
Year 1 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(1,666,000)	(1,660,000)	(6,777,000)	(6,772,000)
Personal Income	(326,000)	(476,000)	(1,139,000)	(1,303,000)
Employment	(12)	(10)	(62)	(60)
Year 7 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(11,661,000)	(11,622,000)	(47,441,000)	(47,401,000)
Personal Income	(2,281,000)	(3,328,000)	(7,976,000)	(9,122,000)
Employment	(12)	(10)	(62)	(60)
Year 10 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(11,093,000)	(11,037,000)	(42,085,685.95)	(42,028,590.05)
Personal Income	(2,401,000)	(3,897,000)	(7,441,655.82)	(9,078,683.52)
Employment	4	6	12	15
Year 14 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	30,327,000	30,383,000	(20,510,000)	(20,453,000)
Personal Income	3,824,000	2,329,000	(4,381,000)	(6,018,000)
Employment	51	53	68	71
Year 21 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	92,265,000	92,320,000	41,921,000	41,970,000
Personal Income	13,050,000	11,555,000	4,722,000	3,085,000
Employment	87	89	104	106

Table 4-12: County Alternative - Economic Impacts (cumulative)

All range livestock ranches w/22% converting to real estate				
Year 1 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(8,578,000)	(8,574,000)	(12,580,000)	(12,605,000)
Personal Income	(1,369,000)	(1,804,000)	(2,010,000)	(2,147,000)
Employment	(80)	(78)	(120)	(118)
Year 7 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(60,049,000)	(60,018,000)	(88,061,000)	(88,238,000)
Personal Income	(9,584,000)	(12,626,000)	(14,071,000)	(15,026,000)
Employment	(80)	(79)	(120)	(118)
Year 10 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(76,514,000)	(76,471,000)	(107,036,953.21)	(107,289,621.51)
Personal Income	(12,102,000)	(16,448,000)	(17,065,271.97)	(18,429,552.97)
Employment	(50)	(49)	(62)	(61)
Year 14 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(30,268,000)	(30,225,000)	(70,286,000)	(70,538,000)
Personal Income	(4,870,000)	(9,216,000)	(11,280,000)	(12,644,000)
Employment	(4)	(3)	(9)	(8)
Year 21 Capital Outlay	County, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		County, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	50,050,000	50,094,000	10,033,000	9,780,000
Personal Income	8,075,000	3,729,000	1,655,000	301,000
Employment	58	60	53	55

that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions. Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-11 and 4-12). An important assumption in the analysis was that allotments not meeting the standard would be operated at preference AUMs at the end of 21 years, without this assumption all impacts would be negative.

Under the County Alternative economic activity was estimated between a gain of almost \$9.8 million and a gain of \$92.3 million. Personal income had a range of between a gain of \$1.7 million and a gain of \$13 million. Jobs had an expected range between a gain of almost 55 and 106 FTEs.

HUMAN DIMENSION

Financial, Social and Cultural Impact Analyses

In the County Alternative the Human Dimension is incorporated into each standard and it also has a Human Dimension Standard.

Financial Impacts

Under the County Alternative, the ranchers face the same effects discussed in the RAC, though approximately only two thirds the number of ranches would be affected, and those would not be as adversely affected.

Based on the analysis of the four New Mexico regions, the ranches not meeting the standard that have a heavy dependency on public lands would be most affected by the BLM management changes. These ranchers may not be able to sustain their ranch operations into the next year. The affected ranchers would be less able to meet their overhead expenses, especially given their increased costs of improvements and maintenance.

Faced with short-term financial loss the rancher's options to reduce substantial financial risk are:

- find additional off ranch income
- find private land to rent for livestock, if available
- large ranches could sell off their assets

- acquire other government lands to use, if available
- reduce size of operations
- sell their land and water rights (liquidate)

Financial Impacts by Region: The remainder of this section discusses financial impacts by region, summary financial threshold tables and summary. The financial threshold analysis is based on the 10-year-average (See Appendix D).

Central Mountain Region: All affected ranches in the four typical ranch size categories not meeting the standard would continue to meet the Financial Threshold for Production, but at a reduced level (losses of gross margin of extra-small-69%, small-8%, medium-23%, and large-8.3%) (Table 4-13). The large ranch would still be able to meet the Economic Threshold for Risk, although with a smaller residual profit. The medium ranch could meet this threshold if resources are available to increase production (Table 4-14). The affected medium ranches not meeting the standard could continue financial activity associated with the BLM permit provided the AUMs are not reduced by 20 percent, and/or the rancher is not required to bear the costs of improvements. The affected large ranches not meeting the standard could continue financial activity associated with the BLM permits even if a 20 percent reduction is imposed, and if the ranchers are required to pay the costs of improvements.

Northwest Region: All affected ranches in the four typical ranch size categories not meeting the standard would continue to meet the Financial Threshold for Production, but at a reduced level (losses of gross margin: extra-small-69%; small-9%; medium-23%; and extra-large-8.3%) (Table 4-13). Only the extra-large ranches not meeting the standard would be able to meet the Financial Threshold for Risk if resources are available to increase production (Table 4-14). Financial activity on the affected BLM permits of extra-small and medium ranches not meeting the standard would continue provided the rancher is not required to bear the costs of improvements, and/or suffer a 20 percent reduction in AUMs.

Southeast Region: All affected ranches in the five typical ranch size categories not meeting the standard would continue to meet the Financial Threshold for Production, but at a reduced level (losses of gross margin: extra-small-53%; small-3%; medium-19%;

Synopsis Table 4-13 County Alternative Affected ranches not meeting the standard, Financial Threshold for Production				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Meeting	Meeting	Meeting	Meeting
Small ranches	Meeting	Meeting	Meeting	Meeting
Medium ranches	Meeting	Meeting	Meeting	Meeting
Large ranches	Meeting	--n/a--	Meeting	Meeting
Extra-large ranches	--n/a--	Meeting	Meeting	Meeting

Note: The information in the above table assumes: 1) there will be no reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

Synopsis Table 4-14 County Alternative Affected ranches not meeting the standard, Financial Threshold for Risk				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Not Possible	Not Possible	Not Possible	Meeting
Small ranches	Not Possible	Not Possible	Not Possible	Not Possible
Medium ranches	Not Possible	Not Possible	Meeting	Meeting
Large ranches	Meeting	--n/a--	Meeting	Meeting
Extra-large ranches	--n/a--	Meeting	Meeting	Meeting

Note: The information in the above table assumes: 1) there will be no reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

large-19%; and extra-large-17%) (Table 4-13). Three of the sizes (medium, large, and extra-large) not meeting the standard would also be able to meet the Financial Threshold for Risk (Table 4-14). Financial activity on the affected BLM permits of the remaining ranches not meeting the standard (small, medium, large, and extra-large) would continue, even if the rancher is required to pay for the costs of improvements and the BLM permits are reduced by 20 percent.

Southwest Region: All affected ranches in the five typical ranch size categories not meeting the standard would continue to meet the Financial Threshold for Production, but at a reduced level (losses of gross margin: extra-small-37%; small-2.5%; medium-43%; large-24%; and extra-large-0%) (Table 4-13). Four of the ranch sizes not meeting the standard (extra-small, medium, large, and extra-large) would be able to meet the Financial Threshold for Risk if resources are available to increase production (Table 4-14). The remaining four affected ranch sizes not meeting the standard (small, medium, large, and extra-large) would continue financial activity on the affected BLM permits even if a 20 percent reduction in BLM AUMs is added or if the rancher is required to bear the costs of improvements.

Financial Summary: The County Alternative has a potential negative effect on the existing condition of current ranch operations. Extra small, small and medium size classes of public land ranches have the potential to be put at financial risk. While an objective of the County Alternative is to stabilize the industry and related local tax base, a potential exists for a ranch to be financially burdened, especially in the short-term. In the short-term, this alternative would be less adverse financially to the affected ranchers than either the RAC or Fallback Alternatives. In addition to the financial impacts to the individual rancher, local governments and agencies would potentially lose taxes and fees from reduced number of livestock, private property assessments and improvements.

Social Impacts

The foundation for determination of the affects to social indicators can best be evaluated by looking at economic and financial information. Quantification of social impacts is not possible due to lack of being able to

identify specific lands not meeting the standards. Thus, the level of impact at the individual, family and community level can not be determined at this time. Based on economic and financial data available, only the direction of impact can be estimated. Table 4-15 shows the expected direction for social effect indicators on rural communities with dependence on public land grazing.

Based on these estimates, this alternative could have short-term adverse impacts on affected ranches as discussed in the RAC Alternative, except that the degree and intensity of impacts would be less than the RAC Alternative.

As livestock grazing or other activities are adjusted, the cumulative effects will increase. Each community has a threshold for the amount of change it can absorb and still function. The threshold for each community will depend upon the individual community's characteristics.

Family Stability

Family stability is the ability of the family to function in harmony without family strife, such as domestic violence and divorce. One of the greatest impacts to family stability is the loss of livelihood, according to empirical social research (Blehar, 1979 and Fagin and Little, 1984). With the loss of employment, the breadwinner is relegated from a position of dignity and worth to low self esteem (Borrero, 1980).

For those ranches that have lands that do not meet the standards and have to adjust their grazing operations to be in concert with the grazing guidelines, the additional costs of range improvement construction, rotating livestock or finding additional pasture would result in additional costs and less return to support the family, in the short-term. Depending on the individual family's circumstances, impacts to ranch families could be far reaching. A potential exists for a ranch family to be put at financial risk and some ranchers might go out of business. This could put the family through a threshold where divorce, crime, suicide, alcohol and family violence break down family stability. Where the family has more stress than it can endure, the family might leave the rural community or perhaps reduce its role in the community.

Table 4-15
Direction of Social Indicators based on County Alternative

Social Indicators	Short-term	Long-term	Measurement
Family Stability	Downward	Upward	Personal Income
Rural Community Stability	Downward	Upward	Employment and Census
Local Government Stability	Downward	Upward	County Budget
Agricultural Land Use	Downward	Upward	Total Acres

A reasonable projection of family stability is personal income (Branch, et al., 1982). Based on the economic analysis, the statewide personal income generated from public land livestock grazing is expected to initially drop, but then increase under this alternative. For those families that are resilient enough to make it through the short-term, they would have improved financial resources. The family stability would be expected to improve in the long-term.

Rural Community Stability

Rural community stability is the capacity of the rural community to absorb the rate and magnitude of change. Employment provides a measure of the impact on rural community stability. The exact impacts on employment can not be determined at this time. According to the Economic Impact Analysis discussed in the previous section the potential short-term employment loss from the County Alternative is 120 jobs. These jobs are hired help; most of these ranches are family run operations with the family contributing most of the labor. Over 250 ranches could be put at financial risk under the County Alternative. Based on typical ranch characteristics, if the average ranch family size is 3 members, and an average 2.5 family members work on the ranch (Fowler 1993); multiply that times 250 ranches for a total of 625 family jobs that would be potentially adversely affected. Combining the family jobs with the wage jobs, 745 jobs could potentially be affected.

Small isolated communities are more vulnerable due to weaker links to centers of political and economic influence and a less flexible job base. Because of this, the smaller communities are more likely to experience

unemployment, increased poverty, and social disruption (Range Reform '94). Social mobility, eroding the agrarian way of life, and out-migration of moderate to low income and/or ethnic minority groups and communities could be accelerated. If employment losses are concentrated in a few communities and if other factors contribute to low community resistance, the result may be a less stable community. However, if employment impacts are dispersed statewide, the destabilization to the rural communities would be less. Rural community stability could improve in the long-term, through increased employment.

Local Government Stability

Local government stability is the ability to provide services such as education, medical care, emergency services, environmental services, law enforcement, fire protection, water, roads, and waste services. In rural counties, these services are often dependent upon land value, agricultural production and the taxes they generate. When these services can no longer be provided due to the loss of revenues, adjustments in the quality or quantity of services must be made. This may result in a community passing through a threshold for local government services, as typically schools are consolidated with larger school systems when budgets are not adequate. When schools are consolidated, their ability to foster community cohesiveness declines (Jobs 1986).

A reasonable measure of local government stability is employment, agricultural products and agricultural land. They provide a tax base for the county budget.

Statewide, employment generated from public land livestock grazing is projected to drop in the short-term. The degree of impact to local government would depend on whether the effects are concentrated or dispersed among communities. The local government stability could be expected to improve in the long-term with an improved tax base.

Agricultural Land Use

Agricultural land use is the total acres of land devoted to producing crops and raising livestock. Under this alternative, it is expected that at least some of the ranchers could find the short-term impacts to their livestock grazing operations too great and they would select the option to go out of business rather than continue livestock grazing operations. Thus, a reduction in acreage of agricultural land use could be expected in the short-term. In the long-term, the ranches could be sold to new livestock operators and as land conditions improve, the land use devoted to agriculture could increase.

Cultural Impacts

If changes impact the traditions, heritage, attitudes, beliefs and values, the culture is affected. For this analysis, cultural impacts can not be quantified and are best evaluated by looking at feedback information. The following two methods are utilized in this analysis:

- public polls
- public comments

In a poll conducted by the University of New Mexico's Public Policy Center, a substantial majority (over 75%) of New Mexico citizens believe it to be moderately to extremely important to preserve ranching as a way of life in the State. However, the same poll identified that 49 percent view environmental preservation as the top priority and 22 percent view recreational use as the top priority. Thus, approximately 71 percent would support a program that provides for environmental enhancement or recreational opportunities.

Rural Values, Attitudes and Beliefs

Most of the public land ranches in New Mexico are family run businesses, originating from three land based cultures (Hispanic, Native American and Anglo-Celtic) discussed in Chapter Three. Where reduced revenues force individuals from their traditional manner of living,

the ranch operation is impacted adversely. This affects the extended families, which in turn, affects the ranching based cultures. The sense of place with its association with a sense of well-being and community stability would be reduced for the ranching communities if adverse impacts are concentrated.

The rural communities of the arid Southwest are made up of people who share beliefs and values which are, if not embodied by, closely linked to the culture of ranching (Smith, 1997). People who ranch rely on their interaction with the public lands for the centering and stabilizing of the lifeway. As the individuals who ranch are displaced by increased economic pressures and/or the demand for changing uses, the values of the communities as a whole begin to fade in the descent toward a more homogenous national monoculture. This can be particularly important for Native American and Hispanic ranchers from Northern New Mexico where livestock operations tend to be vulnerable due to their small size. Additionally, the Anglo-Celtic culture cannot exist without grazing cattle in the highlands (McWhiney, 1988).

Of the commentors on the Draft RMPA/EIS reflecting rural or agricultural values, approximately 72 percent supported the County Alternative. They expressed that it is important to have the Human Dimension Standard. They supported the County Alternative because of its greater emphasis on the Human Dimension and because they believe fewer ranches would be affected.

Environmental Values, Attitudes and Beliefs

The poll conducted by the University of New Mexico's Public Policy Center found that 49 percent of New Mexico citizens believe environmental preservation to be the top priority. Based on their commitment that environmental preservation is their number one priority, it is reasonable to group these individuals into a culture.

Of the commentors on the Draft RMPA/EIS reflecting environmental values are important, approximately 47 percent supported the Fall Back Alternative. They expressed that the County Alternative was not consistent with the regulations and was too focused on the short-term economic needs of ranchers.

Conclusion

Of all the alternatives, the rural interests supported the County Alternative the most, while the environmental interests opposed the County Alternative the most. Table 4-16 shows the expected direction for cultural indicators.

Based on the University of New Mexico’s Public Policy Center poll this alternative would please the over 75 percent of New Mexico citizens who view preservation of ranching as a way of life to be moderately to extremely important. However, it may be a concern to the 71 percent of New Mexico citizens who view environmental preservation or recreation as the top priority.

Table 4-16 Consistency with Cultural Indicators - County Alternative		
Cultural Indicators	Short-term/Long-term Direction	Measurement
Rural Values, Attitudes and Beliefs	High	Comments
Environmental Values, Attitudes and Beliefs	Low	Comments

FALLBACK ALTERNATIVE

VEGETATION

Upland Vegetation

Under the Fallback Alternative, the focus of management and the application of grazing guidelines within this alternative would occur on the public lands that do not meet the standard. Changes in grazing management would include water development, fences, and vegetative treatments and possible deferment on areas, not meeting the standard. In the short-term, little improvement would be expected. However, in the long-term, measurable improvement in vegetative cover and composition would be expected due to grazing management practices. Additionally, vegetation would be enhanced through the use of mechanical and chemical manipulations in both the short- and long-term. These improvements would occur mostly within the desert and woodland biomes in MLRAs 36, 42, and 70.

Riparian Vegetation

Under the Fallback Alternative, riparian communities and vegetation on 154 riparian segments classified as nonfunctional or functional at risk with a downward trend or where the trend is not apparent (stable), would not meet the standards. These areas are affected, at least in part, by grazing activities. Management efforts in the short-term are projected to improve 20 segments. Of this total, 10 segments would improve to proper functioning condition. In the long-term, 29 areas would improve to proper functioning condition and 58 other segments would be improved. Improvement of many areas would be limited by the fragmented distribution of BLM riparian areas and the lack of coordinated watershed management efforts.

SOILS

With intense management under the Fallback Alternative, there would be a continued slow improvement over the long-term in upland soil conditions where soils are more productive, such as Mollisols, Alfisols, and moderately fine textured Entisols. On poorer sites, and with less intensive management, there would be little or no change over the long-term in the health of the upland soils except in

response to drought or additional moisture conditions. No changes are expected for either case over the short-term. This alternative would result in the most overall improvement of all the alternatives due to implementation of grazing management guidelines. Over half of the uplands not meeting the standard for this alternative are in MLRA 42; however, the soil response to management in this MLRA would be slow. More profound response would come from the better sites such as those in MLRAs 36 (northern part); 39, 41, 48A, 70 (northern part); and the gently sloping uplands of MLRA 77.

WATER

In the long-term, continued implementation of BMPs to reduce NPS pollution and riparian area management would promote reductions in erosion and sediment production from public lands and slowly improve water quality. There would be less sediment, nutrients, salts, and biological contaminants in the water. The cycle of apparent arroyo filling is expected to continue which would support riparian restoration, in turn improving water quality by acting as a filter for many pollutants.

While water quality affected by public land uses might improve, it is not expected that any of the water quality-limited stream reaches identified by the state would improve enough to meet state standards solely from this alternative. The impacts on those water quality-limited stream reaches from non-public land uses and sources of pollutants would also have to be reduced to help meet state standards.

GRAZING ADMINISTRATION

Under the Fallback Alternative, livestock use levels are expected to remain approximately at the seven-year average over the short-term, similar to the No Action Alternative. Adjustments in livestock numbers are expected to be upward on some allotments and downward on others. Adjustments are not expected to be large, either upward or downward because in general, current permits and leases are consistent with grazing capacities established through BLM's rangeland monitoring program. Statewide AUM adjustments are expected to balance out over the long-term. However, fluctuation in use levels can be expected due to a variety of factors such as weather conditions and the price of livestock. The long-term AUM projection is expected to be around preference

which is 1,968,341 AUMs.

Implementing the guidelines for the Fallback Alternative would be similar to what BLM is doing now in the No Action Alternative. The livestock management practices may include rest or deferment, adjusting livestock numbers, changing season of use, modifying or developing range improvements and vegetative land treatments. There would be segments of riparian habitat where current grazing practices would be adjusted to achieve riparian standards. In the short-term, functional condition on 20 riparian segments would be expected to improve. In the long-term, improvement in functional condition would be expected on 58 segments. Vegetation and litter in the riparian zone should respond and increase on the segments improved. The increase in canopy cover and litter should decrease the runoff and sediment, and improve the water quality.

Under this alternative 480 permittees could be affected. On the majority of the allotments which are larger, modifications in use will have only minor impact to their ranching operation; however, smaller operations may be affected more. Permittees most affected by the guidelines would be those with small one-pasture allotments where there is continuous, season-long grazing. Continuous, season long grazing is allowed to occur only when it has been demonstrated to be consistent with achieving a healthy, properly functioning ecosystem. Season-long grazing is not inherently inappropriate, if grazing intensity and livestock distribution are managed properly (CAST, 1996) It however may be necessary to defer grazing during periods of plant growth and regrowth. As a result the permittee may be burdened financially by having to lease private pasture, improve the private lands, fence to create an additional pasture or partner with another allotment. There is also the additional costs associated with the handling of livestock for gathering and transporting.

WILD HORSES

The impacts to the Socorro wild horse herd from the implementation of the Fallback Alternative would be similar to the No Action Alternative, with the exception that the RMP decision would be in conformance with the fallback standard for rangeland health. Based on the monitoring data, the area is in fair to good condition with a static trend and currently meets the standard. The existing resource condition would improve as in

the No Action Alternative as long as the AML of 50 is maintained and balanced with livestock grazing and other uses.

The impacts to the Farmington wild horse herd would be similar to the No Action Alternative.

WILDLIFE

The standards and guidelines under the Fallback Alternative are the most restrictive, and would focus management activities on more acres of wildlife habitat protection than the other alternatives.

Implementing the national fallback standards and guidelines would benefit wildlife in the short- and long-term in both upland and riparian areas. The improvement of riparian habitats currently functioning at risk would benefit wildlife, since these areas are the most diverse and productive areas. Over the long-term, the Fallback Alternative would help ensure that site-specific, as well as landscape-level habitat needs are considered when developing LAPs. The Fallback Alternative would allow for a slight increase in actual AUMs over the long-term, but would consider and protect critical wildlife resources. The use of livestock as a management tool would be allowed to restore and maintain sustainable habitats, increase biological diversity and vegetative productivity, and promote properly functioning uplands and riparian areas.

By managing rangeland to restore and maintain natural ecosystems, the Fallback Alternative would benefit wildlife in the long-term by increasing or improving the amount and quality of habitat. With restored naturally-functioning ecosystems comes an increase in biological diversity. Greater biological diversity would allow more opportunities for most species to meet basic life requirements.

36 - New Mexico and Arizona Plateaus and Mesas

Big Game

Long-term benefits to big game would occur from implementing the Fallback Alternative, and improving upland habitat currently in poor condition or not meeting the standard due to grazing practices. Mule deer and elk would be the primary big game species benefitting from these actions. There would be an increase in the deer population through improving the

quality and quantity of browse on upland sites, and creating new fawning areas. Elk are currently increasing in numbers; however, they would be controlled by the NMDGF.

The quality of habitat would improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to the strong emphasis on riparian management. However, due to other limiting factors (drought) and hunting regulations no measurable increase in populations would be expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use can potentially increase the number of roads on public land, resulting in degradation of big game habitat and increased wildlife harassment and displacement. Under this alternative and associated standards for erosion and wildlife habitat, road closures would continue.

Upland Game and Nongame

Upland sites would improve very rapidly over the short- and long-term under the Fallback Alternative, benefitting most upland wildlife species. The continued construction of water developments where needed would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

37 - San Juan River Valley Mesas and Plateaus

Long-term benefits to big game would occur from the Fallback Alternative by utilizing the most restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the standard due to grazing practices.

The quality of habitat would improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to the strong emphasis on riparian management. However, due to other limiting factors (drought) and hunting regulations no

measurable increase in populations would be expected.

Allowing public access while controlling off-highway vehicle use and protecting wildlife habitat is a major concern for most field offices. Off-highway vehicle use can potentially increase the number of roads on public land, resulting in degradation of big game habitat and increased wildlife harassment and displacement. Under this alternative and associated standards for erosion and wildlife habitat, road closures would continue.

Upland Game and Nongame

Upland sites would improve over the long-term, due to land treatments and proper grazing practices, resulting in benefits for most upland wildlife species. The continued construction of water developments would favor upland game bird species.

Special management for raptor nesting areas would continue. Small changes in the overall landscape while protecting nests sites would benefit raptors by increasing their prey base.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

39 - Arizona and New Mexico Mountains

Big Game

The BLM manages very little public land within this MLRA. Under this alternative, there are several areas where the standards and guidelines would improve wildlife habitat. Upland improvement projects along with controlled grazing would improve wildlife habitat for big game species over the long-term. The Southwestern part of the state has a very active fire season. These natural events can be beneficial to resident elk herds by creating open meadow areas and increasing the amount of forage.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl

would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat over the long-term would be improved.

41 - Southeastern Arizona Basin and Range

A small percentage of this MLRA exists on BLM lands. Upland habitat would be improved under this alternative, thereby improving Coues' whitetail deer habitat in the southwestern corner of New Mexico.

42 - Southern Desertic Basins, Plains, and Mountains

Long-term benefits to big game would occur under the Fallback Alternative by utilizing the most restrictive guidelines for livestock grazing, and improving upland habitat currently in poor condition or not meeting the standard due to grazing practices.

Big Game

This alternative would rectify historic land use practices that have caused problems such as the dewatering of streams and springs, and displacement of big game species. Implementation of proper grazing practices, vegetative land treatments, increased water developments, and cooperative management efforts would have long-term benefits to big game habitat. Natural events (fire, flooding, etc.) that create a mosaic within the landscape and diversify the plant community would also benefit wildlife. There would be a slight increase in the deer population from improving the quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and land owners.

Competition for food and space between mule deer and the Iranian ibex would continue under this alternative. Oryx would continue to move off the White Sands Missile Range and may potentially displace mule deer and antelope because of their size and aggressive

behavioral patterns.

The quality of habitat would improve over the long-term for riparian-dependent big game species (turkey, deer, and furbearers) due to the strong emphasis on riparian management. However, due to the small percentage of riparian habitat located on public land and other limiting factors affecting big game populations, no large change in populations would be expected.

Upland Game and Nongame

Upland sites would improve in the short-term and fully recover in the long-term, from land treatments and proper grazing practices, benefitting scaled quails, and Gambel's quail, and dove populations. The continued construction of water developments where needed would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land-resident fisheries habitat would be improved over the long-term.

48 - Southern Rocky Mountains

A small percentage of this MLRA exists on BLM lands. Upland habitat would improve under this alternative, resulting in the improvement of some wildlife habitat within the MLRA.

51 - High Intermountain Valleys

Big Game

Long-term benefits to big game would occur from the Fallback Alternative by utilizing the most restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices. Rocky Mountain elk would continue to be a key wildlife species within the Taos field office. Critical winter range would be improved through implementation of the Fallback standards and guidelines.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, resulting in a benefit for scaled quail, mourning dove, Merriam's turkey, numerous raptors, and migratory bird populations. The continued construction of water developments would favor upland game bird species.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land - resident fisheries habitat over the long-term would be improved.

70 - Pecos/Canadian Plains and Valleys Big Game

Short-and long-term benefits to big game would result from the Fallback Alternative by utilizing the most restrictive guidelines on livestock grazing, and improving upland habitat currently in poor condition or not meeting the biotic standard due to grazing practices. The implementation of guidelines which identify proper grazing practices, vegetative land treatments, and water developments would improve wildlife habitat for big game species over the long-term. Natural events (fire, flooding, etc.) That create a mosaic within the landscape and diversify the plant community would also benefit wildlife. There would be a slight increase in the deer population through improving the quality and quantity of browse on upland sites, and creating new fawning areas. Pronghorn antelope populations are expected to increase over the long-term due to improved habitat conditions and transplants. Habitat conditions would improve over the long-term due to improved ecological conditions and movement patterns. Antelope transplants would be expected to continue in cooperation with the NMDGF and other land owners.

Upland Game and Nongame

Upland sites would improve over the long-term from land treatments and proper grazing practices, resulting in a benefit for scaled quail, bobwhite quail, mourning dove, numerous raptors, and migratory bird populations. The continued construction of water developments where needed would favor upland game bird species.

With the current regional emphasis on the decline of lesser prairie chicken populations, this alternative would have short-and-long-term benefits on approximately 272,000 acres of lesser prairie chicken habitat that would meet special habitat requirements. Recent droughty conditions along with year-long grazing has impacted lesser prairie chicken habitat from the removal of residual growth on bluestems. Most allotments within the Caprock WHA allow for year-long grazing and therefore may exceed the utilization levels required for proper nesting habitat. Under this alternative, wildlife resource conflicts between grazing and lesser prairie chickens would be minimized with the emphasis placed on native populations and their habitat, especially during drought years.

Waterfowl/Fisheries

Habitat quality for resident fisheries and waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land - resident fisheries habitat over the long-term would be improved.

77 - Southern High Plains

Big Game

The BLM manages very little public land within this MLRA. However, this alternative would improve wildlife habitat by establishing strict livestock management-guidelines compatible with wildlife resources.

Upland Game and Nongame

Upland sites would improve in the short- and long-term under this alternative, resulting in a benefit for most upland game and nongame species.

Waterfowl

Habitat quality for waterfowl would generally change in response to the changes in overall riparian and aquatic habitats. Public land resident fisheries habitat over the long-term would be improved.

SPECIAL STATUS SPECIES

Under the Fallback Alternative, the focus of

management and application of grazing guidelines would occur on public lands not meeting the biotic and upland standards, and public land not meeting the upland standard due to current grazing practices. It is more efficient to manage an entire pasture than to manage a small portion of a pasture. Managing the smaller portion would likely incur large costs for fencing, establishment of water sources, and other management facilities. These areas are contained primarily within the desert biome of MLRAs 36, 37, and 42, and the grassland biome of MLRA 70. There would be benefits to a portion of the 95 species occurring in the improved areas of the desert and grassland biomes managed under this alternative. Of concern when implementing livestock grazing practices is that the approximately 4,285,000 acres in areas of late-seral and PNC ecological status not decline due to redistribution of grazing patterns. These areas, in many cases, provide suitable habitat to support special status species with high-seral habitat requirements.

Also of concern in this alternative are the approximately 112 riparian segments that do not meet the proposed standards, due, at least in part, to livestock grazing. The greatest benefits to special status species resulting from this alternative would be the improvement of riparian conditions on 20 riparian segments in the short-term and 58 riparian segments in the long-term. Many of the 76 special status species associated with public land riparian areas and their aquatic systems would benefit from the improvement in riparian condition.

Areas that have passed the threshold of improvement have lost the capability to recover toward PNC within the long-term of this analysis, even in the absence of grazing. In some cases, the PNC has shifted to a different community. Even with chemical or mechanical manipulation, these areas may never re-establish a community like the lost native community. This is due to the change in ecosystem functionality that occurs with the combined impacts of soil loss and vegetative community shifts associated with major disruptions caused by past land use practices and climate change. Examples of these are former desert grasslands which are now mesquite sand dunes and creosote bush/desert pavement communities of the Chihuahuan Desert in MLRA 42. Special status species that formerly used these areas will have differing abilities to recolonize these habitats as the relative condition improves with subsequent management. Some species, such as obligate grassland species like Baird's sparrow, may never be able to return to former habitats for these

reasons. Other areas, such as the shinnery oak/dunes areas of MLRAs 42 and 70 retain profound capability to return to previous grassland dominance, and the ability to support grassland species, such as the lesser prairie chicken.

RECREATION

Recreational visitor use would continue to increase, especially in areas where urban visitors recreate. Developed recreation sites are expected to have increased use. The recreational use levels on a statewide basis would not be expected to be impacted by the standards or the livestock grazing guidelines.

The Fallback Alternative would provide for increased management of off-highway vehicle use and less road proliferation on 4,600 acres in MLRA 36 and 8,000 acres in MLRA 42. Although this area may be important to off-highway vehicle visitors frequenting the area, on a statewide basis it represents a small percent of the public land acreage.

Increased recreation management would occur on 10,600 acres in MLRA 36 and 500 acres in MLRA 37 where recreational activities are keeping the area from meeting the upland standard. Additionally, there are 12,600 acres in MLRA 36 not meeting the biotic standard due to recreation activities.

Considering that there may be overlap on many of the acres identified as having recreation conflicts with the standards, the additional restrictions would occur on less than 33,700 acres. This would not be a detectable impact on the recreational use of the public lands on a statewide basis.

It is expected that the present conflicts between livestock use and the developed area at the Wild Rivers Recreation Area would be resolved over the next five years. As additional recreational sites are developed, livestock would be expected to be excluded.

The BLM would be expected to resolve livestock grazing conflicts on riparian areas. In the long-term, an additional 58 riparian segments would be expected

to improve in condition, improving the quality of the visit for recreationists on the public lands.

Not all the acres are failing to meet the standards due to livestock grazing. However, many acres would be

expected to have an improved quality of the visit for recreational visitors due to the improved native vegetation and animal communities.

WILDERNESS

The Fallback Alternative standards place emphasis only on the natural systems, which would tend to speed up the improvement in the natural systems.

Where sites that are not meeting the standard are included in WAs or WSAs, they would be expected to be a high priority for improved management. The review of WAs and WSAs to determine if they meet the standards should help determine what management changes are needed. However, in WAs and WSAs the Wilderness Act and BLM management guidelines for these areas would limit some of the tools for management. For example, the range improvements that are normally applied to support improved livestock grazing management and land treatment techniques may not be permitted in WAs and in WSAs. However, if the WAs and WSAs meet the standards, there would be no impact on wilderness values.

CULTURAL RESOURCES

Under the Fallback Alternative, emphasis on stabilizing soils, reducing erosion, restoring riparian-wetland areas and streambank stability, providing periods of rest to allow for plant growth or regrowth, and locating of new, and relocating of existing facilities away from riparian areas would all contribute to a reduction in the rate of damage to cultural resources.

PALEONTOLOGY

Under this alternative, emphasis on stabilizing soils reducing erosion, restoring riparian-wetland areas and streambank stability, providing periods of rest to allow for plant growth or regrowth, and locating new, and relocating of existing facilities away from riparian areas would all contribute to a reduction in the rate of damage to paleontological resources.

REALTY/LAND USE

Impacts on realty and land use actions would be same as for the Proposed Action.

MINERAL RESOURCES

Impacts on mineral resources would be the same for the Proposed Action.

NATIVE AMERICAN CULTURAL ISSUES

Native American concerns would continue to be protected under the laws as outlined in Chapter 3. Emphasis on the use of native plant species and improved habitat would ensure continued or enhanced availability of plant and animal species traditionally used by Native Americans.

ECONOMIC

Under Fallback alternative and the scenario that all ranches stayed in business, the least economic impact was when there were no AUM reductions. The initial loss of economic activity (Table 4-17, Table 4-18) was almost \$7.9 million of which approximately a \$1.5 million loss in personal income. An initial loss of 56 FTEs was estimated under this alternative. As compared to the \$24 million loss when 20% of AUMs were reduced and 22% of the ranches converted to real estate. These impacts were for a single year and were aggregated over a seven year period to quantify the cumulative impacts to year seven.

Year 10 cumulative impacts included an authorization of additional AUMs, which allowed the ranch unit to restock any AUMs that were reduced plus 1/3 of the AUMs toward preference. The Fallback Alternative minimum impact after 10 years occurred when none of the ranches converted to real estate, no AUM reductions, and the ranch financed the improvements. The greatest economic loss occurred when there was a 20% reduction in AUMs and BLM financing of improvements under the scenario of 22% of ranches not meeting standard and converting to real estate. After the tenth year of implementation of the guidelines, the negative impacts due to implementation of improvements lessened to only maintenance and repairs under this alternative.

Table 4-17: Fallback Alternative - Economic Impacts (cumulative)				
All range livestock- no ranches converting to real estate				
Year 1	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(7,870,000)	(7,859,000)	(15,004,000)	(14,992,000)
Personal Income	(1,537,000)	(1,826,000)	(2,648,000)	(2,967,000)
Employment	(56.02)	(51.84)	(130.29)	(125.69)
Year 14	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(55,828,000)	(55,720,000)	(48,866,000)	(48,747,000)
Personal Income	(12,410,000)	(15,305,000)	(11,685,000)	(14,879,000)
Employment	(23.67)	(19.49)	(10.34)	(5.74)
Year 21	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(7,890,000)	(7,782,000)	60,075,000	60,195,000
Personal Income	(5,928,000)	(8,823,000)	3,964,000	770,000
Employment	33.07	37.25	46.40	51.00

Table 4-18: Fallback Alternative - Economic Impacts (cumulative)				
All range livestock ranches w/22% converting to real estate				
Year 1	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(18,166,000)	(18,157,000)	(23,954,000)	(23,945,000)
Personal Income	(3,042,000)	(3,268,000)	(3,941,000)	(4,190,000)
Employment	(163.28)	(160.06)	(224.33)	(220.75)
Year 14	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(153,112,000)	(153,028,000)	(163,819,000)	(163,726,000)
Personal Income	(26,090,000)	(28,348,000)	(28,014,000)	(30,505,000)
Employment	(121.71)	(118.49)	(131.94)	(128.36)
Year 21	Fallback, No BLM AUM Reduction		Fallback 20% BLM AUM Reduction	
Capital Outlay	50 & 100% BLM	100% Rancher	50 & 100% BLM	100% Rancher
Economic Activity	(92,790,000)	(92,706,000)	(69,814,000)	(69,721,000)
Personal Income	(16,701,000)	(18,959,000)	(13,643,000)	(16,135,000)
Employment	(42.03)	(38.81)	(52.26)	(48.68)

In year 14 under the Fallback Alternative, it was assumed another 1/3 of preference AUMs were authorized on the BLM permits/leases that had previously not met the standard. Minimum impacts (Table 4-17) occurred when was a 20% reduction of AUMs and the rancher funded 100% of the improvements. These impacts included: losses of almost \$48 million in economic activity, losses of \$15 million in personal income, and a loss of 5.74 FTEs. The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the BLM funded the cost of improvements (Table 4-18). These impacts included: a loss of almost \$164 million in economic activity, a loss of \$28 million in personal income, and a loss of almost 132 FTEs.

Year 21 was the final year of analysis; it was assumed that the allotment should have achieved an ecological condition surpassing the standards and the allotment would be operated with full preference AUMs. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions. Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-17 and 4-18). An important assumption in the analysis was that allotments not meeting the standard would be operated at preference AUMs at the end of 21 years, without this assumption all impacts would be negative.

Under the Fallback Alternative, the economic impacts were estimated to be between a loss in economic activity of \$92.7 million and a gain of \$60 million depending upon a combination of scenarios, assumptions, and options. The range for personal income would be expected to be between a loss of about \$19 million and a gain of almost \$4 million. For jobs the range is estimated to be between a loss of almost 52 FTEs and a gain of 51 FTEs.

Revised Economic Analysis

This analysis recalculated the economic impacts after the methodology modifications. It includes the allotments meeting the standard moving toward preference along with the allotments that did not meet

the standard. This assumes that all BLM allotments within the State of New Mexico are grazing at the historical preference by year 21.

Under this modified methodology the initial (year 1) and Year 7 impacts are identical to the impacts before the modification. However, after year 7 the negative impacts are less than the initial analysis due to the additional allotments moving toward preference.

In year 14 under the Fallback Alternative, it was assumed another 1/3 of preference AUMs were authorized on all of the BLM permits/leases. Minimum impacts (Table 4-19) occurred when was no reduction of AUMs and the rancher funded 100% of the improvements. These impacts included: losses of almost \$28 million in economic activity, losses of \$11 million in personal income, and a gain of 17 FTEs. The greatest economic loss occurred when 22% of the ranches converted to real estate and there was a 20% reduction of AUMs and the BLM funded the cost of improvements (Table 4-20). These impacts included: a loss of almost \$184 million in economic activity, a loss of \$31 million in personal income, and a loss of almost 90 FTEs.

Year 21 was the final year of analysis; it was assumed that the allotments should have achieved an ecological condition surpassing the standards and all of the allotments would be operated with full preference AUMs. The economic impacts varied widely dependant upon the assumptions, and options analyzed. It was recognized that the actual impacts would be in the range between the minimum and maximum economic impacts estimated, since there would be a wide variety of allotment conditions, improvement construction, financing of the improvements, and rancher reactions. Therefore, it was believed that the economic impacts would actually be in a range for this alternative (Tables 4-19 and 4-20). An important assumption in the analysis was that all BLM allotments would be operated at preference AUMs at the end of 21 years, without this assumption all impacts would be negative.

Under the Fallback Alternative, the economic impacts were estimated to be between a loss in economic activity of \$95 million and a gain of \$47 million depending upon a combination of scenarios, assumptions, and options. The range for personal

Table 4-19: Fallback Alternative - Economic Impacts (cumulative)

All range - no ranches converting to real estate				
Year 1 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(7,870,000)	(7,859,000)	(15,004,000)	(14,992,000)
Personal Income	(1,537,000)	(1,826,000)	(2,648,000)	(2,967,000)
Employment	(56)	(52)	(130)	(126)
Year 7 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(55,092,000)	(55,016,000)	(105,030,000)	(104,947,000)
Personal Income	(10,758,000)	(12,784,000)	(18,535,000)	(20,771,000)
Employment	(56)	(52)	(130)	(126)
Year 10 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(69,438,000)	(69,330,000)	(107,368,000)	(107,248,000)
Personal Income	(13,946,000)	(16,841,000)	(19,944,000)	(23,136,000)
Employment	(32)	(28)	(20)	(16)
Year 14 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(28,284,000)	(28,176,000)	(99,290,000)	(99,171,000)
Personal Income	(8,113,000)	(11,008,000)	(19,319,000)	(22,514,000)
Employment	13	17	33	38
Year 21 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	47,198,000	47,306,000	(23,222,000)	(23,103,000)
Personal Income	2,635,000	(260,000)	(8,793,000)	(11,987,000)
Employment	74	78	94	99

Table 4-20: Fallback Alternative - Economic Impacts (cumulative)				
All range livestock ranches w/22% converting to real estate				
Year 1 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(18,166,000)	(18,157,000)	(23,954,000)	(23,945,000)
Personal Income	(3,042,000)	(3,268,000)	(3,941,000)	(4,190,000)
Employment	(163)	(160)	(224)	(221)
Year 7 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(127,158,000)	(127,099,000)	(167,678,000)	(167,612,000)
Personal Income	(21,294,000)	(22,874,000)	(27,585,000)	(29,329,000)
Employment	(163)	(160)	(224)	(221)
Year 10 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(169,842,000)	(169,758,000)	(207,623,000)	(207,530,000)
Personal Income	(28,444,000)	(30,702,000)	(34,371,000)	(36,862,000)
Employment	(128)	(125)	(140)	(136)
Year 14 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(125,567,000)	(125,483,000)	(183,452,000)	(183,359,000)
Personal Income	(21,793,000)	(24,051,000)	(30,780,000)	(33,272,000)
Employment	(86)	(82)	(90)	(87)
Year 21 Capital Outlay	Fallback, No BLM AUM Reduction 50 & 100% BLM 100% Rancher		Fallback, 20% BLM AUM Reduction 50 & 100% BLM 100% Rancher	
Economic Activity	(37,701,000)	(37,617,000)	(95,586,000)	(95,493,000)
Personal Income	(8,132,000)	(10,390,000)	(17,160,000)	(19,651,000)
Employment	(5)	(2)	(10)	(7)

income would be expected to be between a loss of about \$19 million and a gain of almost \$3 million. For jobs the range is estimated to be between a loss of almost 10 FTEs and a gain of 99 FTEs.

HUMAN DIMENSION

Financial, Social and Cultural Impact Analyses

The Fallback Alternative has four standards, all of which are physical and biological standards. The Fallback Standards do not mention a Sustainable Communities and Human Dimension Standard.

Financial Impacts

Under the Fallback Alternative the ranchers face the same effects discussed in the RAC, though approximately one eighth more ranches would be effected.

Based on the analysis of the four New Mexico regions, the ranches not meeting the standard that have a heavy dependency on public lands would be the most affected by the BLM management changes. These ranchers may not be able to sustain their ranch operations into the next year. The affected ranchers would be less able to meet their overhead expenses, especially given their increased costs of improvements and maintenance.

Faced with short-term financial loss the rancher's options to reduce substantial financial risk are:

- find additional off ranch income
- find private land to rent for livestock, if available
- large ranches could sell off their assets
- acquire other government lands to use, if available
- reduce size of operations
- sell their land and water rights (liquidate)

Financial Impacts by Region: The remainder of this section discusses financial impacts by region, summary financial threshold tables and summary. The financial threshold analysis is based on the 10-year-average (See Appendix D).

Central Mountain Region: The extra-small ranch not meeting the standard would no longer meet the Financial Threshold for Production; therefore, grazing on the BLM permit portion would not be financially viable, at least for the short-term. The small, medium, and large ranches not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin of 82.5%, 44%, and 31% respectively) (Table 4-21). These ranches not meeting the standard would not be able to meet the Financial Threshold for Risk (Table 4-22). Therefore financial activities could be substantially reduced or eliminated on all four ranch size categories not meeting the standard, unless the financial impacts are mitigated.

Northwest Region: The extra-small and small ranches not meeting the standard would no longer meet the Financial Threshold for Production, therefore grazing on the BLM permit portion would not be financially viable, at least for the short-term. The medium and extra-large ranches not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin of 67% and 71%, respectively) (Table 4-21). The ranches not meeting the standard would be not able to meet the Financial Threshold for Risk (Table 4-22).

Southeast Region: All five ranch size categories not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (losses of gross margin: extra-small-93%; small-75%; medium-77%; large-64%; and extra-large-68%) (Table 4-21). The five ranch sizes not meeting the standards would not be able to meet the Financial Threshold for Risk (Table 4-22).

Southwest Region: The small ranches not meeting the standard would no longer meet the Financial Threshold for production; therefore grazing on the BLM permit portion would not be financially viable, at least for the short-term. The extra-small, medium, large and extra-large ranches not meeting the standard could still meet the Financial Threshold for Production, but at a much reduced level (loss of gross margin of 89%, 91%, 84%, and 80%, respectively) (Table 4-21). The ranches not meeting the standard would not be able to meet the Financial Threshold for Risk (Table 4-22). Only the affected medium ranches not meeting the standard would continue financial

Synopsis Table 4-21 Fallback Alternative Affected ranches not meeting the standard, Financial Threshold for Production				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Not Possible	Not Possible	Meeting	Meeting
Small ranches	Meeting	Not Possible	Meeting	Not Possible
Medium ranches	Meeting	Meeting	Meeting	Meeting
Large ranches	Meeting	--n/a--	Meeting	Meeting
Extra-large ranches	--n/a--	Meeting	Meeting	Meeting

Note: The information in the above table assumes: 1) there will be not reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

Synopsis Table 4-22 Fallback Alternative Affected ranches not meeting the standard, Financial Threshold for Risk				
	Central Mountain Region	Northwest Region	Southeast Region	Southwest Region
Extra-small ranches	Not Possible	Not Possible	Not Possible	Not Possible
Small ranches	Not Possible	Not Possible	Not Possible	Not Possible
Medium ranches	Not Possible	Not Possible	Not Possible	Meeting
Large ranches	Not Possible	--n/a--	Not Possible	Not Possible
Extra-large ranches	--n/a--	Not Possible	Not Possible	Not Possible

Note: The information in the above table assumes: 1) there will be no reduction in BLM AUMs, and 2) the rancher is not required to bear the cost of improvements.

Source: Southwest Center for Resource Analysis Report - prepared by Rita D. Harbison, M.B.A. -WNMU.

activity associated with the BLM permit, and only if these ranches do not experience a 20 percent reduction in BLM AUMs, and/or if the rancher is not required to bear the costs of improvements.

Financial Summary: This alternative has a potential negative effect on the current conditions of public ranch operations. All size classes of public land ranches have the potential to be put at financial risk. The Fallback Alternative would be more adverse financially to the affected ranchers than either the County or RAC Alternatives. The Fallback has the most indirect negative economic impacts to local governments and agencies with the potential loss of taxes and fees from reduced numbers of livestock, private property assessments and improvements. In the long-term, financial improvement is dependent upon mitigation measures to reduce the financial burden on the ranchers, as well as local governments and agencies.

Social Impacts

The foundation for determination of the affects to social indicators can best be evaluated by looking at economic and financial information. Quantification of social impacts is not possible due to lack of being able to identify specific lands not meeting the standards. Thus, the level of impact at the individual, family and community level can not be determined at this time.

Based on economic and financial data available, only the direction of impact can be estimated. Table 4-23 shows the expected direction for social effect indicators on rural communities with dependence on public land grazing. Based on these estimates, this alternative could have adverse impacts on affected ranches as discussed in the RAC Alternative, except that the degree and intensity of impacts would be greater than the RAC Alternative.

As livestock grazing or other activities are adjusted, the cumulative effects will increase. Each community has a threshold for the amount of change it can absorb and still function. The threshold for each community will depend upon the individual community’s characteristics.

Family Stability

Family stability is the ability of the family to function in harmony without family strife, such as domestic violence and divorce. One of the greatest impacts to family stability is the loss of livelihood, according to empirical social research (Blehar, 1979 and Fagin and Little, 1984). With the loss of employment, the breadwinner is relegated from a position of dignity and worth to low self esteem (Borrero, 1980).

For those ranches that have lands that do not meet the standards and have to adjust their grazing operations to be in concert with the grazing guidelines, the

Table 4-23 Direction of Social Indicators based on Fallback Alternative			
Social Indicators	Short-term	Long-term	Measurement
Family Stability	Downward	Upward	Personal Income
Rural Community Stability	Downward	Upward	Employment and Census
Local Government Stability	Downward	Upward	County Budget
Agricultural Land Use	Downward	Upward	Total Acres

additional costs of range improvement construction, rotating livestock or finding additional pasture would result in additional costs and less return to support the family, in the short-term. Depending on the individual family's circumstances, impacts to ranch families could be far reaching. A potential exists for a ranch family to be put at financial risk and some ranchers might go out of business. This could put the family through a threshold where divorce, crime, suicide, alcohol and family violence break down family stability. Where the family has more stress than it can endure, the family might leave the rural community or perhaps reduce its role in the community.

A reasonable projection of family stability is personal income (Branch et al., 1982). Based on the economic analysis, the statewide personal income generated from public land livestock grazing is expected to drop, under this alternative. Although in the long-term personal income could improve from the short-term low it would not reach the present level. Thus, family stability would remain lower, at least for a portion of the families.

Rural Community Stability

Rural community stability is the capacity of the rural community to absorb the rate and magnitude of change. Employment provides a measure of the impact on rural community stability (Branch, et al., 1982). The exact impacts on employment can not be determined at this time. According to the Economic Impact Analysis discussed in the previous section, the potential short-term employment loss from the Fallback Alternative is 224 jobs. These jobs are hired help; most of these ranches are family run operations with the family contributing most of the labor. Over 450 ranches could be put at financial risk under the Fallback Alternative. Based on typical ranch characteristics, if the average ranch family size is 3 members, and on the average 2.5 family members work on the ranch (Fowler, 1993); multiply that times 400 ranches for a total of 1,125 family jobs that would potentially adversely affected. Combining the family jobs with the wage jobs, 1,350 jobs could potentially be affected.

Small isolated communities are more vulnerable due to weaker links to centers of political and economic influence and a less flexible job base. Because of this, the smaller communities are more likely to experience unemployment, increased poverty, and social disruption (Range Reform '94). Social mobility, eroding

the agrarian way of life, and out-migration of moderate to low income and/or ethnic minority groups and communities could be accelerated. If employment losses are concentrated in a few communities and if other factors contribute to low community resistance, the result may be a less stable community. However, if employment impacts are dispersed statewide, the destabilization to the rural communities would be less. Rural community stability could improve in the long-term, through increased employment.

Local Government Stability

Local government stability is the ability to provide services such as education, medical care, emergency services, environmental services, law enforcement, fire protection, water, roads, and waste services. In rural counties, these services are often dependent upon land value, agricultural production and the taxes they generate. When these services can no longer be provided due to the loss of revenues, adjustments in the quality or quantity of services must be made. This may result in a community passing through a threshold for local government services, as typically schools are consolidated with larger school systems when budgets are not adequate. When schools are consolidated, their ability to foster community cohesiveness declines.

A reasonable measure of local government stability is employment, agricultural products and agricultural land. They provide a tax base for the county budget. Statewide, employment generated from public land livestock grazing is projected to drop in the short-term. This could have an adverse impact on local government. The degree of impact to local government would depend on whether the effects are concentrated or dispersed among communities. The local government stability could be expected to improve in the long-term with an improved tax base.

Agricultural Land Use

Agricultural land use is the total acres of land devoted to producing crops and raising livestock. Under this alternative, it is expected that at least some of the ranchers could find the short-term impacts to their livestock grazing operations too great and they would select the option to go out of business rather than continue livestock grazing operations. Thus, a reduction in acreage of agricultural land use could be

expected in the short-term. With no emphasis on the Human Dimension the ranchers would be less likely be able to sell to new livestock operators.

Cultural Impacts

If changes impact the traditions, heritage, attitudes, beliefs and values, the culture is affected. For this analysis, cultural impacts cannot be quantified and are best evaluated by looking at feedback information. The following two methods are utilized in this analysis:

- public polls
- public comments

In a poll conducted by the University of New Mexico's Public Policy Center, a substantial majority (over 75%) of New Mexico citizens believe it to be moderately to extremely important to preserve ranching as a way of life in the State. However, the same poll identified that 49 percent view environmental preservation as the top priority and 22 percent view recreational use as the top priority. Thus, approximately 71 percent would support a program that provides for environmental enhancement or recreational opportunities.

Rural Values, Attitudes and Beliefs

Most of the public land ranches in New Mexico are family run businesses, originating from three land based cultures (Hispanic, Native American and Anglo-Celtic) discussed in Chapter Three. Where reduced revenues force individuals from their traditional manner of living, the ranch operation is impacted adversely. This affects the extended families, which in turn affects the ranching based cultures. The sense of place with its association with a sense of well-being and community stability would be reduced for the ranching communities if adverse impacts are concentrated.

The rural communities of the arid southwest are made up of people who share beliefs and values which are, if not embodied by, closely linked to the culture of ranching (Smith, 1997). People who ranch rely on their interaction with the public lands for the centering and stabilizing of the lifeway. As the individuals who ranch are displaced by increased economic pressures and/or the demand for changing uses, the values of the communities as a whole begin to fade in the descent

toward a more homogenous national monoculture. This can be particularly important for Native American and Hispanic ranchers from Northern New Mexico where livestock operations tend to be vulnerable due to their small size. Additionally, the Anglo-Celtic culture cannot exist without grazing cattle in the highlands (McWhiney, 1988).

Of the commentors on the Draft RMPA/EIS reflecting rural or agricultural values, approximately 72 percent supported the County Alternative. They expressed that it is important to have the Human Dimension Standard. The Fallback Alternative was viewed as the most negative for their interests. They supported the County Alternative because of its greater emphasis on the Human Dimension.

Environmental Values, Attitudes and Beliefs

The poll conducted by the University of New Mexico's Public Policy Center found that 49 percent of New Mexico citizens believe environmental preservation to be the top priority. Based on their commitment that environmental preservation is their number one priority, it is reasonable to group these individuals into a culture.

Of the commentors on the Draft RMPA/EIS reflecting environmental values are important, approximately 47 percent supported the Fallback Alternative. They expressed that the Fallback Alternative best met the intent of the regulations and the physical and biological needs.

Conclusion

Environmental interests support the Fallback Alternative over any other alternative. However, the rural interests oppose the Fallback Alternative the most of any of the alternatives. Table 4-24 shows the expected direction for cultural indicators. Based on the University of New Mexico's Public Policy Center poll this alternative would please the 71 percent of New Mexico citizens who view environmental preservation or recreation as top priority, but may be a concern to over 75 percent of New Mexico citizens who view preservation of ranching as a way of life to be moderately to extremely important.

Table 4-24

Consistency with Cultural Indicators - Fallback Alternative

Cultural Indicators	Short-term/Long-term	Measurement
Rural Values, Attitudes and Beliefs	Low	Comments
Environmental Values, Attitudes and Beliefs	High	Comments

COMMON TO ALL ALTERNATIVES

INTRODUCTION

Throughout the process of developing this EIS numerous parties have surfaced concerns about the relationship of the establishment of standards and guidelines to property rights, civil rights, environmental justice including disproportionate distributional effects and consideration of State laws and county ordinances. Environmental justice has several aspects including Constitutional, statutory, regulatory and executive order mandates. The following discussion is provided to give the reader an understanding of the guidelines provided by the Constitution of the United States, Federal and State law, Federal regulations, Executive Orders, county ordinances and BLM policies regarding these issues and BLM's planned mitigation. Regardless of which alternative is selected by BLM, the relationship between the programs and guidelines will be the same for all the alternatives.

CONSTITUTION

ARTICLE VI

[2] This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

Amendment V

No person shall ... be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

Amendment XIV

Section 1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

Analysis

Establishment of Standards and Guidelines would not deprive any citizen of life, liberty or property. The program would be consistent with mandates of the Constitution. Implementation of the Standards and Guidelines will be monitored to insure that Constitutional mandates are complied with for fair treatment and due process.

LAWS OF THE UNITED STATES

Civil Rights Act - Title VI

Sec. 601. No person in the United states shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

The National Environmental Policy Act (NEPA) of 1969, as amended

TITLE 1

DECLARATION OF NATIONAL ENVIRONMENTAL POLICY

Section 101. (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of

the Federal Government to use all practicable means, consistent with other essential considerations of national policy to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may -

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
- (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Section 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and

administered in accordance with the policies set forth in the Act, and (2) all agencies of the Federal Government shall -

(A) Utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) Identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) Include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on -

- (i) The environmental impact of the proposed action,
- (ii) Any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) Alternatives to the proposed action,
- (iv) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) Any irreversible and irretrievable commitments of resources which would be

involved in the proposed action should it be implemented. . . .

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

- (i) the State agency or official has statewide jurisdiction and has the responsibility for such action,
- (ii) the responsible Federal official furnishes guidance and participates in such preparation,
- (iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and
- (iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this Act; and further,

this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) Recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designated to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) Make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) Initiate and utilize ecological information in the planning and development of resource-oriented projects; and . . .

Section 105. The policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies.

The Taylor Grazing Act (TGA)

Section 1 [untitled] states in part: Nothing in this Act shall be construed in any way to diminish, restrict, or impair any right which has been heretofore or may be hereafter initiated under existing law validly affecting the public lands, and which is maintained pursuant to such law except as otherwise expressly provided in this Act, nor to affect any land heretofore or hereafter surveyed which, except for the provisions of this Act, would be a part of any grant to any State, nor as limiting or restricting the power or authority of any State as to matters within its jurisdiction.

Section 2 of the Act states in part: The Secretary of the Interior shall make provision for protection, administration, regulation, and improvement of such grazing districts as may be created under authority of the foregoing section, and he shall make such rules and regulations and establish such service, enter into such cooperative agreements, and do any and all things necessary to accomplish the purposes of this Act and to insure the objects of such grazing districts, namely to regulate their occupancy and use, to preserve the land and its resources from destruction or unnecessary injury, to provide for the orderly use, improvement, and development of the range;...

Sec. 3. The Secretary of the Interior is authorized to issue or cause to be issued permits to graze livestock on such grazing districts to such bona fide settlers, residents, and other stock owners under his rules and regulations are entitled to participate in the use of the range, upon the payment annually of reasonable fees in each case to be fixed or determined from time to time, and in fixing the amount of such fees the Secretary of the Interior shall take into account the extent to which such districts yield public benefits over and above those accruing to the users of the forage for livestock purposes. Such fees shall consist of a grazing fee for the use of the range, and a range-improvement fee which, when appropriated by the Congress, shall be available until expended solely for the construction, purchase, or maintenance of range improvement. Grazing permits shall be issued only to citizens of the United States or to those who have filed the necessary declarations of intention to become such, as required by the naturalization laws, and to groups, associations, or corporations authorized to conduct business under the laws of the State in which the grazing district is located. Preference shall be given in the issuance of grazing permits to those within or near a district who are landowners engaged in the livestock business, bona fide occupants of settlers, or owners of water or water rights, as may be necessary to permit the proper use of

the lands, water, or water rights owned, occupied, or leased by them, except that until July 1, 1935, no preference shall be given in the issuance of such permits to any owner, - occupant, or settler, whose rights were acquired between January 1, 1934, and December 31, 1934, both dates inclusive, except that no permittee complying with the rules and regulations laid down by the Secretary of the Interior shall be denied the renewal of such permit, if such denial will impair the value of the grazing unit of the permittee, when such unit is pledged as security for any bona fide loan. Such permits shall be for a period of not more than ten years, subject to the preference right of the permittees to renewal in the discretion of the Secretary of the Interior, who shall specify from time to time numbers of stock and seasons of use. During periods of range depletion due to severe drought or other natural causes, or in the case of a general epidemic of disease, during the life of the permit, the Secretary of the Interior is authorized, in his discretion to remit, reduce, refund in whole or in part, or authorize postponement of payment of grazing fees for such depletion period so long as emergency exists: PROVIDED FURTHER, That nothing in this Act shall be construed or administered in any way to diminish or impair any right to the possession and use of water for mining, agriculture, manufacturing, or other purposes which has heretofore vested or accrued under existing law validly affecting the public lands or which may be hereafter initiated or acquired and maintained in accordance with such law. So far as consistent with the purposes and provisions of this Act, grazing privileges recognized and acknowledged shall be adequately safeguarded, but the creation of a grazing district or the issuance of a permit pursuant to the provisions of this Act shall not create any right title, interest, or estate in or to the lands. (43 U.S.C., sec. 315b).

Sec 4. Fences, wells, reservoirs, and other improvements necessary to the care and management of the permitted livestock may be constructed on the public lands within such

grazing districts under permit issued by the authority of the Secretary, or under such cooperative arrangement as the Secretary may approve. Permittees shall be required by the Secretary of the Interior to comply with the provisions of law of the State within which the grazing district is located with respect to the cost and maintenance of partition fences. No permit shall be issued which shall entitle the permittee to the use of such improvements constructed and owned by a prior occupant until the applicant has paid to such prior occupant the reasonable value of such improvements to be determined under the rules and regulations of the Secretary of the Interior. The decision of the Secretary in such cases is to be final and conclusive. (43 U.S.C., sec. 315c).

Sec 15. The Secretary of the Interior is further authorized, in his discretion, where vacant, unappropriated, and unreserved lands of the public domain are so situated as not to justify their inclusion in any grazing district to be established pursuant to this Act, to lease any such lands for grazing purposes, upon such terms and conditions as the Secretary may prescribe: PROVIDED, That preference shall be given to owners, homesteaders, lessees, or other lawful occupants of contiguous lands to the extent necessary to permit proper use of such contiguous lands, except that when such isolated or disconnected tracts embrace seven hundred and sixty acres or less, the owners, homesteaders, lessees, or other lawful occupants of lands contiguous thereto or concerning thereon shall have a preference right to lease the whole of such tract, during a period of ninety days after such tract is offered for lease, upon the terms and conditions prescribed by the Secretary: PROVIDED FURTHER, That when public lands are restored from a withdrawal, the Secretary may grant an appropriate preference right for a grazing lease, license, or permit to users of the land for grazing purposes under authority of the agency which had jurisdiction

over the lands immediately prior to the time of their restoration. (43 U.S.C., sec. 315m)

The Federal Land Policy and Management Act (FLPMA)

Sec. 202 (C) In the development and revision of land use plans, the Secretary shall - . . .

(8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans; and

(9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located, including, but not limited to, the statewide outdoor recreation plans developed under the Act of September 3, 1964. (78 Stat. 897), as amended, and of or for Indian tribes by, among other things, considering the policies of approved State and tribal land resource management programs. In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of State, local and tribal land use plans; assure that consideration is given to those State, local, and tribal plans that are germane to the development of land use plans for public lands; assist in resolving, to the extent practical, inconsistencies between Federal and non-Federal Government plans, and shall provide for meaningful public involvement of State and local government officials, both elected and appointed in the development of land use programs, land use regulations, and land use decisions for public lands, including early public notice of proposed decisions which may have a significant impact on non-Federal lands. Such officials in each State are authorized to furnish advice to the Secretary with respect to the development and revision of land use plans,

land use guidelines, land use rules, and land use regulations for the public lands within such State and with respect to such other land use matters as may be referred to them by him. Land use plans of the Secretary under this section shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act.

Section 402: (d) All permits and leases for domestic livestock grazing issued pursuant to this section, with the exceptions authorized in subsection (e) of this section, on and after October 1, 1988, may incorporate an allotment management plan developed by the Secretary concerned in consultation with the lessees or permittees involved. Prior to that date, allotment management plans shall be incorporated in grazing permits and leases when they are completed. The Secretary concerned may revise such plans from time to time after such consultation.

(e) Prior to October 1, 1988, or thereafter, in all cases where the Secretary concerned has not completed an allotment management plan or determines that an allotment management plan is not necessary for management of livestock operations and will not be prepared, the Secretary concerned shall incorporate in grazing permits and leases such terms and conditions as he deems appropriate for management of the permitted or leased lands pursuant to applicable law. The Secretary concerned shall also specify therein the numbers of animals to be grazed and the seasons of use and that he may reexamine the condition of the range at any time and, if he finds on reexamination that the condition of the range requires adjustment in the amount or other aspect of grazing use, that the permittee or lessee shall adjust his use to the extent that the Secretary concerned deems necessary. Such readjustment shall be put into full force and effect on the date specified by the Secretary concerned.

(f) Allotment management plans shall not refer to livestock operations or range improvements on non-Federal lands except where the non-Federal lands are intermingled with, or, with

the consent of the permittee or lessee involved, associated with, the Federal lands subject to the plan. The Secretary concerned under appropriate regulations shall grant to lessees and permittees the right of appeal from decisions which specify the terms and conditions of allotment management plans. The proceeding sentence of this subsection shall not be construed as limiting any other right of appeal from decisions of such officials.

(g) Whenever a permit or lease for grazing domestic livestock is canceled in whole or in part, in order to devote the lands covered by the permit or lease to another public purpose, including disposal, the permittee or lessee shall receive from the United States a reasonable compensation for the adjusted value, to be determined by the Secretary concerned, of his interest in authorized permanent improvements placed or constructed by the permittee or lessee on lands covered by such permit or lease, but not to exceed the fair market value of the terminated portion of the permittee's or lessee's interest therein. Except in cases of emergency, no permit or lease shall be canceled under this subsection without two years' prior notification.

(h) Nothing in this Act shall be construed as modifying in any way law existing on the date of approval of this Act with respect to the creation of right, title, interest or estate in or to public lands or lands in National Forests by issuance of grazing permits and leases.

Section 701. (a) Nothing in this Act, or in any amendment made by this Act, shall be construed as terminating any valid lease, permit, patent, right-of-way, or other land use right or authorization existing on the date of approval of this Act. . . .

(f) Nothing in this Act shall be deemed to repeal any existing law by implication.

(g) Nothing in this Act shall be construed as limiting or restricting the power and authority of the United States or-

- (1) as affecting in any way any law governing appropriation or use of, or Federal right to, water on public lands;
- (2) as expanding or diminishing Federal or State jurisdiction, responsibility, interests, or rights in water resources development or control;
- (3) as displacing, superseding, limiting, or modifying any interstate compact or the jurisdiction or responsibility of any legally established joint or common agency of two or more States or of two or more States and the Federal Government;
- (4) as superseding, modifying, or repealing, except as specifically set forth in this Act, existing laws applicable to the various Federal agencies which are authorized to develop or participate in the development of water resources or to exercise licensing or regulatory functions in relation thereto;
- (5) as modifying the terms of any interstate compact;
- (6) as a limitation upon any State criminal statute or upon the police power of the respective States, or as derogating the authority of a local police officer in the performance of his duties, or as depriving any State or political subdivision thereof of any right it may have to exercise civil and criminal jurisdiction on the national resource lands; or as amending, limiting, or infringing the existing laws providing grants of lands to the States.

(h) All actions by the Secretary concerned under this Act shall be subject to valid existing rights.

The Public Rangelands Improvement Act (PRIA) of 1978

SEC. 2. (a) The Congress finds and declares that-

- (1) vast segments of the public rangelands are producing less than their potential for

livestock, wildlife habitat, recreation, forage, and water and soil conservation benefits, and for that reason are in an unsatisfactory condition;

(b) The Congress therefore hereby establishes and reaffirms a national policy and commitment to:

- (1) inventory and identify current public rangelands conditions and trends as a part of the inventory process required by section 201(a) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1711);

- (2) manage, maintain and improve the condition of the public rangelands so that they become as productive as feasible for all rangeland values in accordance with management objectives and the land use planning process established pursuant to section 202 of the Federal Land Policy and Management Act (43 U.S.C. 1712);

SEC. 4. (a) Following enactment of the Act, the Secretary of the Interior and the Secretary of Agriculture shall update, develop (where necessary) and maintain on a continuing basis thereafter, an inventory of range conditions and record of trends of range conditions on the public rangelands, and shall categorize or identify such lands on the basis of the range conditions and trends thereof as they deem appropriate. Such inventories shall be conducted and maintained by the Secretary as a part of the inventory process required by section 201(a) of the Federal Land Policy and Management Act (43 U.S.C. 1711), and by the Secretary of Agriculture in accordance with section 5 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1603): shall be kept current on a regular basis so as to reflect changes in range conditions; an shall be available to the public.

(b) The Secretary shall manage the public rangelands in accordance with the Taylor Grazing Act (43 U.S.C. 315-315(o)), the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701-1782), and other applicable law consistent with the public rangelands improvement program pursuant to this Act. Except where the land use planning process required pursuant to section 202 of the Federal Land Policy and Management Act (43 U.S.C. 1712) determines otherwise or the Secretary determines, and sets forth his reasons for this determination that grazing uses should be

discontinued (either temporarily or permanently) on certain lands the goal of such management shall be to improve the range conditions of the public rangelands so that they become as productive as feasible in accordance with the rangeland management objectives established through the land use planning process, and consistent with the values and objectives listed in sections 2 (a) and (b) (2) of the Act.

SEC. 8. Sections 402 (d) and (e) (43 U.S.C. 1752 (d) and (e)) are hereby amended-

(a) by changing subsection (d) to read as follows:

“(d) All permits and leases for domestic livestock grazing issued pursuant to this section may incorporate an allotment management plan developed by the Secretary concerned. However, nothing in this subsection shall be construed to supersede any requirement for completion of court ordered environmental impact statements prior to development and incorporation of allotment management plans. If the Secretary concerned elects to develop an allotment management plan for a given area, he shall do so in careful and considered consultation, cooperation and coordination with the lessees, permittees, and landowners involved, the district grazing advisory boards established pursuant to section 403 of the Federal Land Policy and Management Act (43 U.S.C. 1753), and any State or States having lands within the area to be covered by such allotment management plan. Allotment management plans shall be tailored to the specific range condition of the area to be covered by such plan, and shall be reviewed on a periodic basis to determine whether they have been effective in improving the range condition of the lands involved or whether such lands can be better managed under the provisions of subsection (e) of this section. The Secretary concerned may revise or terminate such plans or develop new plans from time to time after such review and careful and considered consultation, cooperation and coordination with the parties involved. As used in this subsection, the terms ‘court ordered environmental impact statement’ and ‘range condition’ shall be defined as in the

‘Public Rangelands Improvement Act of 1978’”
(b) by deleting in subsection (e) the words “Prior to October 1, 1988, or thereafter, in” and by inserting “In”.

Clean Water Act (CWA) §313 [33 USC 1323] Federal Facilities Pollution Control

a. Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any property or facility, or (2) engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants, and each officer, agent, or employee thereof in performance of his official duties, shall be subject to, and with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity including the payment of a reasonable service charge.

Analysis

The laws such as TGA, FLPMA and the CWA all mandate that BLM manage the public land and their uses in specific ways. The Constitution as well as NEPA and the Civil Rights Act provide supplemental direction that BLM must follow in carrying out the management of public lands. For example, although ranchers are not protected as a class unto themselves, all Americans are entitled to protection of their civil rights. Therefore, environmental justice requirements must be taken into account in administering the public lands.

In establishing standards and guidelines and in implementation of amended land use plans, the action will not depend on the permittee/lessee’s race, color, sex, religion, national origin, or age. The proposal and alternatives make no reference to taking any action except where the standards are not being met. During implementation BLM will insure environmental justice requirements are met.

The NEPA directs that BLM should in cooperation with State and local governments along with private organizations seek practicable measures to promote the

general welfare and maintain conditions that result in productive harmony between human need and those of nature. The standards would be a step in identification, creation and maintenance of productive harmony. The livestock grazing guidelines and their implementation should consider social, economic and other requirements of present and future generations of Americans, as directed by NEPA.

Additionally, NEPA requires that the Federal Official must be aware of the impacts of their actions before taking an action. This awareness can come from a variety of NEPA analysis documents including EAs and EISs. NEPA also makes it clear that the Federal agency is responsible for the NEPA document including its content. This RMPA/EIS serves as the compliance document for NEPA prior to approval of statewide standards for public land health and guidelines for livestock grazing. Additional documentation of environmental effects maybe required during implementation.

The FLPMA directs BLM to coordinate inventory, planning and management activities for the public lands with management plans and programs of other Federal departments and agencies, along with the plans of the States and local governments to the extent consistent with the laws governing the administration of the public lands. All 33 counties in New Mexico and the State of New Mexico were invited to participate in the development of this document. Additionally pueblos and tribes were consulted as to how they wished to participate in the development of this document. As a result the State of New Mexico and 9 of the 33 counties decided they would like to participate. MOUs were developed which defined the roles of those participating. Although the counties participated in the process, the content of the EIS was governed by Federal laws consistent with FLPMA. Once a decision is made on this action further coordination with the State and counties will be required during implementation.

The laws specific to public land such as TGA, FLPMA and PRIA provide direction concerning livestock grazing management and existing property rights for public land management. It is clear in reading the TGA that management of livestock grazing on the public land does not create a property right, and that implementation of the Act shall not interfere with recognized valid existing property rights. As long as

proper procedures are followed, including due process provided to current grazing permittees/lessees, the BLM may limit or terminate grazing for valid purposes.

With passage of the FLPMA, there is Congressional direction that the BLM decides the appropriate use of Federal public land under multiple use criteria, and the BLM is not bound to provide for all uses, or even a single use, on all lands. Congress provided through FLPMA for management of livestock grazing on the basis of multiple use and sustained yield. When prudent, the BLM can cancel or modify livestock grazing. However, FLPMA requires that if livestock grazing is canceled in whole or in part, payment for the adjusted value of the ranchers interest in range improvements that are no longer needed and a 2-year notice of cancellation of the permit or lease, except in emergencies, will be provided to the rancher. No further compensation is authorized by FLPMA for permit or lease modification or cancellation.

PRIA in Section 8 directs that when allotment management plans are developed the BLM shall do so in careful and considered consultation, cooperation and coordination with the lessees, permittees, and landowners involved, grazing advisory boards, and any State having lands within the area.

FEDERAL REGULATIONS

Section 1501.7 (a) of the CEQ regulations state as part of the scoping process the lead agency shall:

...(4) Allocate assignments for preparation of the environmental impact statement among the lead and cooperating agencies, with the lead agency retaining responsibility for the statement.

Section 1506.2 (c) states:

Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall to the fullest extent possible include joint environmental impact statements. In such cases one or more Federal agencies and one or more State or local agencies shall be joint lead agencies.

Where State laws or local ordinances have environmental impact statement requirements in addition to but not in conflict with those in NEPA, Federal agencies shall cooperate in fulfilling these requirements as well as those of Federal laws so that one document will comply with all applicable laws.

Analysis

In developing this EIS, the BLM took into account as much as possible the ideas from the State and Cooperating Counties. The BLM, as the responsible Federal agency for the content of the entire statement, edited the State-provided analysis of Human Dimension impacts (including civil rights and property rights).

EXECUTIVE ORDERS

Executive Order 12630

Executive Order 12630 of March 15, 1988 Governmental Actions and Interference With Constitutionally Protected Property Rights states:

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to ensure that government actions are undertaken on a well-reasoned basis with due regard for fiscal accountability, for the financial impact of the obligations imposed on the Federal government by the Just Compensation Clause of the Fifth Amendment, and for the Constitution, it is hereby ordered as follows:

Section 1. Purpose. (a) The Fifth Amendment of the United States Constitution provides that private property shall not be taken for public use without just compensation. Government historically has used the formal exercise of the power of eminent domain, which provides orderly processes for paying just compensation, to acquire private property for public use. Recent Supreme Court decisions, however, in reaffirming the fundamental protection of private property rights provided by the Fifth Amendment and in assessing the nature of governmental actions that have an impact on

constitutionally protected property rights, have also reaffirmed that governmental actions that do not formally invoke the condemnation power, including regulations, may result in a taking for which just compensation is required.

(b) Responsible fiscal management and fundamental principles of good government require that government decision-makers evaluate carefully the effect of their administrative, regulatory, and legislative actions on constitutionally protected property rights. Executive departments and agencies should review their actions carefully to prevent unnecessary takings and should account in decision-making for those takings that are necessitated by statutory mandate.

(c) The purpose of this Order is to assist Federal departments and agencies in undertaking such reviews and in proposing, planning, and implementing actions with due regard for the constitutional protections provided by the Fifth Amendment and to reduce the risk of undue or inadvertent burdens on the public fisc resulting from lawful governmental action. In furtherance of the purpose of this Order, the Attorney General shall, consistent with the principles stated herein and in consultation with the Executive departments or agencies promulgate Guidelines for the Evaluation of Risk and Avoidance of Unanticipated Takings to which each Executive department or agency shall refer in making the evaluations required by this Order or in otherwise taking any action that is subject of this Order. The Guidelines shall be promulgated no later than May 1, 1988, and shall be disseminated to all units of each Executive department and agency no later than July 1, 1988. The Attorney General shall, as necessary, update these guidelines to reflect fundamental changes in takings law occurring as a result of Supreme Court decisions.

Section 2. *Definitions.* For the purpose of this Order: (a) "Policies that have takings implications" refers to Federal regulations, proposed Federal regulations, proposed

Federal legislation, comments on proposed Federal legislation, or other Federal policy statements that, if implemented or enacted, could effect a taking, such as rules and regulations that propose or implement licensing, permitting, or other condition requirements or limitations on private property use, or that require dedications or exactions from owners of private property. "Policies that have takings implications" does not include:

- (1) Actions abolishing regulations discontinuing governmental programs, or modifying regulations in a manner that lessens interference with the use of private property;
- (2) Actions taken with respect to properties held in trust by the United States or in preparation for or during treaty negotiations with foreign nations.
- (3) Law enforcement actions involving seizure, for violations of law, of property for forfeiture or as evidence in criminal proceedings;
- (4) Studies or similar efforts or planning activities;
- (5) Communications between Federal agencies or departments and State or local land-use planning agencies regarding planned or proposed State or local actions regulating private property regardless of whether such communications are initiated by a Federal agency or department or are undertaken in response to an invitation by the State or local authority;
- (6) The placement of military facilities or military activities involving the use of Federal property alone; or
- (7) Any military or foreign affairs function (including procurement functions thereunder) but not including the U.S. Army Corps of Engineers civil works program.

(b) Private property refers to all property protected by the Just Compensation Clause of the Fifth Amendment.

(c) "Actions" refers to proposed Federal regulations, proposed Federal legislation, comments on proposed Federal legislation, application of Federal regulations to specific property, or Federal governmental actions

physically invading or occupying private property, or other policy statements or actions related to Federal regulations or direct physical invasion or occupancy, but does not include:

- (1) Actions in which the power of eminent domain is formally exercised;
- (2) Actions taken with respect to properties held in trust by the United States or in preparation for or during treaty negotiations with foreign nations;
- (3) Law enforcement actions involving seizure, for violations of law, of property for forfeiture or as evidence in criminal proceedings;
- (4) Studies or similar efforts or planning activities;
- (5) Communications between Federal agencies or departments and State or local land-use planning agencies regarding planned or proposed State or local actions regulating private property regardless of whether such communications are initiated by a Federal agency or department or are undertaken in response to an invitation by the State or local authority;
- (6) The placement of military facilities or military activities involving the use of Federal property alone; or
- (7) Any military or foreign affairs function (including procurement functions thereunder), but not including the U.S. Army Corps of Engineers civil works program.

Sec 3. General Principles. In formulating or implementing policies that have takings implications, each Executive department and agency shall be guided by the following general principles:

- (a) Governmental officials should be sensitive to, anticipate, and account for, the obligations imposed by the Just Compensation Clause of the Fifth Amendment in planning and carrying out governmental actions so that they do not result in an imposition of unanticipated or undue additional burdens on the public fisc.
- (b) Actions undertaken by governmental officials that result in a physical invasion or occupancy of private property, and regulations imposed on private property that

substantially affect its value or use may constitute a taking of property. Further, governmental action may amount to a taking even through the action results in less than a complete deprivation of all use or value, or of all separate and distinct interests in the same private property and even if the action constituting a taking is temporary in nature.

(c) Government officials whose actions are taken specifically for the purposes of protecting public health and safety are ordinarily given broader latitude by courts before their actions are considered to be takings. However, the mere assertion of a public health and safety purpose is insufficient to avoid a taking. Actions to which this Order applies asserted to be for the protection of public health and safety, therefore, should be undertaken only in response to real and substantial threats to public health and safety, be designed to advance significantly the health and safety purpose, and be no greater than is necessary to achieve the health and safety purpose.

(d) While normal governmental process do not ordinarily effect takings, undue delays in decision-making during which private property use is interfered with carry a risk of being held to be takings. Additionally, a delay in processing may increase significantly the size of compensation due if a taking is later found to have occurred.

(e) The Just Compensation Clause is self-actuating, requiring that compensation be paid whenever governmental action results in a taking of private property regardless of whether the underlying authority for the action contemplated a taking or authorized the payment of compensation. Accordingly, government actions that may have a significant impact on the use or value of private property should be scrutinized to avoid undue or unplanned burdens on the public fisc.

Sec 4. Department and Agency Action. In addition to the fundamental principles set forth in Section 3, Executive departments and agencies shall adhere, to the extent possible permitted by law, to the following criteria when implementing policies that have taking

implications:

- (a) When an Executive department or agency requires a private party to obtain a permit in order to undertake a specific use of or action with respect to private property, any conditions imposed on the granting of a permit shall:
- (1) Serve the same purpose that would have been served by a prohibition of the use or action; and
 - (2) Substantially advance that purpose;
- (b) When a proposed action would place a restriction on a use of private property, the restriction imposed on the use shall not be disproportionate to the extent to which the use contributes to the overall problem that the restriction is imposed to redress.
- (c) When a proposed action involves a permitting process or any other decision-making process that will interfere with, or otherwise prohibit, the use of private property pending the completion of the process, the duration of the process shall be kept to the minimum necessary.
- (d) Before undertaking any proposed action regulating private property use for the protection of public health or safety, the Executive department or agency involved shall, in internal deliberative documents and any submissions to the Director of the Office of Management and Budget that are required:
- (1) Identify clearly, with as much specificity as possible, the public health or safety risk created by the private property use that is the subject of the proposed action;
 - (2) Establish that such proposed action substantially advances the purpose of protecting public health and safety against the specifically identified risk;
 - (3) Establish to the extent possible that the restrictions imposed on the private property are not disproportionate to the extent to which the use contributes to the overall risk; and
 - (4) Estimate, to the extent possible, the potential cost to the government in the event that a court later determines that the action constituted a taking.

In instances in which there is an immediate threat to health and safety that constitutes an emergency requiring immediate response, this

analysis may be done upon completion of the emergency action.

Sec. 5. Executive Department and Agency Implementation. (a) The head of each Executive department and agency shall designate an official to be responsible for ensuring compliance with this Order with respect to the actions of that department or agency.

(b) Executive departments and agencies shall, to the extent permitted by law, identify the takings implications of proposed regulatory actions and address the merits of those actions in light of the identified takings implications, if any, in all required submissions made to the Office of Management and Budget. Significant takings implications should also be identified and discussed in notices of proposed rule-making and messages transmitting legislative proposals to the Congress, stating the departments' and agencies' conclusions on the takings issues.

(c) Executive departments and agencies shall identify each existing Federal rule and regulation against which a takings award has been made or against which a takings claim is pending including the amount of each claim or award. A "takings" award has been made or a "takings" claim pending if the award was made, or the pending claim brought, pursuant to the Just Compensation Clause of the Fifth Amendment. An itemized compilation of all such awards made in Fiscal Years 1985, 1986, and 1987 all of such pending claims shall be submitted to the Director, Office of Management and Budget, on or before May 16, 1988.

(d) Each Executive department and agency shall submit annually to the Director, Office of Management of Budget, and to the Attorney General an itemized compilation of all awards of just compensation entered against the United States for takings, including awards of interest as well as monies paid pursuant to the provisions of the Uniform Relocation

Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. 4601.

(e)(1) The Director, Office of Management and Budget, and the Attorney General shall each, to the extent permitted by law, take action to ensure that the policies of the Executive departments and agencies are consistent with the principles, criteria, and requirements stated in Sections 1 through 5 of this Order, and the Office of Management and Budget shall take action to ensure that all takings awards levied against agencies are properly accounted for in agency budget submissions.

(2) In addition to the guidelines required by Section 1 of this Order, the Attorney General shall, in consultation with each Executive department and agency to which this Order applies, promulgate such supplemental guidelines as may be appropriate to the specific obligations of that department or agency.

Sec 6. *Judicial Review.* This Order is intended only to improve the internal management of the Executive branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any person.

Executive Order 12898

Executive Order 12898 was issued February 11, 1994. Section 1-1 Identifies Agency Responsibilities. It states:

To the greatest extent practicable and permitted by law, . . . each Federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories.

Section 2-2 identifies Federal agency responsibilities for federal programs as:

Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Executive Order 12291

Executive Order 12291 was issued February 17, 1981 to reduce the burdens of existing and future regulations, increase agency accountability for regulatory actions, provide for presidential oversight of the regulatory process, minimize duplication and conflict of regulations, and insure well-reasoned regulations.

Executive Order 12866

Executive Order 12866, issued September 30, 1993 to begin a program to reform and make more efficient the regulatory process. The objectives of the Executive Order was to enhance planning and coordination with respect to both new and existing regulations, to reaffirm the primacy of Federal agencies in the regulatory decision-making process; to restore the integrity and legitimacy of regulatory review and oversight; and to make the process more accessible and open to the public.

Executive Order 13045

Executive Order 13045 was issued April 21, 1997 to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and ensure that its policies, programs activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

Analysis

Executive Order 12630 of March 15, 1988 gives direction on Governmental Actions and Interference With Constitutionally Protected Property Rights.

Executive Order 12630 refers to Federal regulations, proposed Federal regulations, proposed Federal legislation, comments on proposed Federal legislation, or other Federal policy statements that, if implemented or enacted, could effect a taking, such as rules and regulations that propose or implement licensing, permitting, or other condition requirements or limitations on private property use, or that require dedications or exactions from owners of private property.

The TGA and FLPMA both provide for protection of valid existing property rights while also providing for management of livestock grazing on the public land. Whatever property rights any party may have are not directly affected or compromised by proper management of the Federal public land. Therefore, it is not necessary to have concerns about potential "takings" in the establishment of Rangeland Health Standards and Livestock Grazing Guidelines. Accordingly, a takings assessment under Executive Order 12630 at this level (EIS/RMP Amendment) is not necessary.

The BLM will identify lands not meeting the standard due to current grazing practices; then consultation, coordination and cooperation will begin with the livestock grazing permittee/lessee, landowners involved, RAC, the State of New Mexico, and interested public to identify practical means and measures to achieve resource management objectives including grazing guidelines. Emphasis will be given to selection of management practices that will minimize adverse impacts to low income or minority population as directed in Executive Order 12898 on Environmental Justice.

The actions analyzed in this EIS are not regulation or rules as defined in Section 1. (a) of Executive Order 12291 which states "Regulation" or "rule" means "an agency statement of general applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the procedure or practice

requirements of an agency, but does not include...” The change in the grazing regulations (a regulatory change) was analyzed in the Reform ‘94 EIS completed by the Washington Office. The results of that analysis are contained in a document titled “Range Reform Small Entity Flexibility Analysis” dated March 23, 1994. During its preparation, the Small Business Administration was provided the opportunity to comment on the document. They found the document was adequate.

Executive Order 12866 also deals with the development of Federal Regulations. It does not apply to this document because the Proposed RMP Amendment/Final EIS is not a regulation.

Executive Order 13045 is concerned with environmental health and safety risks to children. Environmental health and safety risks are defined as “risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink or use for recreation, the soil we live on, land the products we use or are exposed to).” Implementing the alternatives will reduce the risks to health and safety of children and no further work is required to be consistent with the Executive Order.

LAWS FOR THE STATE OF NEW MEXICO

State Law 72-2-9

New Mexico State Law 72-2-9. [Supervising apportionment of waters.] states:

The state engineer shall have the supervision of the apportionment of water in the state according to the licenses issued by him and his predecessors and the adjudications of the courts.

State Wildlife Conservation Act

The State of New Mexico State Wildlife Conservation Act in Section 17-2-39 (A) provides that:

Species of wildlife indigenous to the state that may be found to be threatened or endangered should be managed to maintain and, to the extent possible, enhance the numbers within the carrying capacity of the habitat.

Section 17-2-40 sets out the procedures for the Director of the NMDGF to follow in the determination of listing State species and the management measures and requirements necessary for their survival. Further, Section 17-2-40-1 sets the procedures for the Director of the NMDGF to follow in the development of recovery plans for the State-listed species.

NMSA 4-37

The State of New Mexico has vested in County Government the authority to protect the health, safety and welfare of its citizens (NMSA 4-37 (1978):

...to provide for the safety, preserve the health, promote the prosperity and improve the morals, order and convenience...enact powers general police power and zoning...County ordinances are effective within the boundaries of the county, including private property owned land and land owned by the United States.

Analysis

Water quality management in New Mexico has both State and Federal aspects. The State, through the NMWQCC and New Mexico Environment Department (NMED), establishes standards for ground water, lakes, and streams or segments of streams, assesses the quality of these water bodies, adopts regulations, and takes actions to protect and maintain water quality. The State also coordinates with the U.S. Environmental Protection Agency in implementing the Federal Water Pollution Control Act (33 U.S.C. 1288), popularly known as the Clean Water Act (CWA) and other Federal acts which contain water quality protection provisions.

COUNTY ORDINANCES

Most of the “Cooperating Agency” Counties in this BLM/State NEPA EIS process have enacted ordinances that require coordinated environmental assessments with Federal agencies, with a special emphasis on socio-economic, and civil and property rights analyses from government proposed actions. Refer to Cooperating County ordinances entitled, “[name] County Environmental Planning and Review Ordinance.” (These ordinances are referred to in NEPA as a “mini-NEPA.”) As Cooperating Counties, the County mini-NEPAs are designed to reduce duplication

of efforts in the environmental analysis, (NEPA 40 CFR §1506.2).

Analysis

Where State of New Mexico laws and county ordinances require those governments to perform environmental impact documentation, CEQ directs, where possible, the Federal agencies NEPA documentation satisfy both requirements. As directed by FLPMA, where possible and practical, the BLM coordinates the Federal programs to be consistent with State and county programs.

BLM POLICY

The Vision Statement for BLM Environmental Justice Strategy states:

. . . The Bureau is vitally aware of the social and economic context within which resource and environmental decisions are made and the potential for inequitable distribution of the benefits and costs of these decisions. Every effort will be made to solicit the full participation of minority and low income groups affected by our land and resource decisions and by our environmental and ecological planning, in our collaborative decision making processes. The Bureau and its managers will provide opportunities the information necessary for involvement in decisions in an effective and timely manner. We will take an active approach to outreach in and around our communities and we are dedicated to the service of all communities, equitably and fairly.

Table 4-25 was developed by Region 8 of EPA to assist agencies in considering environmental justice requirements.

The BLM policy (BLM Manual 6840) instructs State Directors to develop policies to assist the State Government in achieving their management objectives of State-listed species. State-listed species, as other special status species, will be considered in all land use plans and environmental assessments and will be given priority for protection through the identification of their habitat as potential Areas of Critical Environmental Concern or other Special Management Areas.

It is BLM policy (BLM Manual 7240) to protect, maintain, restore, and/or enhance the quality of water on public land so that its utility for other dependent ecosystems, including present and/or desired human environments, will be maintained equal to or above legal water quality criteria. The water quality limits are those defined by the most stringent applicable laws and regulations. It is also policy to inventory, monitor and evaluate natural and developed water systems to determine existing conditions, make cause/effect determinations or resource activities on water quality, and recommend appropriate actions.

Analysis:

The BLM and various agencies in New Mexico have developed Memorandums of Understanding (MOU's) to help carry out BLM policies and State requirements. The MOU's are summarized here.

Following the provisions of the CWA and State authorities, the NMED and BLM have an MOU dated March 2, 1992, which designates BLM as a water quality management agency on public land and gives BLM the responsibility for the control and reduction of non-point source pollution on this land.

In 1990, a MOU between the NMDGF and the BLM recognized that the NMDGF is the primary agency responsible for management, protection, regulation and propagation of wildlife on public land. It further stipulates and agrees that every provision in the MOU is subject to the laws of the State of New Mexico, the laws of the United States, and to each agency's delegated authority.

Thus, the BLM promotes the State of New Mexico, State Wildlife Conservation Act through policy and an MOU with the NMDGF. The BLM recognizes State listed species, and they are given priority for protection, the same as Federally-listed species.

MITIGATION MEASURES

After determination of site-specific standards for public land health, the BLM must determine the activities that it believes are contributing to the lack of achieving the standard. At that time, BLM would determine probable reasons for not meeting the standards. When current livestock grazing practices are determined to be one of the reasons for not

**TABLE 4-25
ENVIRONMENTAL JUSTICE . . . CONSIDER THIS**

DEMOGRAPHICS	DISPROPORTIONATE IMPACT
<ul style="list-style-type: none"> ● EO 12898 directs federal agencies to focus attention on the human health and environmental conditions in minority communities and low-income communities. ● What's a community - A group of individuals living in geographic proximity to one another or a set of dispersed individuals (such as migrant workers) where either type of group experiences common conditions of environmental exposure or effect. ● Low-income populations should be identified with the annual statistical poverty thresholds from the Bureau of the Census: Current Population Reports, Series P-60 on Income and Poverty. ● Minority populations are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. 	<ul style="list-style-type: none"> ● whether there is or will be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority or low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and ● whether environmental effects are significant and are or may be having an adverse impact on minority or low-income populations or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other comparison group; and ● whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.
STAKEHOLDER INVOLVEMENT	BENEFITS AND BURDENS
<p>EO 12898 directs federal agencies to</p> <p>(...continued)</p> <ul style="list-style-type: none"> ● allow all populations a meaningful¹ opportunity to participate in the development of, compliance with, and enforcement of Federal laws, regulations and policies affecting human health or the environment, and ● give minority communities and low-income communities greater opportunities² for participation in, and access to public information on matters relating to human health and the environment. 	<ul style="list-style-type: none"> ● there is no unfairness in the distribution of the benefits and burdens associated with the implementation of Federal laws, regulations, and policies, and ● all segments of the society regardless of race, color, national origin, or income share fairly in receiving the benefits from environmental protection and in shouldering the burdens of implementation of these policies.

Must meet the criteria of top boxes to qualify as an Environmental Justice issue. If only one of the top box criteria are met, then there is no Environmental Justice issue.

Source: EPA Region VIII - A Handout from the Environmental Justice Workshop in Albuquerque NM on September 30, 1999.

¹ Meaningful means the ability to influence a decision.

² Greater than what they have had in the past.

meeting the standard, consultation, cooperation and coordination would begin with the livestock grazing permittee/lessee, landowners involved, RAC, the State of New Mexico, and interested public. In consultation with affected interests, the BLM would then develop a plan to adjust these activities to insure the standard is achieved. For example, in grazing, consultation, coordination and cooperation with the permittee/lessee and other affected interests would identify how to adjust livestock grazing practices to be in concert with the rangeland health standards and livestock grazing guidelines. This process would include discussion of opportunities to mitigate adverse impacts to the various parties.

Executive Order 12898, Interior policies and BLM policies establish direction for BLM to mitigate for environmental justice. To meet the environmental justice requirements, as the program develops, the BLM in consultation with the counties will monitor demographics, disproportionate impacts, stakeholder involvement, and benefits and burdens.

During the planning process, when private property right owners believe their rights are being impacted, they can request a Takings Implication Assessment (TIA) under Executive Order 12630.

It has been recommended by the Counties that as a mitigating measure, BLM apply the following tests to determine if there is a potential for a taking of private property.

1. What property interest will be or are likely to be affected by the proposed action;
2. The likely degree of economic impact on identified property and economic interests;
3. Interference with reasonable investment backed expectations;
4. The character and present use of the property, the anticipated duration of the proposed or intended action, and variations in State law;
5. Whether the proposed policy or action carries benefits to the private property owner that offset or otherwise mitigate the adverse economic impact of the proposed policy or action; and,
6. Whether alternative actions are available that would achieve underlining lawful

governmental objectives and would have a lesser economic impact.

Possible Mitigation Measures

A full spectrum of possible mitigation was raised in discussions BLM had with the joint lead (State of New Mexico) and cooperators (nine cooperating counties) for the EIS. This full spectrum is discussed here to give the reader an understanding what that range of mitigation is. Some of the listed mitigation measures are feasible or likely to be used while others are not. The feasibility of each is discussed in general terms below. Possible mitigation measures include:

1. Reducing the scope of the project - This would entail changing the project to deal specifically with the area where current conditions and grazing practices are not acceptable instead of a larger area within the allotment or within a pasture. While this approach might be more expensive to implement, it might lessen impact to the permittee/lessee. This approach would be highly feasible; however, it would depend on the specific situation.
2. Delay impacts - This would entail giving the permittee/lessee notice before the actual change is made to the grazing operation so the permittee/lessee has time to plan and make the necessary measures to lessen the impact anticipated. This mitigation is feasible and mandated by FLPMA and the grazing regulations for some situations; however, for other situations the mitigation may not be feasible.

The grazing regulations provide for such mitigation under specific circumstances.

43 CFR §4110.4-2 (b) When public lands are disposed of or devoted to a public purpose which precludes livestock grazing, the permittees and lessees shall be given 2 years' prior notification except in cases of emergency (national defense requirements in time of war, natural disasters, national emergency needs, etc.) before their grazing permit or grazing lease and grazing preference may be canceled. A permittee or lessee may unconditionally waive the 2-year prior notification. Such a waiver shall not prejudice the permittee's or lessee's right to

reasonable compensation for, but not to exceed the fair market value of his or her interest in authorized permanent range improvements located on these public lands (see §4120.3-6).

When the BLM is not proposing to cancel the preference or when the proposed action is not excluding livestock use, the 2 year delay is not mandated by regulation, 43 CFR §4180.2 (c) would apply. It states:

The authorized officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines that are made effective under this section. Appropriate action means implementing actions pursuant to subparts 4110, 4120, 4130, and 4160 of this part that will result in significant progress toward fulfillment of the standards and significant progress toward conformance with the guidelines. Practices and activities subject to standards and guidelines include the development of grazing-related portions of activity plans, establishment of terms and conditions of permits, leases and other grazing authorizations, and range improvement activities such as vegetation manipulation, fence construction and development of water. meeting the standard, consultation, cooperation and coordination would begin with the livestock grazing permittee/lessee, landowners involved, RAC, the State

3. Take actions so impacts occur over a period of time - This would entail dealing with making changes to the grazing operation over time to spread out the impact surge to the permittee/lessee. For example, treat one pasture at a time instead of all pastures where brush treatments are called for to help meet the standard for public land health. This approach would be moderately to highly feasible based on the specific situation. If significant progress toward meeting goals and objectives on the allotment is not being made as a

whole, the BLM's authorized officer will follow 43 CFR §4180.2 c (see No. 2).

4. Take no action - This would entail not taking any action to improve the public land health by implementing grazing guidelines as a way of lessening impacts to the permittee/lessee. This approach would not be feasible as it conflicts with the grazing regulations (43 CFR 4180.2 c) (see No. 2) which mandate that action will be taken by the next grazing season. Although no action to resolve grazing conflict would not be possible taking no action on certain proposed management tools or practices may be feasible.

5. Compensate for loss of range improvement values - This would entail the permittee/lessee being paid a reasonable compensation for the adjusted value of the improvements owned by the permittee/lessee, not to exceed fair market value. This approach would seem to be highly feasible as it is provided for now in the law.

The FLPMA states in Sec 402 (g):

Whenever a permit or lease for grazing domestic livestock is canceled in whole or in part, in order to devote the lands covered by the permit or lease to another public purpose, including disposal, the permittee or lessee shall receive from the United States a reasonable compensation for the adjusted value, to be determined by the Secretary concerned, of his interest in authorized permanent improvements placed or constructed by the permittee or lessee on lands covered by such permit or lease, but not to exceed the fair market value of the terminated portion of the permittee's or lessee's interest therein. Except in cases of emergency, no permit or lease shall be canceled under this subsection without two year' prior notification.

6. Compensate for loss of ranch value - This would entail the permittee/lessee being paid the fair market value for loss of ranch value. At this time this approach would not be feasible, as the TGA declares a grazing permit on the Federal range to be a privilege not a right. The Fifth Amendment does not require the government to pay for loss of value added to the

permittees/lessees private lands used in combination with the government permit land, and the TGA does not authorize compensation for such added value. The argument that the increment of value added to a private ranch by public land grazing permit is a compensable property interest was considered and rejected by the United States Supreme Court in United States v. Fuller, 409 U.S. 488 (1973).

Implementation and Mitigation Procedures

In implementation of the standards for public land health the BLM will:

consult, cooperate and coordinate with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans;

seek to attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

seek to achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking.

Following the direction of FLPMA, BLM will consult, cooperate and coordinate, as appropriate, with the following State agencies/commissions:

State Engineer
Environmental Department
Department of Agriculture
Energy, Minerals and Natural Resources
Department
Department of Tourism

New Mexico Game and Fish Department
State Land Office
Department of Cultural Affairs
Oil and Gas Commission
New Mexico Oil Conservation Commission
Interstate Stream Commission
Water Quality Control Commission
Soil and Water Conservation Commission
New Mexico Game and Fish Commission

and

Local governments, as appropriate

to:

insure that BLM's programs are consistent with State versus Federal jurisdictions;

provide for timely advice with respect to public land matters from State government officials, both elected and appointed;

provide early notification to, and solicit the views of State land management agencies of any action which may have significant impacts upon the agency;

provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;

insure that BLM's inventory, planning, and management activities are in concert with State and local agency plans to the maximum extent consistent with the Federal laws and the purposes of the Federal laws governing the administration of the public lands;

assure that consideration is given to State plans that are germane and to the extent practical, resolve inconsistencies between Federal and non-Federal Government plans in a timely manner; and

insure coordination of inventory and assessment of resource data.

by taking the following actions:

- Notify the State agencies of the work schedule to determine which lands meet the standards.

- Request the State agencies provide data they have that would be germane in determining which lands meet the standards.
- After the inventory or assessment, BLM will notify the State agencies of the areas that meet the standards.
- For areas that don't meet the standard, BLM will invite the State agencies to participate in determinations of why the lands do not meet the standards.
- If current livestock grazing practices are determined to be a cause, the BLM would include the State agencies in consultation, cooperation and coordination procedures.

The BLM would request that the State agencies monitor the following indicator data and keep BLM current:

- Water quality
- Water quantity
- Air quality
- Wildlife populations
- Watershed conditions

The BLM would coordinate with the Counties on monitoring and mitigation. To insure coordination with the County government in implementation of the program, the BLM would do the following:

- Notify the County of the work schedule to determine which lands meet the standards.
- Request County and local governments provide data they have that would be germane in determining which lands meet the standards.
- After the inventory or assessment, BLM will notify the County of the areas that meet the standards.
- For areas that don't meet the standard, BLM will invite the County to participate in determinations of why the lands do not meet the standards.
- If current livestock grazing practices are determined to be a cause, the BLM would include the County in consultation, cooperation and coordination procedures.

The BLM would request that the County monitor indicator data for the Sustainable Communities and Human Dimension Standard and keep BLM current.

Appropriate social, cultural, and economic indicators, could include, but not limited to such standard sociological and anthropological measurable indicators such as:

- County or local government and schools
 - programs
 - roads/transportation
 - fiscal/financial
- Population and demographic characteristics
 - population changes
 - demographic changes
- Community stability
- Family stability
 - Divorce rates
 - Unemployment
 - Personal income
- Values, attitudes, and beliefs
- Customs and cultures
- Distributional effects

When BLM has feasible mitigation measures that are fiscally prudent and reasonably available to BLM and are in concert with BLM Congressionally granted authorities, it will incorporate the mitigation measures into new activity plans and guideline implementation.

For each of the alternatives prepared in the NEPA process at the activity level or project level, there is a potential for adverse effects. In the NEPA process mitigation measures and monitoring techniques would be developed to:

- a. State the adverse effects that possibly could be avoided or substantially lessened.
- b. If several measures are available, discuss each.
- c. Describe potential monitoring techniques.

The Decision Record would:

- a. Select mitigation measures and the basis for selecting the particular measure.
- b. Monitoring techniques that are prescribed.
- c. Identify roles and responsibilities of the parties.

CUMULATIVE EFFECTS

The regulations for implementing NEPA require Federal agencies to analyze and disclose cumulative effects that result from incremental impact of an action

“when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR §1508.7)

The Proposed Action and alternatives are broad in scope. Implementation of the alternatives would consist of many actions, including establishing site-specific standards for land condition that BLM will manage for, inventorying the land, and implementing livestock grazing guidelines to assist in meeting the standards.

The standards and guidelines are general in nature and affect public land statewide. As a result, this EIS is programmatic, addressing environmental consequences that are correspondingly wide in scope. Furthermore, neither the Proposed Action nor the alternatives would be implemented in a vacuum.

The BLM rangeland management policies and public land conditions are not the only factors that affect the public land interests and users, the New Mexico livestock industry, rural communities and individual ranchers. Implementation would be interwoven with many other actions, events, and trends taking place at local levels. Many of the trends that are taking place at the State level are expected to continue. For example, many of the ranches are valued based on long-term profitably characteristics rather than short-term cash flow. However, financing is now based on annual cash flow as required by the Federal Deposit Insurance Corporation. Other important factors in determining cumulative impacts are trends in population, growth, changing demographics, lifestyles, property values, the average price received for agricultural products over a 10 year period and personal financial situations. Many rural communities will continue to transform from rural economies to urban economies.

Population growth in many rural communities, while contributing to economic growth and diversification, will continue to diminish the relative importance of agriculture in those communities. But, economic diversification also offers more chances to earn off-ranch income and help families maintain their ranches.

Communities that continue to lose population and whose economies are in decline may be further strained by decreases in short-term livestock production. For example, the impacts of the loss of mining jobs in Hidalgo and Luna counties could be further impacted by the loss of ranching jobs in those counties.

Land use changes such as increased recreation use and subdivision of privately-owned lands, are both a cause and a result of trends in agriculture. Economically marginal ranches might be encouraged to sell to developers where the demand for rural homesites is increasing. As a result, agricultural production would further decline in such areas. Increased outfitter and guide activities, which encourage more recreational use of rural areas may offer more income earning potential for ranch families. However, these are options that are voluntarily rather than enforced by Federal agencies. As these changes are voluntarily adopted, the communities will drift further away from the agricultural base.

Demographic and land use changes may increase or decrease a community's tax base. Where economies are stable or growing, the tax base will likely be stable or increase. Where populations continue to decline, the tax revenues are expected to decline.

In the short-term, communities' with expanding tax bases would not be affected to the degree that counties with decreasing tax bases would be. Livestock grazing reductions may compound the loss in tax base in some counties with decreasing tax bases.

In the long-term, the communities' tax base would benefit as the health of the land improves. As the health of the land improves, increased livestock production, improved wildlife habitat and increased recreational opportunities would improve the tax and revenue base. As the land improves, the public would additionally benefit from improved surface water quality and groundwater recharge, soil retention and stability, decreased soil erosion and surface water runoff, more productive wildlife habitat, increased hunter and non-consumptive wildlife user satisfaction.

At the public land level, a number of trends can be expected to continue. Additional use of the public

land for recreation is expected. It can also be projected that, over time, management adjustments will be necessary to incorporate the direction of regulation requirements.

Implementation of environmental laws such as FLPMA, CWA and ESA is expected to affect the livestock industry, rural communities and the individual ranchers. As these laws are implemented by various Federal agencies, adjustments in livestock grazing practices may be necessary. For example, best management practices for livestock grazing, prompted by the need to comply with the CWA, are being implemented in New Mexico and may lead to changes in grazing practices.

Protection and recovery of Federally-listed species and their habitats are likely to change the way livestock grazing is managed on some Federal land allotments. An example would be the Southwestern Willow Flycatcher. Along with BLM, the Bureau of Reclamation and U.S. Forest Service have applied specific grazing practices to protect the flycatcher habitat during the spring-summer breeding and nesting season. Future activities designed to avert habitat loss and endangered species listings in the long-term might help sustain livestock production on public land.

The future of rangeland vegetation cannot be predicted by considering changes in livestock grazing management alone. Livestock grazing on public land is not the only factor that affects rangeland vegetation. Climate or weather patterns, recreation, wildlife use, management practices on adjoining land, the increase in unpalatable trees and the introduction and spread of alien weeds are also key considerations. Additionally past and current litigation is ongoing and continues to be a factor adding risk and uncertainty to the family ranching operations.

IRREVERSIBLE AND IRRETRIEVABLE

The healthy and viable ranching operations have an ability to respond to changing management factors. However, there is a limit to how much change can be accepted and the ranch operation maintained. If ranching operations go out of business, there may be no opportunity to return. The reason for this is that the equipment and infrastructure may be lost and too expensive to acquire again. To further complicate the return to business, are the tax requirements. After

paying the capital gains taxes that are due upon selling an livestock operation, there may not be enough capital to buy the livestock again.

Another factor to be considered is that the livestock operations depend on skills that have been developed and taught from generation to generation. Once a generation is skipped, the skills are often lost in the family. Thus, unless the ranching skills, traditions and customs are maintained they will be lost to the individual, family, and community forever.