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FINAL



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Bureau of Land Management



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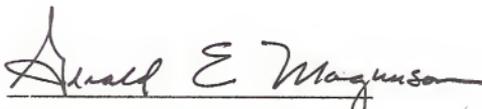
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DEPARTMENT OF THE INTERIOR
FINAL
ENVIRONMENTAL IMPACT STATEMENT
ON
GRAZING MANAGEMENT
IN THE
KANAB/ESCALANTE AREA
UTAH

PREPARED BY

BUREAU OF LAND MANAGEMENT
DEPARTMENT OF THE INTERIOR



ACTING STATE DIRECTOR, UTAH STATE OFFICE

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KANAB/ESCALANTE GRAZING MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT

() Draft

(X) Final Environmental Impact Statement

Department of the Interior, Bureau of Land Management

1. Type of Action: (X) Administrative () Legislative

2. Abstract: The Bureau of Land Management (BLM) proposes to implement livestock grazing management on 2,567,466 acres of public land in Washington, Kane, and Garfield Counties in Utah, and Coconino County in Arizona. Of the six alternative plans proposed, Alternative 5, Rangeland Management Recommendation, is the preferred alternative. Under this alternative, specific management would be applied on 129 allotments, continuous seasonal management would be applied on 60 allotments, and livestock grazing would be eliminated on 21 allotments. The initial livestock grazing capacity under this alternative would be 68,298 AUMs, and the allocation to wildlife and other resources would be 69,253 AUMs. After 24 years the potential grazing capacity under this alternative would be 91,444 AUMs for livestock and 71,627 AUMs for wildlife and other resources. Under this alternative the production of desirable vegetation would increase, overall watershed conditions would improve, wildlife habitat would improve, and rancher income would improve but would continue to be negative in the long term. Considerable vegetation treatments and rangeland developments such as fences and water developments would be necessary to implement this alternative. These developments would degrade the aesthetic values in certain high visibility areas and could cause some short-term soil losses which would be irretrievable.

The environmental consequences would vary with each of the alternatives, but the primary effects would be to vegetation condition, trend, and production. The vegetation change would cause a change to soils, wildlife habitat, net annual rancher income, and aquatic riparian habitat condition. Specific impacts would vary with the degree of management proposed and the subsequent change from the existing situation.

3. Alternatives Analyzed:

1. Continuation of Present Management
2. Elimination of Livestock Grazing
3. Multiple Resource Enhancement
4. Adjustment to Grazing Capacity
5. Rangeland Management Recommendation
6. Livestock Optimization

4. Comments Have Been Requested From: See List of Agencies, Organizations, and Persons in the Draft Environmental Impact Statement from whom comments were requested.

5. For Further Information Contact:

Morgan Jensen, District Manager
Bureau of Land Management
P.O. Box 724
Cedar City, Utah 84720
Telephone: (801) 586-2401

6. Date Final Statement Made Available to EPA and the Public:

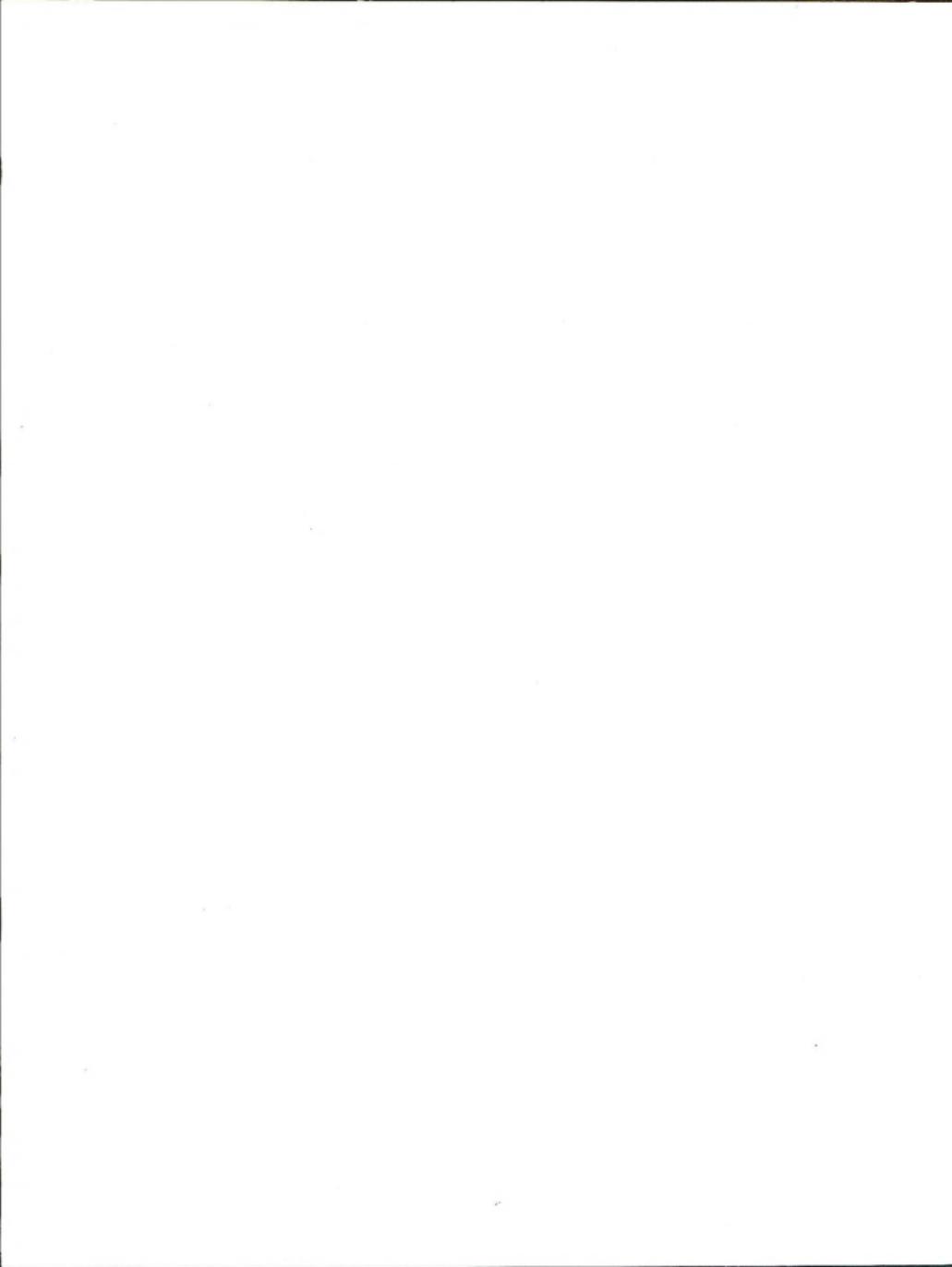


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COORDINATION, CONSULTATION, AND REVIEW
OF THE KANAB/ESCALANTE GRAZING MANAGEMENT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

The DEIS was filed with the Environmental Protection Agency and made available to the public on April 29, 1980. Its availability and the time and place for the public hearings were announced by the Department of the Interior in the Federal Register on April 18, 1980 and by local and regional news media.

July 1, 1980 was originally established as the deadline for submission of written comments. The comment period was extended to July 16, 1980 and was announced by the Department of the Interior in the Federal Register on June 20, 1980 and by local and regional news media.

Public hearings were held at the elementary school in Kanab, Utah on June 10, 1980 at 7:30 p.m., and at the high school in Escalante, Utah on June 11, 1980 at 7:30 p.m.. Ten people attended the hearing in Kanab and three people gave testimony. Twenty-nine people attended the hearing in Escalante and ten people gave testimony. Copies of the hearing transcripts, along with the attendance lists, are available for public review at BLM offices in Salt Lake City and Cedar City, Utah.

The list of agencies and individuals who have requested copies of the DEIS is available for review at the BLM District Office in Cedar City, Utah. The DEIS contains a list of agencies, interested groups, and individuals from whom comments were requested.

The remainder of this document contains: 1) written comments received and BLM responses where applicable, 2) oral comments excerpted from the hearing transcripts and BLM responses, and 3) an addendum containing changes made in the DEIS. Substantive comments received too late for inclusion and response in this FEIS will be answered individually by mail. Late comments and responses, as well as all comments contained herein, will become a part of the Kanab/ Escalante file maintained in the Cedar City District Office, Cedar City, Utah, and will be given consideration along with the Environmental Impact Statement during the decision making process.

All timely written comments and oral testimony from the public hearings were reviewed for consideration in preparation of this FEIS. Those comments that presented new data, questioned facts and/or analyses, and raised questions or issues bearing directly upon the DEIS were responded to by BLM. Letters which were general or did not contain substantive comments were reviewed but no responses were made.

An index number was assigned to each letter received and to each substantive oral comment excerpted from the testimony transcripts. The number appears in the upper right corner on each letter or hearing excerpt. Responses are keyed to individual comments contained in the letters and oral testimony.

COMMENTS AND RESPONSES - WRITTEN

Comment letters are listed below in the order reviewed. A response was not necessary for those marked with an asterisk (*).

1*	Water and Power Resources Service Lower Colorado River Regional Office	14	Heritage Conservation and Recreation Service
2	Esplin Cattle Company	15	Leonard Foote, Barracks Ranch
3	U.S. Fish and Wildlife Service	16*	Lola Esplin
4	Charles C. Esplin	17	Dale E. Clarkson
5	Robert Liston	18	Dale E. Clarkson
6	Ivan Matheson	19	Division of State History
7	Utah Wilderness Association	20	EPA Region 8
8	Utah Woolgrowers Association	21*	Department of Army Corps of Engineers
9	Cooperative Extension Service, USU	22	Keith Carter
10	Roland Allen	23	Doug Carroll
11	National Council of Public Land Users	24	Kane County Board of County Commissioners
12	Kathryn Cushman, Wild Horse Organized Assistance	25	State of Utah, Office of the Governor
13	Soil Conservation Service	26	Garfield County Board of County Commissioners



United States Department of the Interior

WATER AND POWER RESOURCES SERVICE
BUREAU OF RECLAMATION
LOWER COLORADO REGIONAL OFFICE

P.O. BOX 427
BOULDER CITY, NEVADA 89005

MAY 16 1980

1

IN REPLY
REFER TO: LC-159
120.1

Memorandum

To: District Manager, Cedar City District Office,
Bureau of Land Management, P. O. Box 724,
Cedar City, Utah 84720

From: ^{Assistant} Regional Environmental Officer

Subject: Review of Kanab/Escalante Grazing Management Draft
Environmental Impact Statement

We have reviewed the draft statement and have no comments to offer.

Thank you for the opportunity to review the draft EIS.

No response.

Enclosure

Jacqueline J. Bauch

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STATEMENT

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TO: Morgan Jensen, District Manager
Bureau of Land Management
P.O. Box 724
Cedar City, UT 84720

FROM: Esplin Cattle Company
33 North 500 East
St. George, UT 84770

DATE: June 10, 1980

RE: Comments pertaining to Kanab/Escalante Grazing Management
Environmental Impact Statement (Draft) dated April 29, 1980,
as it applies to Esplin Cattle Company and other permittees.

1. Referring to table 1, page A1-2, listed under Present Situation for Goat Ranch Allotment, the Season of Use is stated as 6/1 - 9/30. This is an error. The actual season of use has always been and still is 5/16 - 9/30.

This correction should be made to read 5/16 - 9/30 under the Goat Ranch Allotment in each of the following headings:

- Present Situation, Season of Use in Table 1, page A1-2.
- Area Manager's Recommendation, Season of Use in Table 2, page A1-2.
- MFP Specific Management, Season of Use in Table 2, page A1-3.

The Cottonwood (North) Allotment's Present Situation, Season of Use is yearlong. This should be changed from 10/1 - 5/31 to 10/1 - 5/15 in both the Area Manager's Recommendation, Season of Use in Table 1, page A-2 and the MFP Specific Management, Season of Use in Table 2 page A1-3 to correspond with the changes to be made in the Goat Ranch Allotment Season of Use, if that is the intention of the proposed Management Plan.

2. In Table 2 page A1-3 under Livestock Facilities and Units for Goat Ranch Allotment it lists:

- Fence 1.25 miles
- Water catchment 1
- Springs 2

3. Under the heading Land Treatment and Acres for Goat Ranch Allotment it lists:

- Spray/Seed 700 acres
- Chain/Seed 1168 acres

In order to implement a Deferred Grazing System on the Goat Ranch Allotment, we feel another water catchment should be listed. A catchment should be placed on Lyon's Point in the Goat Ranch Allotment (possibly in Sec. 31 T4P. 43S, R9E, S9N) and one should be placed in Broad Hollow (possibly in Sec. 31 T4P. 42S, R9E, S4N).

Esplin Cattle Company

Response 2-1

Season of Use table 1, page A1-2 and table 2, page A1-3 in the Kanab/Escalante (K/E) Grazing Management DEIS have been revised to read 5/16-9/30 for Goat Ranch Allotment as shown in the addendum of this volume.

Response 2-2

Season of Use table 1, page A1-2 and table 2, page A1-3 in the DEIS have been revised to read 10/1-5/15 for Cottonwood (North) Allotment as shown in the addendum of this volume.

Response 2-3

At this point in the BLM planning process, development of specific details relating to exact onsite location of rangeland developments has not been completed. This depends on the rangeland management program finally selected. Details would be worked out jointly by BLM resource specialists, ranchers, Utah Division of Wildlife Resources (UDWR), Soil Conservation Service (SCS), National Park Service (NPS), Forest Service (FS), and others during the Allotment Management Plan (AMP) program. For further information see Introduction, pages 2-2 and 2-4, and Rangeland Developments, page 2-13 of the DEIS.

3. Another concern we have is that Lyon's Point in the Goat Ranch Allotment and Cottonwood Canyon in the Cottonwood North Allotment are both proposed for wilderness areas. Without water development and land treatments in these areas it would not be possible to have a workable Deferred Grazing System as proposed in the NEP Specific Management in table 2 page A1-3. We are concerned as to the extent of the improvements that will be allowed if these areas are finally designated Wilderness Areas as proposed.

4. Some overall general statements that we want to make are:

- a. Water development must be adequate before a rest rotation will work because water must be available in each pasture that is to be used.
- b. Flexibility must be a part of every A.M.P. Adequate rain fall does not come in every pasture every year and being forced into a dry pasture is detrimental to a permittee trying to earn a living, to the livestock involved, and to the range itself.
- c. Supplemental feeding is very important to a livestock operation and should be addressed in each individual A.M.P. so cattle can be assured of a balanced diet. Good nutrition is necessary for optimum production in the livestock business.

Thank you for considering these comments in preparing the Kanab/Escalante Final Environmental Statement. We hope you will consider them fully along with others that are received and make the necessary changes that will be for the good of all concerned.

Yours truly,

ESPLIN CATTLE COMPANY

Darío L. Esplin

by: Darío L. Esplin

DLE/leh

Response 2-4

Rangeland improvements may be permitted if they do not cause unnecessary or undue degradation of wilderness values. New permanent improvements may be approved for the purpose of enhancing wilderness values by protecting the natural condition of the rangeland. For further information see Impacts to Wilderness, pages 4-57 and 4-58 of the DEIS.

2. Manage sage grouse habitat according to the guidelines recommended by Braun, Britt and Wallestad (1977) or Call (1979).
3. Bighorn and Antelope transplants would continue.
4. Water developments are encouraged with all tanks and troughs constructed to provide water at ground level during the entire freeze free periods and allowing some water to remain available for wildlife at developed springs and seeps.
5. Protect riparian habitats from livestock trampling and abuse by fencing or using natural barriers to improve fish habitat, riparian vegetation, water quality, prevent bank sloughing and soil erosion.
6. Construct livestock fences in wildlife habitat appropriate for the species concerned.

1. Mule Deer

Fifty-four percent of the wildlife habitat in the resource area is in poor condition and 41 percent is classified in fair condition (Page 5-3, paragraph 3). The Objectives For All Allotments calls for maintaining or improving existing habitat conditions and forage quality on big game habitat (Page 1-4, Table 1-1). There are 178,796 acres of important big game habitat that are considered critical; however, 170,897 acres, or 96 percent, is in fair condition (67,187 acres) or poor condition (103,710 acres) according to Page 3-29, under Critical habitat. If the preferred alternative were implemented it is predicted, "the improvement in condition of deer habitat would result in deer numbers increasing from 5,539 to 5,898 head" (Page 4-69, Conclusions and Page 4-71, Conclusions). Putting this in context, the expected increase in deer because of improved multiple use management on 2,567,466 acres of public land would net a gain of 359 deer, or 60 more AUM's (8 1/2 deer per AUM) would be allocated to deer than are presently allowed compared to an increase of 37,550 livestock AUM's in the same area (Page 1-4, Table 1-1).

② Considering the amount of critical winter deer range in poor and fair condition and the small expectation of improvement compared to the increased livestock forage it's obvious multiple use was not a high priority in the planning process.

2. Sage Grouse

③ There are no provisions for protection and management of sage grouse habitat (Page 1-7, MFPI and Page 2-16, paragraph 4). We recommended BLM follow the guidelines for the management of sage grouse habitat described by Braun, Britt and Wallestad (1977) and Call (1979) as discussed at our scoping meeting.

Response 1-2

The increase which would occur to deer numbers would not be due to the increase in forage. According to UDWR, deer numbers in southern Utah are low. The causes of these low numbers are not clear, but forage does not appear to be a limiting factor. The increase in deer numbers discussed would be expected to result primarily from habitat improvement and not from forage quantity.

As shown in Table 4-6, Summary of Impacts to Big Game Habitat, improvements in critical deer winter range would occur. The EIS document is not intended to discuss multiple land use but is intended to analyze the effects of livestock grazing on other resources. The increase in habitat quality (including food, cover, and water), and the resulting increase in deer numbers are associated strictly with improvement activities for livestock. Additional improvement activities strictly for wildlife but not addressed in this or any livestock grazing EIS will be implemented to enhance habitat quality when wildlife habitat management plans are written.

Response 3-3

A discussion of treatments that would occur in sage grouse habitat is on page 4-68 of the DEIS. Treatments which may occur in sage grouse habitat would conform with the Interagency Sage Grouse Guidelines agreed to by BLM, UDWR, FS, and SCS in July 1979. On-the-ground examinations by BLM and UDWR could be made to assure this conformance. This information has been added to Appendix 3 as shown in the addendum of this volume.

3. Bighorn and Antelope Transplants

It was recommended at our scoping meeting that desert bighorn sheep and antelope transplants continue in the Kanab/Escalante Resource Area.

④ A bighorn sheep transplant on Spencer Bench - Harvey's Fear area is alluded to if the wild horses are removed (Page 4-66, Bighorn Sheep). Does this mean bighorns would or would not be transplanted? Is this the only area under consideration?

⑤ Under Antelope (Page 4-67) it states, "Implementation of this alternative (alternative 5, preferred alternative) would improve important antelope habitat on 10,220 acres. Antelope would be allocated 25 AUM's both initially and in the long term." Thirty-five AUM's would only provide forage requirements for the 30 antelope now present. With this allocation there can be no planned antelope increase by either accretion or transplanting.

4. Water Developments

Water developments are encouraged to better utilize available forage. We recommended at the scoping meeting that a source of ground level water be available at all tanks and troughs throughout the freeze free period and that some water remain available at springs and seeps for small mammals and birds, particularly pre-fledged ground nesting birds such as chukars or Gambel's quail.

Some of those recommendations would be incorporated in water development projects (Appendix 3).

① 5. Riparian and Aquatic Habitats

We recommended riparian habitats be protected from livestock trampling and abuse by fencing and/or using natural barriers to improve fish habitat, riparian vegetation, water quality, prevent bank sloughing and soil erosion. Executive Order 11990, requires all Federal Agencies institute a program to Protect and Improve Riparian Habitats and Wetlands. The Bureau of Land Management's final guidelines on Wetland - Riparian Area Protection and Management; Policy and Protection Procedures were published in the Federal Register, Vol. 45, No. 25, Feb. 5, 1980, pages 7529-7595. There is nothing in the draft environmental statement recognizing that those orders or guidelines exist. Projections based on implementing alternative 5 (preferred alternative) does not meet the objectives as stated in BLM guidelines, "02 Objectives. The objectives are to: A. Implement a management system to protect, maintain and enhance all wetland-riparian areas administered by BLM."

⑦ Our review leads us to conclude nothing has been proposed to improve riparian habitat and/or its associated aquatic habitat. Statements from your draft environmental statement to support this conclusion can be found in the following places; Page S-2, paragraph 5; Page S-10, paragraph 6; 2-19, Table 2-5, Riparian; Page 2-21, Table 2-5, Fisheries; Page 3-6, Riparian Vegetation; Page 3-31, Fisheries; Page 3-34, paragraph 3; Page 4-19, Conclusion; and others.

Response 3-4

An agreement between BLM and UDWR to transplant bighorn sheep into the Spencer Bench-Harvey's Fear area has been signed. These are the only areas presently under consideration in the K/E EIS area. BLM has completed an environmental assessment concerning the proposed transplant, and is preparing an environmental assessment on the removal of wild horses.

Response 3-5

Approximately 150 antelope were transplanted into the area during the 1970s. Since that time, their numbers have diminished and stabilized at approximately 35 animals, indicating that the area may be only marginal antelope habitat. More forage is available in the area and could be allocated if antelope numbers increase.

Response 3-6

Executive Order 11990 was addressed during the planning stages of the DEIS and is referenced on page 4-22 of the DEIS.

The purpose of the EIS is to analyze the impacts of livestock grazing on other resources, not to discuss management objectives and multiple land use.

Response 3-7

The draft and final guidelines regarding the protection of riparian habitat were not available during the planning process. However, Alternatives 2 and 3 propose complete protection of riparian areas, allowing the District Manager to select an alternative or parts of any alternative which will protect the natural resources from deterioration.

The analyses of riparian areas in Alternative 3 (page 4-13 of the DEIS) show that the protection of riparian areas is necessary for these areas to incur any significant improvement. This can also be found in paragraph three on page S-10, table 5 on page 2-19, and table 2-5 on page 2-21 of the DEIS. Although no significant improvement would occur in Alternatives 4, 5, and 6, reduction in livestock numbers, changes in season of use, and periodic rest would result in some improvement of riparian areas.

- ⑤ 5. Construct fences in wildlife habitat appropriate for the species concerned. We assume new fences will be compatible with wildlife based on fence design specifications found in Appendix 3.

Specific Comments

Page 1-6, Table 1-2, MFP 2 states, "Wildlife and other resources would be allocated 69,253 AUM's, divided as follows: 15,527 AUM's to deer, 35 AUM's to antelope, 632 AUM's to elk, 590 AUM's to bighorn sheep, 52,469 AUM's to other wildlife and resources". This statement is often repeated throughout the draft statement and we believe it needs considerable clarification to be creditable. Fifty-two thousand four hundred sixty-nine AUM's represents a tremendous amount of forage. It amounts to 76 percent of the total "wildlife and other" resource AUM's, or 32 percent of the entire 163,071 long-term forage AUM's (Page 4-19) anticipated in the resource area. These facts lead us to the following questions:

- ⑨ 1. What forage plants contribute to the 52,469 AUM's that preclude it from being used by livestock or big game?
- ⑩ 2. Are they palatable forage species and should they be considered "forage" at all?
- ⑪ 3. What other wildlife besides deer, elk, antelope and bighorn sheep needs or would use 52,469 AUM's in this resource area?
- ⑫ 4. Why couldn't more of this 52,469 AUM allocation to "wildlife and other resources" be given to deer, elk, antelope, bighorn sheep or wild horses since their forage is already over allocated to livestock?
- ⑬ 5. What "other resources" needs require ungrazed forage plants that couldn't be served by vegetation properly grazed?
- ⑭ 6. Is the 52,469 AUM's allocated to "other wildlife and resources" based on sagebrush, juniper and pinyon forage production and being presented as a cover up for the imbalance of AUM's divided between livestock and wildlife?

We believe answers to these questions will help us and others understand your forage allocations better.

- ⑮ 15. Page 1-10, final sentence reads, "...protection of species and" Do you mean protection of threatened and endangered species and ...?

Page 2-1, paragraph 4 reports, "...an additional 52,738 noncompetitive AUM's for the wildlife and resource uses were derived from big sagebrush. A sagebrush winter proper use factors of 10 and 30 percent was assigned to cattle and deer respectively."

Response 3-B

Fences will be designed to accommodate the wildlife species in the area as specified in Appendix 3 of the DEIS.

Response 3-9

All plants identified during the inventory stages contributed to the 52,469 AUM's. Each plant used by wildlife was assessed and a proper use factor was determined for that plant. This was completed in the same manner for livestock. See page 2-1 of the DEIS.

Response 3-10

Forage species which were not as palatable as other plants were given low proper use factors, making their contribution to the total AUM's low. See Response 3-9.

Response 3-11

Small mammals and insects take an unknown but expected large amount of forage annually. Their undetermined forage requirement is included in the 52,469 AUM's.

Response 3-12

In accordance with a request by UOWR, BLM allocated wildlife forage during the planning process to satisfy the needs of prior stable wildlife numbers. Although current big game numbers are low in the area, forage availability does not appear to be a limiting factor.

Response 3-13

Although some resources would not require elimination of grazing to improve, literature indicates that frail watersheds would improve most rapidly when not grazed. See pages 4-25 and 4-26 of the DEIS.

Response 3-14

The 52,469 AUM's available to "other wildlife and resources" is comprised of available forage from the plant species found in the EIS area. See Response 3-9.

Response 3-15

The text has been changed to include "threatened and endangered species" on page 1-10 as shown in the addendum of this volume.

In the past the need for a heavy sagebrush diet for deer may have been overvalued. Studies by Ward and Nagy 1966; Nagy et al. 1964 and Wallmo et al. 1977 found deer diets containing 15% or more sagebrush inhibits digestive functions. Wallmo et al. 1977 found in Middle Park, Colorado that as consumption of sagebrush increased up to 30 percent of the diet, deer experienced critical weight loss, with some becoming manifestly ill. Smith et al. 1979 and other workers found that if livestock were grazed on winter deer range in a timely manner to avoid direct competition on the winter range and not grazing off tender new browse shoots when they are palatable to livestock, that under a dual grazing system more animal units can be supported per unit area than managing it for either single group.

In view of these studies we recommend less reliance on sagebrush for winter deer forage and more on a realignment of livestock grazing periods on deer winter ranges to achieve these goals. Hopefully over time it would avoid pressuring deer into a starvation diet high in sagebrush and juniper because livestock ate all the preferred browse before the deer moved on the winter range.

Pages 2-9, alternative 3, item 8; 2-9, alternative 4, item 7; 2-11, alternative 5, item 8; and 2-12, alternative 6, item 5. All state, "Periodic monitoring and evaluation of proposed management actions would assure that management goals would be met and maintained. Management goals would be based on evaluation of key species that are representative of desirable forage plants. These key species include grasses (indian ricegrass, crested wheatgrass, sand dropseed, big galleta grass) and shrubs (antelope bitterbrush, fourwing saltbush, winterfat)." If sagebrush will provide 52,738 AUM's (Page 2-1, paragraphs 4 and 5) out of the long-term total of 163,071 AUM's (Pages iii, 4-19 and others) why isn't sagebrush shown as a key species and used for monitoring and evaluation? A forage plant contributing 32% of the total forage base would appear to be important enough to monitor.

Page 2-13, paragraph 6 continuing to 2-15, paragraph 1, reads, "... treatments would be to remove less desirable vegetation ... piñon-juniper and sagebrush stands, and replace them with more desirable species." If sagebrush is important enough to provide 52,738 AUM's (Page 2-1, paragraphs 4 and 5) of forage, would more AUM's, or pounds of forage be produced on the 242,227 treated sagebrush acres? How many pounds of forage would be gained in "desirable" forage over the amount produced by sagebrush? What "desirable" wildlife and livestock forage would be reseeded?

Page 2-15, paragraph 6 reads, "Proposed seed mixtures would consist of grasses, forbs and shrubs. Applications would be by aerial means or by drill seeding" What grasses, forbs and shrubs would be used? These plants should be identified so other interests could evaluate their desirability. It should be pointed out that the U.S. Forest Service Shrub Science Lab at Provo determined that many shrubs cannot successfully compete with grass when seeded together and hand planting

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Response 3-16

Key species such as antelope bitterbrush, fourwing saltbush, and winterfat are more closely associated with quality habitat, and because of their high palatability, are better indicators of vegetation change than sagebrush.

Response 3-17

The treatment of sagebrush areas would produce a variety of livestock and wildlife forage. This forage would be of higher quality and would be more desirable to livestock and wildlife, although production (pounds of forage) may be less.

Response 3-18

Treatment would result in approximately 24,223 AUMs of desirable forage being produced, including fewer sagebrush AUMs, but AUMs of higher quality. Species to be seeded in vegetation treatments would be decided upon by the rangeland user, BLM, NPS, FS, SCS, and UGWR (page 2-13 paragraph 5 of the DEIS). Examples of plant species which would be considered in revegetation operations are: shrubs (antelope bitterbrush, desert bitterbrush, Utah serviceberry, winterfat, fourwing saltbush, littleleaf mountain mahogany); grasses (Russian wildrye, sand dropseed, crested wheatgrass, Indian ricegrass); and forbs (Palmer penstemon, small burnnet, Utah sweetvetch).

Response 3-19

See Response 3-18.

seedling browse plants can be cost effective in getting the desired plant composition and assure establishing wanted browse plants. Many of those shrubs are important deer winter forage plants.

Pages 2-19 and 2-21, Table 2-5, Riparian Condition and Fisheries. According to Table 2-5 the riparian condition would not measurably improve and there would be no change in the aquatic/riparian community. Fisheries habitat would decline an 6-9 miles due to increased livestock use. Executive Order 11990 requires all Federal agencies to take actions to assure riparian wetland habitats are improved. Does alternative 5

- (20) (Preferred Alternative) meet this requirement? BLM's Final Guidelines on the Policy and Protection Procedures were published in the Federal Register February 5, 1990. Does this action follow those guidelines?
- (21) Would the riparian habitat be measurably improved in the short and long term? Evidence from several studies indicate anything less than complete exclusion of livestock would not effect measurable improvement in riparian/aquatic conditions. Buff (1978) found short-term trespass negated the effects of 4 years improvement under total exclusion. In the local western vernacular, it is often said, "cows will stand on water and starve to death unless you move them out every day." Anything less than nearly total exclusion will not improve riparian/aquatic habitats.

Page 3-12, last paragraph states, "...concentrated livestock and wildlife use along streamides is believed to be the primary cause for collapse and deterioration of these areas." Where in the Kanab/Escalante area are wildlife concentrations large enough to cause collapse and deterioration of streambanks? Chapter 3 describes the existing environment and if wildlife are not a measurable contributor to streamside collapse and deterioration the reference to them in this context should be removed, even if you are quoting studies on the cause of collapse of streambanks.

- (22)
- (23) Page 3-30, Table 3-9, Pronghorn Antelope, states, "... conflicts occur when livestock graze the riparian areas prior to or during antelope fawning periods." This is an error. Antelope do not fawn in riparian areas but use large flats far from riparian areas where vision is unobstructed in all directions. Dependence on riparian areas for antelope is small. This statement should be deleted.

Page 3-32, Table 3-10, Sage grouse, Notable Characteristics states, "...adult birds consume up to 90 percent plant material of which 77 percent is sagebrush." This should be changed to read "sage grouse diets are 100 percent sagebrush from November through May, Patterson (1950) and others."

- (24)
- (25) Page 3-32, Table 3-10, Gambel's quail, existing situation states, "Once common in EIS area, especially along riparian areas. Over hunting and severe winters resulted in gradual elimination of quail from original range." What evidence is there to support the hypothesis over hunting eliminated Gambel's quail? It is virtually impossible to "hunt out" a species where habitat is adequate. Gambel's quail are native to the EIS area and as such evolved over a long period of time withstanding severe winters. The destruction of habitat from overgrazing by livestock caused the demise of the quail. Table 3-10 should be corrected on the existing situation of Gambel's quail.
- (26)
- (27)

Response 3-20

Alternative 5 primarily discusses the impacts of a variety of grazing systems and vegetation treatments. The impacts of protection for riparian areas are discussed in Alternative 3. As explained on page 5-11 of the DEIS, the impact analysis is presented in this fashion to allow the manager to select from a variety of alternatives and develop rangeland management plans which will best manage the resources and meet the needs of the livestock operators. See Response 3-7.

Response 3-21

Under Alternative 5, riparian habitat presently in very poor and poor condition would not show any significant improvement in the short term, but would improve in the long term due to more intensive livestock management. No significant change would be expected to occur in those areas which are in fair to good condition. See Response 3-7.

Response 3-22

The impacts of total exclusion of riparian areas are discussed in Alternatives 2 and 3 in the DEIS (pages 4-11 and 4-13).

Response 3-23

As discussed in Chapter 3, wildlife numbers are low in the K/E EIS area. The reference to wildlife has been deleted as shown on pages 3-12 and 4-19 in the addendum of this volume.

Response 3-24

According to BLM observations, most of the sightings and primary use areas of pronghorn antelope occur in riparian areas. In the EIS area, May and June are the driest months and coincide with the antelope fawning period. Antelope are very dependent on forbs and succulent forage during this period, and the riparian areas provide this type of forage.

Response 3-25

The text has been changed. See table 3-10 on page 3-32 in the addendum of this volume.

Response 3-26

The text has been changed. See table 3-10 on page 3-32 in the addendum of this volume.

Response 3-27

See Response 3-26.

28 Page 3-33, Table 3-11. We believe Flathead Minnow should be Fathead Minnow.

29 Page 4-14, paragraph 4 reads, "... remove dominant deep-rooted mature plants (primarily pinyon-juniper ...)." Do you consider pinyon and juniper deep-rooted?

30 Page 4-53, paragraph 3 states, "... more than adequate forage is available to deer." What forage do you mean? According to Page 3-3, 96 percent of the big game range is in fair or poor condition. Page 3-29, Critical Habitat shows 170,857 acres out of 178,796 acres of critical habitat is in poor (103,710 acres) or fair (67,187 acres) condition.

31 Page 4-54, Mule Deer states, "Due to overallocation of livestock forage, low plant vigor, and poor quality forage, deer habitat continues to decline" Since mule deer forage is the largest share of big game forage allocations (15,527 AUM's, deer; compared to 35 AUM's antelope; 632 AUM's for elk and 590 AUM's for bighorn sheep, Table 1-2) we must assume deer forage is not adequate as is stated on Page 4-53, paragraph 3 and we recommend that statement be changed to describe the true situation.

32 Appendix 18, Allotments With Livestock/Big Game Conflicts. None of the Allotments are shown to indicate livestock grazing in critical riparian areas as a conflict. With the recognized importance of riparian habitats to many wildlife species, including mule deer, and 5,846 acres in fair (1,549 acres), poor (4,032 acres), or very poor (265 acres) condition because of overuse by livestock out of the 6,807 riparian acres, how can that not be recognized as a conflict and be left out of Appendix 18? Unless something can be shown to the contrary, it should be included as a conflict in every allotment with riparian habitat.

We thank you for this opportunity to review and comment on your draft environmental statement.

Robt H. Shiloh

Response 3-28

The text has been changed to read "fathead minnow." See page 3-33 in the addendum of this volume.

Response 3-29

The term "deep-rooted" has been deleted. See page 4-14 in the addendum of this volume.

Response 3-30

The present big game populations require approximately 6,184 AUMs (deer - 5,747 AUMs, antelope - 35 AUMs, elk - 316 AUMs, and bighorn sheep - 85 AUMs). A total of 69,253 AUMs of wildlife forage is available according to the BLM range survey, leaving 63,069 AUMs of forage for other resources. See Response 3-9.

Response 3-31

Mule Deer has been changed on page 4-54 as shown in the addendum of this volume. The AUMs allocated to wildlife (shown in table 1-2 of the DEIS) are of sufficient amount for prior stable wildlife numbers. Wildlife numbers discussed on page 4-53 are present numbers and are considerably less than prior stable numbers.

Responses 3-32

Corrections in Appendix 18 have been made to identify areas with conflicts in riparian areas, as shown on page A18-1 in the addendum of this volume.

CEDAR CITY, UTAH
JUNE 16, 1960

DISTRICT MANAGER
BUREAU OF LAND MANAGEMENT
P.O. BOX 724
CEDAR CITY, UTAH 84720

GENTLEMEN:

I AM WRITING REGARDING THE KANAB/ESCALANTE DRAFT ENVIRONMENTAL IMPACT STATEMENT, AND SPECIFICALLY THE UPPER NORTH FORK ALLOTMENT IN THE ZION PLANNING UNIT USED BY CHARLES H. ESPLIN AND SONS.

IT IS MY UNDERSTANDING THAT IT IS PLANNED TO HAVE THE B.L.M. LAND UNDER A CUSTODIAL ALLOTMENT USE, SO WOULD BE USED IN SUCH A WAY AS TO CONFORM TO USE OF SURROUNDING PRIVATE LAND. THE PROPOSED GRAZING SEASON IS FROM 8/1 - 9/30 EACH YEAR. THIS SEASON WILL BE USED SOME YEARS, POSSIBLY MOST YEARS BUT SOME YEARS, DEPENDING ON WEATHER, ROTATION OF GRAZING ON PRIVATE LAND, ETC. USE MAY NEED TO BE EARLIER OR LATER ON PART OF THE B.L.M. LANDS THAT ARE PART OF THE NATURAL TRAILING AREA FROM ONE PARCEL OF PRIVATE LAND TO ANOTHER. FOR THIS REASON THE SEASON NEEDS TO BE FROM JUNE 1 TO OCTOBER 15.

PLEASE GIVE FULL CONSIDERATION TO THIS REQUEST, RECOGNIZING THE USE WILL NOT BE ANNUALLY ON THESE DATES, BUT NEEDS TO BE GRANTED IN ORDER TO HAVE FLEXIBILITY OF USE NEEDED. IT WOULD NOT BE POSSIBLE TO SPECIFICALLY SAY WHICH YEARS THIS EARLIER OR LATER USAGE WOULD BE NEEDED BECAUSE OF VARIABLE FACTORS DETERMINING THE USE.

SINCERELY YOURS,

CHARLES C. ESPLIN
138 NORTH 500 WEST
CEDAR CITY, UTAH 84720

Charles C. Esplin

Response 4-1

Season of Use, Area Manager's Recommendation, table 9 on page A1-26 has been revised to read 6/1-10/15 for the Upper North Fork Allotment, as shown in the addendum of this volume.

1

June 14, 1980

5

B.L.M. District Manager
P.O. Box 725
Cedar City, Utah 84720

Dear Mr. Jensen,

On June 11, at the High School Gym, I went on record as opposing the Environmental Impact Study. I would also like to submit a written statement concerning my opinions and feelings.

The whole document is very misleading, discriminatory, and biased when judged by lifetime cattlemen like myself. To me it suggests a socialistic form of government when the B.L.M. can not even take away what has rightfully belonged to the cattlemen since the discovery of this valley.

Just last spring at this time my wife and I made a trip down to the Blowers allotment to take pictures of how the area looked. In the years I have run cattle I couldn't remember many springs that it looked better, yet the B.L.M. range manager formulated his own judgement of the area, made his decision based on those so-called judgements and submitted it to his superiors. No concern for men whose livelihood would be wiped out, but lots of concern for wild horses, wild sheep, aesthetic beauty, etc., etc. It was the conclusion of a biased environmentalist raised in the east. How can you call that fair and just? How

Robert N. Liston

Response 5-1

No decisions have been made at this time. The BLM manager will make his decisions after additional input from the public, specialists, and other interested agencies. See Response 2-3.

Response 5-2

As required by law (Taylor Grazing Act, 1934; Classification and Multiple Use Act, 1964; Public Law 88-607; and the Federal Land Policy and Management Act [FLPMA], 1976), BLM is responsible for managing public land "in a manner that will protect the land and its resources from destruction or unnecessary injury, stabilize the livestock industry dependent on public lands, and provide for the orderly use, improvement, development, and rehabilitation of the public lands for livestock grazing consistent with multiple use, sustained yield, environmental, economic, and other objectives" (4100.0-2 Grazing Regulations).

Sixteen scoping meetings were held to provide the public, State, and Federal agencies an opportunity to comment on land use plans and address critical issues pertinent to the DEIS. Significant issues identified during scoping are included on page 1-8 of the DEIS. All of these issues were addressed in the DEIS.

can you call a four-year college graduate, who hasn't seen a cow before, a specialist?

① I would like to know of one suggestion from a cattleman on this E.I.S. that has affected your final decisions. To me the whole

BLM decision-making process is a farce. On page 1-2 of your E.I.S. it reads, "The BLM planning system is a decision-making process using input from the public and resource specialists." The input from the public does not make one particle of difference in your decisions and your "specialists" have their minds totally made up even before they begin their study.

② Another thing that bothers me is your allocation of AUM's. You are actually allocating more AUM's to the wild life and other resources than to cattle, and that's what it was primarily set up for - a cattle winter range.

③ And too, you talk about long term management plans. Who's going to be around in 20 years to reap the benefits? We see that as a sure fire way to put us off the land permanently.

④ On page 5-8 it reads, "This would be a 38% reduction from the present grazing preference or a 1% reduction from past active authorized use." Because of drought and poor crops we have had to get rid of some of our cattle and therefore haven't been using all of our AUM's in the past several years. The 1% clause is very misleading because you are actually

Response 5-3

No final decisions have been made. BLM has solicited and used information from ranchers concerning existing grazing practices, ranch budgets, existing treatments and developments, and tentative grazing systems. BLM managers will meet with ranchers prior to any final decisions and cooperatively develop AMPs as explained on pages 5-11, 2-1, 2-13, and 4-3 of the DEIS. See Response 2-3.

Response 5-4

The forage allocations were based on the 1975-1977 ocular reconnaissance survey, which determined the forage available to livestock and wildlife. See page 2-1 of the DEIS for an explanation of differences between livestock forage and wildlife forage.

Response 5-5

FLPMA mandates that BLM manage resources with a long-term management program. The 24-year timeframe was chosen for purposes of measuring objectives of proposed management options. As explained in the Vegetation section of Chapter 4 (pages 4-4 through 4-22) in the DEIS, many benefits would occur prior to the end of 24 years. As soon as water and access would be developed on 135,000 potentially suitable acres, an additional 6,258 AUMs would be available. As proposed, when vegetation treatments would be completed and the vegetation could support grazing without being damaged, additional AUMs would be available. There is no effort to put the permittee off the rangeland; instead, the intention is to improve the rangeland as soon as possible.

Response 5-6

The active authorized use information used in the comparison and analysis was based on a 5 to 10-year average. The proposed stocking levels, based on the ocular reconnaissance survey completed in 1977, indicated that many allotments would not support current preference levels of livestock use without degradation to the vegetation resource. See pages 4-4 through 4-22 and A20-1 through A20-14 of the DEIS. Economic consequences of adjusting levels of livestock use are covered on pages 4-41 through 4-53 of the DEIS. With additional vegetation treatments, rangeland developments, and management systems, many allotments would improve beyond the average active authorized use level.

-15-

taking away permit that we plan to use and will use as soon as we can get our herds back up.

① One last thing - I would like to know who makes the final decision about this Environmental Impact Study and the cuts given to the cattlemen in the Escalante-Boulders Area? Is it the BLM? If so, that hardly seems fair in a democracy where all are supposedly given equal rights and opportunities. I feel the decision should be made by a third party who will weigh the issues and feelings of both the cattlemen and the BLM. If this is not done, naturally, the BLM will decide in their own favor and a third party will inevitably be called in, for that third party will be - the courts.

Very sincerely yours,
Robert N. Liston

Response 5-7

As indicated on pages 1-2 and 1-5 in the DEIS, resource management decisions are developed using input from the public and information contained in the seven planning system components. Using the information provided by public participation and the planning system components, the BLM Cedar City District Manager will make land use decisions concerning the K/E livestock grazing management program. As explained on page 2-13 of the DEIS, these decisions will be made after the FEIS is written and individual AMPs have been developed with the ranchers and other interested agencies.

UTAH STATE SENATE for City Utah REC'D. 6



June 17, 1980

Section	Action	Info	Initial
DR			
ADM			
PA			
AO			
PEC			
CR			
CO			
AMB			
AMU			
AME			
AMK			
PLN			
ENV			
P-V			
HS			

JUN 20 1980

SENATOR
 IVAN M. MATHESON
 TWENTY-NINTH DISTRICT
 SALT LAKE, WASHINGTON,
 GARFIELD AND KANE COUNTIES
 300 E. MAIN VALLEY ROAD
 CEDAR CITY, UTAH 84720
 GEORGE PHONE 346-8257

Morgan Jensen, District Manager
 Bureau of Land Management
 Cedar City, Utah 84720

Dear Mr. Jensen:

I am sorry that I was not able to attend either of the hearings on the Kanab-Escalante Environmental Impact Statement. I would, however, like to voice some concerns with regard to the proposed cut-backs in grazing permits in those areas. I have discussed these concerns at length with Gary Wicks, State Director of the BLM. Mr. Wicks indicated that he will be in Southern-Utah early in July and will go over the problems and proposed cut-backs and try to mitigate some of the problems being created by the EIS proposal.

As you are aware, the Forest Service recently cut grazing permits and locked up large areas in wilderness. The economy of Kane and Garfield counties is vitally affected by the cuts. The National Park Service has also withdrawn lands which has hurt the permittees. We have seen some of the best grazing lands in these two counties locked up in Wild and Scenic Rivers and Wilderness and Primitive areas. The economy of Kane and Garfield counties cannot stand further cut-backs.

The lumber industry, which has augmented a slim economy in these counties in the past, has been tragically reduced by the policies of the Forest Service and EPA.

Range specialists of repute have indicated that the ranges are not in bad shape at this time. Many of us living in these areas feel that it would be criminal for BLM to carry out its proposed grazing cut-backs. It often seems that our feelings and input are not heeded when BLM takes such action.

We would appreciate consideration being given to the well-being of human beings living in these counties in preference to many of the other factors being addressed in the EIS.

We thank you for this consideration.

Sincerely,

Ivan M. Matheson
 Utah State Senator

IMM/jbt
 cc: Kane and Garfield County Commissions

Ivan M. Matheson, Utah State Senator

Response 6-1

Approximately 25 qualified range conservationists worked on the inventory at various times over the 3-year period of the survey. The livestock carrying capacity revealed by the survey was 68,298 AUMs, which was within 1 percent of the 5 to 10-year average active authorized use of 68,895 AUMs. This survey indicated that 500,465 acres were in poor livestock forage condition, 682,830 acres were in fair livestock forage condition, and 324,344 acres were in good livestock forage condition. The majority of the rangeland condition trend was static. This information made it apparent that unless a change in management occurred, portions of the rangeland resource would continue to deteriorate.

Realizing that the necessary reductions would create a hardship, and recognizing a possibility of 10-percent error, the policy in the K/E area will be to place the AUMs of difference between the preference right and the surveyed capacity into nonuse, providing there is adequate potential for the forage capacity to again be authorized at the level of the preference right. However, if the potential to reach the preference level is not there, nonuse can only be granted for what potential is attainable through management, water developments, distribution fences, or vegetation treatments.

improvement of range conditions? Grazing systems are only justified when the range needs improving; they should not be used as substitutes for an area that needs livestock numbers reduced. Cuts should be made where the data show they are needed. Range improvements should be conducted only if the benefit/cost ratio is cost effective. Are the proposed improvements economically justifiable? Apparent trend is not always a good indicator of range trends. Are there any ongoing studies that will guarantee the apparent trend information is accurate? Have natural values and multiple use considerations been considered in range improvements? In the past, range manipulations have been dominant use oriented (livestock) and have ignored natural, cultural and other values. This clearly will not satisfy the law, court cases or sensible planning.

Are the suitability guidelines a realistic reflection of animal grazing patterns? Do cattle properly graze areas three miles away from water during hot dry weather? Will potentially suitable areas that don't contain water at present be allocated or will they be termed unsuitable if water cannot be found or transported to these areas? Are season of use adjustments adequate to protect the plants during critical phenological stages?

No single alternative seems to fit the needs of all involved and the questions/concerns we have raised have not been properly addressed. With adequate responses to these questions, the combination of alternatives 3, 4 and 5 should be considered as a legitimate alternative. The area covered by the EIS contains some of the most spectacular country on earth. We should consider the implications our present actions may have on future generations in a true multiple use sense.

Thank you for the opportunity to comment on this document. We look forward to a sincere incorporation of our comments into the final statement.

Sincerely,

Dick Carter
Coordinator

Response 7-8

Although Appendixes 1 and 7 of the DEIS specify proposed developments for each allotment by alternative, specific location, size, and number of developments would be dependent upon a specific onsite evaluation conducted with the rancher and other interested agencies during the development. This has been explained on pages 5-11, 2-1, 2-13, and 4-3 of the DEIS. Before a development could be implemented, a benefit/cost analysis, onsite soils analysis, threatened and endangered species evaluation, and an archaeological investigation would be required. See Response 5-7.

Response 7-9

The validity and reasons for using apparent trend are explained in the DEIS on pages 2-4 and 2-11. Appendix 11 discusses the apparent trend methodology. Although apparent trend data is limited, it can be applied by experienced rangeland specialists to obtain reasonably reliable information to determine whether the vegetation is improving or declining. The monitoring program as explained in the DEIS on page 2-15 will add the necessary replication for substantiating the apparent trend information.

Response 7-10

The multiple use considerations were analyzed in the planning system and are summarized in Table 1-2 of the DEIS. The natural values were also considered in planning, and to assure protection, mitigating measures will be implemented as shown in Appendix 3 of the DEIS. This appendix summarizes the project design specifications for seedings, spraying, burning, water developments, fences, and other developments that would disturb the environment.

The section on vegetation treatments (pages 2-13, 2-15, and 2-16 of the DEIS) explains how the vegetation would be manipulated and that both wildlife and livestock forage species would be reseeded.

Response 7-11

Based on as many credible sources of research information as possible, BLM developed rangeland suitability criteria in four major parameters of influence: livestock forage production, distance from water, slope, and soil erosion. Rangeland is deemed suitable only if it can be grazed on a sustained yield basis without damage to the basic soil resource. The term "suitable" is often confused with the common term "usable." Many areas can be grazed by livestock and are, therefore, usable; however, they cannot be grazed year after year without damage to the soil resource. For more information see Appendix 9 of the DEIS.

Response 7-12

Use of an area by livestock does vary, depending on the topography and distance from water. This and other information has been considered by BLM in developing the suitability guidelines shown in Table 1 on page A9-3 of the DEIS. See Response 7-11.

Response 7-13

Potentially suitable rangelands are not currently suitable for livestock grazing because of: 1) current inaccessibility to livestock, or 2) lack of water available for proper utilization. The allocation of forage for livestock on potentially suitable lands will not be made until such time as the area becomes suitable. No allotment specific management systems could be implemented until all necessary developments and treatments in the particular allotment would be completed.

Response 7-14

As shown in Appendix 20 of the DEIS, there are many factors (including intensity of grazing, rest, management systems, and degree of utilization during critical growth stages) that affect the vigor and physiological development of plants. The deferment of grazing until after seed ripeness during the Alternative 4 would provide for the physiological needs of plants during the critical spring growth period. However, under Alternatives 5 (BLM preferred alternative) and 6, physiological needs during critical growth periods may not be adequately provided for in some allotments that would be in continuous seasonal use. Refer to pages 4-1 through 4-15, A20-1 and A20-2, and 2-14 of the DEIS for more information.



June 18, 1980

Morgan Jensen
District Manager
Bureau of Land Management
P.O. Box 724
Cedar City, UT 84720

Dear Mr. Jensen:

Thank you for supplying a copy of the Kanab/Escalante
Grazing Management Environmental Impact State Draft.

It was our privilege to have a representative at the
hearing, May 21st regarding the EIS. We have reviewed
the EIS and recognize there are few sheep involved,
however a statement on the general EIS is appropriate.

It is our opinion alternative 5 "Rangeland Management
Recommendation" of alternatives listed would possibly
come closer to meeting the long-term adjustments better,
however, in reviewing the figures 3-24 agriculture is
a source of income for the K/E area amounting to 15%
of total employment is agriculture. It is noted
"Government" leads the employment list in the area,
however the real lifestyle of the area is dominated by
a rural atmosphere centered primarily around livestock
and for every individual working in agriculture 15 other
individuals are employed. This is not a small item

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even in the K/E area, therefore, any effect on livestock production has an effect on others as well.

Rather than discuss each alternative and record statements, it is suffice to draw to attention certain questions and look at some general situations. Recognizing the economics quoted were

made from interviews. How can you justify a long term income adjustment either negative or positive? Our economy has not been that stable and your assumptions are only probable and not accurate. Your justification is not valid, it's all assumption.

You draw attention to attitudes with a statement 4-50, "This alternative would generate mixed impacts to ranchers attitudes and expectations." How do ranchers know they will get increased grazing in long-term (24 years)? The BLM track record of 44 years does not include such adjustments to date. There has not been confidence developed with the individual by BLM nor can it seem that this would be the case in the next 24 years, it's purely supposition. And based on funds becoming available.

With the strain on government today are your budgets increasing greater than the inflation rate? If so please note so and document your case.

We read continually of Wildlife increase but of livestock reduction. EIS 2-1 states "In computing the range survey, an additional 52,738 non competitive AUM's for other wildlife and resource uses were derived primarily from big sagebrush. A

Hatch Howard, President Utah Wool Growers Association

Response B-1
Due to the difficulty of predicting future livestock market conditions, an assumption that current market conditions would prevail was necessary for socioeconomic analysis, as explained further on page 4-2 of the DEIS. The impact of each of the six alternatives on the forage condition, trend, and production was then applied to the present economic conditions obtained in the survey of affected ranchers, as explained further on page 3-2 of the DEIS.

The unavoidable adverse impacts to socioeconomics that would result from the implementation of any one of the six alternatives is explained on page 4-52 of the DEIS. There would be unavoidable adverse impacts in all alternatives except Alternative 6. The unavoidable adverse impacts would primarily affect medium-size ranching operations. However, all data in the analysis represents an average of the entire size class. Any individual's finances could differ significantly from that average. Therefore, the numbers should be interpreted as general indications to compare alternatives and not as hard facts, as explained on page 4-41 of the DEIS.

Response B-2
Your reference to attitudes on page 4-50 of the DEIS concerns the expected increases in forage capacity in Alternative 5 as a result of the proposed development of potentially suitable acres, additional water developments, distribution fences, vegetation treatments, and grazing management systems. The expected increases or adjustments (shown by allotment in Appendix 1D of the DEIS) are based on experience with management systems, condition of rangeland sites in the area, edaphic factors (explained in Appendix 21 of the DEIS), and literature searches (explained in Appendix 20 of the DEIS). Naturally, drought years, fires, and other catastrophes could occur to change the environment and cause the predictions to be inaccurate, but there could also be good moisture years and generally favorable growing conditions to offset the bad years. There would be no guarantee of increases, but given proper management and necessary improvements, the increases would be most likely to occur.

Response B-3
Our budgets are not increasing greater than the inflation rate. However, there have been some very favorable changes made recently which are for the benefit of the rangeland resource. Congress has recognized that the rangeland resource is not producing to its potential, and through FPLMA and the Rangeland Improvement Act of 1978, has approved of funding for developing the rangeland resource to its potential.

sagebrush winter proper use factor of 10 and 30 percent was assigned cattle and deer respectively." The BLM manual states "Procedures will be followed in conducting rangeland and habitat studies. Periodic inspections will be conducted to insure compliance with terms of AMP's (allotment management plans). Monitoring studies will include: Actual use, utilization, climate analysis, rangeland condition and trend, herbage production and plant phenology. To evaluate effects of the AMP's on total resources, other studies will also be necessary to monitor wild-life habitat, riparian habitat, threatened and endangered species, cultural resources, wilderness and competition between livestock and wildlife (Big horn sheep, Antelope and Mule Deer). Results of these evaluation studies will be used to monitor and refine grazing systems and determine allowable livestock use. AMP's may be revised on the basis of these studies."

-22-

- ④ Does this policy statement by BLM stand as general procedure? If it is then domestic livestock will not have serious consideration to use public lands in the future. In another policy statement BLM states "A discussion will be held in a case-by-case basis however if no agreement can be reached a decision will be made." Who then makes the decision? BLM or someone else? If BLM make the decision is surely has not favored a conscious livestock position. Thus again more bureaucratic domination. Too many times the situation is such that biased conditions bring forth the statement "Don't confuse me with the facts my mind is already made up".
- ⑤

Response 8-4

Monitoring and evaluating changes in plant composition and ground cover after grazing treatments would be implemented to determine the degree of utilization of key forage species. This procedure is necessary to determine the effectiveness of the current management, and as explained on page 2-16 and 2-17 of the DEIS, to provide for modifications to the grazing treatments to assure protection of the resources. Administrative options and flexibility are further explained on page 2-17 of the DEIS.

Response 8-5

The District Manager will make the decision and the permittee will have 30 days to appeal this decision. However, every attempt will be made by the District Manager to arrive at a grazing management plan that will protect the natural resources and most nearly fit the permittee's operations. See Response 5-7.

Our greatest concerns are the projected programs. It is our opinion they are only projections and not realistic. They show only a biased phase and for the time and money expended are un-needed expenses.

Livestock people as a whole are conscious and have tried to cooperate with federal agencies but the uncertainties, the sudden changes in policy, the promises never kept and the overall confusion has not been good public relations for BLM. No wonder we have a "Sagebrush Rebellion", no wonder people are concerned. Policies have been made in Washington and so many of those individuals are not acquainted nor qualified with western livestock operations.

Too many officials are not interested or concerned in multiple-use but are biased for only a specific item or subject themselves to national pressure and not concerned with the socio-economic impact on small or rural communities or the individuals within those areas.

Prior to your final draft and implementation we urge further consideration to the above situations.

These views are not those of one individual but represent the sentiment of 1,000 individual sheepmen.

Sincerely,


Hatch Howard, President
Utah Wool Growers Assn.



COOPERATIVE EXTENSION SERVICE
UTAH STATE UNIVERSITY

9

AMC 48
LOGAN, UTAH 84322

Utah State University and the U. S.
Department of Agriculture Cooperating

June 20, 1980

Mr. Morgan Jensen, District Manager
Bureau of Land Management
P. O. Box 724
Cedar City, UT 84720

Dear Sir:

I appreciate the opportunity to review and comment on the Kanab/
Escalante draft environmental impact statement. My comments are intended
to be constructive yet candid and are offered in hopes that this process
of analysis and review will be helpful in improving the management of
the rangeland resources of the subject area.

One area of concern to me is procedural in nature. The condition
classification systems used for rating quality of the rangeland resources
or the desirability of this resource for various uses continue to be a
source of misunderstanding and misinterpretation. Riparian condition ratings,
wildlife habitat condition ratings, erosion condition rating, and livestock
forage condition rating all have in common a classification system based
on desirability or quality. In many instances, as was pointed out in the
text of the document, these do not correspond or take into
account inherent site capability and limitation. The connotations of
the qualitative terminology used in the rating systems continue to become
a source of criticism and discontent from the public as well as continued
pressure for BLM to make a "silk purse out of a sow's ear". My purpose
in pointing this out is to encourage you and your staff to work in the
direction of developing and adopting classification or rating systems based
on inherent limitations and capabilities of the various ecological sites
you are called on to manage. In this way, the interested public can assume
a more reasonable and realistic perspective from which to base its expectations
of BLM management and the rangeland resource.

For example, in the absence of natural fires, many of the piñon-
juniper woodland areas might be rated in late successional stage based
on ecological site determining factors yet provide little more than cover for
many wildlife species, produce very little forage usable by livestock,
or exhibit undesirable watershed characteristics from man's point of
view. The job then becomes managing those ecological sites at a desired
status whether or not it is advanced successional, to provide the
goods and services deemed desirable by society. If this is done, quality
of the various sites for various uses is separated and discernible from
site capabilities or limitations.

24

Another aspect that concerns me is the apparent discrepancy that exists between estimated grazing capacities from the recent surveys and currently existing rangeland resource status (forage production, species composition, stocking rates) on several allotments I have visited and am somewhat familiar with. For example, Big Bone Bench, Lower Cattle, and the consolidated Bunting Well allotments all appear to be currently stocked and managed within the grazing capacity of these areas with due regard and allowances given to other resource uses and values. Yet, range surveys of these allotments indicate that reductions from current actual use are needed. While, I realize that there are generally ample existing opportunities to improve management by improving distribution of livestock and other means, the current situation on these allotments appears to be desirable with many factors considered. It follows, that if such discrepancies exist on these areas I am familiar with, how many of the other 200 plus allotments exhibit similar discrepancies? The point is clearly that grazing capacity estimates have limitations resulting from inherent error. Sources of such error occur among methods of survey, among years, seasons, individuals, and among days or even time of day for an individual. Margins of error should be considered in the use of grazing capacity estimates resulting from range surveys rather than absolute acceptance of such estimates. Other forms of information such as historical use, level of utilization, patterns of utilization, and season of use should be given ample consideration in tempering grazing capacity estimates. The analysis carried out in this environmental assessment indicates that excessive dependence is being placed on range survey grazing capacity estimates without adequate consideration of other modifying factors. It is suggested that this trend be altered at the point where decisions are to be made.

Under some of the alternatives being proposed, acreages are given in regard to various specific forms of grazing management (grazing systems). It seems premature to be proposing specific management systems at this point without consultation with the ranchers that will be affected. The specific management on any particular allotment or area should be determined on site and in cooperation with the individual(s) who will be required to carry out the practice(s).

Nowhere in the document did I find information indicating the number of individual permittees by allotment currently or under proposals for consolidation of allotments. This information may be very useful in assessing past management between private allotments and community allotments. This may have a great deal of bearing on the desirability of further consolidation of allotments as is proposed. From a management standpoint, it may be a great deal easier to design management programs to meet the needs of one individual rancher than to develop an appropriate plan with several ranchers involved. I would like to see the information on the number of permittees by allotment currently and under various proposals included in the document.

Several questions arise in regard to recreation use in the area as described in Chapter 3. The assumption based on recent trends in visitor use is that visitor use will continue to increase. This assumption may in fact be invalid in light of changing lifestyles due to increasing costs of energy. In fact, visitor use may be stabilizing or declining.

Roger Banner, Cooperative Extension Service, Utah State University

Response 9-1

The analysis used the best available data which, in most cases, amounted to the range survey grazing capacity estimates. Long-term range studies (which are modifying factors) have not been completed on all areas. These studies are a part of the rangeland management program being proposed (Chapter 2, General Features Needed for Implementation in the DEIS) and as such, will be considered in the decision.

Margins of error are considered in adjusting stocking rates based on grazing capacity estimates. The initial grazing capacity determinations from the range survey are valid only at the time the survey is conducted and are properly used as a starting point in management (BLM Manual 4412.11A). As a result, the alternative descriptions (Chapter 2) also propose continuous monitoring and studies to begin concurrently with the implementation of a rangeland management program. These studies would be required to follow up the survey and adjust initial capacities if needed. They will be central to the rangeland management program finally selected.

Response 9-2

The grazing management systems proposed (shown in the Specific Management tables of Appendix 1 of the DEIS) are tentative and have been discussed with the individual permittees by the inventory team members and the area managers. Further refinement of the systems will be made in cooperation with the ranchers and other interested parties. See Response 5-7.

Response 9-3

Alternatives 5 and 6 are the only ones involving allotment consolidations, and the allotments affected in each would be the same. There would be a total of six consolidations affecting 15 allotments and 11 permittees. The proposed consolidations and the number of permittees affected would be as follows: Escalante River and Silver Falls - one permittee; Bunting Well, Cedar Mountain, East Clark Bench, and Judd Hollow - one permittee; Upper Hackberry and Lower Hackberry - two permittees; Kane Spring, Elephant Cove, and Harris Flat - three permittees; and Meadow Canyon and Locke Ridge - two permittees.

Currently there are some 33 allotments (involving 116 permits) in which more than one permittee runs his livestock. There would be less than 116 individual permittees since many hold permits in more than one allotment. Many of these allotments would not be considered to be large "community allotments." There are now five community allotments affecting some 52 operators:

Cedar Washes	7 operators
Lower Cattle	8
Upper Cattle	11
Cottonwood	5
Headwaters	21
	<hr/> 52 operators

-25-

①

②

③

- ④ It is my understanding that for the past season, BLM records indicate a decline in recreation use. That projections were or can be made that assist in prediction of demand for dispersed recreation use? Since recreation use is an issue in the planning for management of the subject area, I think it is appropriate to make projections of demand for recreation use in light of current trends in lifestyles and energy consumption in recreation/recreation activities. A short-term and long-term projection are both needed and should be updated periodically. Also, the issue of conflicts between livestock grazing and recreation use is addressed in Chapter 3 indicating that there is generally a conflict situation when recreationists see livestock or signs of livestock. From surveys or other bases, what percentages of recreationists by category (hiker, sightseer, hunter, etc.) regard the presence or evidence of livestock use in general as a negative encounter?...indifferent?...positive? This data may in fact refute the assumption that there is a general conflict and indicate that the conflicting encounter or negative experience may occur with only a minority of the recreationists within any particular category or local situation. Also such records may direct managers toward ways of solving specific problems.
- ⑤
- ⑥

Response 9-4
BLM visitor use data for the K/E EIS region does not indicate a decline in recreation use. Visitor use in Special Management Areas and the Escalante portion of GCNRA is not decreasing. Demand projections have not been made, nor are they planned for the K/E EIS region.

Response 9-5
Demand projections for recreation activities were not deemed necessary due to the current light use that the K/E Area receives. Current use estimates indicate that recreational use is below carrying capacity.

Response 9-6
As indicated in Chapter 3, Recreation, pages 3-41 and 3-42 of the DEIS, land use conflicts are occurring between backcountry recreationists and grazing activities in the confined canyons of Special Management Areas and the GCNRA. Conflict situations specifically occur in the above mentioned areas and are not widespread throughout the K/E region. According to the BLM Recreation Information System data, the confined canyons of Special Management Areas and GCNRA are primarily oriented toward backcountry and hiker use. These recreationists view the presence or evidence of livestock as a negative aspect of the experience.

- ⑦ Assessment of impacts on riparian vegetation for some of the alternatives (4, 5, & 6) appears to assume that standard operating procedure in development of management plans and the resulting management precludes the opportunity for applying practices and systems of management that will enhance other resource values such as management of riparian zones. Hopefully, this is an example of "worst case analysis" and that such an assumption is not in reality the practice. The opportunity and responsibility to attempt to solve specific resource problems should be an inherent part of management plan development under any alternative available.

Response 9-7
Analysis and expected impacts are based on the alternatives as discussed in Chapter 2 of the DEIS. Design operating procedures as well as management flexibility were considered during the analysis. Prior to a final decision, management systems would be worked out in greater detail with the rancher and other concerned and involved State and Federal agencies. This could result in changing the type of systems from those presently proposed, but would remain within the parameters of providing for the physiological requirements of the vegetation resource.

- ⑧ Allocation of AUMs (forage) seems to have some inherent problems brought out in analysis. It seems that with removal of wild horses under certain alternatives, the AUMs released are to be allocated to big horn sheep. The problem is that while the diets of the two species may overlap, they are not identical and 314 AUMs for horses may not equate to 314 AUMs for big horns. This is only an example and AUMs-diet inconsistencies may exist between/among other species in the analysis also. Generally speaking, I do not think enough information on diets (seasonally) is available to make the kinds of allocations for all animal species that have been attempted in this analysis. As with any other estimation technique, diet estimation by any method has many limitations that constrain the application of detailed allocation.

Response 9-8
It is realized that diets do not entirely overlap. However, no specific dietary information is available at this point in the planning process. The analysis makes use of available data in the forage allocation process and is considered to be adequate to make a decision until more specific dietary information is available.

- ⑨ It is encouraging to see a commitment to monitoring and studies as is indicated by this assessment. However, there are some changes that seem to be appropriate. Rather than monitoring trend in livestock forage conditions as is proposed, it seems more appropriate to embark on a system of monitoring trend in range condition or synonymously, ecological condition. This would entail correlating previously established and new trend studies with ecological sites or range sites through the ongoing systems currently being broadened by BLM and SCS. This will provide better data for future management decisions.

Response 9-9
Monitoring ecological condition is recognized as a desirable method of determining trend of rangeland, and current surveys using the Soil-Vegetation Inventory Methods use ecological condition as a data baseline. However, available soils information in the K/E area is quite limited, and the ocular reconnaissance survey method used in the inventory did not identify rangeland sites for the site writeup areas. Without the necessary soils data and attendant rangeland site descriptions, a correlation between existing rangeland trend data and ecological condition is not possible.

I appreciate the efforts made to assess impacts of land treatments in terms of runoff and sediment yield recognizing that there is a limited amount of information available. However, before a decision is made in terms of whether or not to windrow chained areas, it would be useful to review the conditions under which the experiments took place that indicate leaving debris in place is preferable from a watershed standpoint. It is my understanding that windrowed sites sampled were not windrowed in topographical contours but rather were windrowed up and down the slope. In my estimation, this would greatly affect the results of the study and interpretation of these results. I suggest that consultation with Dr. Fred Gifford or Dr. F. E. Busby would be appropriate in application of these research results.

In general, I feel the approach undertaken in this environmental statement is superior to previous efforts for other areas. While I do not agree with certain aspects of the analysis and procedures used, the presentation of the information is an improvement over past efforts.

In terms of preference for course of action, I personally prefer a course of action that is sensitive to and meets the needs of those people directly dependent on the land as well as meets the needs of the rangeland resource.

Again, I appreciate the opportunity to review and comment on aspects of this document that I feel I can adequately address.

Sincerely yours,



Roger E. Banner
Extension Range Specialist

cc: Mr. Merrill Despain
Utah State Office, ELM

Response 9-10

Limited information regarding surface runoff from windrowed treatments is available. Windrows placed in contour would appear to be more desirable than windrows placed up and down a slope. However, Gifford (1975) indicates that a decrease in infiltration (increased runoff) will probably result on chained-with-windrowing treatments because of the "rather severe mechanical disturbance of surface soils during the windrowing process." Therefore, it appears that any method of windrowing would be less desirable than leaving the debris in place. See pages 2-15 and 4-28 of the DEIS.

Roland Allen
Panguitch Utah (10)
6/22/80

Dear Sirs:

The following are my observations on the draft Karnah/Escalesite environmental impact statement:

My BLM permit at Wagon Creek would not be adversely affected by most of the alternatives, as it needs only water development and a vegetation program is not needed. I do, however, have strong feelings about the region as a whole.

I am impressed with the thorough presentation you have made concerning the impacts of the different alternatives. I especially respect the way that you have documented the social impact of the cattle business on our communities and the fact that this outweighs the monetary value.

I drifted into this area after World War II and I would not have stayed here without the possibility of working into the cattle business. I worked as a mechanic for years and gradually built up cattle. Now, I am in the cattle business exclusively.

I would like to point out that all the small and medium sized cow men are making their livings at other jobs or businesses. They and their families are running cattle because they like to; it is a way of life.

Your figures showed quite a diversity of income sources in our towns, but a decline in the cattle business would make us too dependent on the tourist industry, that

employs mostly women and kids at minimum wage or less, and is very seasonal.

① I would like to make a point that you missed: There is a very definite scenic value to the cow business. Most cowmen, over the years, have had hundreds of tourists take pictures and ask questions as they drive cattle across or along highways.

② As I see it, the cattle men can live with either alternative 5 or 6. Alternative 6 would probably be the best prescript for the soil loss, and I believe that you are overestimating this. As you know, the S.C.S., Forest Service, and B.L.H. all use variations of the same soil loss formula. The S.C.S. found out recently that they were overestimating soil loss by a factor of more than 2 to 1. I have been having quite a "go round" with the Forest Service on the Kaibab and they have finally come to the conclusion that they are measuring, to a great extent, soil movement of a few inches or feet, rather than soil loss.

Yours Truly
Roland Allen

Roland Allen

Response 10-1
Impacts to Recreation, page 4-92 paragraph 2 of the DEIS has been revised as shown in the addendum of this volume.

Response 10-2

Sediment yield data collected in conjunction with range survey inventories between 1975 and 1977 was based on Pacific Southwest Interagency Committee methodology (Wilson et al., 1975). It is generally accepted that this methodology gives an estimate of sediment yields. Because of the lack of inventory data regarding soils, as well as the lack of specificity regarding vegetation treatments and rangeland development, analysis on a worst case basis was used. See page 3-11 of the DEIS.

National Council of Public Land Users

P. O. Box 811
Grand Junction, Colorado 81501

Paul Maxwell, President

24 Jun 80

Herbert Snyder, Secretary

11

District Manager
Bureau of Land Management
P.O. Box 724
Cedar City, Utah 84720

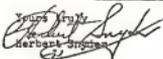
Dear Sir:

Thank you for the Draft Environmental Impact Statement on the proposed Grand Escalante Grazing Management Plans in Kane, Garfield, and Washington Counties in Utah, and Coconino County in Arizona.

It is requested that under Chapter 3, Effectuated Environment, Socio-economics, that the following information be included. This information is considered absolutely essential to analyze multiple use costs vs. benefits.

WHAT ARE THE ANNUAL COSTS OF:

1. Administering the grazing program? \$ _____
2. Loss of non-replaceable topsoil from erosion of the watersheds?
\$ _____
3. Topsoil being deposited in expensive water reservoirs? \$ _____
4. Treating polluted water from the watersheds for domestic use? \$ _____
5. Irrigating with high saline water from overgrazed watersheds? \$ _____
6. Elimination of wildlife supposedly competing for food? \$ _____
7. Damage to fish resulting from polluted water? \$ _____
8. Damage to all aquatic life due to unstable stream flow resulting from flooding and drought? \$ _____
9. Farmers having to compete with grazing on BLM lands at \$2.50 an AUM? (This compares with baled hay at about eight (8) cents a bale).
\$ _____
10. Lost precipitation resulting from solar thermals from reflected bare ground in an environment where the annual precipitation is several times less than the natural evaporation? \$ _____

Yours Truly,

Herbert Snyder
Secretary

Copy to: Natural Resources Defense Council

National Council of Public Land Users

Response 11-1

Since the DEIS is an analysis of the effect that six proposed rangeland management plans would have on the environment and is not a decision document, it is not considered essential at this time to analyze costs versus benefits. Until the decision is made to follow one or parts of the six alternatives, there are no specific quantifiable costs available to answer your ten questions. As explained in the DEIS on pages 5-11, 2-1, 2-13, and 4-3, additional cooperation and coordination with ranchers and other interested parties will be necessary to finalize grazing management systems and to determine site specific locations of needed rangeland developments and treatments. At that time, cost/benefit analysis could be made.

WILD HORSE ORGANIZED ASSISTANCE, EASTERN REPRESENTATIVE

Kathryn Cushman
 Box 26
 Canterbury, New Hampshire 03224
 June 25, 1980

District Manager
 Bureau of Land Management
 Cedar City District Office
 1579 North Main Street, Box 724
 Cedar City, Utah 84720

Subject: Kanab/Escalante Grazing Management Environmental Impact
 Statement, Draft; Kane, Garfield and Washington Counties
 in Utah, Coconino County in Arizona

Wild Horse Organized Assistance is commenting on this plan
 as it affects wild horses.

The summary (p. S-4) stresses increased costs to ranchers. It serves no purpose to allow public lands to further to deteriorate in order to save money for the ranchers; a saving that will cost them in the long term effect. The time has come for ranchers to contribute their fair share to improving the lands they use. Improvement of the condition of public lands should be approached from a multiple use standpoint as is mandated by law. Range improvements should benefit all users. Any new water sources should be available on a year round basis, not just when livestock are using them. For too long the Bureau has catered to livestock interests to the exclusion of other users.

In reference to competition between wild horses and big horn sheep (#8, p. S-4), it is stated on p. 3-35 (paragraph #3) that information on competition is not available and that big horn sheep disassociate themselves from other animals. In paragraph #2 on the same page, a proposed big horn sheep transplant in the Spencer Bench-Harvey's Fear area is suggested. Why cause conflict where none exists? More important, this is one of only two wild horse herds in the entire EIS area. WIOHA strongly objects to further liciting the horses already limited habitat to make way for a hunter related species. This plan is totally negative, with no move to enhance or improve wild horses.

The 1977 Forage Condition (p. 3-34, last paragraph) lists the forage as fair to poor in areas utilized by wild horses. Livestock grazing in the Wagon Box, Moody and Death Hollow allotments further reduces the amount of forage available to the wild horses. In the Wagon Box allotment cattle are also reducing the available forage for deer. Livestock grazing in the horse herd area should be removed in order that the forage species that exist in the area are available to the horses and deer. Some recovery would result from decreased demand.

Kathryn Cushman, Wild Horse Organized Assistance

Response 12-1

A bighorn sheep transplant has been proposed for the Spencer Bench-Harvey's Fear Allotments by UDWR. This issue was discussed during the BLM scoping meetings. The alternatives in the DEIS are designed to propose different levels of wild horse use, allowing the land manager to select an alternative or parts of alternatives which will best manage the resources. See Response 3-4.

Response 12-2

The impacts that would result to wild horses from the removal of livestock grazing are analyzed in Alternative 2, pages 4-78 and 4-79 of the DEIS. With the removal of livestock, it is anticipated that vegetation would improve and competition for water would not exist. Therefore, the horse herd would have an opportunity to increase in numbers under that alternative.

Alternative #1, Continuation of Present Management is unacceptable. Multiple use is ignored as there is no forage allocation for horses or wildlife. Original allocations of forage for livestock were overly optimistic, therefore allocations in most areas were above what the resource could support. Results: single use, over-grazed resource lands, a policy that most certainly should not continue.

Alternative #2 is obviously not a viable solution. It is a waste of time to even include such a proposal. It is interesting to note that even under this alternative, wild horses are being kept at, or near, 1971 levels regardless of the results of range surveys. At the present level, 26 horses and 5/8 over the long term is obviously the most acceptable alternative presented. WHOA contends that if the horses must be reduced to assist in improving the range, then they must also share in the results of increased forage production.

Alternative #3 is again not providing an allotment for wild horses. The Wild Free-Roaming Horse and Burro Act as amended by the Public Rangelands Improvement Act of 1978, under policy, states: wild and free-roaming horses and burros where found on public lands shall be considered comparably with other resource values in the development of resource management plans under the Bureau's planning system including allocation of appropriate portions of the available forage. (Emphasis added). It is obvious that the above quoted section of the law was totally ignored in this EIS draft.

Alternative #4, Adjustment to Grazing Capacity, as in #1, 5 and 6 calls for only 1% reduction in livestock when under law 10% is allowable. Wild horses are only .2% of the use of public rangelands and remain at 314 AUMs. These figures do not indicate comparable consideration with other users. It is stated (p. 5-3) that the allocation would remain at 314 AUMs in an effort to maintain the stability of the wild horse populations. A herd of 26 is not large enough to withstand periods of severe environmental stress. A herd numbering 35 in 1973 in the Wagon Box area was reduced to 17 by winter loss in 1978-79, over a 100% reduction! A larger herd must be maintained in order that it remain viable.

Alternative #5, the Rangeland Management Recommendation blatantly ignores both the mandate to consider multiple use and the law requiring comparable consideration of wild horses with other users. It is difficult to believe that a government agency proposes, and recommends, that it ignore the very laws that govern it.

Alternative #6, Livestock Optimization is obviously unacceptable for reasons previously stated.

The Kanab/Escalante Grazing Management EIS draft centers a great deal of effort on setting up a case for livestock owners. Some important information is lacking such as where are the critical areas as they relate to the allotments, vegetation allocation by AUMs in the various allotments.

WHOA recommends at least the 650 AUMs for wild horses, and that some action be taken where feasible to improve the forage availability in their habitat. Whatever alternative is implemented, 650 AUMs minimum be allocated to horses and a multiple use approach must be taken.

I appreciate the opportunity to comment on the Kanab/Escalante Grazing Management EIS draft on behalf of Wild Horse Organized Assistance. I am authorized to comment for that organization. Please put my name on your list to receive the final statement when it becomes available.

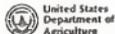
Sincerely,
Kathryn Cushman
Kathryn Cushman
WHOA.

Response 12-3

The alternatives in the DEIS provide for a wild horse herd varying from 0 to 50 head. This presents the land manager with a wide range of options to choose from in formulating a decision, which may include any one or parts of the alternatives.

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United States
Department of
Agriculture

Soil
Conservation
Service

4012 Federal Building
125 South State Street
Salt Lake City, UT 84138

June 25, 1980

District Manager
Bureau of Land Management
P. O. Box 724
Cedar City, UT 84720

Dear Sir:

We have reviewed the draft Kanab/Escalante Grazing Management Environmental Impact Statement. Most of the areas of concern where SCS has interest and/or expertise have been adequately addressed.

We offer the following specific comments for your consideration:

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I
- ① 1. The Environmental Impact Statement and appendixes are over 400 pages long. This is somewhat longer than recommended in the November 29, 1978 Council on Environmental Quality regulations.
 - ② 2. Table 3-4, page 3-9, describes general soil associations. For the Kanab/Escalante area, it would be more accurate to delete blackbrush as a characteristic vegetation under the sandy soil grouping, association No. 65, and add Pinon-Juniper under association No. 67.
 - ③ 3. Pages 3-18 and 3-19 have conflicting information concerning the livestock industry. The second paragraph on page 3-18 says most operations run one bull to thirty cows and breed May-December. The top paragraph on page 3-19 says most operators run one bull to twenty cows and breed from May-October.
 - ④ 4. The Environmental Impact Statement indicates that more follow-up work is needed before implementation. It would be well to discuss opportunities for cooperative planning with state and private land users.

U.S. Soil Conservation Service, Salt Lake City, Utah

Response 13-1

The actual DEIS is 256 pages, with the remaining pages being supportive material.

Response 13-2

Table 3-4 on page 3-9 has been changed as shown in the addendum of this volume.

Response 13-3

Page 3-19 has been changed to read the same as page 3-18, as shown in the addendum of this volume.

Response 13-4

This will be done, and as explained on page 2-13, details will be worked out jointly with the ranchers and other interested parties. See response 5-7.



- ⑤ 5. It appears that critical deer winter range is directly associated with private land. This does not seem to be addressed in any of the alternatives.
- ⑥ 6. The legend is incomplete on figure 3-3.

We appreciate the opportunity to review and comment on this Environmental Impact Statement.

Sincerely,


GEORGE D. McMILLAN
State Conservationist

Response 13-5

The impacts to critical deer range discussion in each alternative does not address private lands but concerns only lands managed by BLM. A comparison of figures 1-1 and 3-3 reveals that a large portion of critical deer winter range occurs on BLM administered lands. Acreage by allotment for both critical and important deer range can be found in Appendix 25 of the DEIS.

Response 13-6

The legend to figure 3-3 has been changed as shown on the Errata Sheet in the addendum of this volume.



United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
MID-CONTINENT REGION
POST OFFICE BOX 25357
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

14

IN REPLY REFER TO:

DES-80/29

JUN 26 1980

MEMORANDUM

To: District Manager, Bureau of Land Management
Cedar City, Utah

From: Assistant Regional Director, Land Use Coordination

Subject: Review of Draft Environmental Impact Statement on Grazing
Management in the Kanab/Escalante Area, Utah (UT-040 1792.0101 KE)

In response to your notice, we have reviewed the subject document and offer the following comments for your consideration.

NATIONWIDE RIVERS INVENTORY

The Nationwide Rivers Inventory is a two-phased screening process being conducted by the Heritage Conservation and Recreation Service (HCRS) to identify the best remaining free-flowing rivers in the nation that may merit protection at the Federal, State, or local level. Phase I of the inventory, focusing on streams or segments still in a relatively natural, undeveloped condition, has been completed nationwide. Phase II, which will consider such positive factors as recreation and wildlife values, is just being initiated in the western regions of HCRS.

Four streams within the Kanab/Escalante Area were identified in Phase I as meeting the established criteria. They are the Paria River (from its source to the Colorado River), the Escalante River (from Escalante to Lake Powell), the North Fork Virgin River (from its source to the road head at Zion National Park), and Steep Creek (from its source to the Escalante River). All four streams appear to traverse lands administered by the Bureau of Land Management.

President Carter's August 2, 1979, "Memorandum for the Heads of Departments or Agencies" directs that:

Each Federal agency shall, as part of its normal planning and environmental review process, take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory prepared by the Heritage Conservation and Recreation Service in the Department of the Interior. Agencies shall, as part of their normal environmental review process, consult with the Heritage Conservation and Recreation Service prior to taking actions which could effectively foreclose wild, scenic, or recreational river status on rivers in the Inventory.

We urge that all lands adjacent to the identified stream segments be managed in a manner which preserves the visual qualities of the stream corridors, and maintain or improve the water quality of the streams. The final statement should recognize the special designation given these stream segments and indicate what effects, if any, the selected plan will have and their qualities.

Robert R. Wynn
for Robert J. Arkin

U. S. Heritage Conservation and Recreation Service, Denver, Colorado

Response 14-1

Page 3-38 in the DEIS has been changed as shown in the addendum of this volume. See Appendixes 10 and 13 and pages 4-82 through 4-88 in the DEIS for an environmental impact assessment of the six grazing management alternatives on riparian vegetation and visual resources in the suitable stream corridors.

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CJI
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BARRACKS RANCH, INC.

LEONARD H FOOTE
567 East 390 South
Spanish Fork, Utah 84660
Phone: (801) 759-3428

WARREN C. FOOTE
1777 East 1200 North
Logan, Utah 84321
Phone: (801) 752-3166

W. DARRELL FOOTE
1630 Carlin Street
Reno, Nevada 89503
Phone: (702) 747-5470



27 June 1980

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We desire very much to properly protect and develop this BLM property in conjunction with our adjoining private land and leased state land and are eager to work with you in the improvement and proper utilization of the natural resources involved.

We appreciate your consideration in this matter.

Sincerely,

Leonard H Foote
Leonard H Foote

Warren C Foote
Warren C. Foote

W. Darrell Foote
W. Darrell Foote

Mr. Morvan S. Jensen District Manager
Bureau of Land Management
Cedar City District Office
1579 North Main Street
Cedar City, Utah 84720

Dear Mr. Jensen:

We have reviewed the Kanab/Escalante Grazing Management Environmental Impact Statement Draft and make the following comments relative to our Virgin River Allotment.

We are very concerned about the proposed reduction in our allotted AUMs from 230 to 168, a reduction of 26% (draft page A1-16). We feel strongly that our allotment has a substantially higher livestock carrying capacity than is indicated in the EIS because of the following reasons:

1. It has successfully carried the 230 AUMs in past years without detriment to the range. This allotment has been separated from surrounding allotments by fence and cliff barriers for the past 34 years. During this period it has actually improved in condition while carrying the full 230 AUMs most of the time. It currently has a relative abundance of forage.
2. The present plan to graze only during the non-growing season will allow continued maximum forage production and natural reseedling.
3. Well conducted multiple use studies show that cattle and deer have different grazing preferences and are therefore not in direct competition but actually complement each other in range utilization. If this were not the case it appears that decreasing cattle AUMs would not improve the range condition but merely provide more forage for game animals.

We request that our Virgin River Allotment remain at 230 AUMs. We will be pleased to discuss this matter with you further and arrange to go over the allotment on horseback with you or your representatives if this would be helpful.

Barracks Ranch, Orderville, Utah

Response 15-1

According to the 1975-1977 range survey, the Virgin River Allotment has only 108 AUMs of forage available to livestock. The permittees of this allotment have taken voluntary nonuse during the past several years to allow the rangeland to improve.

Response 15-2

Deer and cattle may complement each other when a diversity of plant species (shrubs and grasses) exists in an area of good condition. However, when the rangeland is overstocked, livestock tend to place heavier use on browse or shrub species as the rangeland deteriorates. This creates or intensifies the competition between livestock and deer for forage.

100

Object: zero growth 543 E 600 South
 Ft. George Utah 847770

To: P.M. Dist. Mgr.

July 11, 1960

Following are my comments on the Hand/
 Localist's Prayer, Mgmt. C & S Draft:

I wholeheartedly concur with the Kanab
 Chamber of Commerce. I think the whole
 expensive business should be scrapped.

The intent of the socialist planners
 from the outset has been to tie up huge
 tracts of land so the American people
 can't continue to maintain their high
 standard of living. Yours truly, Lela Liplin

No response.



P. O. BOX C 430 WEST CENTER • KANAB, UTAH 84741

TELEPHONE (801) 844-2686
(801) 844-2643

17

July 3, 1980

Mr. Morgan Jensen
District Manager
Bureau of Land Management
P. O. Box 724
Cedar City, Utah 84720

Dear Mr. Jensen:

I have reviewed the Kanab-Escalante Grazing Management Environmental Impact Statement and would like to record the following objections. I realize it is probably a waste of time to send this letter, but feel compelled to let you know that I am in disagreement with your grazing suggestions.

When I met with BLM personnel, they suggested a possible 9% reduction in our AUM's during our meeting. It seems inconsistent that this information was not respected and when the EIS was prepared, it showed a 33% reduction. The grazing capacity established by your recent studies shows that there is sufficient AUM's to continue grazing at approximately the same rate as we have in the past. There are other inconsistencies in the printed draft, which I can not find an explanation for.

I object to the anticipated reduction and believe this will not improve the range conditions.

Sincerely,

Dale E. Clarkson

DEC/nj

Dale E. Clarkson, Utah Properties, Inc.

Response 17-1

As shown on page A1-5 of the DEIS, a total of 606 AUMs are currently allocated in the Deer Creek Allotment. However, according to the 1975-1977 BLM range survey, a total of 404 AUMs are presently available. This would result in a 33-percent reduction during the interim management. As shown on page A1-7 of the DEIS, the development of four water tanks would result in 148 AUMs being made available from areas which are presently considered potentially suitable, making a total of 552 AUMs available, or a reduction of 9 percent from the current preference of 606 AUMs.



P. O. BOX C-38 WEST CENTER • KANAB, UTAH 84741

TELEPHONE (801) 444-2409
(801) 444-2443

18

July 3, 1980

Mr. Morgan Jensen
District Manager
Bureau of Land Management
P. O. Box 724
Cedar City, Utah 84720

Dear Mr. Jensen:

I have reviewed the Kanab-Escalante Environmental Impact Statement relative to our grazing permits at Deer Springs Ranch. I disagree with the findings of the report and the information as printed in the existing draft.

① I have discussed certain errors in the study to identify existing AUM's with BLM personnel. I note that in Appendix 10, Deer Springs Ranch is grouped with units identified as being in poor condition. I believe this could be easily challenged and an increase in AUM's proven.

② It looks very suspicious to reduce the cattle AUM's by almost exactly the same number of AUM's as now established for wildlife on this range. I sincerely hope the report will be reconsidered before it is put into effect.

Sincerely,

Utah Properties, Inc.

Dale E. Clarkson
Dale E. Clarkson

DEC/aj

Dale E. Clarkson, Utah Properties, Inc.

Response 18-1

According to the 1975-1977 range survey, all 9,463 suitable Federal acres of the total 21,862 acres in the allotment are in poor condition (Appendix 10, page A10-35 of the DEIS). The proposed specific management, as shown on page A1-28 of the DEIS, is designed to improve the rangeland forage condition.

Response 18-2

Under the present management situation, 1,194 Federal AUMs are allocated to livestock in the Deer Spring Point Allotment. According to the 1975-1977 range survey, only 534 AUMs of livestock forage are available (page A1-24 of the DEIS). However, a three-pasture rest rotation grazing system, additional fencing, water developments, and 11,965 acres of vegetation treatments would result in a potential of 2,752 AUMs being available in the long term (page A1-28 of the DEIS). Wildlife would be allocated 1,021 AUMs. These AUMs would not be usable by livestock (page 2-1 of the DEIS).

June 17, 1980

District Manager
Bureau of Land Management
Cedar City District Office
1579 North Main St.
P.O. Box 724
Cedar City, Utah 84720



DEPARTMENT OF PARKS AND RECREATION

Division of
State History
UTAH STATE HISTORICAL SOCIETY

DEIS

STATE OF UTAH
DEPARTMENT OF FINANCIALITY AND
ECONOMIC DEVELOPMENT

MELVIN T. SMITH, DIRECTOR
307 WEST 200 SOUTH
SALT LAKE CITY, UTAH 84101
TELEPHONE 581-1535/5378

19

RE: Kanab/Escalante Grazing Statement Multi Co.

Dear Sir:

In response to your request for review and in accordance with your responsibility as outlined in 36 CFR 800.4, we are happy to consult with you concerning your project.

The staff of the Utah State Historic Preservation Office has received the Kanab / Escalante Grazing Statement for review.

The Preservation Office is aware of the limited time and funding these interim statements were written under.

① However the background data presented on cultural resources is inadequate particularly in the historic period to be of any use for management decisions. An example of this is the location of 6 historic sites and 2 trails in 2.5 million acres.

If you have any questions or concerns, please call or write James L. Dykman, Compliance Administrator, or Wilson G. Martin, Preservation Development Coordinator, at the Utah State Historical Society, 307 West 200 South, Salt Lake City, Utah 84101.

Sincerely,

Melvin T. Smith
Director and
State Historic Preservation
Officer

JLD:re

Melvin T. Smith, Utah State Historical Society

Response 19-1

The background data on cultural resources provided in Chapter 3, page 3-35 of the DEIS was not intended to provide precise information on cultural resources. BLM has conducted a Class 1 inventory for the entire K/E area. This information will be made available to the State Historic Preservation Officer upon request. For further details, see page 3-35 of the DEIS.

As per the Cultural Resources Memorandum of Understanding between BLM and the Utah State Historic Preservation Officer (Appendix 2), Part III, Section B, BLM will enforce the following stipulation should a management system be implemented: literature searches and intensive surveys will be undertaken on all areas which would be disturbed prior to initiation of ground disturbing activities.

-40-



JUL 7 1980

Ref: BW-EE

Morgan Jensen, District Manager
Bureau of Land Management
P. O. Box 724
Cedar City, Utah 84720

Dear Mr. Jensen:

The Region VIII Office of EPA has reviewed the draft environmental impact statement for the Kanab/Escalante Grazing Management Program. The draft EIS is a very thorough and comprehensive document except for an evaluation of salinity impacts. EPA supports the effort by the BLM to improve rangeland conditions for livestock grazing and other uses.

Salinity (total dissolved solids) is the major, basin-wide, water quality problem in the Colorado River system. Much of the salinity comes from diffuse nonpoint sources. Land use activities, including grazing, have a significant impact on salt contribution. All seven basin states have adopted salinity standards which have been approved by EPA. (Water Quality Standards For Salinity Including Numeric Criteria and Plan of Implementation For Salinity Control, 1975.) In addition, Minute 292 governs salinity of waters delivered to Mexico. Furthermore, Section 313 of the Clean Water Act (PL 92-500 as amended by PL 95-217) requires Federal compliance with, "... all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution"

Of primary concern to EPA is the failure of your current planning efforts to recognize that reductions in saline runoff should be a major objective of grazing management within the Colorado River basin. The EIS states that there is little data relating such water quality problems to livestock grazing. Information produced by your agency concludes, "...that a reduction in salinity from rangelands could be achieved by adjusting the intensity and timing of grazing". (Control of Salinity from Point Sources Yielding Groundwater Discharge and from Diffuse Surface Runoff in the Upper Colorado River Basin FY 1978 Status Report, February 1980, Bureau of Land Management.)

The unregulated grazing by domestic cattle is considered, according to this report, to be a significant factor in causing increase of salinity in surface runoff from saline soils. The Five County Association of Governments water quality report identifies the Escalante and Kanab drainage system as high priority for control of agricultural nonpoint sources. The report recommends that proper grazing use in these erosive areas include streamside vegetation protection, reductions in livestock numbers and non-use periods for overgrazed land. (Water Quality Inventory and Management Plan, Southwestern Utah, July 1977.) The EIS study area includes sizeable acreage of slightly to strongly saline soil classes.

20

1

-2-

BLM should revise the EIS to reflect that reduction of salinity will be an important goal of grazing management in the Kanab/Escalante area. EPA recommends that strong consideration be given to elimination of grazing on the marginally productive, strongly saline soils and that grazing management changes to reduce the intensity and timing of grazing (rest rotation periods) be evaluated in relation to other saline soil classes.

Based on EPA's system for evaluating EIS's under its review, we have rated this EIS as ER-2. This means that EPA has environmental reservations regarding this proposal and specifically requests that reductions in salinity be included as a grazing management objective. We would appreciate additional information in the final EIS to answer these concerns.

Please contact Weston Wilson of my staff (FTS 327-4831) for any further assistance you may require on this EIS review.

Sincerely yours,

J. Williams
Regional Administrator

Attachment

Environmental Protection Agency, Denver, Colorado

Response 20-1

BLM recognized that saline runoff is a significant problem in the Colorado River Basin. As explained on page 3-12 of the DEIS, the saline soils that occur in the area usually coincide with areas subject to high sedimentation. Generally, because of the high sedimentation, steep slopes, and lack of forage, a majority of the moderately saline soils are identified as unsuitable for livestock grazing.

Several management actions designed to reduce saline runoff have been proposed in the various alternatives, including suspension of grazing on 114,299 acres of frail watershed and saline soils (table 1-2 on pages 1-6 and 2-7 of the DEIS), and specific management systems designed to improve the vegetation cover and reduce sedimentation on 129 allotments (pages 2-10 and 2-11 of the DEIS). As shown in the addendum of this volume, table 1-1 on page 1-3 has been changed to indicate that protection of saline soils is an objective of BLM.

DETAILED COMMENTS
KANAB/ESCALANTE GRAZING MANAGEMENT PROGRAM

1) Impacts of Pinyon-Juniper Chaining

The draft EIS indicates that temporary increases in sediment may occur, particularly if reseeding is unsuccessful following chaining of pinyon-juniper areas. The 1977 BLM status report on salinity discusses the impacts of pinyon-juniper chaining when used to increase stock and wildlife forage and improve watershed conditions. It was found that, "where trees were chained and windrowed and the areas seeded to grass, water and sediment yields increased over yields measured on adjacent native juniper-pinyon woodland stands. This occurred even though ground cover made up by grass, forbs, and litter was higher on the chained, windrowed, and seeded sites." (U.S.O.I. Bureau of Land Management, The Effects of Surface Disturbance on the Salinity of Public Lands in the Upper Colorado River Basin, Status Report, 1977.)

2) Although much of this sediment may never reach surface waters, has an assessment been done of the potential impact on specific stream segments? If so, some identification of these vulnerable stream segments should be made in the final EIS. It may be appropriate to include mitigation measures such as sediment traps or rest rotation periods to reduce such effects. Preventing grazing during the critical spring season may be the most useful management tool in this regard.

3) We understand that previous chaining efforts in Utah have occurred in apparent disregard for archaeological resources. Therefore, specific measures demonstrating BLM's compliance with Section 106 of the National Historic Preservation Act should be included in the final EIS.

4) 2) Herbicide Applications

It is mentioned in the EIS that a one-quarter mile boundary would be kept around riparian zones during herbicide applications. We compliment the district office for using this size protective zone. Previous grazing management plans submitted to this office indicate the use of a 100 foot buffer. EPA hopes BLM will enforce the large boundary limit, as it better assures protection of the area's water quality.

The EPA Office of Pesticides Programs, Benefits and Field Studies Division (BFSD) is currently organizing a multi-state range management research project to analyze benefits and impacts of herbicide management. The BFSD study could be a potentially valuable information resource for future BLM rangeland management projects. We invite you to contact Mr. Charles Reese, BFSD Project Manager, (FTS 472-9327) or Region VIII contact Dallas Miller (FTS 327-3926) for further information regarding the possible application of this study to the Kanab/Escalante situation.

Response 20-2

Very little data is available on specific areas having water quality problems related to livestock grazing. The exceptions are Indian and Water Canyons, which have occasional coliform bacteria and total dissolved solids problems, as explained on page 3-14 of the DEIS.

Response 20-3

BLM is in complete agreement with your statement and three of the alternatives are designed to overcome, among other things, sediment losses. Alternative 3 eliminates grazing on highly erosive soils, protects riparian habitat by fencing, and eliminates grazing on river bottoms in the GENRA. Alternative 4 limits grazing to times after seed ripe and not during the growing season. Alternative 5 has management systems proposed with various periods of rest or deferred rotation, designed specifically to reduce the effects of livestock grazing.

Pages 4-23, 4-25 through 4-27, 4-29, and 4-30 of the DEIS identify the impacts to soils by alternative, including saline soils, which are included with soils of high sedimentation.

Response 20-4

The DEIS contains Cultural Resources Memorandums of Understanding between BLM and the State Historic Preservation Officers of the States of Utah and Arizona. These memorandums address cultural resource protection as required by 36 CFR 800: Protection of Historic and Cultural Resources. For further details, see Appendix 2, Cultural Resource Memorandums of Understanding, pages A2-1 through A2-10 of the DEIS. See Response 19-1

BLM also has a Programmatic Memorandum of Agreement with the President's Advisory Council on Historic Preservation. A copy of the memorandum is located in the BLM Cedar City District Office files.



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90088

21

SPLED-E

23 June 1980

District Manager
United States Department of the Interior
Bureau of Land Management
P.O. Box 724
Cedar City, Utah 84720

Dear Sir:

This is in response to a letter from your office which requested review and comments on the Draft Environmental Impact Statement (DEIS) for the proposed Kanab/Escalante Grazing Management Plans in Kane, Garfield, and Washington Counties in Utah, and Coconino County in Arizona.

The proposed plan does not conflict with existing or authorized plans of the Corps of Engineers, Los Angeles District. We have no comments on the DEIR. We suggest that you contact our Sacramento District Office for possible additional review.

Thank you for the opportunity to review and comment on this document.

Sincerely,

Robert T. Hall
ROBERT T. HALL
Chief, Engineering Division

No response.

1
4
3
1

July 14, 1970

22

Dear B.S.M.

I feel the cuts proposed in the C.T.S. are unjustified because the survey was taken after a 3 yr. drought, also not enough herd plots over allotment for a long enough period of time to really establish trend. There has also been a difference of an opinion between Area manager or rancher of the range.

As a rancher I am in nothing I want more as to take care of the range & if the range will not carry as many cattle allotted on the range I do want it reduced as I graze with other permittees, I want the range in good condition for my cows as I have to make my living off type for livestock. But if the range will carry the allotted cattle it would be unwise to keep getting cutting cattle which hurts the economy of our community. I feel that if range improvements are developed that are written in the C.T.S. & cattle are distributed better over the range, we could increase the F.U.M.s on the range rather than decrease.

We have not received the improvements on our last contract with B.S.M. which if had been done maybe there would have been no need of an C.T.S. being done. From things that have transpired in the past I would have to refrain from signing an other or a C.T.S. as much as I would like if I could really feel positive of getting the improvements we do badly need.

Yours Sincerely
Keith T. Carter

Keith T. Carter

Response 22-1

Although the survey was conducted during drought years, the carrying capacity was adjusted to reflect the grazing capacity of an average year. The survey was rechecked in 1978 and 1979 and found to be within ± 10 percent of the original survey.

Trend information on the Lower Cattle Allotment covered 12 years and was measured at four locations each year. This is considered adequate coverage to analyze the trend of livestock forage condition.

July 10, 1980

23

Mr. Morgan Jensen
B.L.M. District Office
P.O. Box 724
Cedar City UT 84720

Dear Mr. Jensen:

I must express grave reservations about the accuracy of the Kanab/
Escalante Grazing E.I.S. Statement. There are many areas where errors have
been made, many of which are of a serious nature. As a business man and resident
of Kane County the impact of this E.I.S. Statement, an error filled statement,
cannot be overlooked or tolerated. It appears the B.L.M. has made the E.I.S.
Statement say exactly what they want based on a predetermined outcome.

Considerable weight is given to the wildlife of the area, most of which
is unfounded. Mule deer is the predominate species of big game (Page 3-26).

Contrary to B.L.M. belief, the deer and livestock, particularly cattle are
not in direct competition for forage. Any qualified wildlife expert can verify
that fact. Large grazing cuts seem unjustified due to wildlife competition.

Formulating grazing policy to allow for wild horse herds? By B.L.M.
estimates, there exists 24 wild horses in the E.I.S. study area. This is an
area of 2,897,995 acres or 120,749.79 acres per horse. Do they really need
specific policy? It seems doubtful.

In preparing the economic portion of the Grazing E.I.S. Statement, it
appears that whoever prepared this portion knew little or nothing about
ranching, livestock market conditions or basic economics. The ranch budget
sheet found on page 3-21 is an insult to ranchers, the local area, and to
human intelligence. This budget grossly underestates total revenues and also

Douglas Corral

Response 23-1

Numerous studies (Peek et al., 1978; Dusek, 1975) have been conducted
concerning the competition between livestock and deer. Most of the competi-
tion occurs on critical deer winter range. During the winter, cattle and
deer rely heavily on browse species, particularly where there is an accumula-
tion of snow or where there is very little desirable perennial grass species,
which results in direct competition for forage.

Response 23-2

Public Law 92-195 as amended by FLPMA (Public Law 94-579) and the Public
Rangeland Improvement Act of 1978 (Public Law 95-514) requires in Section
3(a) that the Secretary of the Interior protect and manage wild free roaming
horses and burros as components of the public lands. The wild horses do not
run on the entire area. They are found in two areas consisting of approx-
imately 57,117 total acres.

Response 23-3

The following discusses the general procedures employed to develop the
ranch budget sheets, the potential sources for error, and the appropriate way
to interpret budget sheet analysis:

understates expenses.

A simple comparison budget can quickly point out the incompetent level with which the B.L.M. prepared their report. For this comparison the following parameters will be used, and only the large operation compared for brevity. (1) Study period December 1978 - January 1979 (from page 3-18 of E.I.S. Statement). (2) Average heard size and animal weights the same as table on page 3-19 of E.I.S. Statement. (3) Selling prices; calves .80¢ lb. straight through, yearling heifers 55¢ lb., yearling steers 65¢ lb., cows 40¢ lb., bulls \$1,000.00 each. (4) Numbers sold; 200 calves of 234 total, 20 yearling heifers of 29 total, 45 yearling steers, 2 bulls, 20 cull cows.

BUDGET	(Compared to page 3-21 E.I.S. Statement)		
	<u>B.L.M.</u>	<u>Comparison</u>	<u>*See Attached Worksheet</u>
Calves	\$17,975.00	\$59,200.00	
Yearling Heifers	5,143.00	7,150.00	
Yearling Steers	15,286.00	21,645.00	
Cull'd Cows	4,914.00	7,280.00	
Bulls	<u>2,400.00</u>	<u>2,000.00</u>	
GROSS INCOME	\$45,718.00	\$97,275.00	

The B.L.M. figures indicate one of several things could have happened in respect to income from calf sales. (1) The rancher could have sold 60.73 calves at the 80¢ per lb. price or, (2) he could have sold the 200 calves at the price of 243¢ per lb. These are the only two explanations to the absurd figures provided by the B.L.M. Both alternatives are absolute insults to the rancher. It would be ridiculous to sell for 24.3¢ per lb. when the market was bringing 80¢ per lb. It would also be ridiculous to sell only 60.73 calves of 200 saleable animals. The same comparison can be made in each class of animal.

General Procedures

The ranch budget sheets were constructed with the help of area ranchers who volunteered private information about their ranch operations. After the results of an initial survey were tabulated, the memberships of both the Kane County and the Escalante Cattlemen's Association reviewed the budgets, but did not make any substantive changes. These same rancher groups, plus the county extension agent, were then given the opportunity to review and comment on the revisions. Therefore, a very broad cross section of the ranching population in the EIS area has participated in constructing and reviewing the ranch budget sheets, and it is presumed that the sheets are representative of that cross section.

Potential Sources for Error

There are always opportunities for built in error in surveys like the one used. Among these are:

1. Respondent gaging - referring to survey respondents biasing their responses in the hope of favoring a particular outcome.
2. Time bias - referring to bias introduced by conditions prior to or at the time of sampling, which could change as time progresses.
3. Recordation bias - referring to bias which results from the ways in which respondents have recorded their base information (e.g., information compiled for a loan would be different from that compiled for a tax return).
4. Limited sample size - referring to error which can be introduced due to natural variability between sampled units, and where there is such a range of values that the average becomes relatively meaningless.

The probable sources of error affecting the survey in order of magnitude are: time bias, recordation bias, and sample size. Time bias was introduced because survey respondents were requested to give responses which would reflect the conditions of what they considered to be a "normal year," both financially and operationally. This, of necessity, required that the respondent consider earlier periods as points of reference. Livestock prices have been very susceptible to this type of error. For the 7 years prior to the survey period, the average annualized price per pound for calves was 38.16¢ with a standard deviation of only 8.25¢ (calculated from Utah Agricultural Statistics, Utah Department of Agriculture, 1978). Since that time, calf prices have nearly tripled.

Recordation bias has probably had some role in introducing error into the survey because many of the respondents used their tax records as a basis for responding to survey questions. This would result in biasing the costs to the high side and incomes to the low side, producing low net incomes.

Also, limited sample size may have reduced the statistical power of the survey somewhat, but this has been mitigated by stratifying the sample into three ranch scales - small, medium, and large.

Respondent gaging has probably not been a significant contributor to sampling error in this case.

These figures used for comparison are of no deep concealment. Market figures are published weekly in any number of newspapers, apparently none of which were checked. Market figures are of public information!

The comparison selling prices can be checked by going back through market reports and are very conservative for the market period of question (December 1978 - January 1979).

The expense side of the budget is similar to the income in that it is sloppy and inaccurate. Many items are under stated. Fortunately, not quite as much (by percent) as income.

Perhaps a business person and an economist should have been used to prepare the economic portions rather than someone with studies in Resource Management and Resources Economics.

The conclusion on page 3-22 states, "The implications of these calculations are of pivotal economic importance". This being true, sloppy calculations such as provided in the E.I.S. Statement cannot and should not be accepted by either the public, the B.L.N., or Washington, from where the B.L.N. received directives.

The difficulties spoken of in the conclusion (3-22) are a natural result of the free market system. Something we would like to retain.

The impact of the livestock industry in the study area seems to be understated. Page 3-25 states that "less than 15% of the total employment is provided by agriculture". That figure is misleading. Indirectly agriculture provides much more income and employment than 15%. The major portion of farm income received by ranchers is spent in the study area. With 89 large operations (Page 3-18) in the area, gross revenue of approximately \$8,000,000 will be produced, most of which (Approximately 60%) will be spent locally. Using the conservative multiplier factor 4 (velocity of money; elementary economics)

Interpretation

Since the ranch budget survey was performed in order to provide a basis for analyzing the relative impacts of the different alternatives, it is not analytically crucial that it be purely representative. If the model is sufficiently detailed (showing a majority of income and cost categories), and if the base is held constant for all alternatives, then the budgets are perfectly valid for demonstrating relative impacts by category. The interested individual can apply the relative changes as shown in the DEIS to his own budget sheet categories to estimate how each alternative would affect his own operation. The budgets should be considered to be frameworks for analysis, not "photographic reproductions" of all ranch budgets in the area. Therefore, although the sample does have error in it, especially with regard to outdated prices, its validity for demonstrating relative impacts is undiminished.

Response 23-4

The economies of Garfield and Kane Counties must be characterized as "high leakage" economies; that is, they are high level importers of goods such as machinery, gas and oil, food stuffs, dry goods, etc. They are also relatively low level exporters of basic goods, which can be seen under the categories of manufacturing and wholesale trade in tables 3-6 and 3-7 of the DEIS. In addition, a very large proportion of the economy of the region is occupied by the services and retail trade sectors (table 3-6 and 3-7 of the DEIS). These sectors accounted for approximately 28 percent of the employment in Garfield County and 35 percent in Kane County, compared with 13 and 11 percent respectively for all agricultural employment. These same sectors accounted for 21 and 39 percent of personal income for Garfield and Kane Counties respectively, as compared to 6 and 2 percent respectively for agriculture. Therefore, it is not believed that the economic impact of the livestock industry on the region has been understated.

The multiplier cited - a multiplier factor 4 - cannot be applied to the EIS area because no input/output analysis has been performed for this region (the only source for such a multiplier), and such factors generated for a full State-level economy are not appropriate for subregions. This would be especially true for the EIS region because of its high economic leakage characteristics. This is not to say that a multiplier effect does not exist for the livestock industry, for there certainly is one, as there are multiplier effects for each sector of the economy. To properly use these multiplier effects in the analysis, each would have to be accounted for to avoid unwarranted overinflation of the economic importance of any one sector.

5 [that provides revenue to the area (both farm and non-farm related) of approximately \$20,000,000.

Determination of the sociocultural conditions on page 3-25 is questionable where data from 1960-1970 was used. More current data could be obtained. Again evidence of limited knowledge on the part of those responsible for preparation of this E.I.S. Statement.

In conclusion, the Kanab/Escalante Grazing Management Environmental Impact Statement is an inaccurate, poorly prepared, unfair compilation of paperwork. I recommend that a serious, long look be taken at this document before any decision be made. Of the 6 alternatives suggested in the E.I.S. Statement, I suggest alternative 1. A seventh alternative could, with sound foundation, be suggested.

Remember the people in this area are not playing dead anymore.

Respectfully,

Doug

DOUGLAS CARROLL

Calvin E. Johnson

DC/kb

cc: Senator Orin Hatch
Senator Jake Garn
Mr. Gary Vicks
Mr. Rex Bowley

WORK SHEET

	Total	- Keep	= Sell	x	Average Weight (P. 3-19)	x	Selling Price	= Income
Calves	234	- 34	= 200	x	370	x	.80	= \$59,200.00
Yearling Heifers	29	- 9	= 20	x	650	x	.55	= \$ 7,150.00
Yearling Steers	45	- 0	= 45	x	740	x	.65	= \$21,645.00
Cull Cows	20	= 20	x	910	x	.40	= \$ 7,280.00	
Bulls	2	@	1,000				= \$ 2,000.00	

Response 23-5
These data sources were utilized in order to establish historical trends for the EIS area.

KANAB/ESCALANTE GRAZING
MANAGEMENT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

24

2

KANAB/ESCALANTE GRAZING EIS
KANAB COUNTY COMMISSION RESPONSE

KANAB COUNTY BOARD OF COUNTY COMMISSIONERS
POSITION STATEMENT
July 11, 1980

INTRODUCTION:

It is incumbent at the outset to express some generalized concerns relative to the Bureau of Land Management, the presentation of the Draft Environmental Statement and differences in philosophy. Our response to this draft document has been colored to some small measure by these introductory thoughts.

GRAZING RIGHTS: We reject the concept as repeated throughout the draft statement that the cattlemen have grazing "privileges". We deny the concept. Rather we submit that the cattlemen of our area and their forebears have earned the right to run cattle on the range. The earlier people of this area tamed and claimed the land, fought and died with the Indians for the right to run their cattle. They developed the land, the water resources and the plant life. They had a good operation in hand, long before the invention of the Bureau of Land Management. Some mistakes had been made in grazing, but on balance there was a good, proper utilization of the land.

MANAGEMENT POLICIES: For forty-five years, plus or minus, the Bureau of Land Management has been administering the lands of the Kanab/ Escalante area. And yet, reading the draft statement submitted to us, it is apparent that the condition of the range land administered by the Bureau has deteriorated or remained static. There have been consistent surveys made with subsequent cuts in carrying capacity for the range. This is not a good picture for an agency that is charged with improving the range quality that after forty-five years it is still calling for cuts in the carrying-capacity of the range.

CREDIBILITY: The cattlemen of the area have severe reservations with reference to the contracts and agreements that they enter into with the Bureau of Land Management. Historically, it has been found that the cattlemen have signed contracts and agreements, honored their part of the agreement only to have the Bureau of Land Management renege on the improvements to the range and other aspects that were in the agreement. The question comes, why should the ranchers now expect the Bureau to be any more responsible and responsive than they have been in the past. The Commission has seen some of these contracts going back over many years that indicates that the Bureau of Land Management was committed to making major improvements on the individual allotments held by the cattlemen if they would agree to a percentage cut-back in the cattle on the range. The Bureau has yet to honor those commitments, after all of these years. Even some of the earliest commitments have gone by the board without any token or attempt at carrying through on the agreed set of circumstances in each contract.

RECOMMENDATION:

The Kane County Board of County Commissioners respectfully submits that the Alternative that would best assist the proper land utilization, range development, economic growth and improvement of the cattle industry would be a cross between Alternatives 1 and 6 with these components:

ALTERNATIVE # 1:	Initial livestock allocation (AUMs)	109,708
	Initial big game allocation (AUMs)	0
	Initial other wildlife and resource allocation (AUMs)	0
	Initial wild horse allocation (AUMs)	0
	Allotments with specific management	21
	Allotments with continuous seasonal management	183
	Allotments unallotted and/or eliminated	6
ALTERNATIVE # 6:	Miles of pipeline required	149
	Number of storage tanks	39
	Number of reservoirs	59
	Number of wells	17
	Number of spring developments	60
	Number of water catchments	38
	Number of cattle-guards	12
	Miles of stocktrails	5
	Miles of fence	117
	Acres of burning and seeding	31,388
	Acres of spraying and seeding	46,232
	Acres of chaining and seeding	57,240
	Acres of plowing and seeding	27,835
	Acres of burning	15,854
	Acres of spraying	5,456
	Treatment AUMs	16,259
	Management AUMs	34,190
	Water and access development AUMs	6,258

RATIONALE FOR THE RECOMMENDATION:

The Kane County Board of County Commissioners has predicated this recommendation on a series of divergent data that touch in some instances and in other cases have definite interface. All of the pieces of the data, however, create a mosaic of concern for the on-going situation within the Kane and Garfield Counties area.

The components for developing this recommendation are economic, credibility of the Bureau of Land Management, survey procedures, key species factor, wildlife management programs, Visual Resource Management, and grazing management programs.

KANAB/ESCALANTE GRAZING EIS
KANE COUNTY COMMISSION RESPONSE

ECONOMIC IMPACTS:

COUNTY: In the 1870's when Kane County was first explored, settled and developed, the cattle industry was the mainstay for the economy of the entire area. This area was the beef-producer for the Mormon empire that was being developed across the western United States. Cattle was the base for the economy of the area. This remains true through the 1940's.

In the process the cattlemen moved out to new areas, developed the water, wrested the land from primitive status and fought the Indians for the right to use the land. This is apparent by a review across the area of Kane and Garfield Counties where the cattlemen are presently running cattle.

In the 1930's the Congress of the United States in their infinite wisdom that transcends all human understanding decided because of some minor abuse by some random cattlemen throughout the west that they had to have a closer supervision over all of these lands. They developed a bureau to supervise range management and development--the Bureau of Land Management. In the late 1940's, through the 1950's there was a barely perceptible program of cuts tempered with the promise of range improvements. In the 1960's and 1970's this pattern was accelerated to an extreme degree.

In the early 1960's the cattle industry was still the primary base for the economy of Kane County. That is no longer true. Through restrictive management programs over the years, the Bureau of Land Management has been able to cut the cattle industry to third place in importance in the economy of Kane County. There are less than a dozen cattlemen in the area now that can claim ranching as the sole means of their livelihood whereas two decades ago it was only means of support for virtually all of the cattlemen of the area. This breakdown in the diversification of the economic base of the county is to be decried. It is most unfortunate. At this time, we would appeal for a stronger emphasis to be made on upgrading the cattle industry of the entire area.

RANCHERS: We wish to take exception to the data provided in the draft Environmental Impact Statement. From our data, it is apparent that the preparers are not totally familiar with the current economic situation with reference to the cattle industry.

The budget contained on page 3-21 is understated rather dramatically. The expenses are too low also.

In determining our figures we interviewed cattlemen as to the current market as well as the test period (December 1978 - January 1979). For our purposes we used the classification of a small operation contained on page 3-19. There is a discrepancy between the test period and the current prices, therefore, we have settled on the following:

Kane County Commissioners

Response 24-1
See Response 23-3.

KANAB/ESCALANTE GRAZING EIS
 KANE COUNTY COMMISSION RESPONSE

calves	80c/lb.
yearling heifers	55c/lb.
yearling steers	75c/lb.
cows	40c/lb.
bulls	\$1,500/each

Working with the weights, numbers and selling prices, we have arrived at a totally different figure than that presented by the Bureau of Land Management in the EIS statement. For the purposes of this discussion, we have arbitrarily developed the following set of constants for a comparison purpose.

Category	Herd Total	Herd Sell	Ave. Weight	Selling Price	Income Total	
Calves	12	10	435	80c	\$3,480	Cottlemen's Estimate
Yr. Heifers	3	1	800	55c	440	
Yr. Steers	2	2	800	75c	1,200	
Cows	16	2	920	40c	736	
Bulls	1	-	---	---	---	
					\$5,856	

Calves	12	10	435	37 1/2c	\$1,631	S.L.M. Estimate
Yr. Heifers	3	1	800	46c	368	
Yr. Steers	2	2	800	14c	224	
Cows	16	2	920	10c	184	
Bulls	1	-	---	---	---	
					\$2,407	

The price arrived at for the Bureau of Land Management comes from some very rudimentary arithmetic that takes the herd sell multiplied by the average weight and divided by the price quoted on page 3-21. It is apparent that there is a wide discrepancy between the two sets of figures even with the arbitrary herd sell. We could extend this argument throughout the entire unit on economics, but suffice the example to serve as an argument for the whole.

We must however emphasize that the entirety of this report will have an overwhelming impact on the economy of the individual ranchers as well as the county as a whole. The Bureau states on page 3-22, "The implications of these calculations are of pivotal economic importance." That is a gross understatement. We would recommend that greater attention be directed to this entire area with special care toward the current market and the future projections especially in light of the current crisis situation in Texas and other areas of the southwest. This would be the time for the local ranchers to be expanding their herds and picking up the slack that will be resulting from the situation in the southwest. It is our contention that flexibility should be written into any final program developed by the Bureau of Land Management.

KANAB/ESCALANTE GRAZING EIS
KANE COUNTY COMMISSION RESPONSE

2 With reference to the total economy, a strong, active cattle industry develops a multiplier factor within the economy of 4.5 times. For every dollar a rancher brings to the area, it generates \$4.50 in return throughout the community. Additionally, the ranchers have traditionally been inclined to shop at home and to keep the new dollars that they have generated circulating throughout the county.

CREDIBILITY OF THE BUREAU OF LAND MANAGEMENT:

As was mentioned in the Introduction, the Bureau of Land Management has a crisis of credibility. The ranchers, the elected officials, the people generally do not trust them, do not believe them. Repeatedly over the years, the Bureau has entered into contracts with the ranchers with promises for range development: fences, reservoirs, water catchments, burn and seedings, rail and reseedings and other types. Unfortunately, these have not been carried through. The cattlemen have cut back on their stock on the range in conformity with the agreement only to be disappointed by the Bureau's inability to carry through on their commitments, their promises. The blame has consistently been laid at the door of the Congress of the United States.

It is recommended by the Kane County Board of County Commissioners that prior to requiring any additional cuts by the Bureau of Land Management that the Bureau would honor the past commitments. The ranchers should not be required to live with past commitments made by them and not honored by the Bureau. The Bureau is indebted to the ranchers and should honor that commitment.

SURVEY PROCEDURES:

3 The repeated changing of the survey procedures by the Bureau of Land Management is confusing and wasteful. We contend that the surveys that have been made since the inception of the Taylor Grazing Act should be incorporated into the finished product produced by the Bureau. The present survey apparently does not invalidate the previous information contained in the Parker Three-Step Range Forage Survey. And yet, all of the data secured through this method has been discarded. It is apparent that the difference between the present data and actual use is 1%.

It is recommended by the Kane County Board of County Commissioners that no cuts should be imposed at all. Rather, the present ADMs should be maintained with the understanding that subsequent cuts or additions should be worked out between the individual cattlemen and the Area Manager for the Bureau of Land Management. The cattlemen have shown a sagacity in the use and maintenance of the public lands that they have. It is apparent that they realize that only proper utilization of the land will benefit them. It is our contention that this attitude will prevail and that arbitrary cuts at this time are uncalled for especially in light of the wise voluntary non-use that has been taken by the cattlemen.

Response 24-2
See Response 23-4.

Response 24-3

Survey procedures have not been changed. The forage survey method used to inventory the K/E area was the ocular reconnaissance method. This method has been used by BLM and the Grazing Service (before BLM) since 1937. Previous surveys of the K/E area were done by the ocular reconnaissance survey and the record of these surveys by allotment can be found in the BLM Kanab, Escalante, and Dixie Resource Area Offices. Details of this survey method can be found in BLM Manual 4412.11A Forage Surveys. A summary of these procedures can be found in Appendix 12 of the DEIS.

WILDLIFE MANAGEMENT PROGRAMS:

The wildlife management programs on the public land should be developed in a realistic manner cognizant of the current utilization patterns of our local citizenry. The wisdom of trying to bring the deer herds, the elk herds and other wildlife groups to the apparent level prior to the pioneer's introduction of cattle on the range is questionable. There is a great level of non-conflicting utilization of the range between cattle and wildlife. The big-horn sheep and the wild horses would be competition for the cattle. From discussions, however, it would appear that the wild horse situation is being resolved by natural attrition. Thus, we would support no increase in the big-horn sheep into the area, nor would we be happy with bringing wild horse herds from the Nevada area of high concentration.

The Kane County Board of County Commissioners would recommend that there would be no major importation of wildlife to compete with the existing cattle herds. We would not be adverse to improving the number of deer and antelope throughout the county.

VISUAL RESOURCE MANAGEMENT:

4 With reference to Figure 3-5, the Kane County Board of County Commissioners must take strong exception. First question that we have is who determined the areas of VRM categories for Kane County, when was this done and was it done in conjunction with a Public Hearing. The northern part of Kanab City, Kanab Creek Ranchos, Mt. Carmel Junction, Glendale and Alton are all classified as Class II - "Changes in any of the basic elements caused by a management activity should not be evident in the characteristic landscape. A contrast may be seen but should not attract attention." This would preclude any type of activity other than basic residential in any of these areas, even the area "down-the-lane" from Kanab that has been identified as light industrial by the Kane County Zoning Ordinance. We reject this concept. We reject the implementation of these classifications. We reject the covert, surreptitious and clandestine manner in which this was effected.

It is recommended by the Kane County Board of County Commissioners that the classifications imposed on Kane County for Visual Resource Management by set aside pending public hearings relative to the standards to be imposed.

CONCLUSION:

After a cursory review of the Kanab/Escalante Grazing Management Draft Environmental Impact Statement, the Kane County Board of County Commissioners would recommend the following to the Bureau of Land Management:

1. The first seven elements contained in Alternative I should be implemented; the last sixteen elements contained in Alternative six should be implemented.
2. The commissioners feel that everything possible should be done to improve the status of the cattle industry in the Kanab/ Escalante area for the good of the economy of the individual ranchers, the county and the state.

3. No additional cuts should be made to the ranchers until all past commitments made to the ranchers have been honored by the Bureau of Land Management. If additional appropriations from the Congress of the United States are needed, we would recommend that the Bureau begin immediately to request such funds.
4. A standardized method of survey procedures should be implemented and consistently used instead of the constant changing of the survey programs.
5. If there is importation of wildlife, it should not be of a major nature to compete seriously with the existing cattle herds. The importation of deer and antelope would not be protested; however, we would severely question any wild horses brought into our area.
6. The VRM classifications for Kane County should be suspended pending a full-blown Public Hearing to explain the classification system and the impacts to be imposed on Kane County by such a classification.

Response 24-4

The Visual Resource Management (VRM) system is a method for identifying scenery quality and for setting minimum standards for management of visual resources on public lands. Public lands are classified into one of five management classes, with each class containing a specific management objective for maintaining or enhancing visual resources. The management class assigned to a given area depends on three factors: 1) quality of scenery being viewed; 2) the visual sensitivity level of the type of use an area receives; and 3) the visual zone it is in.

BLM conducted a visual resource inventory for the K/E EIS area in 1978. These VRM objectives only apply to public lands administered by BLM, and do not apply to private lands. Concern was expressed that VRM classifications around Kanab, Kanab Creek Ranchos, Mt. Carmel Junction, Glendale, and Alton would preclude development. Figure 1-1, Land Ownership, indicates that much land around these areas is under private ownership, so the VRM designations would not apply. Public lands surrounding Alton and Glendale are predominantly classified as Class III and IV, while the public lands around Kanab and Mt. Carmel Junction were identified as Class II, III, and IV. Page 6 of your letter indicated that the above mentioned cities were in Class II areas. See pages 4-82 through 4-88 and Figure 1-1 in the DEIS.

The Visual Resource Management System was brought before the public during the planning process. The public was given the opportunity to comment on land use plans during scoping meetings held prior to the writing of the DEIS.

STATE OF UTAH COMMENTS
KAHAB/ESCALANTE GRAZING MANAGEMENT
ENVIRONMENTAL IMPACT STATEMENT

GENERAL COMMENTS

The State appreciates the magnitude of analyzing livestock grazing on almost three million acres, involving 212 grazing allotments. Generally, the Bureau has done a commendable job in attempting such a large and comprehensive undertaking. However, there are several areas of concern which the following comments address:

First, several sections of the document approach grazing on the public lands from a negative, rather than a positive, viewpoint. For example, page 1-2 states that it is BLM's responsibility to help stabilize that portion of the livestock industry that uses the public lands. BLM will fulfill this responsibility by providing for the orderly use, improvement, development and rehabilitation of the public lands for livestock grazing consistent with the Taylor Grazing Act's and the Federal Land Policy and Management Act's (FLPMA) mandates of sustained yield and multiple use. This is a positive statement of purpose, however, the State is concerned with the negative approach BLM suggests should be taken to achieve that purpose. For example, page 1-1 states that BLM will take actions to overcome existing problems in livestock forage condition and production. The State concedes that some of these problems exist but feels BLM should have a wider perspective, one that would include livestock forage conditions and production but also address other rangeland problems. That is, BLM should focus on the allocation of range resources and the correction of problems where they may exist. Approaching the problem in this manner not only would be more beneficial to the correction of rangeland problems but also consistent with the stated goals of the Taylor Grazing Act and FLPMA, as expressed on pages 1-2 of the EIS.

2 In addition, the report notes in two separate sections that agricultural lands are declining, inferring that agriculture's importance to the area's economy is declining. However, this is not the case. Although it can be argued that agricultural production in the area is declining, many of the people in the area still depend heavily on agriculture for their livelihood and this dependence will continue in the future. Moreover, statistics indicate that agriculture has a multiplier effect of 3.4 in this State, which further shows agriculture's importance to a local economy, particularly the Kanab/Escalante area.

5- Second, the BLM policy concerning livestock adjustments states that any adjustments must be consistent with the data on which the adjustments are based. Therefore, any adjustments made in the Kanab/Escalante area must be consistent with the data collected from that area. However, sections of the report are not compatible with the above policy. For example, pages 1-2 and 2-4 state that BLM's ocular reconnaissance survey merely provides an estimate of the amount of forage presently available for livestock and wildlife and that these are baseline figures to be used to develop the allocations of the rangeland resources. Nevertheless, pages 2-4 and 2-10 state that available livestock forage is one percent under the past average active authorized use and that livestock grazing would be adjusted to the supply based on the above survey.

3 Furthermore, the confidence of the survey is never stated or discussed which implies that the survey provides an accurate level of the grazing capacity. However, the accuracy of the survey is only within a plus or minus 10 to 15 percent. Therefore, the State recommends that BLM should use

Response 25-2

The only implications (page 3-16 of the DEIS) based on historical trends, are that agriculture has been playing a declining economic role in the K/E area, not that the importance of agriculture has been diminished for those who are still in business.

Although there may be an agricultural multiplier of 3.4 for the State of Utah, it is inclusive of all forms of agriculture, not just livestock, and it applies to the State as a whole, not any one region. As such, the multiplier effect cited is not validly applied to the K/E area. There not being a reliable multiplier for the K/E region, none was used. To use any number arbitrarily would be misleading.

Response 25-3

As explained in Appendix 12 of the DEIS, the capacity estimates are only valid at the time of the survey. Continuous monitoring and evaluation is necessary to follow up a survey and adjust the initially established grazing capacities.

this survey merely as a starting point, that the confidence level of the ocular reconnaissance survey should be included in the final EIS to avoid inaccurate conclusions and that livestock adjustments should be consistent with the reliability to that data.

4 Third, the discussion on erosion problems and control is misleading. Geologic erosion has always occurred in this area and will continue to occur in the future regardless of whether livestock grazing is present. Further, wind erosion is particularly prevalent in areas that contain sandy soils, such as the Kanab area. Therefore, the final EIS should include a discussion on geologic and wind erosion to avoid the misimpression that erosion is due solely to livestock grazing.

5 Additionally, the document discusses the soil surface factor and the method used to determine the erosion class. Erosion condition classes are listed as stable, slight, moderate, critical or severe based on a numerical value. These classes are needed to ascertain the extent of erosion, however, the further subdivision of these classes is impractical. For example, the column heading for soil movement calls for the examiner to choose between a numerical rating of 0-3. If there is no visual evidence of movement, how could there be a difference between 0 and 3 in numerical ratings? The State suggests that, to avoid impractical requirements on the examiner, sub-classifications such as these should be eliminated. Also, there is no provision for taking into account wind erosion.

6 Fourth, according to the statement at the beginning of Appendix 1, the specific management tables are the base recommendations of Alternative Five, the preferred alternative. Page 2-10, paragraph 3, states that proposed vegetation treatments for the preferred alternative would add 3,360 AUMs of livestock forage on 51,887 acres. However, the Appendix 1 tables indicate

Response 75-4

As explained on page 3-12 of the DEIS, salt production and high sediment yields in the K/E EIS area are the result of natural geologic erosion processes rather than accelerated erosion processes which occur primarily from the activities of man or animals. This is reiterated on page 3-14 of the DEIS, on which page the Five County Association of Government 208 Water Quality Report is referenced, stating that large sediment loads and high total dissolved solids in the K/E area are attributed to natural occurrences rather than being man caused.

Wind erosion and its contribution is covered on page 3-8, table 3-4, and page 3-12 of the DEIS. Due to a lack of baseline data for wind erosion, and since a comparable analysis of the impacts to soils from wind erosion in the six alternatives would not be very significant (table 3-4 of the DEIS), wind erosion was not analyzed in depth.

Additionally, the amount of change in wind erosion would be proportionate to the amount of change in soil cover, whether vegetative or rock mantle, and would not lend significant additional support in the comparative analysis of alternative management proposals.

Response 25-5

Because the Soil Surface Factor (SSF) is a numerical ranking of the erosion condition class, there are 100 points of reference in seven soil erosion condition elements to make this subjective evaluation more readily quantifiable. The column reference in your comment is only one of five columns that evaluates degrees of soil movement. BLM Manual 7317 and form 7310-12 offer the examiner a wide range of 14 points, from no visual evidence of movement to subsoil exposed over much of the area (may have embryonic dunes and wind scoured depressions). BLM believes this wider range is more conducive to accurate examination than a system without the subclassifications.

Response 25-6

The 91,894-acre figure in Appendix 1 includes more acres of treatment than are necessary to balance pastures. This is explained in the text on page 2-15, and in the footnote on page A1-29 of the DEIS. In the Zion Planning Unit, the acreage shown in the Land Treatment and Acres column (66,272 acres) is also more than is necessary to balance pastures. The Alternative 5 treatment total (51,887 acres), shown on page 2-10 of the DEIS, includes only those acres of the Zion Planning Unit that are necessary to balance pastures. The 52,557 acres of treatment (51,887 acres of seedings and 670 acres of spraying) were those considered in the impact analysis (pages 4-16, 4-17, and 4-19 of the DEIS).

there is a total of 91,894 acres proposed for treatment. And, it appears from reading the information in the tables, that the 91,894 figure is accurate as to the actual acres of land treatment being proposed under the preferred alternative. Therefore, the difference between the 51,887 acre figure on page 2-10 and the 91,894 acre figure in Appendix 1 needs to be clarified.

⑦ Fourth, although the tables in Appendix 1 provide vital information, they do not provide all the information needed to properly analyze the impacts of the proposal. For instance, the licensed or actual use figures, together with the trend data by allotment, should be shown. This could either be the apparent trend information or the trend data from photo trend plots, if available. In addition, the percentage change between the surveyed AUMs and the actual use should be shown.

The following is a discussion of each of the planning units presented in the tables of Appendix 1 to illustrate why the above information should be included.

Canaan Mountain Unit

⑧ This Unit lists 22 allotments, 19 of which show licensed use. In comparing the licensed use with surveyed AUMs, the table shows that on 13 of the 19 allotments, the licensed use is the same as, or within plus or minus 10 or 15 percent of, the surveyed AUMs. But, to obtain trend information, one must turn to Appendix 10 and sort through all of the allotments for the entire environmental statement area. This is very confusing and time consuming. If the difference between the licensed use and the surveyed AUMs along with trend information were discussed in detail, a truer picture, and one quite different from comparing the surveyed AUMs with the preference AUMs, would emerge concerning actual use, range condition and trend.

Responses 25-7

As discussed on page 4-2, Assumption 7, and pages A20-5 and A20-6 of the DEIS, past active authorized use or actual use was used as a baseline for those allotments for which that information was available. For those eight allotments for which active authorized use or actual use was lacking or unreliable, the surveyed capacity was assumed to reflect the true forage production under proper grazing. Before the final decision is made on each allotment, additional coordination and cooperation with the ranchers and other interested parties will be necessary to finalize the AHPs. See Response 5-7.

Response 25-8

Table 1 of Appendix 1 under the present situation in the Canaan Mountain Unit lists 18 allotments, not 22. The Area Manager's recommendation on the same table considers 19 allotments, one of which is proposed for no grazing. The licensed use is proposed licensed use, not present licensed use, and is not relevant for analysis purposes.

The present licensed use for all allotments is contained in the files of the BLM Dixie, Kanab, and Escalante Resource Area Offices and is not included in the tables of Appendix 1. The analysis of impacts was not limited merely to the difference between licensed use and the survey and trend information. As explained in detail in Appendix 20 of the DEIS, livestock forage condition, vegetation type, composition, present and potential forage production, and the capability of the soils to respond to management were additional elements examined in the analysis.

Paria Planning Unit

9 There are 26 allotments listed in Table 5 of Appendix 1. Out of these 26 allotments, actual use or licensed data is available on 20 of the allotments. Out of these 20, surveyed AUMs exceed the licensed or actual use AUMs on 13 allotments. This is important information and should be presented in the document.

Vermilion Planning Unit

10 Table 7 lists 73 allotments in this Unit. Out of those 73, licensed or actual use data is available on 55 of the allotments. On five of the allotments, the licensed use equals the surveyed data and on four other allotments, the surveyed AUMs are higher than the licensed use. However, on 45 of the allotments, the licensed use is more than the survey data by a substantial margin, in most cases exceeding 15 to 20 percent. This is important information and should be contained in the document.

11 Further, only 8,000 acres in this planning unit are recommended for some kind of range improvement. But, even though this planning unit appears to have more problems from a carrying capacity standpoint, there are additional allotments in this area whose potential for improvement is very good. For example, no land treatment acres are identified for Buck Pasture on Harris Mountain though the soils are good and the potential for seedings is excellent. Also, there is existing seeding of intermediate wheatgrass on private land, which is probably producing approximately 1,500 pounds of forage per acre. In addition, no land treatment is proposed on the Kintkinnick Allotment. Yet, some private land has been developed in this area by dozing over the Pinon and Juniper trees. It is evident from this private undertaking that the potential for development is there even though the sandy soils would necessitate

Response 25-9

As mentioned in Response 25-8, no licensed or actual use information is shown in Appendix 1 of the DEIS. However, the Kanab Resource Area files do show 14 allotments with surveyed capacity exceeding licensed use. This was considered in the analysis, as indicated in Assumption 7 on page 4-2 of the DEIS.

Response 25-10

See Response 25-9. In the Vermilion Unit, 17 allotments have a survey capacity greater than average active authorized use, and 46 allotments have a survey capacity less than average active authorized use. The residual allotments are considered potentially suitable and require certain water developments before the available forage can be authorized for livestock grazing.

Response 25-11

Although only 8,025 acres of vegetation treatments are proposed in the Vermilion Unit, specific size and location of treatments and rangeland developments will require site specific soils analysis, archaeological clearances, threatened and endangered plant and animal clearances, and design of a specific management system. As explained in Response 5-3, all of this will require additional coordination and cooperation with the permittees and other interested parties. The acreage could increase or decrease, depending on further investigation.

some special consideration. No treatment is identified for the Sink Hole Allotment either, yet there are heavy stands of Pinyon-Juniper which offer good potential, for chaining or burning.

These examples are not exhaustive. There are also other areas that offer potential for range improvement which should be identified.

Zion Unit

This unit contains 58 allotments. Actual or licensed use information is available on 38 of the allotments. The surveyed AUMs exceed the licensed or actual use on only 10 of the allotments. On the remaining 28, the licensed or actual use exceeded the surveyed data by a substantial margin. This unit also contains much of the area being proposed for land treatment, approximately 66,000 acres, and the State agrees that the potential is great for land treatment practices in this planning unit, particularly Pinyon-Juniper chaining.

Escalante Resource Unit

This planning area contains 30 allotments and is the only unit in which the State has photo trend information available. On 12 of the allotments the surveyed AUMs exceed the past licensed or actual use. On one of the allotments, the surveyed AUMs are the same as the past licensed or actual use. On 17 of the allotments, the licensed or actual use exceed the surveyed AUMs. Permanent photo trend plots have been established in 15 of the allotments. Most plots were established in 1967 and photos have been taken on a regular basis through 1979. An evaluation of the photos taken at these plots by the BLM indicate that the trend is static on four allotments, down on nine allotments, and two allotments have insufficient data to determine trend.

However, of the 15 allotments with photo trend plots, there appears to be some inconsistencies among the survey data, the trend data and the actual use data on the following seven allotments:

<u>Allotment</u>	<u>Actual Use AUMs</u>	<u>Surveyed AUMs</u>	<u>Percent Change</u>	<u>Trend</u>
Circle Cliffs	1,346	895	-34	Static
Alvey Wash	898	1,040	+16	Static
Forty-Mile Ridge	1,642	2,028	+24	Down
Last Chance	2,867	3,077	+ 7	Down
Loner Cattle	5,021	4,101	-18	Static
Mudholes	304	358	+18	Down
Seda	1,437	1,600	+11	Static

On the Circle Cliffs Allotment, the actual use AUMs are 1,346 but the survey shows 895 AUMs. This indicates a reduction of 34 percent yet the trend data shows the allotment is in static condition. On the Forty-Mile Ridge Allotment, the actual use AUMs are 1,642 but the survey shows 2,028 AUMs. This indicates an increase of 24 percent yet the trend data shows down. The same situation exists for Last Chance Allotment and the Mud Holes Allotment. Further, this information also points out that the surveyed AUMs can be at least plus or minus fifteen percent from what the actual carrying capacity may be. These inconsistencies can be resolved only after thoroughly evaluating the range condition and trend over time with good actual use information and must be resolved before grazing adjustments, either up or down, are made.

As a general observation, if photo trend information is available for other allotments, it should be presented in the document and discussed along with the apparent trend information. This includes the available photo trend information on the Escalante allotments.

Specific Comments

Page 5-3

The fourth paragraph talks about the condition of the streams in the area,

Response 25-12

The survey indicated that all seven of the listed allotments are in static condition. However, trend, actual use, and the survey were not the only elements considered in the analysis of impacts. As mentioned in Response 25-8 and Appendix 20 of the DEIS, condition, type, composition, present and potential forage production, and soils capability were additional elements considered in the analysis.

The actual use AUMs in your table reflect actual use on lands, which includes private and State lands. The actual use AUMs considered in the analysis were actual use on Federal lands only. The acreage comparisons, as shown in Appendix 1 of the DEIS, were all Federal acres. This is indicated in each table of the Appendix. Comparisons on a percentage basis cannot be made using data from total acreage compared to Federal acreage.

BLM recognizes that there are some inconsistencies, and therefore the monitoring and evaluating studies as explained on page 2-16 of the DEIS will be carried out to adjust the stocking rates up or down as the studies indicate.

Response 25-13

As explained on page A20-6 of the DEIS, apparent trend information was gathered in the BLM survey of 1975-1977. On those allotments with sufficient replication of trend studies, analysis considered the actual trend data.

14 pointing out that few streams support, or have the capacity of supporting, populations of sport fish because of their present condition. The State concedes that the present condition of the streams limit productivity, but this section should be clarified so as not to indicate that this condition is due solely to livestock grazing.

15 The fifth paragraph indicates that presently overlapping seasons of use between hikers and livestock grazing contribute to land use conflicts. However, the conflicts between hikers and livestock is more imagined than real because, if the livestock were completely removed from the rivers, the vegetation would soon increase to a point where it would be almost impossible for anyone to hike along the river bottoms.

Page 5-8, Alternative 5

16 Alternative 5 states that existing livestock use would be adjusted to the supply of available forage as determined by the range survey. As our comments stated earlier, the range survey is an estimate of the carrying capacity and cannot be used as the sole basis for the allocation of range forage. Particularly, it cannot be used with any accuracy greater than plus or minus 10 to 15 percent. This should be stated in the document.

Page 5-9, Alternative 2

17 Alternative 2 states that if livestock grazing were eliminated, there would be no increase in erosion. However, as stated earlier, much of the erosion is due to geologic and wind factors and will occur regardless of whether livestock grazing continues in the area. This is not to say that some of the erosion problems are not due to livestock grazing. However, all erosion cannot be attributed to livestock grazing.

Response 25-14

Livestock grazing is the primary cause of limited stream productivity in the K/E EIS area. Information obtained from USFWS indicates that wildlife numbers are low in the area, and therefore have only limited impacts on streambank erosion and stream productivity. See Responses 3-7, 3-21, and 3-23.

Response 25-15

The fifth paragraph of page 5-3 in the DEIS is only a summary of the existing situation concerning present land use conflicts in Outstanding Natural Areas and Recreation Areas. Due to overlapping seasons of use (Appendix 19 of the DEIS), livestock/recreationist conflicts are occurring with existing management and are indicated in the Escalante Unit Resource Analysis. Major conflicts include degradation of water quality and the presence of feces and associated odors. See Response 9-6.

Response 25-16

See Response 25-1. Page 5-8 of the DEIS is a summary page, and as such the descriptions are shorter than in other chapters. However, as on page 2-10 of the DEIS, the allocation is considered initial, and with monitoring studies, adjustments will be made as needed to meet management goals.

Response 25-17

Page 5-9 of the DEIS is a summary page, and as such is only a brief explanation of what would happen. Detailed analysis of the soils situation in Alternative 2 can be found on page 4-25 of the DEIS, which states that additional acres in critical erosion condition and acres with high sediment yields and moderately saline soils would continue in their existing condition, since their inherent erodibility, slope, or accelerated degree of erosion would not respond to livestock removal alone. These factors are not management controlled.

Page 2-8, Section 8

18 It is hoped that key species for wildlife and livestock would be included in the evaluation of desirable forage species for management goals.

Page 2-11, Paragraph 7

The State totally agrees with and supports the removal of all wild horses from the Kanab area.

Page 2-13, Last Paragraph

19 The State agrees with the statement that these less desirable stands cover about 65.6 percent of the Kanab area and are fire dependent ecosystems that are not responsive to grazing management systems alone. However, the State encourages further explanation of the fire dependence, particularly in reference to the pinyon-juniper communities because in many areas, simply taking the livestock off these ranges would not improve the areas.

Page 2-15, First Paragraph

20 The State supports the concept of burning to control some of the woody species such as sagebrush and pinyon-juniper. We also encourage more emphasis on the possibility of, and the desirability of, burning many of the pinyon-juniper stands where there is an adequate understory to carry fire.

Page 2-15, Paragraph 5

Proposed seed mixtures are mentioned for range developments. These mixtures also should be mentioned in the Rangeland Management decision document.

Page 2-16, Monitoring and Study

21 Is the 50 percent of the current annual growth only on key species?

Page 2-19, Table 2-5

22 Table 2-5 presents apparent trend information. Apparent trend information is also presented in Appendix 10. This information should be combined in a more usable fashion where it can be directly compared against the preference AUMs, the actual use AUMs, and the surveyed AUMs such as in Appendix 1.

Response 25-18

Key species for wildlife and livestock would be included in the evaluation of desirable forage species.

Response 25-19

The unresponsiveness of pinyon-juniper to removal of livestock or to grazing systems is discussed on page 4-10 of the OEIS.

Response 25-20

Because of the following problems associated with burning/seeding treatments in pinyon-juniper stands, burning and burning/seeding treatments would generally be restricted to sagebrush stands:

Martin (1978, Proceedings of the Western Juniper Ecology and Management Workshop, USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland Oregon) and Wright et al. (1979, The Role and Use of Fire in Sagebrush - Grass and Pinyon-Juniper Plant Communities - A State of the Art Review, USDA Forest Service, Intermountain Forest Service and Range Experiment Station, Ogden, Utah) indicate that closed stands of pinyon-juniper will not carry a fire well except under severe fire conditions (more hazardous than is acceptable), and as the height of the tree increases, the kill success decreases. In fact, literature indicates that trees greater than 4 feet high will not be killed consistently. Other literature (Roundy et al., 1978) indicates that burning of pinyon-juniper will decrease water infiltration rates, which may lead to increased sedimentation. However, on these areas where soils, fuel conditions, and weather conditions are favorable, burning of pinyon-juniper would be considered.

Response 25-21

Management goals would be based on evaluation of key species that are representative of desirable forage species. This is explained in the description of Alternatives 3, 4, 5, and 6 on pages 2-8, 2-9, 2-11, and 2-12 of the OEIS.

Response 25-22

Table 2-5 of the OEIS (a summary of impacts table by alternative) is for the public and management to use in comparing the anticipated changes that would result from implementation of any of the six alternatives. It is a summary of the allotment analysis summary in Appendix 10. A detailed analysis of the expected changes by environmental component and by alternative can be found in Chapter 4 of the OEIS. The methodology used in analysis of impacts is explained in detail in Appendix 20 of the OEIS.

Page 3-12, Last Paragraph

23 The text mentioned a reference to Thomas et al. (1979), in which the primary cause of streambank erosion is listed as concentrations of livestock and wildlife. Because of the current low big game numbers in the Kanab/Escalante area, we know of no such concentrations and thus, wildlife cannot be one of the prime causes of streambank erosion in that area. This condition should be acknowledged in the EIS.

Page 2-23

24 The report indicates that unfavorable impacts on recreational quality in the Glen Canyon National Recreation Area along the Escalante River would result if Alternative 4, 5, or 6 is implemented. Although this may be true for a very small percentage of those using the Escalante River, it is not true for the majority. Therefore, this section requires further explanation.

Page 3-26, Paragraph 2

25 This paragraph states that three of the eight vegetative types support the greatest species diversity of wildlife. It should be noted that riparian habitat is the most important in supporting this diversity.

Page 3-5

26 In the first paragraph it states that permanent established plots and/or transects to measure range, trend, and condition have been established and read on some allotments. Where this data is available, it should be presented in the EIS to indicate its relation to the actual use information, and the surveyed AUMs.

27 This page also states that the apparent trend indicates that 90 percent of the area is static, with 7 percent up and 3 percent down. Granted, apparent trend is a one-time look at the range and does not evaluate or measure trend

Response 25-23

This has been corrected on page 3-12 as shown in the addendum of this volume. See Responses 3-7, 3-21, and 3-23.

Response 25-24

The unfavorable impacts identified for recreational quality along the Escalante River in the GCMRA under Alternatives 4, 5, and 6 are based on substantial AUM increases in allotments along the river. A 1,638-AUM increase in Alternative 4 and a 2,458 AUM increase in Alternatives 5 and 6 would increase the number of livestock that would concentrate in Escalante Canyon, Harris Wash, Twenty-five Mile Wash, and Coyote Wash. With increased numbers of livestock, the probability of livestock/recreationist conflicts would increase.

For further details concerning the existing environment and impact analysis see pages 3-41 and 4-88 through 4-97 of the DEIS.

Response 25-25

Page 3-26 has been changed as shown in the addendum of this volume.

Response 25-26

As explained on page A20-6 of Appendix 20 in the DEIS, actual trend on allotments was used in the analysis when it was available. See Response 25-8 and Assumption 7 on page 4-2 of the DEIS.

Response 25-27

See Responses 7-9, 22-1, and 25-24.

over time but, it is an indication of the health of the range in general, and should be more thoroughly evaluated in relationship to the actual use occurring in that area.

Page 3-20, Last Paragraph

28 The Division of Wildlife Resources reported Peregrine Falcon sightings near Kanab on December 15, 1979, and at Lone Rock in Wahweap Bay during 1979 and 1980 in the Glen Canyon National Recreation Area.

Page 3-29, Paragraph 2

29 In the statement on the number of AUMs of forage for desert bighorns, it should be noted that a considerable amount of forage also exists for these animals in Capitol Reef National Park immediately adjacent to the BLM land.

Page 3-30, Table 3-9

30 In the mule deer section, three browse species are mentioned (bitterbrush, mountain mahogany and cliffrose) but only bitterbrush is listed on Page 2-8, No. 8; Page 2-9, No. 7; Page 2-11, No. 8; and 2-13, No. 5 as a key species. It is hoped that mahogany and cliffrose will be included in a more complete list of key species. Further, the same table reveals a conflict between-

31 desert bighorn sheep and wild horses. Our information shows that there are no horses in Moody Canyon. Horses are found several miles South in Cow Canyon along the Escalante River. In addition, Page 4-57, paragraph 2; Page 4-60, paragraph 1; Page 4-62, paragraph 2; Page 4-65, paragraph 6; Page 4-68, paragraph 4;

32 and Page 4-70, paragraph 5, also contain references to the wild horse/desert bighorn conflict. The State recognizes the potential conflict between desert bighorn and horses and supports the BLM in their efforts to remove the few

Response 25-28

We appreciate the additional information concerning the sightings of peregrine falcon in the K/E area. This information has been included on page 3-20, as shown in the addendum of this volume.

Response 25-29

This addition has been made on page 3-29, as shown in the addendum of this volume.

Response 25-30

The key species discussed on pages 2-8, 2-9, 2-11, and 2-13 of the DEIS are key species for livestock and are not key species for wildlife. Mountain mahogany and cliffrose may be considered when the ANP is developed.

Response 25-31

According to BLM personnel, horses and horse sign have been observed in the Moody Canyon Allotment. Although the Moodies Canyon area does not appear to be a primary use area of the wild horses, a spring in that area is sometimes utilized during periods of drought.

Response 25-32

The proposal to remove wild horses is not based entirely on the presence of bighorn sheep; it also reflects concern over the effects of yearlong grazing on the vegetation resources and the availability of water, especially during dry periods. Water appears to be a factor limiting habitat use because springs appear to be the only reliable source of water. See page 3-34 of the DEIS.

ferel horses from the Escalante area. However, we do not agree that such removal should be strictly coupled to bighorn management. Justification for a removal program should also be based on the damage to fragile riparian areas and water sources.

Page 3-32, Table 3-10

33 1. Blue grouse do not inhabit high elevation areas year long. They typically exhibit a "reverse migration" wintering in high elevation conifers, and move to lower elevations for breeding and nesting. Typically, male breeding territories are established in transitional areas where clumps of mountain brush are interspersed with open grasslands. Males commence upward migration immediately following breeding. Hens typically nest near the breeding territories and slowly migrate upward with their broods.

34 2. It is difficult to imagine that "overhunting" has reduced quail populations in the areas. As with all upland game, the key to quail abundance is habitat, particularly the riparian zones within the grazing unit. Volumes of research have established that quail populations normally fluctuate in response to short-term factors, such as severe winters, and that long-term population trends mirror the trend of habitat.

35 3. During summer and fall, chukar distribution is strongly influenced by available water, but chukars are adaptable to almost any type of water source from seeps to streams. Chukar distribution is not limited by lack of suitable "riparian habitat," but may be limited by the availability of surface water.

36 4. No mention is made of either the mourning dove or the band-tailed pigeon, both of which nest in the area.

Page 3-33, Table 3-11

37 The flathead minnow should be corrected to fathead minnow (Pimephales promelas).

Response 25-33

Pages 3-10 and 3-32 have been changed as shown in the addendum of this volume.

Response 25-34

Pages 3-10 and 3-32 have been changed as shown in the addendum of this volume.

Response 25-35

Table 3-10 on page 3-32 has been changed as shown in the addendum of this volume.

Response 25-36

No impacts to mourning doves or band-tailed pigeons were identified during the analysis of the six alternatives. Therefore, these species were not included in the DEIS.

Response 25-37

The text has been changed to read "fathead minnow" as shown in the addendum of this volume.

Page 3-39, Table 3-13

38 The Division of Wildlife Resources officially designates cougar hunting as small game hunting. Therefore, cougar hunting is authorized by the possession of a small game license and cougar permit. With the planned developments due to population growth in Utah, the recreational use in the EIS area should increase. Therefore, the question of wildlife recreational values needs to be addressed more fully in the EIS..

Page 3-36, 3-37, 3-41

39 These pages discuss the visual quality of the riparian areas and talk about land use conflicts between hikers and livestock. The State does not agree that the quality of the riparian zones has been significantly affected by livestock grazing. The conflict that is occurring between hikers and livestock is not that significant. There are those backpackers who object to livestock use in the riparian zones, but there are those who realize that grazing serves a purpose. Without grazing along the river bottoms, it would be impossible in a few years to hike along the Escalante River or other rivers. This type of information should be discussed along with the information presented on the conflicts.

Page 3-42

40 This page discusses grazing in areas that are being considered for wilderness designation. Even though the document states that existing grazing uses may continue in the same manner and degree as that conducted on October 21, 1976, it is important to understand the intent of Congress as it relates to grazing in wilderness areas. Congressional intent concerning grazing in wilderness areas is clearly outlined in House Report No. 96-617, which states:

"This includes the establishment of normal range allotments and allotment management plans. Furthermore, wilderness designation should not prevent the maintenance of existing fences or other livestock management improvements, nor the

Response 25-38

In Table 3-13, Major Recreational Activities, on page 3-39, "although some cougar hunting occurs" has been deleted under Opportunities for Big Game Hunting, and "and cougar" has been added under Opportunities for Small Game Hunting, as shown in the addendum of this volume.

The K/E DEIS only addressed the six grazing management alternatives outlined on pages 2-1 through 2-12. Impacts to recreational resources from proposed projects and corresponding population growth were not addressed.

Response 25-39

See Responses 3-7 and 9-6.

Response 25-40

See Response 7-1.

construction and maintenance of new fences or improvement which are consistent with the allotment management plans and/or necessary for the protection of the range..."

"The maintenance of supporting facilities, existing in an area prior to its classification as wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.) is permissible in wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment..."

"The replacement or construction of deteriorated facilities existing in an area prior to its classification as wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.) is permissible in wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment..."

"The replacement or construction of deteriorated facilities or improvements should not be required to be accomplished using natural materials, unless the material and labor costs of using natural materials are such that their use would not impose unreasonable additional costs on grazing permittees..."

"The construction of new improvements or replacement of deteriorated facilities in wilderness is permissible if in accordance with those guidelines and management plans governing the area involved..."

Response 25-43

Because 90 percent of the livestock forage is in static trend, that class would most likely change trend class. As Cook (1966) found (pages 4-7 and 4-8 of the DEIS), excessive defoliation of grasses leads to reduced vigor and subsequently increases their susceptibility to the competition from other plants. Since litter accumulation and vigor of desirable forage species are used to indicate trend, and since they would be affected by continuation of present management, it would be most likely that the total acreage in a downward trend would increase in the long term.

Trend is a measure of the change in livestock forage condition, and as a result of early spring use and utilization of forage species beyond proper physiological limits, a slight decline in livestock forage condition would be expected.

Response 25-42

Elimination of livestock grazing would not in all cases cause improvement in condition and trend of livestock forage species. However, as explained on pages 4-9 and 4-10 of the DEIS, on those allotments in which there is not a dominant undesirable overstory (such as pinyon-juniper) and where significant composition of desirable forage species exists, forage condition would be expected to increase.

Utilization by livestock would be eliminated under Alternative 2. This would improve vigor and seedling establishment because of an increased opportunity to complete growth and the reproductive processes. Allotments composed primarily of pinyon-juniper or other dominant woody species would not be expected to improve in forage condition.

Page 4-7

(1) Continuing present management would not necessarily cause an increase in number of areas in downward trend. As the present trend data indicates, only 3 percent of the area is in a downward trend at this time, 90 percent is static and 7 percent is in an upward trend.

Page 4-9, Alternative 2

(2) The elimination of livestock grazing would not, in all cases, cause significant improvements in condition and trend of livestock forage species. For example, in pinyon-juniper areas, these stands are generally fire dependent and the removal of livestock would not reverse the successional trend to a closed community of pinyon-juniper.

Page 4-17, Paragraph 4

(41) This paragraph identified 52,557 acres of proposed treatment. This conflicts with the 51,887 acres stated on Page 2-10 and the 91,894 acre figures found in the tables of Appendix 1. Therefore, a clarification of these conflicts is needed.

Page 4-18

(44) The third paragraph states that some initial improvement would occur as a result of the reduction in the level of livestock use from 68,895 AUMs to 68,298 AUMs. This provides only a 1 percent adjustment. It is very doubtful whether a 1 percent change in the grazing level would provide an improvement.

Page 4-53

(45) No details of the sources of big game AUMs are given in the EIS nor are details provided on key forage species. This information is vital for management of the area because 96 percent of the big game range is in fair to poor condition (Page 5-3) and 96 percent of the critical habitat is in fair to poor condition (page 3-29).

Page 4-54, Paragraph 3

(46) This section states that, "due to the present over-allocation of livestock forage, low plant vigor and poor quality forage, deer habitat continues to decline...". This statement needs to be explained in light of Page 4-54, paragraph 3, which states that adequate forage exists for deer and the largest share of big game forage allocations is for deer (Table 1-2).

Page A12-1, Appendix 1B

(47) This Appendix appears to contain an error in that no critical riparian area conflicts are indicated. Conversations with the BLM district office in Cedar City indicate that all allotments with critical antelope farming and critical deer farming will also include critical riparian areas. Therefore, this Appendix should be corrected.

Response 25-43

The 52,557 acres of proposed treatments include all proposed treatments in Alternative 5, including spraying sagebrush on 670 acres that have enough residual perennial grasses to not require seeding (page 2-10 of the DEIS). The 51,887 acres (page 2-10 of the DEIS) are the vegetation treatment acres that would have seeding as well as manipulation of the existing vegetation. The 91,894 acres of treatments proposed in the planning system (Appendix 1, Specific Management) exceeded the acres needed to balance pastures. These acres were cut back as explained in the last paragraph of page 2-15 and the footnote on page A1-29 of the DEIS.

Response 25-44

The reduction to carrying capacity, although only a 1-percent reduction, would result in a slight improvement in rangeland condition. As stated on page 4-18 of the DEIS, this slight improvement would result from periodic rest, reduction in capacity, and better livestock distribution.

Response 25-45

See Responses 3-9-, 3-10, 3-16, 3-17, and 3-18.

Response 25-46

See Response 3-31.

Response 25-47

See Responses 3-32.

KANE/ESCALANTE GRAZING EIS
GARFIELD COUNTY COMMISSION RESPONSE

RECOMMENDATION:

The Garfield County Board of County Commissioners respectfully submits that the Alternative that would best assist the proper land utilization, range development, economic growth and improvement of the cattle industry would be a cross between Alternatives 1 and 6 with these components:

ALTERNATIVE #1:	Initial livestock allocation (AUMs)	107,700
	Initial big game allocation (AUMs)	0
	Initial other wildlife and resource allocation (AUMs)	0
	Initial wild horse allocation (AUMs)	0
	Allotments with specific management	21
	Allotments with continuous seasonal management	183
	Allotments unallotted and/or eliminated	6
ALTERNATIVE #6:	Miles of pipeline required	149
	Number of storage tanks	39
	Number of reservoirs	59
	Number of wells	17
	Number of spring developments	60
	Number of water catchments	38
	Number of cattle guards	12
	Number of stocktrails	5
	Miles of fence	117
	Acres of burning and seeding	31,388
	Acres of spraying and seeding	46,232
	Acres of chaining and seeding	52,240
	Acres of plowing and seeding	27,835
	Acres of burning	15,854
	Acres of spraying	5,456
	Treatment AUMs	16,259
	Management AUMs	34,190
	Water and access development AUMs	6,258

RATIONALE FOR THE RECOMMENDATION:

The Garfield County Board of County Commissioners has predicated this recommendation on a series of divergent data that touch in some instances and in other cases have definite interface. All of the pieces of the data, however, create a mosaic of concern for the on-going situation within the Kane and Garfield Counties area.

The components for developing this recommendation are economic, credibility of the Bureau of Land Management, survey procedures, key species factor, wildlife management programs, Visual Resource Management, and grazing management programs.

KANAB/ESCALANTE GRAZING EIS
GARFIELD COUNTY COMMISSION RESPONSE

ECONOMIC IMPACTS:

COUNTY: In the 1870's when Garfield County was first explored, settled and developed, the cattle industry was the mainstay for the economy of the entire area. This area was the beef-producer for the Mormon empire that was being developed across the western United States. Cattle was the base for the economy of the area. This remained true through the 1940's.

In the process the cattlemen moved out to new areas, developed the water, wrested the land from primitive status and fought the Indians for the right to use the land. This is apparent by a review across the area of Kane and Garfield Counties where the cattlemen are presently running cattle.

In the 1930's the Congress of the United States in their infinite wisdom that transcends all human understanding decided because of some minor abuse by some random cattlemen throughout the west that they had to have a closer supervision over all of these lands. They developed a bureau to supervise range management and development--the Bureau of Land Management. In the late 1940's, through the 1950's there was a barely perceptible program of cuts tempered with the promise of range improvements. In the 1960's and 1970's this pattern was accelerated to an extreme degree.

In the early 1960's agriculture was still the primary base for the economy of Garfield County. That is no longer true. Through restrictive management programs over the years, the Bureau of Land Management has been able to cut the cattle industry to third place in importance in the economy of Garfield County. There are less than a dozen cattlemen in the area now that can claim ranching as the sole means of their livelihood whereas two decades ago it was only means of support for virtually all of the cattlemen of the area. This breakdown in the diversification of the economic base of the county is to be decried. It is most unfortunate. At this time, we would appeal for a stronger emphasis to be made on upgrading the cattle industry of the entire area.

RANCHERS: We wish to take exception to the data provided in the draft Environmental Impact Statement. From our data, it is apparent that the preparers are not totally familiar with the current economic situation with reference to the cattle industry.

The budget contained on page 3-21 is understated rather dramatically. The expenses are too low also.

In determining our figures we interviewed cattlemen as to the current market as well as the test period (December 1978 - January 1979). For our purposes we used the classification of a small operation contained on page 3-19. There is a discrepancy between the test period and the current prices, therefore, we have settled on the following:

Garfield County Commissioners

Response 26-1
See Response 24-1.

KANAB/ESCALANTE GRAZING EIS
GARFIELD COUNTY COMMISSION RESPONSE

calves	80c/lb.
yearling heifers	55c/lb.
yearling steers	75c/lb.
cows	40c./lb.
bulls	\$1,500/each

Working with the weights, numbers and selling prices, we have arrived at a totally different figure than that presented by the Bureau of Land Management in the EIS statement. For the purposes of this discussion, we have arbitrarily developed the following set of constants for a comparison purpose.

Category	Herd Total	Herd Sell	Ave. Weight	Selling Price	Income Total
Calves	12	10	435	80c	\$3,480
Yr. Heifers	3	1	800	55c	440
Yr. Steers	2	2	800	75c	1,200
Cows	16	2	920	40c	736
Bulls	1	-	-	-	-
					\$5,856

Cattlemen's Estimate

Category	Herd Total	Herd Sell	Ave. Weight	Selling Price	Income Total
Calves	12	10	435	37 1/2c	\$1,631
Yr. Heifers	3	1	800	46c	368
Yr. Steers	2	2	800	34c	224
Cows	16	2	920	10c	184
Bulls	1	-	-	-	-
					\$2,407

B.L.M. Estimate

-72-

The price arrived at for the Bureau of Land Management comes from some very rudimentary arithmetic that takes the herd sell multiplied by the average weight and divided by the price quoted on page 3-21. It is apparent that there is a wide discrepancy between the two sets of figures even with the arbitrary herd sell. We could extend this argument throughout the entire unit on economics, but suffice the example to serve as argument for the whole.

We must however emphasize that the entirety of this report will have an overwhelming impact on the economy of the individual ranchers as well as the county as a whole. The Bureau states on page 3-22, "The implications of these calculations are of pivotal economic importance." That is a gross understatement. We would recommend that greater attention be directed to this entire area with special care toward the current market and the future projections especially in light of the current crisis situation in Texas and other areas of the southwest. This would be the time for the local ranchers to be expanding their herds and picking up the slack that will be resulting from the situation in the southwest. It is our contention that flexibility should be written into any final program developed by the Bureau of Land Management.

KANAB/ESCALANTE GRAZING EIS
GARFIELD COUNTY COMMISSION RESPONSE

With reference to the total economy, a strong, active cattle industry develops a multiplier factor within the economy of 4.5 times. For every dollar a rancher brings to the area, it generates \$4.50 in return throughout the community. Additionally, the ranchers have traditionally been inclined to shop at home and to keep the new dollars that they have generated circulating throughout the county.

CREDIBILITY OF THE BUREAU OF LAND MANAGEMENT:

As was mentioned in the Introduction, the Bureau of Land Management has a crisis of credibility. The ranchers, the elected officials, the people generally do not trust them, do not believe them. Repeatedly over the years, the Bureau has entered into contracts with the ranchers with promises for range development: fences, reservoirs, water catchments, burn and seedings, fall and reseedings and other types. Unfortunately, these have not been carried through. The cattlemen have cut back on their stock on the range in conformity with the agreement only to be disappointed by the Bureau's inability to carry through on their commitments, their promises. The blame has consistently been laid at the door of the Congress of the United States.

It is recommended by the Garfield County Board of County Commissioners that prior to requiring any additional cuts by the Bureau of Land Management that the Bureau would honor the past commitments. The ranchers should not be required to live with past commitments made by them and not honored by the Bureau. The Bureau is indebted to the ranchers and should honor that commitment.

SURVEY PROCEDURES:

The repeated changing of the survey procedures by the Bureau of Land Management is confusing and wasteful. We contend that the surveys that have been made since the inception of the Taylor Grazing Act should be incorporated into the finished product produced by the Bureau. The present survey apparently does not invalidate the previous information contained in the Parker Three-Step Range Forage Survey. And yet, all of the data secured through this method has been discarded. It is apparent that the difference between the present data and actual use is 18.

It is recommended by the Garfield County Board of County Commissioners that no cuts should be imposed at all. Rather, the present AUMs should be maintained with the understanding that subsequent cuts or additions should be worked out between the individual cattlemen and the Area Manager for the Bureau of Land Management. The cattlemen have shown a sagacity in the use and maintenance of the public lands that they have. It is apparent that they realize that only proper utilization of the land will benefit them. It is our contention that this attitude will prevail and that arbitrary cuts at this time are uncalled for especially in light of the wise voluntary non-use that has been taken by the cattlemen.

Response 25-2
See Response 24-2.

Response 26-3
See Response 24-3.

WILDLIFE MANAGEMENT PROGRAMS

The wildlife management programs on the public land should be developed in a realistic manner cognizant of the current utilization patterns of our local citizenry. The wisdom of trying to bring the deer herds, the elk herds and other wildlife groups to the apparent level prior to the pioneer's introduction of cattle on the range is questionable. There is a great level of non-conflicting utilization of the range between cattle and wildlife. The big-horn sheep and the wild horses would be competition for the cattle. From discussions, however, it would appear that the wild horse situation is being resolved by natural attrition. Thus, we would support no increase in the big-horn sheep into the area, nor would we be happy with bringing wild horse herds from the Nevada area of high concentration.

The Garfield County Board of County Commissioners would recommend that there would be no major importation of wildlife to compete with the existing cattle herds. We would not be adverse to improving the number of deer and antelope throughout the county.

VISUAL RESOURCE MANAGEMENT:

4 With reference to Figure 3-5 in the E.I.S. statement, the Garfield County Commissioners must take strong exception. First question that we have is who determined the areas of VRH categories for Garfield County, when was this done and was it done in conjunction with a Public hearing. The areas surrounding Escalante, and Boulder are classified as class I & II VRH's - "Changes in any of the basic elements caused by a management activity should not be evident in the characteristic landscape. A contrast may be seen but should not attract attention." This is too vague a definition for a descriptive classification of Class II. We reject the implementation of these classifications without further knowledge of their implications.

It is recommended by the Garfield County Commission that the classifications imposed in Garfield County for Visual Resource Management be set aside pending public hearings relative to the standards to be imposed.

CONCLUSION:

After a cursory review of the Kanab/Escalante Grazing Management Draft Environmental Impact Statement, the Garfield County Commission would recommend the following to the Bureau of Land Management:

1. The first six elements contained in Alternative I should be implemented; the last eighteen elements contained in Alternative six should be implemented.
2. The commissioners feel that everything possible should be done to improve the status of the cattle industry in the Kanab/Escalante area for the good of the economy of the individual ranchers, The county and the state.

KANAB/ESCALANTE GRAZING EIS
GARFIELD COUNTY COMMISSION RESPONSE

3. No additional cuts should be made to the ranchers until all past commitments made to the ranchers have been honored by the Bureau of Land Management. If additional appropriations from the Congress of the United States are needed, we would recommend that the Bureau begin immediately to request such funds.
4. A standardized method of survey procedures should be implemented and consistently used instead of the constant changing of the survey programs.
5. If there is importation of wildlife, it should not be of a major nature to compete seriously with the existing cattle herds. The importation of deer and antelope would not be protested; however, we would severely question any wild horses brought into our area.
6. The VRH classifications for Garfield County should be suspended pending a full-blown public hearing to explain the classification system and the impacts to be imposed on Garfield County by such a classification.

Duane Ecology
Gene Griffin
Moham Shook
Frank Taylor
John Brown
Keith A. White

Dale DeJare
Leo Wilson
McCleary
John Smith

Dwight Benson
Robert M. White
Walt Brooks
Alfred Jensen
A. D. Lane Griffin
Sharon Lee Marsh
Cecil Griffin
Clayton
Stanley Gustin

COMMENTS AND RESPONSES - ORAL

Speakers at the public hearings are listed in order of appearance. A response was not necessary for those marked with an asterisk (*).

Kanab Hearing

1. Paul Jenkins
2. Calvin C. Johnson
3. Douglas Carroll

Escalante Hearing

4. Arthur Lyman
5. Gary Haws
6. Delaine Griffin
7. Anthony Coombs
8. Dell LeFevre
9. Wallace Woolsey
10. Dale Marsh
- 11.* Thurman Spencer
- 12.* Louise Liston
13. Robert Liston

KANAB HEARING

Speaker Number 1

①

Comment 1-1

Of course, they chose the ocular reconnaissance inventory method. First, however, they waited until two things were favorable. They had to rid the files of old ocular recon surveys which were used earlier to establish initial carrying capacities, and then they had to wait for excessively dry years. In 1976 and 1977 the dry years came. They were ideal, two of the driest years of record, and having them occur back to back was a great stroke of luck.

Response 1-1

The dates of the 1975-1977 survey were dictated by a Federal court order that required a site specific analysis of proposed BLM management plans by 1980. To complete the survey and planning analysis, it was necessary to start the survey in 1975.

Comment 1-2

The application of this F.F. [Federal fudge] factor was so effective the subsequent survey was hardly needed. It not only threw out over a million acres of rangeland, but resulted in the shrinking of the remaining lands because all areas with a measurement of 1 mile by 1 mile were considered to contain 640 acres, whether these lands were flat, hilly, or mountainous. Any mile square area of land not flat contains more than 640 acres.

Response 1-2

BLM rangeland suitability criteria are based on the four major parameters discussed in Letter Response 7-11. Rangeland is considered suitable only if it can be grazed on a sustained yield basis without damage to the basic soil resource. Acreages used were derived from planimetric maps. Because of the variability, it is not feasible to measure slope distances or slope acreages. Therefore, all acreages are figured as planimetric or flat for consistency.

Comment 1-3

The ocular recon survey is a composite of four nebulous estimations, namely: composition, density, proper use, and forage acre requirement. All or any of these components are susceptible to the application of a Federal fudge factor.

Response 1-3

See Letter Response 7-4.

Comment 1-4

One more fudgeable factor was introduced into the inventory process to further insure livestock would no longer clutter the western range landscape. This one is called "wildlife allocation." This is a broad base set aside for forage of all kinds of wildlife, both real and imagined; 35,568 AUMs for real and 33,685 AUMs for imagined. The AUMs of forage set aside for the nonexistant wildlife is about 50 percent of the total allowed for livestock.

Response 1-4

The forage available to wildlife was determined in the same manner as that for livestock. Methodology used to calculate forage availability is explained in Appendix 12 of the DEIS.

Comment 1-5

The entire foundation data to support this draft statement is a forage inventory conducted in drought years. A forage inventory based solely on guesses and estimates and replete with fudge factors. It would be interesting to examine the man years of time and dollar cost to the unsuspecting taxpayers to produce this bit of fiction.

Response 1-5

See Letter Response 22-1.

Comment 1-6

I shall close by asking this question: Why is it a government agency can take 5 years, spend millions of dollars to produce a statement which is adverse in its effect to a segment of the citizenry, yet that segment of the citizenry is allowed only 30 days and no money to respond, and that response is further limited to 10 minutes within an environment suggestive of the Spanish inquisition.

Response 1-6

The DEIS was started August 15, 1979 and published and made available to the public April 29, 1980 (a total time expenditure of 8.5 months). The statement, newspaper articles, and individually mailed letters gave the public 60 days to comment on the DEIS, with the assurance that substantive comments would be printed with responses and changes made in the text. This public comment period was extended an additional 15 days, for a total time of 75 days. This was published in newspapers and the Federal Register. A 10-minute time limitation would have been imposed if there had been many individuals wishing to testify. However, because of the small number of ranchers at the hearing in Kanab, the Cedar City District Manager waived this time limitation in his opening remarks.

Speaker Number 2

②

Comment 2-1

I firmly object to the Kanab/Escalante Grazing Management Environmental Impact Statement draft. My reasons are: the lands claimed unusable are usable providing they're given the proper adjustment to the permittee to grazing. There is water on these lands the BLM has not found or does not recognize.

Response 2-1

See Letter Response 7-11.

Speaker Number 3

③

Comment 3-1

As Mr. Jenkins stated, we have 30 days within which to prepare and document our objectives and/or whatever else we may decide to propose to the BLM. This is an unfair time limit which we are obligated to work under.

Response 3-1

See Speaker Response 1-6.

Comment 3-2

We have had very little time to go through this, but in the small amount of time we've had, it seems first of all, that the ranges in Kane County and Garfield County are by definition in here practically unsuitable for habitation by man or beast.

Response 3-2

Of the 2,567,466 Federal acres, 1,259,827 acres (approximately 50 percent) are considered unsuitable for livestock grazing. The suitability was determined by using the guidelines as shown in Appendix 9 of the DEIS, pages A9-1 through A9-4. The four major parameters influencing suitability for livestock are livestock forage production, percent slope, distance to water, and amount of soil erosion. Any one or a combination of these parameters determines suitability, as shown in table 1 of Appendix 9 on page A9-3 of the DEIS.

Comment 3-3

It states in here that the wildlife are in direct competition with the cattle. This is garbage if anyone knows anything about the deer herds. Deer and cattle do not compete against each other, and deer is the only valuable resource we have in wildlife.

Response 3-3

Several studies (Peek et al., 1978; Dusek, 1975) have been conducted concerning competition between livestock and deer. Most competition occurs on critical deer winter range. During the winter, cattle and deer rely heavily on browse species, particularly where there is an accumulation of snow or where there are few desirable perennial grass species. This results in direct competition for forage. See Letter Response 15-2.

Comment 3-4

Assuming the 200 calves of 370 pounds, that would give us an income, assuming a very low level of 80¢, of \$59,200, quite a considerable difference from the \$17,975 set forth in this EIS statement.

We have also got an average size of 29 yearling heifers. Let's assume, for example, we keep nine of those heifers, sell 20 of those heifers. A very conservative figure for the study period is 55¢ a pound. They were selling during the study period for closer to 80¢ to 90¢ a pound. But assuming the low level of 55¢ a pound and an average weight as set forth in the book on page 3-19 again of 650 pounds, that would give us \$17,050 as compared to the figure given in here of \$15,100, or almost exactly \$2,000.

Now, in addition to that, we're showing an average size of 45 yearling steers per year. . . . So we're going to sell all of them this year, 45 of those, at an average weight of 740 pounds as set forth in here at a conservative figure of 65¢ a pound, which probably should have been 90¢. But at 65¢ per pound, that gives us a total figure of \$21,645 compared with what is set forth in here, \$15,286. There's quite a lot of discrepancy on the figures here just on those things -- I'm not cosidering the cows and the bulls -- \$2,400 was given in your statement. I won't dispute or substantiate that.

That totals us in these three areas to \$87,995 as compared with \$45,718. That is \$42,000 difference.

Now I don't know if the rest of the manual was prepared with the same level of incompetency. It is all garbage because anyone that is reasonably qualified in economics and especially in agricultural economics will come up with basically these same figures. I've figured very conservatively. If I was to figure what calves were actually selling for in this area, I would come up with something over \$100,000 compared with \$45,000.

That seems to be a serious discrepancy. I think it needs review, and I submit to you that you should review it as well as many other things in here.

Response 3-4

When ranchers were first surveyed (late 1978 - early 1979), they were asked to give information which they thought was representative of an "average" year. Many used their tax records (probably 1977) as a basis for responding, but the use of such records tends to understate incomes for two reasons: 1) gross incomes are adjusted downwards in computing taxes; and 2) the prices received per pound at that time averaged around 37 cents for calves and 32 cents for steers and heifers (Utah Department of Agriculture, 1978) which are considerably different from the current price levels.

When the results from this initial survey were compiled, the results seemed disproportionately low. At that time, arrangements were made to meet with larger groups of ranchers to review the data and to adjust it where needed. Two separate meetings were held; ranchers went over the information and made changes where they saw fit. No substantive major changes resulted from these reviews, only relatively minor refinements. These results were then redistributed to the participants for their perusal and comments, of which there were none.

Therefore, after initial contacts with the ranching industry, opportunities to adjust initial inputs, and subsequent opportunities to readjust inputs, the information was taken at face value and utilized as a basis for analysis. Even so, it was not believed that such information was without inherent error. Therefore, the precautions published in the DEIS in the last two paragraphs of page 3-20 were considered to be in order. Also, in addition to these precautions, while BLM has made a concerted effort to represent the livestock industry in the affected area, the analyses should be used to demonstrate the relative differences between alternatives rather than to be a "photographic representation" of any particular ranch operation. For additional information see Letter Response 23-3.

ESCALANTE HEARING

Speaker Number 4

Comment 4-1

Another concern of mine along with these men is . . . what guarantee that these range developments that the BLM are proposing, what guarantee do we have that they will take place?

Response 4-1

The proposed improvements will take place as funds and management plans are finalized. Section 401 (b)(1) of the Federal Land Policy and Management Act of 1976 states "Congress finds a substantial amount of Federal range lands is deteriorating in quality, and that installation of additional range improvements could arrest much of the continuing deterioration and could lead to substantial betterment of forage conditions with resulting benefits to wildlife, watershed protection, and livestock production." Because of this condition, Congress directed that 50 percent of all money received by the United States as fees for grazing domestic livestock on public lands shall be used for on-the-ground range rehabilitation, protection, and improvements. The Rangeland Improvement Act of 1978 also conveys the same intent of Congress to improve the public rangelands. Both of these acts authorize expenditure of appropriated funds for rangeland improvements. This is a great deal more assurance than was available before these acts were passed.

Comment 4-2

Also, in previous years some school sections have been taken away or traded. BLM has traded the cattlemen out of these school sections and promised them that they will improve their range and justify taking these and trading these school sections out of the area.

Response 4-2

Certain State lands have been exchanged with the Federal government for Federal lands in other areas. The majority of these previously State-owned lands have continued to be allocated to livestock operations by BLM. The AUMs available on the State lands are still available as AUMs on Federal lands.

Comment 4-3

Also, the elk have a tendency to destroy fences. Who is responsible for taking care of the fences that the BLM or the elk tear down?

Response 4-3

If BLM would destroy a fence that is necessary for management purposes, then BLM would repair the fence. However, if elk, livestock, deer, or antelope would destroy the fence, then it would most likely be the responsibility of the permittee to repair the fence. Each instance would be handled on a case-by-case basis, depending on the circumstances.

Speaker Number 5

Comment 5-1

The cuts that we have received, I'm speaking specifically about the Circle Cliffs Allotment. Twelve years ago, the BLM furnished us a management plan which was signed by the BLM and the ranchers in that area. At this time we agreed to take a 68-percent cut, and they would reseed three allotments, put in a water system, and as of to date, the BLM has reseeded two allotments and they have got a half a water system in. And on top of that, they want to give us another 43-percent reduction.

Response 5-1

The grazing preference for Circle Cliffs Allotment was established at 1,042 AUMs at the time of the implementation of a grazing management plan in

1968. Due to subsequent rangeland improvements and vegetation treatments, the grazing preference was raised to the current grazing preference level of 1,530 AUMs. The range survey completed in 1977 indicated that the carrying capacity was 895 AUMs (adjusted to 897 AUMs to balance cattle numbers and season of use), a reduction of 42 percent from the current grazing preference, and a 29-percent reduction from the average active authorized use of 1,063 AUMs. Following completion of proposed rangeland developments and vegetation treatments, an additional 1,029 AUMs of forage would be expected, resulting in a grazing preference of 1,926 AUMs.

	AUMs
1968 preference	1,042
Additional from improvements and treatments after 1968	488
Current preference	1,530
Average active authorized use (10 years)	1,063
Proposed stocking level	897
Potential additional AUMs from improvements, treatments	1,029
Total potential AUMs following implementation	1,926

Speaker Number 6

Comment 6-1

And one of the things when we get up there next week I'd like to have you check, the trend studies that's there. I believe there's only four up on the mountain. Most of those, well the whole group is in the lake area in this area. To me they're in an unsatisfactory place on trails and driveways there or at the edge of a flat, out from the trees where the trend study won't give you a true account of actually what's being taken place. And for that reason, of course, I'm against and opposing the cut that has been stated.

Response 6-1

To be most effective, it is necessary to place trend plots mostly in areas of medium to high livestock utilization so that management adjustments can be made in a timely manner before the rangeland deteriorates severely. If the trend plots would be placed in light utilization areas, the critical areas would be severely damaged before the trend plots would show a need to adjust management.

Speaker Number 7

Comment 7-1

This Kanab/Escalante Management Environmental Impact Statement was wrote up in drought years after the two worst drought years we have had in the state, and maybe because of this and maybe not, there's no forage value been allotted to the annual plants that grow on the desert. Some years this makes up a substantial amount of the feed.

Response 7-1

See Letter Response 22-1. All permittees presently have the right to request additional carrying capacity based on good annual production. When there is sufficient moisture to bring abundant annual growth, the Area Manager can write a nonrenewable license for that year only, authorizing the increased stocking rate. However, because of the uncertainty of moisture condition and the subsequent abundance of annuals, annuals are not included

in the management plan. This would be unfair to the rangeland user because he would be counting on something that might not be available. BLM believes it is best for the rangeland user to have the right to request a nonrenewable license for any particular year of abundant annuals.

Comment 7-2

The present allotment management plan has not included any school lands. As a requirement for the last management plan, we were required to relinquish control of all school sections. Personally, I valued my school lands at \$16,000 that I turned over to the BLM.

Response 7-2

Approximately 2,400 acres of State lands in T325, R7E Sec. 32; T325, R6E Sec. 36; T335, R6E Sec. 2; and T335, R7E Sec. 16 were exchanged for Federal lands in the Circle Cliffs Allotment. However, those same lands are now Federal and are included in the Circle Cliffs Allotment. The carrying capacity of those lands is still included in the allotment. The only difference is they are not State of Utah lands; they are Federal lands and subject to the grazing fees of BLM.

Comment 7-3

Now there's not been in the past a credible management plan. There has been many written, but to my knowledge there has been very few followed through with. As a result, loan institutions will not accept BLM permits as collateral for government loans, not even other government agencies. The proposed cuts will reduce the collateral of our ranches by approximately \$45 to \$50 per AUM that we lose.

Response 7-3

These concerns have been discussed in detail on page A24-1, Appendix 24, Section 2 of the DEIS.

Comment 7-4

I feel that this environmental impact study is discriminatory against the Circle Cliffs permit holders, due to the fact that the reduction is based on actual use rather than preference right as in the other allotments. I feel that it should be determined if present allotment management plans [AMP] are valid, and if not, we should be able to go back to a pre-AMP allotment management.

Response 7-4

The ocular reconnaissance survey was conducted on all allotments in the Y/E area, including the Circle Cliffs Allotment. The survey showed how much forage was available for livestock, wildlife, and other resource uses. Whether the surveyed capacity is subtracted from the preference right of 1,510 AUMs, or whether it is subtracted from the 10-year average use of 1,063 AUMs, the carrying capacity of 895 AUMs does not alter. The reduction would then be 42 percent of the preference right, but only 16 percent of the 10-year authorized active average use. The present AMP calls for extensive rangeland development projects, including 2,642 acres of seedings, as shown on page A1-7 of the DEIS. It is anticipated that the potential could be as high as 1,726 AUMs if the seedings and management would be successful.

FLPMA, Section 202(a)(c)(4) requires BLM, on behalf of the Secretary of the Interior, "to rely, to the extent it is available, on the inventory of the public lands, their resources, and other values." Since there is a recent inventory, BLM cannot go back to pre-AMP allotment management.

Speaker Number 8

Comment 8-1

BLM feels that they'll get some more money, but it's not a definite thing. Right now the improvements they're using in the State of Utah is money used, what they collect off the grazing fees.

Response 8-1

Appropriated funds for improvements now come from two sources. One half of the grazing fees are made available for rangeland improvements as per FLPMA. Funds also come from the Rangeland Improvement Act of 1978, which are not from grazing fees, but are appropriated specifically for rangeland improvement. However, the improvements are dependent upon the amount of money appropriated by Congress each year and, therefore, BLM cannot make specific promises for improvements until the appropriated funds are made available.

Comment 8-2

We run on Big Bow Bench. Big Bow Bench has been on the comeback now for 7 years. They have come off in the spring, and I feel this is a good enough cut without taking another 40 percent cut. . . .

Response 8-2

The ocular reconnaissance survey indicated that the carrying capacity of Federal lands in the Big Bow Bench Allotment was 831 AUMs, an approximate 45-percent reduction from the current grazing preference level of 1,490 AUMs, and an approximate 27-percent reduction from the average active authorized use of 1,068 AUMs. Following implementation of the management system, an additional 382 AUMs would be available, (a total of 1,213 AUMs), resulting in a reduction of 19 percent from the grazing preference, and an increase of 13 percent from the current average active authorized use. For additional information, refer to pages 2-3, 2-4, 2-8, 2-9, 2-11, A1-5, and A1-7 of the DEIS.

Speaker Number 9

Comment 9-1

I feel that any cut that has taken place or should take place in the future if there are future cuts, that someone has to reckon with these farmers and ranchers that have spent money knowingly by all parties for permit rights, need to be reimbursed to the individual.

Response 9-1

As discussed on page A24-2, Appendix 24, Section 2 of the DEIS, the Taylor Grazing Act does not permit BLM to recognize any marketable value for grazing permits. Therefore, where monetary transactions have taken place for permits, such transactions are not recognized by BLM.

Comment 9-2

Now I would request that there be serious consideration given to a moratorium that should be honored by all parties, with no cuts until all improvements that have already been planned are completed and given a year or two to flourish. Then see what influence those developments have on carrying capacity of all units that are involved.

Response 9-2

No management systems would be imposed until all necessary improvements would be in place. However, it would be necessary to reduce livestock numbers to the survey level and even less when vegetation treatments would be implemented. If there would be potential to meet the grazing preference level after implementation of improvements and management, the preference level would not be reduced. The difference between the surveyed capacity and the current preference level would be placed in nonuse. If the preference level would not be attainable through management and/or improvements, the preference level would be reduced to the potential attainable.

Speaker Number 10

10

Comment 10-1

I think it is time the BLM adopt Section 4 where permittees could develop water cooperatively with BLM and also other needed projects. We hear the story that they do not have the money to do projects, but I think if they adopted Section 4, they could put these out in a cooperative deal where permittees would work in the State and lending agencies and do some of these needed projects.

Response 10-1

Memorandums of Understanding between BLM and ranchers currently allow rangeland developments and vegetation treatments to be completed. These cooperative projects will continue to be an important component of BLM rangeland management practices. See pages 2-12 through 2-17 of the DEIS.

Comment 10-2

I think the down trend in your range studies was shown after 2 to 3 years of drought.

Response 10-2

See Letter Response 22-1.

Comment 10-3

I also think annual plants should be used in determining carrying capacity, and this was stated to us by Professor Bomms from Utah State Agricultural College when we made a range tour with your group.

Response 10-3

See Speaker Response 7-1.

Comment 10-4

I don't think you've taken into consideration the economic effects on the communities where cuts are to be made. They haven't been considered at all, only to the cattlemen's standpoint.

Response 10-4

Projected impacts to communities have been addressed for each alternative under the heading "Impacts to the Region and Its Communities" on pages 4-43, 4-45, 4-47, 4-48, 4-50, and 4-51 of the DEIS.

Comment 10-5

If permittees lean toward your ultimate plan Number 5, favored by the BLM, what will be the attitude of the BLM? Face more cuts because of your management?

Response 10-5

The impacts to each allotment as a result of each of the six alternative management plans are shown in Appendix 10 starting on page A10-1 of the DEIS. In many cases the carrying capacities would be increased due to management and improvements. Some allotments may not reach the potential shown in Appendix 1 due to soils, lack of water, steepness of slopes, or vegetation that cannot be changed through management alone.

Comment 10-6

And permittees can still do a good job if the BLM would just cooperate. And if you've got feed, sell it to the permittees. And if you haven't, we in our own operations, we have enough judgment that we'll keep our cattle home and feed them ourselves.

Response 10-6

The grazing capacity determined for each allotment is based on the estimated average forage production as determined by the range survey. Temporary nonrenewable grazing permits may be issued in years of exceptional forage production to allow grazing forage above the grazing preference level. Livestock numbers may be reduced from the grazing level in the event of reduced forage production in any one season or growing year. See page 2-17 of the DEIS.

Comment 10-7

I think that the trend plots used by the BLM are too few and usually located in areas where cattle move to water, not showing the true picture of range trends. And we've also noted that your trend plots are located near gullies or places that are eroding quite bad.

Response 10-7

See Speaker Response 6-1.

Speaker Number 13

13

Comment 13-1

Since 1960 on our allotment, Lower Cattle Allotment, we've taken a 45-percent reduction plus 2 month's time. With the present proposal of 26 percent added together, that makes a total of 71 percent since 1960.

Response 13-1

A 40-percent reduction from current grazing preference is proposed for the Lower Cattle Allotment. However, since permittees have not stocked this allotment to capacity, the percentage of difference between the survey and the average active authorized use is much different than the percentage of difference between the survey and the grazing preference.

Lower Cattle Allotment

Preference (AUMs)	6,877
Average active authorized use (AUMs)	4,758
Survey (AUMs)	4,101
Percent difference from average active authorized use	-15

The average active authorized use can be found in the individual allotment files at the BLM Kanab Resource Area Office. The percentage difference would be even less if the average active authorized use would be reduced to include the Federal lands only (this figure has not been computed).

Comment 9-2

Now I would request that there be serious consideration given to a moratorium that should be honored by all parties, with no cuts until all improvements that have already been planned are completed and given a year or two to flourish. Then see what influence those developments have on carrying capacity of all units that are involved.

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Comment 10-7

I think that the trend plots used by the BLM are too few and usually located in areas where cattle move to water, not showing the true picture of range trends. And we've also noted that your trend plots are located near gullies or places that are eroding quite bad.

Response 10-7

See Speaker Response 6-1.

Speaker Number 13

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10

13

Lower Cattle Allotment

Preference (AUMs)	6,877
Average active authorized use (AUMs)	4,798
Survey (AUMs)	4,101
Percent difference from average active authorized use	-15

The average active authorized use can be found in the individual allotment files at the BLM Kanab Resource Area Office. The percentage difference would be even less if the average active authorized use would be reduced to include the Federal lands only (this figure has not been computed).

ADDENDUM:
TEXT REVISIONS

(Changes Are Underlined)

TABLE 1-1
Rangeland Management Objectives

Objectives For All Allotments	Suitable Federal Acres
<u>VEGETATION</u>	
Maintain existing livestock forage condition and trend. Provide for physiological needs and maintain vigor of key species.	332,808
On allotments proposed for specific management, improve livestock forage condition and trend. Also provide for physiological needs and improve vigor of key forage species. Maintain composition of newly established seedings. Monitor and evaluate specific management tentative grazing systems (after seed ripe, deferred rotation, rest rotation) to ensure that livestock forage utilization would not exceed an average of 50 to 60 percent of key forage species by allotment.	1,307,639
<u>WATER QUALITY</u>	
Maintain or improve existing water quality by reducing livestock concentrations on stream areas. Maintain or improve streambank cover.	6,807 (Includes 553 unallotted acres)
Maintain or improve existing water quality by reducing livestock concentrations and maintaining or improving plant cover on frail watersheds. Locate rangeland developments where they would not degrade water quality.	144,229
<u>SOILS</u>	
Maintain or improve existing plant cover. Maintain or improve soil productivity and reduce erosion from runoff. <u>Reduce accelerated erosion caused by livestock grazing on highly saline soils.</u>	1,307,639
<u>LAND USE</u>	
Allow livestock use consistent with maintaining existing resource productivity.	1,307,639
Maintain or increase existing forage productivity and allow maximum level of livestock and wildlife use consistent with maintaining this level.	1,307,639
Maintain or improve existing visual/recreation values and manage livestock grazing consistent with preserving these values.	1,307,639

(continued)

new grazing fee year (March 1981) approximately 6 months after filing the Final K/E EIS.

INTERRELATIONSHIPS

Because public lands in the west are extensively interspersed with private and State-owned land, the use and management of land under one ownership has a strong influence on the use of adjacent land owned by others (CAST, 1974). Close coordination between the various land management agencies is required in order to accomplish common goals and avoid resource conflicts.

Federal and State agencies which have programs related to the rangeland management program include the Forest Service, Soil Conservation Service, U.S. Fish and Wildlife Service, National Park Service, Environmental Protection Agency, BLM (Arizona), Utah Division of Wildlife Resources, and the Utah Division of Lands. Private landowners would also be affected. Some important interrelationships are cited below.

Forest Service (FS)

In general, the FS has the same multiple use land management policies as BLM: long-term sustained use of the resource for public benefit. For this reason, management programs of the two agencies are similar and, to a degree, complementary. There are 49 BLM permittees with livestock operations in the planning unit who also graze on the adjacent Dixie National Forest. Use of BLM and FS land during spring, summer, and fall is an integral part of the operator's yearlong operation. Proposed adjustments in season of use and livestock numbers would relate to seasonal interdependence. As a result, although FS and BLM maintain separate rangeland management programs, close coordination must occur between the permittees and both agencies. Two such opportunities for coordination are provided in a Memorandum of Understanding between BLM, FS, and the Soil Conservation Service (January 1978) that addresses Coordinated Management of Rangelands and in the Experimental Stewardship Program established by the Public Rangelands Improvement Act of 1978, PL 95-514.

Soil Conservation Service (SCS)

SCS efforts are primarily directed toward stabilization of the soil and watershed resources and increasing the productive capability of private land. In the K/E EIS area, SCS has developed ranch plans for private lands. These plans are the joint ventures between SCS and individual ranchers and include grazing systems, brush treatment projects, fences, and water developments. There are presently 62 ranchers who have SCS ranch plans and are also BLM permittees. Changes in the management of public lands may alter existing ranch plan designs and change cost sharing programs.

U.S. Fish and Wildlife Service (USFWS)

The USFWS is responsible for the protection of migrating waterfowl, threatened and endangered species, and animal damage control programs. The protection of threatened and endangered species and migrating waterfowl may be affected (positively or

CHAPTER 2
ALTERNATIVES

INTRODUCTION

This chapter describes the six alternative rangeland management programs under consideration. It also discusses projected impacts of each alternative and identifies the Bureau of Land Management (BLM) preferred alternative.

Alternative descriptions focus on the kind, season, and level of livestock use proposed and the kind of rangeland management that would be applied. Specific levels of use and expected levels of forage output are identified. Initial forage allocations are shown in table 2-1 and in figure 2-1.

The BLM Ocular Reconnaissance Survey (1975-79) provides an estimate of the amount of forage presently available for livestock and wildlife. This forage was allocated in the BLM planning system as follows: 68,298 animal unit months (AUMs) to livestock, 16,515 AUMs to big game, and 314 AUMs to wild horses.

In computing the range survey, an additional 52,738 noncompetitive AUMs for other wildlife and resource uses were derived primarily from big sagebrush. A sagebrush winter proper use factor of 10 and 30 percent was assigned to cattle and deer respectively. Therefore, the rangeland surveyed allowed a total of 40-percent utilization on big sagebrush by cattle and deer combined. This is the percent of current year's growth of sagebrush that could be utilized by both cattle and deer during the winter without causing a decline in the rangeland condition.

All of the 10-percent sagebrush proper use factor was allocated to livestock. However, not all of the 30-percent sagebrush proper use factor was allocated to big game because it was not needed. These 52,738 AUMs could be available for big game if numbers were to increase. They are not available for livestock because if over 10-percent utilization on big sagebrush was allowed, overgrazing of desirable grasses and browse would occur. Refer to Appendix 12 for detailed information on how the AUMs were determined from the range survey.

The 210 existing grazing allotments (Existing Allotments, fig. 2-2 inserted at the back of this volume) are considered in each alternative discussion. In some cases these allotments would be managed separately, while in other cases they would be combined or would have livestock elimination proposed.

Following the district manager's selection of a rangeland management program from the alternatives, additional cooperation and coordination would be needed with the livestock operators to finalize grazing management systems, location of rangeland developments, (words deleted) vegetation treatments, and livestock grazing suitability determinations. The manager could then develop a decision document which would protect the resources

and most nearly fit the livestock operators' needs. Implementation of the management program for the Kanab/Escalante (K/E) Environmental Impact Statement (EIS) area would take place at the beginning of the new grazing fee year (March, 1981) approximately six months after filing the Final K/E EIS statement.

This discussion includes proposed rangeland developments that would be needed to support the alternatives and required administrative actions that would be needed to implement the rangeland management program finally selected. Measures that would mitigate environmental impacts (Appendix 3) have been included in the development of each alternative and considered in the analysis of impacts.

DESCRIPTION OF ALTERNATIVES

A summary of the proposed initial level of use and developments that would be required in each alternative is shown in table 2-1. Specific types of management that would be applied under each alternative are discussed in the Implementation section of this chapter. The BLM Range Survey (1975-79) provides an estimate of the amount of forage presently available for livestock, 68,298 AUMs; wildlife and other uses, 69,253 AUMs; and wild horses 314 AUMs. These are the baseline figures used in the planning system to develop the allocations proposed in each alternative.

SPECIFIC DESCRIPTION OF EACH ALTERNATIVE

Continuation of Present Management: ALTERNATIVE 1

Present grazing practices (season, level, and kind of management) would continue as shown by allotment in Appendix 1, Present Situation. The livestock forage allocation would remain at the present grazing preference of 109,708 AUMs and grazing permits would be the same as presently issued (fig. 2-1). Present average active authorized use over the past 5 to 10 years has been 68,895 AUMs and this level would be expected to continue. No adjustment to the season, level, or kind of management would be made. There would not be an allocation of forage to wildlife or wild horses as no allocation presently exists. However, the BLM Range Survey (1975-79) indicates that an estimated 69,253 AUMs are available for wildlife and other uses and an estimated 314 AUMs are available for wild horses. Existing levels of forage utilization would continue; for many areas this would exceed physiological limits of 50-percent utilization on desirable forage.

An analysis of this alternative is required by regulation. This alternative is used as a base from which to make comparisons of the other proposed actions. Specific actions would be:

1. Overallocation of livestock forage would continue by 38 percent over the survey estimate, or 37 percent over the past average active authorized use on 1,307,639 suitable Federal acres (based on a BLM Livestock Forage Survey, 1975-79 and subsequent forage allocations made in the Management Framework Plan).

Description of Soil Associations

Grouping	Associa- tion Number	Soils	Depth ^a	Permea- bility ^b	Surface Texture	Surface ^c Runoff	Sediment ^d Production	Wind ^e Erosion	POTENTIAL YIELDS (years) ^f (pounds per acre per year)		Characteristic Vegetation
									Favorable	Unfavorable	
1. Sandy soils	65	Typic Torripsaments- Typic Torriorthents Association	Deep	Rapid	Loamy fine sands	Slow to medium	Low	Critical	900 to 1,000	500 to 700	Sagebrush
	67	Ustic Torripsaments Association	Deep	Rapid	Fine sands	Very slow to slow	Low to moderate	Moderately critical	1,200	800	Big sagebrush, pinyon- juniper
2. Highly erodible soils	63	Typic Torriorthents (Shallow)-Lithic- Calcicorthics-Lithic Natrargids Association	Shallow	Moderate to slow	Loams, silt loams, silty clay loams	Rapid	High	No serious wind erosion	200 to 1,300	100 to 600	Shadscale, saltbush
	64	Ustic Torriorthents (Shallow)-Badland- Rock Outcrop Associa-	Shallow to moder- ately deep	Moderate to very slow	Loams, silt loams, silty clay loams	Moderate to high	High	No serious wind erosion	900 to 2,000	500 to 1,200	Pinyon- juniper, sagebrush
3. Light-colored soils of valleys, terraces, and mesas	36	Ustic Torrifluvents- Ustic Torriorthents Association	Deep	Slow to moder- ately rapid	Fine sandy loams to silty clay loams	Slow to medium	Moderate to high	Moderately critical	2,300	1,400	Sagebrush, bluebunch wheatgrass
	37	Ustollic Haplargids- Ustic Torriorthents Association	Deep	Slow to moder- ately rapid	Fine sandy loams and loams	Slow to medium	Moderate to low	Moderately critical	900 to 2,000	400 to 850	Sagebrush, Indian ricegrass
	41	Lithic Ustollic Calcicorthids-Lithic Ustic Torriorthents Association	Shallow to moder- ately deep	Moderate to rapid	Fine sandy to coarse, grav- elly loams	Medium to rapid	Moderate to low	No serious wind erosion	600 to 1,250	276 to 900	Pinyon- juniper, sagebrush
4. Dark-colored soils of upland plains and terraces	18	Aridic Arguistolls- Typic Arguistolls Association	Moder- ately deep to deep	Moderate	Loams and fine sandy loams	Medium to rapid	Moderate	No serious wind erosion	1,250 to 1,500	800 to 900	Pinyon- juniper, sagebrush
5. Dark-colored soils of mountains and plateaus	5	Typic Argiborolls- Lithic Argiborolls- Typic Haploborolls Association	Shallow to deep	Slow to moderate	Gravelly loams to silty clay loams	Medium to rapid	Low	No serious wind erosion	1,200 to 2,000	600 to 900	Pinyon- juniper, sagebrush
	6	Typic Argiborolls- Typic Ustorthents Association	Shallow to deep	Slow to very slow	Gravelly loams to silty clay loams	Medium to very rapid	Moderate	No serious wind erosion	1,600	825	Pinyon- juniper, oakbrush

(continued)

<u>Yield Category</u>	<u>Percent of Area</u>	<u>Acres</u>
Very low	5.1	145,308
Low	58.0	1,640,763
Moderate	21.5	608,717
High or very high	4.5	123,346
Barren or not rated	10.9	309,376

Sediment yields on 1.2 million acres were estimated using BLM Phase I Watershed Conservation and Development Inventory (1977) and converted to PSIAC sediment yields using a method developed by the BLM Denver Service Center.

Salt production and high sediment yields in many areas of the K/E EIS area are the result of natural geologic erosion processes rather than accelerated erosion processes which occur primarily from the activities of man or animals. Appendix 14 identifies allotments with high sediment yields.

Important Soil Characteristics and Areas of Concern

Generally, soil characteristics that lead to high runoff and sediment yields are fine-textured soils with low permeabilities, low forage production, slopes exceeding 10 percent, and that are within highly intense consecutive storm regions (Wilson et al., 1975; Branson et al., 1972). Wind erosion is primarily a problem in sandy to loamy soils with sparse or no vegetation cover. Runoff on these soils is usually low, due to high permeability rates.

Of particular concern are soils in critical or severe erosion classes (Existing Situation, Appendix 15) which have livestock forage utilization of 60 percent or greater in 19 allotments (URA, Watershed, all planning units, 1975-79). There is a total of 14,500 Federal acres involved. Livestock grazing would be authorized on these allotments because during the BLM Range Survey (1975-79) range specialists judged the critical erosion areas as being capable of realizing improved erosion conditions due to better rangeland management practices (Appendix 9, Methodology Used to Determine Suitability).

Based on Soil Conservation Service soil salinity condition maps for Utah (1973), only two soil associations in the EIS area are considered moderately or slightly saline (fig. 3-2). These two associations generally coincide with areas of high sedimentation as described previously. All other soil associations are considered nonsaline.

An additional area of special concern, especially in terms of sedimentation, is streambank sloughing. In the K/E EIS area, approximately 315 streambank miles are in poor erosion condition. Appendix 16 lists the streams, allotments, and streambank mileage with observed erosion problems. These figures are based on field observations made on the streams listed. They are not inclusive of all area streams. Quantitative information relating to the magnitude of this problem is lacking. However, concentrated livestock (~~words deleted~~) use along streambanks is believed to be the primary cause for the collapse and deterioration of these areas (Thomas et al., 1979). Specific drainages with major erosion problems are Escalante River, Harris Wash, The Gulch, and Deer Creek.

operation with only a few ranchers retaining calves to sell as yearlings. Cows are usually replaced from calf crops, except in some of the larger sized operations where calves are also purchased from outside the herd. Replacement age in most cases is around 10 to 11 years, resulting in an approximate 10-percent annual turnover rate. Most operations replace their bulls every 2 to 8 years, averaging a 20-percent annual turn-over rate. In general, replacement bulls are purchased from outside to maintain or improve the herds' characteristics. Most ranches run 30 cows per bull and attain around a 75-to-85-percent calving ratio. The breeding season for most operations runs from May (or as late as July) to December. The use of range bulls is the prevailing breeding method.

Average herd compositions for the three size classes are:

<u>Category</u>	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Cows	16	99	301
Bulls	1	4	15
Calves	12	84	234
Yearling heifers	3	8	29
Yearling steers	2	1	45

Selling weights attained by the three sizes of operation are:

<u>Category</u>	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Calves	435	380	370
Yearling heifers	800	870	650
Yearling steers	800	900	740
Cull cows	920	900	910
Bulls	1,800	1,600	1,500

Dependence on BLM Forage

There are two direct methods of assessing the level of dependence that a ranch unit has on BLM forage: (1) the percent of its total annual forage requirements obtained from BLM, and (2) the percentage of the herd that utilizes BLM forage during its normal season of BLM rangeland use. The average percent of annual forage requirements supplied by Cedar City District BLM to the three scales of operation are:

	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Percent of annual AUMs	35	63	42

The seasonal dependency of the three ranch size classes on BLM forage is:

	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Percent of base herd on BLM during season of use	51	85	61

independent; their self-reliant western lifestyle is associated with livestock and ranchers, and even though these are less important sectors in the current economy, this strong-willed character dominates individual and community views.

WILDLIFE

The K/E EIS area supports a diverse wildlife community. A total of 415 different species has been recorded in this area, including 81 species of mammals, 277 species of birds, 33 species of reptiles, 9 species of amphibians, and 15 species of fish (URA, Wildlife, all planning units, 1975-79).

Of the eight vegetation types delineated in the EIS area, those supporting the greatest species diversity are riparian, pinyon-juniper, sagebrush, and grassland. The riparian habitat is the most important type supporting this diversity.

The following discussions will focus on key wildlife species that use public lands in the K/E EIS area and their habitat components. Figures 3-3 and 3-4 (at the back of this chapter) identify the location of this habitat. This discussion is limited to those species that are of economic value, threatened or endangered, or that might be influenced by implementation of any of the proposed alternatives. Other wildlife species not specifically mentioned utilize habitats similar to those described. In some cases existing conflicts have been identified, usually with livestock grazing activities (URA, Wildlife, all planning units, 1975-79). However, specific data indicating the extent and significance of present conflicts is not available for all cases.

Important Big Game Habitat

Of all the habitat on public lands in the K/E EIS area, 139 allotments (1,001,361 acres) are considered to be important for big game (deer 89 percent, elk 4.4 percent, bighorn sheep 1 percent, pronghorn antelope 5.6 percent) (URA, Wildlife, all planning units, 1975-79). Habitat conditions for these species are similar and occasionally overlap. Table 3-8 identifies important characteristics of big game habitat and figure 3-3 shows the existing habitat for each big game species found in the K/E area. Overall conditions of big game habitat are:

<u>Condition</u>	<u>Acres</u>	<u>Number of Allotments</u>
Good	39,555	5
Fair	411,541	47
Poor	537,921	78
Unknown	12,344	9
TOTAL	<u>1,001,361</u>	<u>139</u>

Mule Deer

The mule deer is the most numerous big game species in the K/E EIS area. Historically, mule deer were scarce in Utah prior to this century (Julander

are expected by UDWR to reach at least 200 head. A population of this size would require 632 AUMs. According to the 1975-79 Range Survey (BLM Cedar City District Office) 632 AUMs of forage are available to elk, although some shortages of forage may occur under present management practices (Appendix 22).

Desert Bighorn Sheep

The earliest record of desert bighorn sheep in the area comes from prehistoric Indian pictographs dating back 1,500 to 1,900 years. According to Wilson (1968), there is no question that the bighorn was found in the EIS area in substantial numbers. However, a major decline has occurred, apparently caused by a number of factors associated with the effects of advancing civilization (Dalton et al., 1971; Wilson, 1968).

During 1975-76, 23 bighorn sheep were transplanted into the Moody Canyons by the Utah Division of Wildlife Resources (UDWR). The population is doing well and has increased to approximately 40 animals. Results of the 1975-79 Range Survey (BLM Cedar City District Office) indicate that 261 AUMs of forage are presently available to bighorn sheep (Appendix 22) in the Moody Allotment. Projected bighorn sheep population demand is 321 AUMs for the Moody and Escalante River allotment area. An undetermined amount of additional forage is available to bighorn sheep in the GCNRA and Capitol Reef National Park. This information suggests that as bighorn sheep numbers increase, they would have to disperse into other areas.

Critical Habitat (Potential and Existing)

There are 178,796 acres of important big game habitat that are considered to be critical. Conflicts exist or have the potential to exist on these areas with big game, wild horses, and livestock grazing activities. Critical habitat for deer and antelope overlap in some instances. Present condition in these areas is shown below:

<u>Critical Habitat Condition</u>	<u>Acres</u>	<u>Number of Allotments</u>
Good	2,389	5
Fair	67,187	22
Poor	103,710	44
Unknown	5,510	2
TOTAL	<u>178,796</u>	<u>73</u>

Table 3-9 describes conflict areas of each big game species. Appendix 18 identifies specific allotments where these conflicts exist.

Threatened and Endangered Species

The peregrine falcon and bald eagle are two Federally classified endangered species which occur in the K/E EIS area. There is very little information on the past distribution or population of these species, although the peregrine falcon was undoubtedly more common in the past. A few historical sightings of the peregrine falcon have taken place near Kanab (Behle, 1958). Recently six sightings occurred near Kanab, and one sighting was made along the Escalante River (Kanab BLM, Wildlife Observation Reports, 1978). In

addition, UDWR has reported peregrine falcon sightings near Kanab on December 15, 1979, and at Lone Rock in Wahweap Bay of GCNRA during 1979 and 1980.
There are no nesting records for the EIS area, however, peregrine falcon sightings

TABLE 3-10

Key Upland Game Bird Species and Their Habitat

Species	Existing Situation	Habitat Condition	Notable Characteristics
<u>UPLAND GAME BIRDS</u>			
1. Sage grouse	Loss of sagebrush habitat over past 30 years appears to be main cause for low but stable populations. Present population is estimated to be about 30 to 50 birds inhabiting area near Alton. These may be part of transplant stock released near there.	Sage grouse habitat on public lands involves 3,160 acres. Due to low numbers, little is known of critical areas and no strutting grounds are known to occur on public lands. Current habitat is in fair condition.	Sage grouse have specialized digestive systems. Adult birds consume up to 98-percent plant material of which 100 percent is sagebrush. Juvenile birds' diet normally consists of 75-percent forbs until 12 weeks old, then shifts to sagebrush. Nest sites are in sagebrush habitat.
2. Blue grouse	<u>Utilize the high elevation conifers for wintering and move to lower elevations for breeding.</u> Water is readily available at springs and streams.	There are about 40,700 acres of habitat on public lands. Most habitat is in fair to good condition; adequate food and cover exists. No known conflicts exist.	<u>Hens nest near the breeding territory and slowly migrate upwards with their broods. Males migrate to higher elevations immediately following breeding.</u>
3. Wild turkey	Transplanted into Lydia's Canyon area in 1957. Since release, populations have grown to an estimated 150 birds.	There are about 34,285 acres of habitat, mainly pinyon-juniper, mountain shrub, and ponderosa pine types utilized primarily during winter. Habitat is in fair to good condition and provides adequate food, cover, and water.	Most important and heavily utilized type is large stands of ponderosa pine that are roosting sites.
4. Gambel's quail	Once common in EIS area, especially along riparian areas. <u>The loss of riparian habitat has resulted in gradual elimination of quail from original range.</u>	Present habitat now about 5,340 acres of public land; mainly riparian and sagebrush. Currently sagebrush habitat is in fair to good condition and supplies added diversity to the diet.	Riparian areas are utilized as cover, nesting and brooding habitat, and as a source of water. Squabush and Apache plume are two species highly preferred but normally absent from riparian areas.
5. Chukar partridge	An exotic species introduced from Europe and Asia. Numerous releases in EIS area made during 1950-60s.	These birds currently inhabit 86,789 acres yearlong in the EIS area. Habitat consists of steep, rocky, pinyon-juniper and desert shrub areas adjacent to riparian types. Most areas are in poor to fair condition.	<u>Due to irregular precipitation patterns, regulating the amounts of food and water available, chukar distribution appears to be limited.</u>

private land, much of the flow may be diverted for irrigation purposes, thus reducing stream flow on public lands. In some areas sufficient water is lacking to support fish populations. As a result, relatively few species of fish are found in the area. Table 3-11 lists species, streams in which they are known to exist, relative abundance, and origin (URA, Wildlife, all planning units, 1975-79). Due to a lack of stream surveys in the area, fish populations and numbers are not known.

TABLE 3-11

List of Fish Species Which Occur in the K/E EIS Area

Species	Stream	Relative Abundance and Status
Speckled Dace	Unit-wide	CN
Carp	Kanab Creek, Three Lakes, Escalante River	UX
Bluegill	Johnson Canyon, Three Lakes	CN
Green Sunfish	Johnson Canyon	CN
Largemouth Bass	Lower Escalante River	CN
Rainbow Trout	Death Hollow, Calf Creek, Deer Creek, Boulder Creek, Pine Creek, Varney Griffith and Wide Hollow Reservoirs	CX
Cutthroat Trout	Calf Creek	RN
Brown Trout	Death Hollow, Calf Creek, Boulder Creek, and Deer Creek	CX
Desert Sucker	East Fork Virgin River	CN
Roundtail Chub	Lower Escalante River	CN
Red Shiner	Escalante River	UN
<u>Fathead</u> Minnow	Escalante River	UX
Flannelmouth Sucker	Escalante River, East Fork Virgin River	CN
Bluehead Sucker	Escalante River, Deer Creek	CN
Channel Catfish	Escalante River	UX

Source: URA, Wildlife, all planning units, 1975-79.

LEGEND:

Relative Abundance: C = Common U = Uncommon R = Rare
 Origin: N = Native X = Exotic

<u>Agency</u>	<u>Recreation Area Management (acres)</u>
BLM	55,205
National Park Service	388,116
Utah State Department of Parks	14,733
	<u>485,054</u>

Nation Wide River Inventory

Phase I of a two phase Nationwide Rivers Inventory (conducted by the Heritage Conservation and Recreation Service) has identified four streams within the K/E EIS area which may be suitable for inclusion in the Wild and Scenic Rivers System: the Paria River (from its source to the Colorado River); the Escalante River (from Escalante to Lake Powell); the North Fork Virgin River (from its source to the road head at Zion National Park); and Steep Creek (from its source to the Escalante River).

Activities

Recreational activities include sightseeing, camping, picnicking, hunting, fishing, collecting (rockhounding and vegetation), and off-road vehicle use.

Visitor use is increasing and occurs year round in the EIS area, especially sightseeing. Hunting activities are seasonal and are set by UDWR. Most backcountry use occurs in the spring and fall months, but summer and winter use is increasing. Camping and picnicking are essentially summer activities.

Table 3-12 indicates visitor use activity estimates for recreational activities and most predominant user group. Tables 3-13 and 3-14 discuss recreational activities in more detail.

TABLE 3-13

Major Recreational Activities

Activity	Opportunities	Significance
Big game hunting	Mule deer hunting is most significant. (phrase deleted) Present hunting opportunities are limited due to low deer numbers, limited access to public lands and dense pinyon-juniper stands which limit shooting opportunities (URA, Recreation, all planning units, 1975-79).	During 1978 deer season, about 7,451 hunter visits and 4,587 hunter days were attributed to the EIS area; average success was about 20 percent, while 23 percent was Statewide average (Utah Big Game Harvest, 1978). Local residents account for 42 percent, nonresident for 24 percent, and other Utah residents for 34 percent of hunters during 1977 (Utah Big Game Investigations and Management Recommendations, 1978).
Small game hunting	Principal animals hunted include rabbits, coyotes, and occasionally fox and cougar. Low populations are common, however, highest densities occur on agricultural lands and vegetation treatment areas.	Compared to Statewide data, hunting and harvest pressure is low for the EIS area. Coyote hunting is perhaps most common activity. Some county residents received as much as \$40 to \$60 for coyote pelts on commercial market (Kane County PAA, 1979).
Sight-seeing	Major activity in EIS area. Although often associated with other forms of recreation, auto-sightseeing offers unlimited opportunities. Variety of landscapes offered are: rolling grasslands, pinyon-juniper woodlands, massive cliffs, and colorful limestone breaks. Historical and wildlife sightseeing opportunities also exist. Two herds of wild horses totaling 24 animals occur in two extremely remote locations in the K/E EIS area (Wild Horses, Chapter 3).	The EIS area is located in a region of national significance. Zion, Bryce Canyon, and Capitol Reef National Parks are located on the periphery of the EIS area. Glen Canyon National Recreation Area and five outstanding natural areas are found within the EIS area. Due to the remote location of wild horse herds, sightseeing is extremely limited. Recreational sightseeing involving wild horses is not a significant activity.

ERRATA SHEET

FIGURE 3-3

The legend in figure 3-3, Major Wildlife Habitat, is changed to include vertical lines in the Deer Summer Range legend box.

Livestock Forage Condition

Treatments, specific management systems providing periodic rest, and deferment of grazing until after seed ripe on many allotments would improve the condition of livestock forage. A 1-percent reduction from the current level of livestock grazing (68,895 AUMs) to present forage availability (68,298 AUMs) would occur. Additionally, an adjustment in the present grazing season would occur. Spring use would be deferred until after seed ripe (about July 1 to July 15) of desirable forage species on 23,072 acres (Chapter 2). Implementation of 21 AMPs would provide specific management on 659,819 acres. This management would involve implementation of grazing systems (Chapter 2, Grazing Management) and would require construction of rangeland developments and vegetation treatments consisting of 7,140 acres of chaining, 8,078 acres of burning, 5,898 acres of spraying, and 1,665 acres of plowing.

Rest rotation grazing systems would be implemented on 1,096,542 acres. These systems would provide periodic rest during the critical growing season which would allow improved seed production and establishment of seedlings (Hormay, 1970). Average utilization rates on grazed pastures could however, exceed moderate (50 to 60 percent) utilization.

Deferred rotation management would occur on 239,558 acres and would generally be favorable to vegetation. Schmutz (1973) indicates that deferred rotation systems improve plant vigor and seedling establishment, and result in more uniform grazing. He also states, however, that after heavy use it may take many years for arid or semi-arid rangeland to improve. Buwai and Trlica (1977) also indicate that it may be necessary to give important forage plants periodic rest to insure their productivity.

As discussed in Vegetation Treatments in Appendix 20, treatments would change plant composition which would improve forage condition. Chaining would remove dominant (~~words deleted~~) mature plants (primarily pinyon-juniper or sagebrush). Treatments occurring in pinyon-juniper sites may, however, suffer reinvasion by undesirable species within 15 years (Tausch and Tueller, 1977) and would require retreatment.

Burning, used primarily in dominant sagebrush stands, would remove undesirable shrub species, thereby releasing native grasses from competition. At least 3 years could elapse before production of many desirable species would be back to pretreatment levels (Vallentine, 1971). Linne (1978) also indicates that undesirable species (rabbitbrush) may increase after burning. Nielsen and Henkley (1975) report up to a 100-percent kill of sagebrush by fire.

Mature deep-rooted sagebrush would also be removed by plowing. Native perennial grasses would respond favorably to this method of treatment, but the treatment would be limited to rolling terrain and deep soils.

Spraying would reduce the competition of shrubs and forbs with grasses. Depending on the soil moisture, stage of growth when treated, and species treated, mortality of target plants normally varies from 60 to 95 percent (Herbicide Control of Sagebrush and Wyethia in Utah, Forest Service, 1973).

(which do not contribute significantly to production) with desirable forage species (grass and browse). These treatments on 52,557 acres would result in increased long-term sustained production of 5,171 AUMs. Success of proposed treatments was evaluated using available soils information (Appendix 21). Appendix 20 describes how this evaluation was used in the vegetation analysis. Basically, this data indicates the most realistic degree of success that would be expected and the AUM figures noted above would be minimum amounts. It would be possible to increase forage production from vegetation treatments (toward proposed levels in Chapter 2) by on-the-ground examination, site selection, and selection of treatment methods. This would occur prior to the writing of the final AMP.

Projected increases would be available in the long term upon successful implementation of proposed management. Short-term increases would not be expected, although proposed management would likely improve forage quality.

Forage production would be 137,551 AUMs in the short term. In the long term, management (primarily grazing systems), water developments, access, and vegetation treatments would increase forage production to 163,071 AUMs.

Riparian Vegetation

Although specific management systems would be implemented on 129 allotments, proposed management would not adequately protect existing riparian vegetation. Reduction in livestock numbers, rest from spring grazing, and improved livestock distribution would relieve some grazing pressure in the riparian zones. The management changes would be sufficient to improve herbaceous vegetation during the rest periods, but periodic heavy utilization by livestock (~~words deleted~~) would prevent long-term improvement. As a result, riparian areas in very poor condition would decrease from 545 acres to 10 acres, areas in poor condition would increase from 2,756 acres to 3,046 acres, 2,320 acres in fair condition would increase to 2,565 acres, and 571 acres in good condition and 20 acres in excellent condition would be maintained in their current condition.

Conclusion

Forage production would increase from 137,551 AUMs in the short term to 163,071 AUMs in the long term. Condition of riparian vegetation would decline slightly over existing conditions. Impacts to livestock forage condition and trend would be:

Condition	Acres		Trend	Acres	
	From	To		From	To
Good	124,344	164,384	Up	85,262	667,396
Fair	682,830	678,551	Static	1,178,368	634,617
Poor	500,465	464,704	Down	44,009	5,620

Livestock Optimization: ALTERNATIVE 6

Impacts of this alternative would be closely related to those in Alternative 5 due to similar implementation procedures developed for this

TABLE 4-5

Summary of Forage Allocation to Big Game

Alternative	Big Game (Initial Allocation)	Big Game Long-Term Allocation)
1. Continuation of Present Management	0	0
2. Elimination of Livestock Grazing	16,515	16,515
3. Multiple Resource Enhancement	16,784	16,784
4. Adjustment to Grazing Capacity	16,515	16,515
5. Rangeland Management Recommendation	16,784	16,784
6. Livestock Optimization	16,784	16,784

condition by alternative can be found in table 4-6. The acres shown in this summary are derived from projection of the Distribution of Wildlife Species map (fig. 3-3 at the end of Chapter 3) on the Existing Allotment map (fig. 2-2 inserted at the back of this volume).

The predicted impacts to wildlife are based on information contained in the vegetation impact analysis (Vegetation, Chapter 4). A big game and upland game bird impact summary by allotment and alternative can be found in Appendix 25. Included in Appendix 25 is a discussion of methodology used in projecting deer numbers.

Continuation of Present Grazing Management: ALTERNATIVE 1

Under this alternative there would be a continuation of the present season and level of livestock use. This would result in an overallocation of livestock forage, which would cause a long-term decrease of forage production by 6 percent and a decline in forage condition (Vegetation, Chapter 4). Consequently, critical wildlife areas would continue to be utilized heavily and conflicts with livestock would result in a decline in wildlife habitat condition.

Mule Deer

Due to present overallocation of livestock forage (which has caused low plant vigor and poor quality forage), deer habitat condition (in Alternative 1) would continue to decline on 139 allotments containing 1,001,361 acres of important deer habitat, and 68 allotments containing 178,746 acres of critical deer habitat (tables 3-8 and 3-9). Desirable browse species would continue to decrease in areas of heavy livestock grazing, lowering the quality of habitat (Dusek, 1975). An overall 6-percent decline in forage production would result (Vegetation, Chapter 4). This decline would cause a change in condition class on 2,019 acres (table 4-6), and would result in further deterioration of deer habitat. A decline

Elimination of Livestock Grazing: ALTERNATIVE 2

The improvement of 128,147 acres of important big game habitat and potential increases in projected deer numbers from 5,539 to 5,672 head as a result of the elimination of livestock grazing (Wildlife, Chapter 4) would improve hunting quality. The projected increase in deer numbers could result in an increase in hunter-days from 4,587 to 4,697, a 2.4-percent increase over 1978 hunter-days. Hunting opportunities would remain constant on the remaining 873,214 acres of habitat due to its static condition.

As a result of the elimination of livestock grazing, the improvement in species diversity and composition of rangeland and riparian vegetation would enhance the color and textural qualities of the landscape (Visual Resources, Chapter 4). The overall improvement in visual quality would improve the aesthetic appearance of the EIS area and thus improve sightseeing quality. The above-mentioned improvement in big game habitat and potential increase of wildlife numbers (Chapter 4, Wildlife) would improve viewing opportunities.

Elimination of livestock on Federal lands would reduce the scenic values along trail routes for sightseers who enjoy viewing the traditional livestock setting. Fishing opportunities would improve on 33.7 miles of stream containing populations of brown and rainbow trout. The improvement of riparian vegetation and fish habitat would improve fishing opportunities (Fisheries, Chapter 4). Although fishing quality would improve on 33.7 stream miles, fishing pressure would not be expected to change, due to the remoteness of the fishing areas.

Approximately 973 miles of fence needed to enclose private lands would act as a barrier to ORV use. The placement of gates on most roads would decrease the barrier effect.

With the elimination of livestock grazing, the quality of recreational activities (hiking and camping) would improve in all special management areas and GCNRA. Existing livestock/recreationist conflicts (Recreation, Chapter 3) would be eliminated in confined canyons and the scenic quality of riparian areas would improve due to increased visual diversity (color, texture, form) (Visual Resources, Chapter 4). The elimination of livestock grazing would improve the recreational experience but would not be expected to result in an increase of backcountry users in special management areas and GCNRA.

Conclusion

This alternative would have an impact on big game hunting opportunities due to a potential increase of hunter-days from 4,587 to 4,697. Fishing quality would improve on 33.7 stream miles. The impacts to sightseeing would be favorable. Construction of new fencelines would have an impact on ORV use. Recreational quality would be improved in all special management areas and GCNRA.

Multiple Resource Enhancement: ALTERNATIVE 3

The elimination of livestock grazing on 6,807 acres of riparian areas and large reductions in livestock numbers would improve habitat conditions on 105,527 acres presently in fair condition. The improvement of 105,527 acres of habitat could increase projected deer numbers from 5,539 to 5,672 head.

TABLE 3

ESCALANTE: MFP Interim Management

Allotment	Present Situation				Area Manager's Recommendation				Potentially Suitable Lack of Water		
	Livestock Numbers and Class ^a	Season of Use	Federal		Season of Use	Suitable AUMs ^b	Federal Acres	Percent Change in AUMs	Federal		
			AUMs	Acres					AUMs	Acres	
Alvey Wash	241C	5/16-9/30	1,086		48,606	6/16-10/31	1,086	10,519	0	27	348
Big Bown Bench	295C	10/16-2/28	1,328		16,508	10/16-3/15	831	14,957	-45	.....	.....
	152C	3/1-3/31	152								
	20C	4/1-4/30	20								
Boulder Creek	10C	4/1-5/31	20		1,705	9/1-10/31	34	772	-75	.....	.....
	30C	8/16-10/15	60								
Boulder Stock Trail	.....	.....	135		2,598	.....	135	2,598	0	.....	.....
Cedar Washes	245C	6/16-9/30	860		11,567	7/16-10/30	648	8,137	-25	.....	.....
Chimney Rock	539C	11/1-6/15	4,043		31,942	11/1-6/15	2,783	30,476	-31	.....	.....
Circle Cliffs	291C	11/1-3/31	1,530		29,779	11/1-3/31	895	8,338	-42	.....	.....
Collets	30C	6/16-9/15	90		15,252	7/16-8/15	26	588	-71	.....	.....
Death Hollow	194C	11/1-3/31	970		17,883	11/1-3/31	255	6,364	-75	73	1,203
	23C	4/1-5/15	35								
Deer Creek	142C	11/1-2/28	540		17,447	11/1-2/28	404	6,182	-33	148	2,025
	32C	4/1-6/15	66								
Dry Hollow	108C	4/21-6/20	216		1,307	Accept proposal	18	297	-92	.....	.....
Escalante River Lower River	339C	9/1-4/15	2,547		67,891	9/1-3/30	2,268	49,729	0	33	365
Phipps Range						10/1-3/30	280	4,669	0	.....	.....
Forty-Mile Ridge	336C	11/1-5/31	2,376		41,641	10/1-3/31	1,884	29,061	-21	380	9,739
Haymaker	50C	11/1-12/31	100		3,328	11/1-12/31	76	1,621	-24	.....	.....
King Bench	483C	11/1-3/31	2,415		48,268	11/1-3/31	1,113	17,641	-54	295	5,396
Lakes	327C	6/1-9/30	1,308		23,301	6/1-9/30	848	17,706	-35	.....	.....
Last Chance Escalante	258C	5/1-10/15	1,419		51,020	6/1-10/15	1,100	6,190	0	.....	.....
Paria	258C	10/16-4/30	1,667		178,204	10/16-4/30	1,387	79,280	0	.....	.....
Long Neck	21C	5/1-5/31	21		610	Accept proposal	5	130	-76	.....	.....
Lower Cattle	1,138C	10/1-4/15	6,877		72,611	10/1-4/15	4,101	61,783	-40	.....	.....
McGath Point	40C	3/16-6/15	120		3,440	11/1-1/31	120	2,193	0	.....	.....

(continued)

TABLE 4

ESCALANTE: MFP Specific Management

Priority	Allotment	Suitable Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treatment and Acres	Potential AUMs Increased With		Percent Change AUMs	Season of Use	Surveyed AUMs ^b	Total AUMs ^c
								Management	Treatment				
2	Alvey Wash ^c	10,867	Rest rotation	3	Agcr, Orhy, Putr	Springs 2 Pipeline 8 miles Cattleguard 1 Fence 2.6 miles Reservoir 1 Troughs 6	Sagebrush plow/seed 1,440 acres	635	156	+73	6/15-10/31	1,086	1,877
1	Big Bown Bench ^d	14,957	Winter	1	Orhy, Atca	Reservoirs 3 Fence 0.4 mile		382	.....	-19	10/1-3/31	831	1,213
1	Boulder Creek	772	Winter	1	.....	.....	.....	46	.....	0	9/1-10/31	34	80
1	Boulder Stock Trail	2,598	.....	...	.....	.....	.....	131	.....	...	.....	135	266
3	Cedar Washes	8,137	Deferred rotation	2	Orhy, Hija, Agcr	Retention Dam 4 Springs 2 Fence 2.5 miles	Sagebrush burn/seed 860 acres Pinyon-juniper chain/ seed 340 acres	<u>506</u>	<u>156</u>	+52	6/15-9/30	648	1,310
1	Chimpey Rock ^c	^d 30,476	Rest rotation	4	Orhy, Hija, Epne	Fence 0.8 mile Seep 1 Spring 1 Pipeline 2 miles Well 1		877	.....	-9	11/1-6/15	2,785	3,662
2	Circle Cliffs ^c	8,338	Rest rotation	4	Agcr, Elju, Atca	Windmill 1 Pipeline 1.5 miles Troughs 3 Water catchment 1 Seep 1 Fence 1.7 miles	Sagebrush plow/seed 2,642 acres	583	<u>446</u>	<u>+26</u>	11/1-5/15	897	<u>1,926</u>
2	Collets	588	Summer/fall	1	Orhy, Atca	Seep 1		8	.....	-62	7/16-8/15	25	34
1	Death Hollow	7,567	Winter	1	Orhy, Atca	Seeps 4 Reservoirs 4		365	.....	-31	11/1-3/31	330	695
3	Oeer Creek ^c	8,207	Winter	3	Orhy, Atca	Stock tanks 4		280	.....	+38	11/16-2/28 4/1-4/30	554	834

(continued)

TABLE 5

PARIA MFP Interim Management

Allotment	Livestock Numbers and Class ^a	Present Situation			Area Manager's Recommendation			Percent Change in AUMs	Potentially Suitable Lack of Water Federal ^b		
		Season of Use	Federal ^b		Season of Use	Federal ^b			AUMs	Federal ^b	
			AUMs	Acres		AUMs	Acres			AUMs	Acres
Blue Pools	55C	8/1-5/31	553	9,188	10/1-3/31	516	8,425	-7	.....	.....
Bunting Well	10C	6/1-11/30	60	2,630	6/1-11/30	120	1,680	+100	.....	.....
Cedar Mountain	248C 3H	6/1-10/15	1,130	13,108	6/1-10/15	810	9,970	-28	.....	.....
Clark Bench	175C 5H	8/1-5/31	1,800	64,341	^b 8/1-5/31	1,800	23,270	0	264	3,987	
Cockscomb ^d	9C	12/16-4/15	37	1,961	11/16-3/15	36	1,036	-3	.....	.....
Cottonwood	381C 10H	11/1-5/31	2,737	83,998	11/1-5/31	2,737	31,242	0	377	9,934	
Coyote	292C	11/1-5/31	2,044	44,141	^e 11/1-5/31	2,044	21,544	0	343	10,399	
Deer Range	85C	8/1-10/15	213	10,294	8/1-10/15	213	2,280	0	.....	.....
Ory Valley	195C	7/1-10/31	^f 668	11,355	7/1-10/31	^g 668	^g 6,382	0	133	1,085	
East Clark Bench	80C	11/1-5/15	520	9,555	11/1-5/15	<u>452</u>	<u>5,704</u>	<u>-13</u>	^h <u>153</u>	<u>1,840</u>	
Ferry Swale				1,535	*** ADMINISTERED BY ARIZONA STRIP DISTRICT OFFICE ***						
Flat Top	45C	8/1-5/31	450	5,245	8/1-5/31	390	4,865	-13	.....	.....
Harvey's Fear	***** Unallotted		*****	4,566	*** Nonuse ***		3,197	.....	.....	.....
Headwaters ⁱ	582C	^f 5/1-6/10	ⁱ 774	.....	5/1-6/10	.....	.....	.....	.....	.....
	328C	5/1-9/30	1,640	249,059	5/1-9/30	5,930	^j 53,370	0	92	1,892	
	703C	11/1-3/31	3,515	.....	11/1-3/31	.....	.....	.....	.....	.....
Judd Hollow	172C	11/1-5/31	1,204	13,688	10/1-3/31	696	9,745	-42	.....	.....
Lower Hackberry	96C	11/1-3/31	480	17,695	11/1-3/31	250	5,117	-48	.....	.....
Lower Warm Creek	40C 5H	11/1-3/31	225	33,242	11/1-3/31	110	2,645	-51	^k 400	^j 7,045	
Mud Springs	64C	7/16-10/15	194	14,455	7/16-10/15	123	3,807	-36	33	909	
Navajo Bench	*** Nonuse ***		^k 832	7,628	Nonuse	.....	3,039	.....	212	3,183
Nipple Bench	190C	12/1-4/30	950	26,942	11/1-3/31	515	10,645	-46	367	6,207	
Round Valley	125C	11/1-3/31	625	8,974	.....	.....	.....	-100	^l 376	5,169
Rushbeds	54C	11/1-4/30	324	16,525	11/1-4/30	246	5,076	-24	77	1,690	
Spencer Bench	*** Nonuse ***		^k 264	8,505	Nonuse	.....	2,186	.....	164	3,492
Upper Hackberry	^l 125C	11/1-3/15	862	21,604	^l 11/1-3/15	578	8,759	-33	131	5,130	
	^m 149C	4/16-6/15			^m 4/16-6/15						

(continued)

TABLE 5 PARIA (concluded)

Allotment	Present Situation				Area Manager's Recommendation				Potentially Suitable		
	Livestock Numbers and Class ^a	Season of Use	Federal ^b		Season of Use	Suitable AUMs ^c	Federal ^b Acres	Percent Change in AUMs	Lack of Water ^d		
			AUMs	Acres					Federal ^b AUMs	Acres	
Upper Warm Creek	221C	11/1-5/31	1,547		68,265	11/1-3/31	837	11,193	-46	640	8,725
Wahweap	80C	12/1-4/30	400		11,223	11/15-3/31	194	5,609	-51	.....	.....
TOTALS	4,504C 38H		24,049		759,722		19,777	245,955	-20	n _{3,762}	n _{70,587}

^aClasses of livestock are: C = Cows; H = Horses; S = Sheep.

^bIncludes Glen Canyon National Recreation Area.

^cAUMs may vary from survey due to balancing livestock numbers and season of use.

^dContinuous seasonal allotment that carries into specific management.

^eSeason the same as existing AMP.

^fSixty-three AUMs based on 41 percent Federal range; 42 AUMs used in conjunction with private land.

^gBLM is licensing 157 of these AUMs on 1,670 acres in Kodachrome State Park which is State land under a Recreation and Public

^hPurpose patent. If grazing interferes with the intent of the patent, the AUMs will be deducted from the allotment.

ⁱOperator presently hauls water to make use of these AUMs.

^jSeason times cattle numbers does not equal total AUMs because some operators' season varies from that shown. Proposed acres

^kto be grazed is actual acreage grazed.

^lAcres and AUMs unavailable due to inaccessibility.

^mAUMs entirely in suspended nonuse (not included in total).

ⁿApplies to native range.

^oApplies to seedings.

^pIncludes AUMs and acres potentially suitable in Round Valley and East Clark Bench Allotments where suitability is based on hauling water: 376 AUMs and 5,169 acres in Round Valley; 136 AUMs and 1,200 acres in East Clark Bench. Considers 1,670 acres grazed in Kodachrome State Park and 11,927 acres reduction from proposed in Headwater Allotment. Also includes acres and AUMs unavailable due to inaccessibility.

TABLE 6

PARIA MFP Specific Management

Prior-ity	Allotment	Suitable ^a Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treat- ment and Acres	Potential Increased Manage- ment	AUMs With Treat- ment	Percent Change AUMs	Season of Use	Surveyed ^g AUMs	Total AUMs ^c
1	Blue Pools (word deleted)	8,425	Fall/ winter	1	Orhy, Atca	Reservoir 1 Fence 3 miles	.....	180	.....	-7	10/1-3/31	516	696
2	Bunting Well Cedar Mountain East Clark Bench Judd Hollow Flat Top (Consolidated)	33,804	Rest rotation	3	Orhy	Troughs 2 Pipeline 2.5 miles Water catch- ment 2 Fence 2 miles Tank 1	.....	651	.....	-22	6/1-5/31	2,626	3,277
15	Clark Bench ^d	27,257	Deferred rotation	3	Orhy, Atca, Cela	Reservoir 1 Pipeline 7 miles Slickrock catchment 1	.....	451	.....	+14	8/1-5/31	2,060	2,511
16	Cottonwood ^d	42,716	Rest rotation	6	Agcr, Hija Cela	Seeps 3 Pipeline 9 miles Spring 1 Water catch- ment 1 Fence 2 miles Reservoir 1	.....	570	.....	+19	11/1-5/31	3,255	3,825
14	Coyote ^d	33,463	Rest rotation	6	Agcr, Orhy, Cela	Water catch- ment 1 Storage tank maintenance 1 Storage tank 1 Slickrock catchment 1 Stock-rail maintenance 1 mile Fence 0.5 mile	.....	501	.....	+24	11/1-5/31	2,527	3,028
11	Deer Range	2,280	Summer/ fall	1	Orhy, Putr, Cemo	Pipeline 0.5 mile Trough 1 Slickrock catchment 1	.....	6	.....	0	8/1-10/15	213	219

(continued)

TABLE 6 PARIA (concluded)

Priority	Allotment	Suitable ^a Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treat- ment and Acres	Potential AUMs		Percent Change AUMs	Season of Use	Surveyed AUMs ^c	Total AUMs ^c
								Increased Manage- ment	With Treat- ment				
8	Upper Warm Creek	19,918	Rest rotation	3	Oriy, Hija, Atca	Fence 1.25 miles Reservoirs 3 Pipeline 2.5 miles Storage tanks 3 Springs 3	.....	464	.....	-5	11/1-5/31	1,477	1,941
3	Wahweap	<u>5,609</u>	Winter	<u>1</u>	Hija, Atca	Reservoir 1 Springs 2 Water catch- ment 1 Stocktrail 1 mile	.....	91	.....	-52	11/15-3/31	<u>194</u>	<u>285</u>
TOTALS		<u>289,483</u>		<u>53</u>			800 acres	5,082	170	-6		<u>22,403</u>	<u>27,655</u>

^aContains acres that are potentially suitable due to lack of water.

^bRepresents proposed stocking levels. Changes from actual surveyed AUMs are the result of balancing cattle numbers and season of use.

^cTotal of surveyed AUMs plus potential AUMs with management and treatment.

^dAllotments presently under an AMP.

^eOf 1,670 acres, BLM is licensing 157 AUMs in Kodachrome State Park which is a Recreation and Public Purpose (R&PP) patent. If this grazing use ever interferes with the intent of this R&PP, these AUMs will be deducted from the allotment.

TABLE 8 VERMILION (continued)

Prior- ity	Allotment	Suitable ^a Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treat- ment and Acres	Potential AUMs Increased With Manage- ment	With Treat- ment	Percent Change AUMs	Season of Use	Surveyed and/or Treatmnt AUMs	Total AUMs ^c
13	Meadow Canyon Locke Ridge (consolidated)	4,715 2,057	Deferred rotation	2	Orhy, Putr	Slickrock reservoir 1 Pipeline from well 1.5 miles Trough 1	.....	116	...	-41	8/16-3/15	280	396
8	Lower Hog	710	ASR ^d	1	Orhy	.....	.....	9	...	-23	8/1-10/15	28	37
4	Mollies ^f Nipple	57,585	ASR and ^d rest rotation	6	Agcr, Putr	Reservoir 1 Spring 1 Pipeline 4.5 miles Wet seep 1	Burn/seed 1,850 acres	2,431	...	-15	Yearlong	2,928	5,359
45	Seeps	980	ASR ^d	1	Orhy	Reopen well 1 Pipeline 1 mile Trough 1	.....	50	...	-93	12/1-2/28	30	80
30	Oak Springs ^f	1,459	ASR ^d	1	Orhy, Putr	Horizontal drilling 1 Trough 1 Cattleguard 1	.....	44	...	-55	5/1-10/31 and 7/1-10/31 alternating	76	120
31	Pine Springs	7,976	Winter	1	Spcr, Putr	Well mainten- ance 1 Slickrock catchment 1	.....	164	...	-36	11/16-3/15	284	448
29	Poverty Flat	2,048	ASR ^d	1	Spcr, Putr	Reservoir 1	.....	44	...	-86	11/1-12/31	56	100
27	Red Butte	5,166	ASR ^d	1	Orhy, Putr	Well trough 1 Windmill 1	.....	76	...	-18	7/1-3/31	196	272
26	Red Canyon	6,033	ASR ^d	1	Orhy, Putr	Windmill 1 Trough 1	.....	155	...	-66	7/1-12/31	152 42	349
18	Red Knoll	4,755	ASR ^d	1	Orhy, Putr	.....	.....	116	...	....	7/1-3/31	140	256
20	Rock Springs	4,292	Deferred rotation	2	Orhy, Putr	Pipeline 1 mile Reservoir maintenance 1	.....	102	...	-72	6/16-11/15	140	242
48	Granary Ranch	280	ASR ^d	1	Bogr	Operator to haul water to use 11 AUMs	.....	4	...	-84	9/1-10/31	11	15

(continued)

TABLE 9

ZION MFP Interim Management

Allotment	Present Situation				Area Manager's Recommendation				Potentially Suitable Lack of Water		
	Livestock Numbers and Class ^a	Season of Use	Federal		Season of Use	Suitable AUMs	Federal Acres	Percent Change in AUMs	Federal		
			AUMs	Acres					AUMs	Acres	
Alton ^b	4C	6/1-10/31	20		80	Deferred rotation 6/1-10/31 due to small acreage	5	80	-75	...	.....
Bald Knoll	40C	5/6-10/15	214		6,701	7/1-10/31	25	860	-88	...	.....
Ben Hollow ^b	15C	5/1-10/15	83		<u>573</u>	.....	<u>9</u>	<u>128</u>	<u>-89</u>	...	.....
Black Mountain ^b	67C	10/1-11/30	134		1,210	8/15-11/20	42	869	-69	...	.....
Black Rock	211C	6/1-10/15	950		18,044	6/1-10/15	662	12,759	-30	...	.....
Buck Knoll	43C	7/1-10/15	151		4,745	7/1-10/15	168	3,475	11	13	250
Burnt Cedar Point	25C	6/1-10/31	125		2,980	7/1-11/30	105	2,430	-16	...	.....
Burnt Flat ^b	6C	6/1-10/31	30		866	6/1--10/31	20	726	-33	...	.....
Calf Pasture	57C	8/16-10/15	114		2,291	8/16-10/15	124	1,191	9	60	1,040
Cave Creek ^b	4C	6/1-9/30	16		770	6/1-9/30	26	410	62	...	.....
Coal Mine	20C	10/1-11/30	40		255	10/1-10/31	3	95	-93	...	.....
Cogswell Point	5C	6/15-7/15	5		230	.....	.....	.....	-100	...	.....
Coop Creek	16C	5/1-9/30	80		430	.....	.....	.....	-100	...	.....
Cottonwood Springs	80C	6/1-10/31	430		3,176	7/1-10/31	95	2,236	-78	...	.....
Cove ^b	8C	6/1-10/31	40		160	9/1-10/31 or 6/1-10/31	8	160	-80	...	.....
Deer Spring Point	217C	5/16-10/31	1,194		21,662	7/16-11/30	534	10,618	-55	43	1,155
Dry Wash	19C	6/1-10/31	95		<u>1,093</u>	7/1-11/30	<u>34</u>	<u>552</u>	<u>-64</u>	...	.....
Dump	20C	6/16-10/15	80		201	7/1-10/31	7	201	-91	...	.....
Elbow Falls ^C	45C	6/16-10/15	180		2,945	Falls Pasture 7/1-10/31	^d 35	^e 727	-67	...	.....
						Elbow Pasture 6/15-3/31	25	765	....	...	.....
Elbow Springs	56C	8/1-10/15	140		2,364	.....	.....	.....	-100	...	.....
Elkheart Cliffs	.....	.....	.....		681	.....	.....	.....	0	...	.....

(continued)

TABLE 9 ZION (concluded)

Allotment	Present Situation				Area Manager's Recommendation				Potentially Suitable Lack of Water	
	Livestock Numbers and Class ^a	Season of Use	Federal		Season of Use	Suitable AUMs	Federal Acres	Percent Change in AUMs	Federal	
			AUMs	Acres					AUMs	Acres
Rocking Chair ^b	162C	6/1-6/30	162	1,631	6/1-6/30	61	1,561	-62	...	.....
Sink Valley	76C	6/1-10/15	342	8,329	7/1-10/15	177	4,216	-66	27	1,008
	93C	7/1-8/31	186	.....	7/16-10/31					
Spencer Bench	64C	7/1-10/15	224	2,220	7/1-10/15	98	1,668	-56	...	.....
Spring ^b Hollow	.....	.....	.....	510	10/1-10/31	8	330	100	...	.....
Stewart ^b Creek	.....	.....	.....	325	5/1-10/31	6	325	100	...	.....
Sugar Knoll	28C	3/16-7/15	112	2,648	Rest for 2 years than graze after seed ripe 7/1-10/15	15	620	-87	...	.....
Swains Creek	50C 4H	5/16-7/15	108	371	7/1-10/15	<u>21</u>	341	<u>-81</u>	...	.....
Swallow Park ^f	176C	5/1-11/30	1,232	11,594	5/1-11/30	868	9,994	-30	33	700
Syler Knoll ^b	18C	5/1-10/31	108	415	5/1-10/31	4	100	-96	...	.....
Table ^b Mountain	336S	5/16-10/15	335	2,254	7/1-9/30	127	1,262	-62	...	.....
Timber Mountain	125C	7/1-9/30	375	6,664	7/16-10/15	403	6,664	7	...	.....
Upper North ^b Fork	22C	6/1-9/30	88	810	<u>6/1-10/15</u>	3	30	-97	..	.....
Upper Place ^b	11C	6/1-10/15	50	1,715	6/1-10/15	23	635	-54	...	.....
Willow Creek ^b	.....	.....	.....	1,158	5/15-10/31	30	389	-100	...	.....
Zion Park ^b	54C	5/1-7/31	162	1,298	.....	.....	.....	-100	...	.....
Zion ^b	239C	5/1-10/31	<u>1,434</u>	<u>11,012</u>	5/1-10/31	<u>270</u>	<u>5,152</u>	<u>-81</u>	<u>64</u>	<u>2,516</u>
TOTAL	2,778C 4H 436S		12,561	182,455		5,736	99,958	-54	381	8,660

^aClasses of livestock are: C = Cows; H = Horses; S = Sheep.

^bAllotment totally continuous seasonal that carries into specific management.

^cAllotment partially continuous seasonal that carries into specific management.

^dContinuous seasonal AUMs.

^eContinuous seasonal acres.

^fPresent qualifications include AUMs in Vermilion Planning Unit.

^gReduction in suitable AUMs due to riparian fencing.

TABLE 10 ZION (continued)

Priority	Allotment	Suitable Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treat- ment and Acres	Potential AUMs Increased With		Percent Change AUMs	Season of Use	Surveyed and/or Treatent AUMs ^e	Total AUMs
								Manage-	Treat- ment				
4	Deer Spring Point	11,773	Rest rotation	3	Agcr, Agin, Putr	Fence 5.5 miles Pipeline 5.75 miles Troughs 7 Spring 1 Water catch- ment 1	Burn/spray/seed 7,735 acres Chain/spray/seed 4,230 acres	250	1,968	+110	6/1-10/31	^e 2,502	2,752
19	Ory Wash	<u>552</u>	Fall ^f	1	Agin, Putr	.....	.....	22	.....	-64	9/1-11/15	<u>34</u>	<u>56</u>
20	Oump	201	Fall ^f	1	Orhy	.....	.....	5	.....	-91	9/1-10/31	7	12
3	First Point ^d	3,955	Rest rotation	3	Agcr, Putr	Water catch- ment 1 Troughs 2 Pipeline 1.5 miles	Burn/spray/seed 2,540 acres Burn/spray 2,000 acres	0	734	+75	5/1-12/31	^e 1,139	1,139
5	Ford Well	6,601	Rest rotation	3	Agin, Agcr	Windmill/well/ trough 1 Water catch- ment 1 Pipeline 1 mile Troughs 3 Equip existing well/trough 1 Pasture fence 4 miles Seep 1	Burn/spray/seed 6,870 acres	...	1,042	+334	6/1-9/30	1,264	1,264
15	Glendale Bench	1,784	Fall ^f	1	Stco, Agcr	Pipeline 0.5 mile Trough 1	Burn/seed 600 acres	60	72	+12	7/1-10/31	^e 144	204
12	Isolated Tracts Lower Sink	2,273	Deferred rotation	2	Agcr, Orhy,	Spring 1 Pipeline 4 miles Trough 1	Burn/seed 1,210 acres	28	157	+189	Spring/fall use after implementation of improvements	240	268
13	Johnson Canyon	985	Rest rotation	1	Agcr	.....	Chain/seed 450 acres	20	58	-66	See Vermilion	91	111
7	Mill Creek	3,309	Rest rotation	3	Agcr, Agin Putr	Troughs 3 Well 1 Storage tanks 2 Pipeline 1.5 miles Reservoirs 3 Boundary fence 7 miles	Burn/spray/seed 9,410 acres	...	1,253	+367	6/1-9/30	^e 1,401	1,401

(continued)

TABLE 10 ZION (concluded)

Prior-ity	Allotment	Suitable ^a Federal Acres	Grazing System	Number of Pastures	Key Species	Livestock Facilities and Units	Land Treat- ment and Acres	Potential AUMs Increased With Manage- ment	Potential AUMs With Treat- ment	Percent Change AUMs	Season of Use	Surveyed and/or Treatmt AUMs ^b	Total AUMs ^c
11	Sink Valley	3,871	Deferred rotation	2	Agcr, Orhy, Putr	Spring 1 Pipeline 2.75 miles Troughs 2 Reservoir 1 Cattleguard 1	Plow/seed 615 acres Burn/seed 332 acres	31	112	-52	Spring/fall	^e 252	283
21	Sugar Knoll	620	Fall ^f	1	Hija, Putr	.....	.....	18	.....	-87	7/1-10/15	15	33
22	Swains Creek	34	Fall ^f	1	Orhy, Putr	.....	.....	4	.....	-81	7/1-10/31	<u>21</u>	<u>25</u>
1	Swallow Park ^d	10,694	Rest rotation	3	.....	Water catch- ment 1 Pipeline 3.75 miles Troughs 5 Storage tank 40,000 gal. Fence 2 miles	Burn/spray/seed 6,710 acres Spray/plow/seed 565 acres Spray 1,680 acres	40	1,492	+94	5/1-11/30 5/16-11/30	^e 2,393	2,433
6	Timber Mountain	<u>6,664</u>	Deferred rotation	<u>2</u>	Stco, Putr, Agin	Water catch- ment 1 Troughs 2 Fence 1.5 miles Pipeline 1/8 mile	Burn/spray/chain/ seed 2,110 acres Spray 4,314 acres	...	<u>1,071</u>	<u>+293</u>	7/1-10/15	^e <u>1,474</u>	<u>1,474</u>
TOTALS		82,105		42			^g 66,272 acres	989	9,652	+20		14,104	15,093

^acontains acres that are potentially suitable due to lack of water.

^brepresents proposed stocking levels. Changes from actual surveyed AUMs are the result of balancing cattle numbers and season of use.

^ctotal of surveyed and/or treatment AUMs plus potential AUMs with management.

^dallotment presently under an AMP.

^eallotments where present surveyed AUMs plus treatment potential exceed Class I qualifications.

^ffall grazing system is after seed ripe.

^gthis acreage exceeds acreage needed to balance pastures and is not the same acreage shown for Alternatives 4 and 5 in table 2-1 (see Chapter 2, Vegetation Treatments for explanation).

APPENDIX 3 (continued)

General Specifications	Seedings	Spraying and Burning	Water Developments (pipelines, troughs, springs, and wells)	Fences
5. Threatened and endangered species clearance will be required for all project sites prior to new construction.	5. Seedings will be designed to provide maximum "edge effect" with "islands" of cover in open portions of the seeding.	5. Steep drainages and areas within an estimated 0.25 mile of riparian areas, reservoirs, springs, and livestock water developments, will not be treated. See NOTE below.	5. Size of storage tanks and troughs will be designed to accommodate expected needs of livestock and wildlife using each source.	5. Right-of-way clearance will be held to a minimum. Disturbed areas will be rehabilitated where possible.
6. A supplementary environmental assessment will be prepared to include site specific mitigating measures prior to project construction. This assessment will be site specific and supplement the analysis contained in this EIS.	6. Seedings done in important and critical big game habitat will be seeded with desirable browse species to reach a 40-percent target composition.	6. Timing for spraying will be determined by plant growth and soil moisture. Seedings may or may not follow on a case-by-case basis. Desirable plants in remnant population will determine need.	6. Water will be left at the site for wildlife. Wells will be cased to prevent cave-ins and well sites will be fenced.	6. In big game areas, fences will meet BLM Manual design specifications to accommodate wildlife movement.
7. No range developments will be constructed or installed in areas designated as trail watershed.	7. If after two years of rest on new seedings less than 60 percent of the desired plant composition is not attained, reseed as needed and follow with another 2 years of rest.	7. After determination of which acres will be treated by spraying in each allotment, an environmental assessment will analyze application methods and chemicals to be used on approved Denver Service Center list.	7. Storage structures will be designed to provide water for wildlife. Drinking ramps will be installed and heights will not prohibit young wildlife from obtaining water.	7. All fences will be in conformance with VRM guidelines.
8. VRM Class guidelines will be followed in the construction of range developments.	.....	8. Burning will be conducted in the fall and on slopes less than 15 percent. In sagebrush, burning will be done after desiccation and prior to seed ripe of the sagebrush. Seeding will follow immediately.	8. Water development will be compatible with visual resource management guidelines.	8. Fences will not be constructed where natural barriers or rocky slopes can be used. This will reduce fencing costs and amount of visual impact.
9. Implementation of any part of an alternative not meeting requirements of Section 503 of FLPMA or the interim management policy would be deferred pending Congressional action on suitability recommendations.	.....	9. "Cooperative Sage Grouse Guidelines" developed in conjunction with BLM Tech. Note "Habitat Requirements and Management Recommendations for Sage Grouse" and the Western State Sage Grouse Committee "Guidelines" will be followed in the course of developing plans for vegetation treatment. BLM will conform with the Interagency Sage Grouse Guidelines agreed to by BLM, UDMR, FS, and SCS in July 1979.	9. Water developments will not be operational until seedings have been determined to be successful.	9. Pastures will not be fenced until sites for seedings are surveyed, seedings are successful, and permanent water is provided.

NOTE: The actual dimensions of a buffer strip will be determined on-the-ground on a case-by-case basis. This will occur during AMP development. (continued)

APPENDIX 18

Allotments With Livestock/Big Game Conflicts

Allotment	Species in Conflict	Type of Conflict ^a	Acres
Art Canyon	Deer	A, B	2,700
Bald Knoll	Deer	A, B	1,440
Barracks Point	Deer	A, B	1,520
Black Rock	Deer	A, B	5,940
Boulder Creek	Deer, elk	A, B, <u>F</u>	1,705
Boulder Stock Trail	Deer	A, B	2,278
Brown Canyon	Deer	A, B	1,020
Buck Pasture	Deer	A, B	1,280
Chris Spring	Deer	A, B	2,660
Circle Cliffs	Deer, elk	A, B, <u>F</u>	17,263
Clark Bench	Antelope	<u>D</u>	215
Clay Flat	Deer	A, B	1,560
Cottonwood (Paria)	Deer, antelope	<u>D</u> , E	540
Cottonwood Point	Deer	A, B	20
Coyote	Deer, antelope	<u>D</u> , E	1,025
Deer Creek	Deer, elk	A, B, F	3,879
Deer Range	Deer	B	8,800
Dry Lake	Deer	A	1,240
Elephant Cove	Deer	A, B	5,250
Escalante River	Bighorn sheep ^b	<u>C</u>	95
FAR	Deer	A, B	115
Farm Canyon	Deer	A, B	2,960
First Point	Deer	A, B	780
Flag Point	Deer	A, B	260
Flood Canyon	Deer	A, B	790
Ford Well	Deer	A, B	3,440
Gardner Hollow	Deer	A, B	840
Glendale Bench	Deer	A	1,010
Grapevine	Deer	A	25
Harris Flat	Deer	A, B	3,040
Headwaters (winter)	Deer	A, B, <u>E</u>	3,361

(continued)

APPENDIX 18 (continued)

Allotment	Species in Conflict	Type of Conflict ^a	Acres
Headwaters (summer)	Deer	<u>E</u>	968
Horse Valley	Deer	A, B	40
John R. Flat	Deer	A, B	2,690
Johnson Canyon	Deer	A, B	3,630
Johnson Lakes	Deer	A, B	3,590
Kane Springs	Deer	A, B	3,380
King Bench	Deer	A, B	11,415
Kinnikinnic	Deer	A, B	2,600
Last Chance	Deer	<u>E</u>	34
Lower Hackberry	Deer	<u>E</u>	434
Long Neck	Deer	A, B	610
Meadow Canyon	Deer	A	680
Mill Creek	Deer	A, B	2,150
Mollies Nipple	Deer	A, B	6,390
Moody	Bighorn sheep ^b	<u>C</u>	1,230
Nipple Bench	Antelope	<u>D</u>	75
Pine Creek	Deer	A, B	3,822
Poverty Flat	Deer	A	730
Red Canyon	Deer	A, B	2,460
Red Hollow	Deer	A, B	740
Red Knoll	Deer	A, B	5,990
Rocking Chair	Deer	A, B	1,200
Saltwater Creek	Deer	A, B	5,814
Sethy's Canyon	Deer	A, B	1,510
Sink Holes	Deer	A, B	1,620
Sink Valley	Deer	A, B	1,230
Soda	Deer	A, B	2,511
Steep Creek	Deer, elk	A, B, <u>F</u>	9,170
Sugar Knoll	Deer	A, B	1,090
Swallow Park	Deer	A, B	3,610
Trail Canyon	Deer	A, B	660
Upper Place	Deer	A, B	1,080
Upper South Creek	Deer	A	35

(continued)

APPENDIX 18 (concluded)

Allotment	Species in Conflict	Type of Conflict ^a	Acres
Upper Warm Creek	Antelope	<u>D</u>	124
Vermilion	Deer	A, B	4,310
Wagon Box	Deer, bighorn sheep ^b	A, B, <u>C</u>	5,134
Wahweap	Deer	<u>E</u>	211
White Rock	Deer, elk	A, B, <u>F</u>	1,302
Wide Hollow	Deer	A, B	5,986
Willow Gulch	Deer, elk	A, B, <u>F</u>	4,456
Willow Spring	Deer	A, B	1,910
Yellow Jacket	Deer	A, B	2,680
Zion	Deer	A, B	<u>540</u>
TOTAL			186,892

^aThe letters used represent the following types of conflicts: A = Overutilization of key browse species; B = Livestock season of use reduces forage for deer; C = Competition with wild horses for habitat; D = Livestock grazing riparian areas critical to antelope fawning; E = Livestock grazing critical riparian areas used for deer fawning; F = Livestock season of use reduces forage for elk.

^bBighorn sheep/wild horse conflicts will occur in the near future as sheep numbers increase.

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