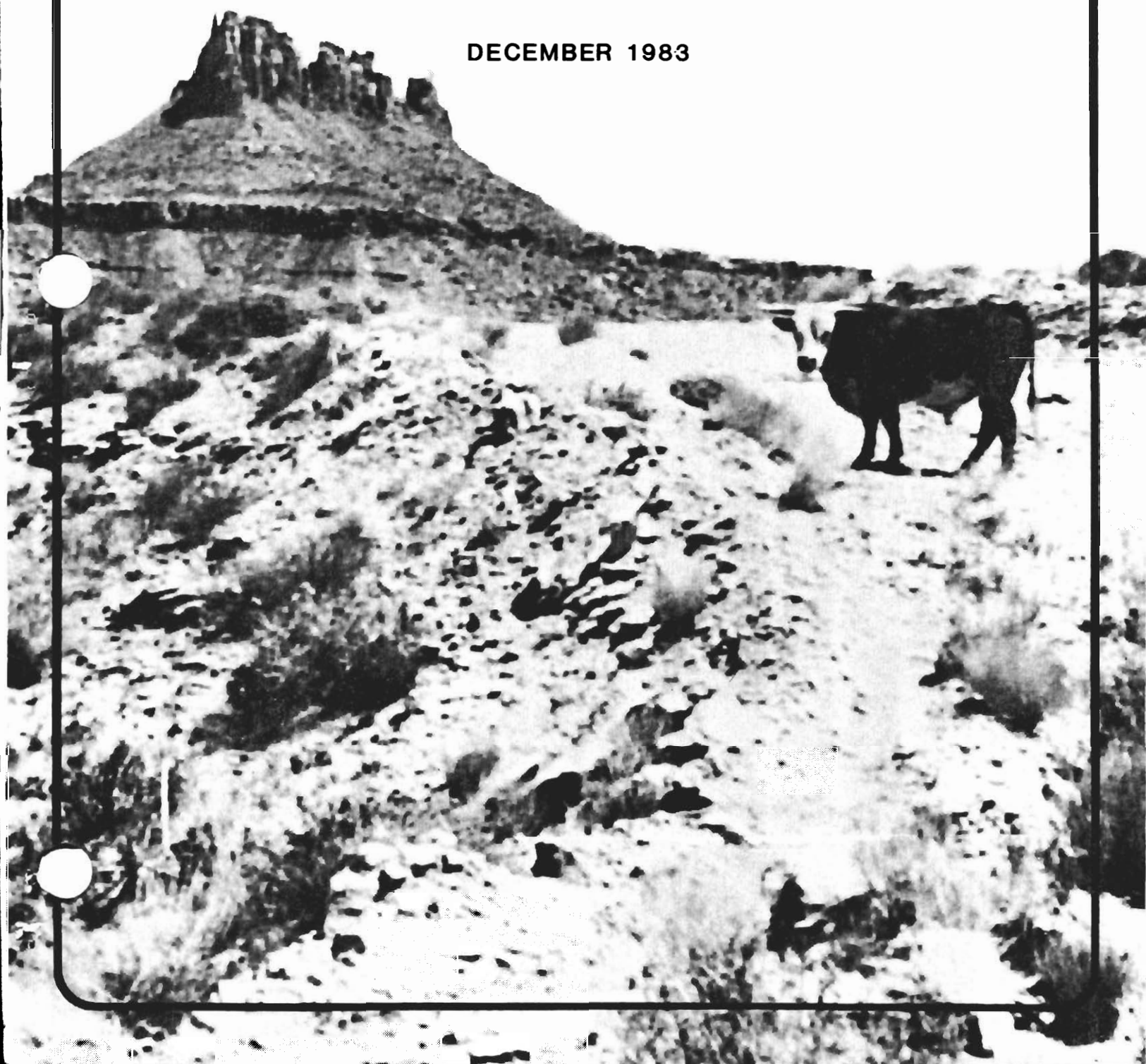


**A REVIEW OF LIVESTOCK GRAZING MANAGEMENT
ON
GLEN CANYON
NATIONAL RECREATION AREA**

DECEMBER 1983



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National Park Service
United States Department of the Interior



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INTRODUCTION

Within the Glen Canyon National Recreation Area (NRA), livestock grazing is administered by the BLM under the authority of Section 6 of the enabling legislation (P.L. 92-593) and a Utah Memorandum of Understanding, 1 February 1973 and supplement thereto (26 September 1973) and an Arizona Memorandum of Understanding, June 1973, whereby the NPS and the BLM agree to coordinate and promote the effective management of the grazing resources within the NRA. As stated in the Memorandum of Understanding, grazing within the NPS administrative unit will be influenced by "the same policies followed by the BLM in issuing and administering . . . grazing leases on other lands under its jurisdiction shall be followed in regard to the lands within the boundaries of the recreation area . . ." Further, it is clearly stated in the MOU supplement that the specific purpose of the signed agreements between the BLM and NPS are to "coordinate and promote the effective management of livestock grazing with the management of other resources in the Glen Canyon National Recreation Area as provided by law" (our italics). Both the MOU and supplement No. 1 thereto are found in Appendix I.

The supplement to the MOU, signed by the Utah State Directors of both the BLM and NPS outlines specific management intentions in an attempt to clarify the responsibilities of both agencies in effecting a sound grazing program on the NRA. These specific management intentions are as follows:

The local representatives of both agencies (Supt. of Glen Canyon NRA; district manager of BLM) will work together to: (1) identify areas where domestic livestock must be excluded in order to prevent irreparable adverse effects on other resource values; (2) identify areas where domestic livestock may be allowed to graze, noting any particular restrictions to prevent significant adverse effects from occurring. BLM will identify resource characteristics important to livestock grazing such as grazing suitability, capacity, and history of authorized livestock use including livestock classes, numbers, season, distribution, and range operator dependency by range areas. NPS will identify other resources such as wildlife, historic, archeologic and recreational values which may be impacted by livestock grazing.

As of 1983, there are 40 grazing allotments utilized by 75 individual (or family) permittees on the NRA. On the NRA, the allotments support 26,878 total allowable (active preference) animal unit months (AUMs) with an average 16,448 AUMs used every year for the past five years. The names of the permittees and livestock brands for each allotment are found in Appendix III. The total land area within the NRA presently included within the BLM administered grazing program is 976,801 acres, or 80 percent of the Glen Canyon National Recreation Area. This area is approximately one-third of the total area (3,624,281 acres) included in all 40 allotments. The amount of NRA land contained within specific

allotments ranges from 1 to 100 percent. At present, the principal livestock use is by cattle; however, sheep and horses utilize the NRA to a lesser extent. In addition, there are local concentrations of feral horses, cattle and goats within the area.

Due to a lack of fencing or natural boundaries between NRA and adjacent BLM lands, it is not possible to determine actual livestock use on the NRA portions of mixed-ownership allotments. The actual livestock use of the 3.6 million acres has declined in the past 10 years from 75,419 Animal Unit Months (AUMs per year) for the period 1970-74 to 60,921 AUMs for the period 1980-84.

It is well known that range resources within the 3.6 million acres of the 40 allotments has severely deteriorated within the past 100 years (BLM 1979, 1980, 1983). In an attempt to mitigate the range deterioration the BLM has developed, or is in the process of developing, grazing management plans for each allotment. The mandated responsibility of the BLM "is to maintain or improve rangeland resources such as soil, water and vegetation through the use of grazing management. As required by law (Taylor Grazing Act 1934; Classification and Multiple Use Act, P.L. 88-6071, 1964; and the Federal Land Policy and Management Act of 1976), the BLM is responsible for management "in a manner that will protect the land and its resources from destruction or unnecessary injury, stabilize the livestock industry dependent upon 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" (BLM Manual 4100.0-2). For habitats known to contain unique wildlife resources, such as riparian or streamside environments, the BLM management criteria (BLM Manual 6740 and Executive Order 11990 [42TR26961]) require additional protective measures. BLM guidelines emphasize that riparian habitats must not only be protected, but specific measures are to be taken to provide for the enhancement (our italics) of these unique wildlife resources.

In 1973, the National Resources Defense Council and others, filed suit in Federal Court alleging that the BLM grazing management programs throughout the western United States had fallen far short of the above intended goals and responsibilities. By court order, the BLM was directed to prepare site-specific Environmental Impact Statements (EISs) for all public lands where grazing authorization was a major Federal action. The intent of the environmental analysis (as per the conditions and restraints of NEPA, 1969) was to provide grazing management programs that would be consistent with the above stated management goal of the BLM.

In this document, a review of BLM grazing management data, and policies for resources protection on the NRA has been undertaken. The specific objectives of the present study were as follows:

1. Review National Park Service and Bureau of Land Management agreements, policies, philosophies and regulations relative to grazing management on the NRA

2. Review present range conditions on each of the forty (40) NRA allotments
3. Review the trespass and/or domestic livestock numbers, distribution and their influence on NRA allotments
4. Review areas where domestic livestock use is in conflict with the ecological, cultural and/or recreational resources of the NRA
5. Identify existing and proposed livestock management improvements on the NRA
6. Review BLM data base and grazing monitoring systems on the NRA

HISTORICAL REVIEW OF LIVESTOCK GRAZING ON THE NRA

The first domestic livestock to graze in the area now included within the Glen Canyon National Recreation Area were herds driven along the old Spanish Trail in the late 1700s. The Escalante party used these cattle as a fresh meat supplement to other rations carried by mules. Little is known concerning exact livestock numbers, but some sources indicate subsequent Spanish Trail herds could have numbered in the thousands. Strays and cattle traded and stolen from the Spanish by local Indians continued to graze the area until the early 1900s. Early Mormon settlers brought small herds of livestock with them into the region in the 1860s and early 1870s but no serious attempt to utilize the range resources occurred until the middle 1870s when both sheep and cattle were introduced into the Escalante Canyon/Fifty Mile Mountain area. In 1879-1880 as Mormon settlers moved through Hole-in-the-Rock to settle the San Juan area, they were accompanied by 1,800 head of cattle. After arriving in Bluff in the spring of 1880, these cattle ranged north of the San Juan River between Bluff and the Colorado River. In the middle 1880s the Bluff settlers formed a grazing association known as the Bluff Pool to defend their claimed rangeland against larger cattle operations from Texas and New Mexico, which were then expanding their domain into the southeast portion of the state of Utah. Specific total livestock numbers then ranging in the area is difficult to determine. However, one source indicates that Bluff Pool livestock numbers reached a peak in 1886 as large numbers of cattle were driven into Bluff from central and northern Utah via Hanksville and Halls Crossing. The last major pioneer cattle operation established on the east side of the Colorado was the Scrup Brothers, who first ran cattle in the White and Dark Canyon areas in 1891.

The west side of the Colorado River saw cattle and sheep enter the area from the north as Mormon settlers moved into the rough unpopulated areas surrounding Escalante and Kanab. As the rapid buildup in livestock numbers occurred throughout the area, peak numbers were recorded in the 1890 census. Then in the middle 1890s, after a series of dry years and range misuse caused by overstocking, severe livestock losses occurred. A specific account in 1896 indicates that one operation sustained a 50 percent loss in the Escalante area. Generally, livestock numbers continued to decline from that period. For example, in 1900 San Juan County counted 9,866 cattle, just half of the livestock counted in 1890. The World War I war economy reversed this trend for a short period in the late 1910s and early 1920s.

GENERAL VEGETATIVE CHARACTERISTICS OF THE NRA

The diversity of vegetation species and vegetation associations on the NRA is high. A wide range in elevation and precipitation has provided conditions favorable for the establishment of nearly every vegetation zone found in Utah and Arizona. The elevations vary from 3,700+ feet along the shores of Lake Powell to 7,451 feet above sea level on Navajo Point at the end of Fifty Mile Mountain. The climatic variations are characterized by 5 inches or less of precipitation in the arid lowlands and over 30 inches in the Henry Mountains near the northeastern boundary of the NRA.

There are four major vegetation zones found within the NRA and adjacent BLM land: The warm-desert shrub zone, the cool-desert shrub zone, the pigmy forest and the riparian zone. The occurrence and importance of each of these zones is briefly discussed below.

WARM-DESERT SHRUB ZONE

This vegetation zone occurs in the lowest, warmest, and generally driest areas. It is transitional between the creosote bush communities, common to the Mojave Desert, and the cool-desert shrub communities common throughout most of the Great Basin. This zone is best developed on the deserts below 5,000 feet to the east and south of the mountains, where soils derived from sandstone strata are well drained and tend to be nonsaline.

COOL-DESERT SHRUB ZONE

This vegetation zone is the largest in the area and also in the Mountain West. It includes vegetation types developed on fine-textured and well-drained saline to neutral soils between 5,000 and 7,000 foot elevations. This zone interfingers with the warm-desert shrub below and the pigmy forest above. Because of the different soils and environments (i.e. badlands, low mesas, deserts, washes, alluvial fans, saline seeps and streams), the cool-desert shrub zone is the most complex of the zones in the area. Within the cool-desert shrub zone, there are several more or less well developed distinct communities, including shadscale, mat atriplex, greasewood, cottonwood, saltgrass, salt marsh, big rabbitbrush, galleta/three awn grassland and little rabbitbrush-mixed desert shrub.

PIGMY FOREST ZONE

The pigmy forest or pinyon-juniper woodland occurs mostly between 6,000 and 8,000 feet in areas receiving above 12 inches of annual precipitation. In the Henry Mountains, this zone covers the foothills between the deserts and the higher mountain communities, forming a distinct band of trees, often with little or no understory of shrubs and herbaceous plants.

7

Juniper is most common at lower elevations and pinyon pine enters the community at mid elevations, becoming co-dominant with juniper. Pinyon pine dominates the higher elevations. Big sagebrush is a common understory species throughout the zone. Transition to ponderosa pine or mountain brush at the upper limits is often gradual, with pinyon, juniper, scrub oak, ponderosa, aspen, and Douglas fir communities intermingled.

RIPARIAN ZONE

Riparian zones are those areas associated with streams, lakes and wet areas where plant communities are predominately influenced by their association with water. The vegetation of a riparian community reflects the additional soil moisture available along a drainageway.

Riparian areas comprise small but important habitat types. The riparian vegetation of the area is primarily associated with perennial and intermittent streams, springs and seeps. Characteristic plants occurring in these riparian areas include cottonwood (birch-leaf buckthorn), willow, arrowweed and some exotic species such as saltcedar and Russian olive. Most of the riparian communities are in poor condition due to past livestock grazing, and reproduction of cottonwood and willow is often nonexistent.

Riparian zones occupy a relatively small but important part of the NRA.

RARE, THREATENED AND/OR ENDANGERED PLANTS

The listing in Table 1 on the following page is incomplete as the recreation area has not been intensively surveyed. A preliminary 6-month survey of the vascular flora was conducted in 1983 by Dr. Stanley L. Welsh, and confirmed the presence of T/E species in the area. Fieldwork was concentrated in the high priority areas where there has been interest expressed in mineral development or other surface activity.

Table 1. Rare, Threatened and/or Endangered Plants on the NRA

Nineteen species of vascular plants known to occur in or near the recreation area have been proposed for protection under the Endangered Species Act. One species, Pediocactus bradyi, is listed as endangered and a portion of its range is contained within the recreation area.

	<u>Species</u>	<u>Status</u>	<u>Allotment(s)</u>
1.	<u>Cymopteris higginsii</u>	Threatened	Navajo Bench, Harveys Fear, Spencer Bench, Rock Creek-Mudholes
2.	<u>Lomatium latilobum</u>	Threatened	unknown
3.	<u>Cycladenia humilis</u> var. <u>jonesii</u>	Endangered	probably on Moody (?)
4.	<u>Asclepias cutleri</u>	Threatened	probably on Texas Muley
5.	<u>Viguiera soliceps</u>	Endangered	adjacent to Last Chance
6.	<u>Pediocactus bradyi</u>	Endangered*	Lees Ferry
7.	<u>Euphorbia nephradenia</u>	Threatened	adjacent to Last Chance
8.	<u>Astragalus barnebyi</u>	Threatened	adjacent to Escalante River and Lower Cattle
9.	<u>Astragalus lancearius</u>	Threatened	Upper Warm Creek
10.	<u>Astragalus malacoides</u>	Threatened	Navajo Bench, probably on Lake and Harveys Fear
11.	<u>Astragalus monumentalis</u>	Threatened	White Canyon-Wooden Shoe Sewing Maching, Little Rockies
12.	<u>Dalea epica</u>	Threatened	probably on Lake Canyon
13.	<u>Phacelia howelliana</u>	Threatened	Texas Muley, Soda
14.	<u>Phacelia indecora</u>	Endangered	Flint Trail
15.	<u>Phacelia mammillarensis</u>	Endangered	Rock Creek, Mudholes (?)
16.	<u>Zigadenus vaginatus</u>	Threatened	Lake Canyon, Soda
17.	<u>Phlox cluteana</u>	Threatened	unknown
18.	<u>Eriogonum clavellatum</u>	Threatened	Texas Muley, Perkins
19.	<u>Penstemon atwoodii</u>	Threatened	unknown

BUREAU OF LAND MANAGEMENT RESOURCE AREAS
AND NRA ALLOTMENTS

The 40 NRA grazing allotments are administered by six BLM Resource Area Offices located in widely separated southern Utah communities. Figures 1-4 present allotment boundaries for each of the six Resource Areas, including the portions of the grazing units found within the boundaries of the NRA.

The San Rafael Resource Area (RA), with offices located in Price, Utah, administers a single allotment (Horseshoe Canyon) representing 34,180 acres within the NRA. The San Rafael RA EIS will not be written until 1988, and only a minimum of data on the Horseshoe Canyon allotment was perused during the preparation of this document.

The Henry Mountain RA in Hanksville, Utah, administers seven allotments including 265,857 acres of the NRA. The Henry Mountain final grazing statement (EIS) was completed in May 1983.

The Escalante RA, administering the most acreage and allotments within the NRA, fifteen allotments and 304,481 acres, is located in Escalante, Utah. The Kanab RA, controlling six allotments and 85,961 NRA acres is located in Kanab, Utah. A single final grazing management EIS including both the Kanab and Escalante Resource Areas was released in 1980.

The Vermillion RA in St. George, Utah, administers five of the NRA allotments including 30,817 acres of NPS land in Arizona. The Vermillion draft EIS was released in 1979 with Rangeland Summary updates provided in 1982.

The San Juan RA office in Monticello, Utah, administers six of the allotments, including 255,505 acres within the NRA. The San Juan RA draft EIS will not be made available until 1985.

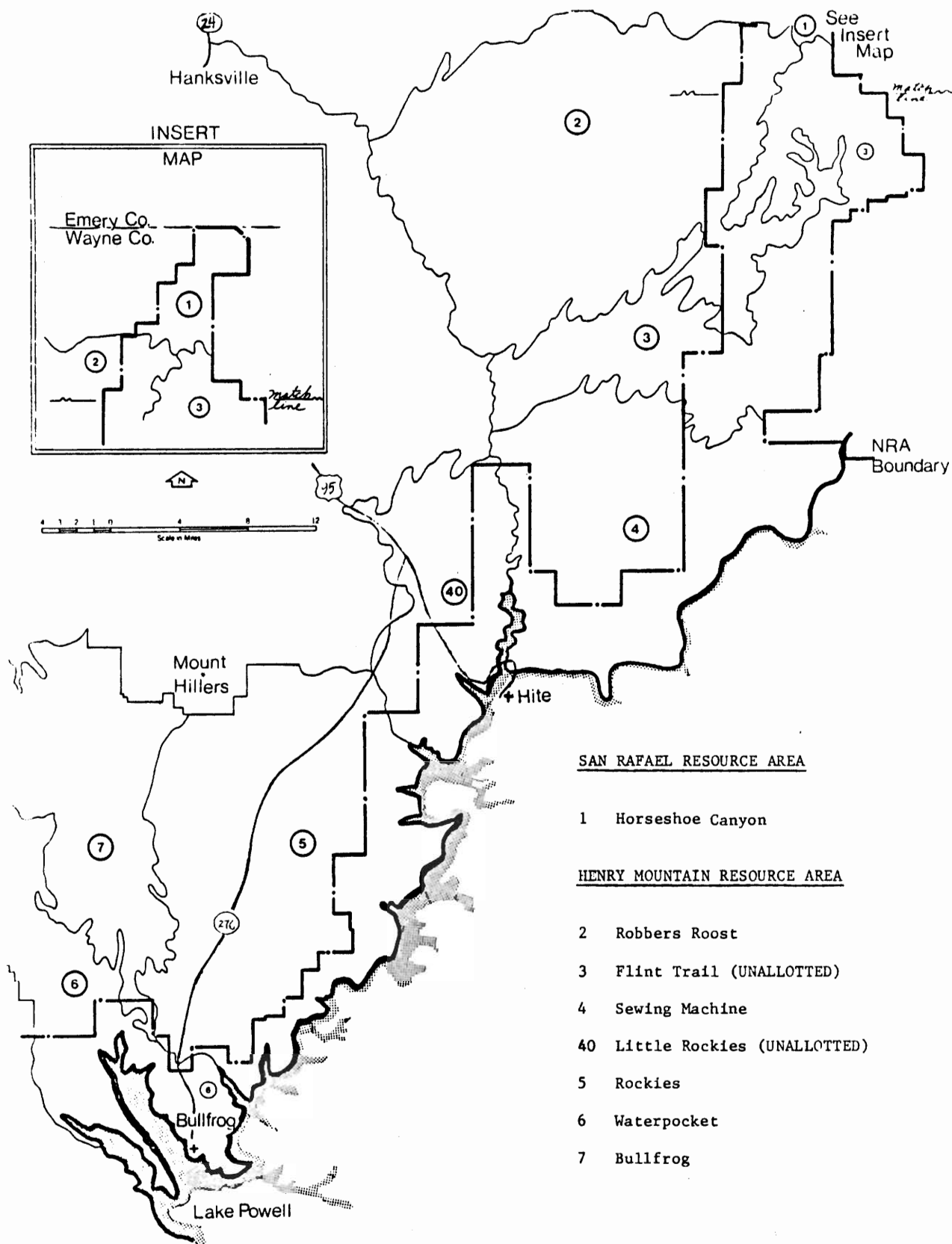


Figure 1. The San Rafael and Henry Mountain BLM Resource Areas and allotment boundaries within the Glen Canyon National Recreation Area.

ESCALANTE RESOURCE AREA

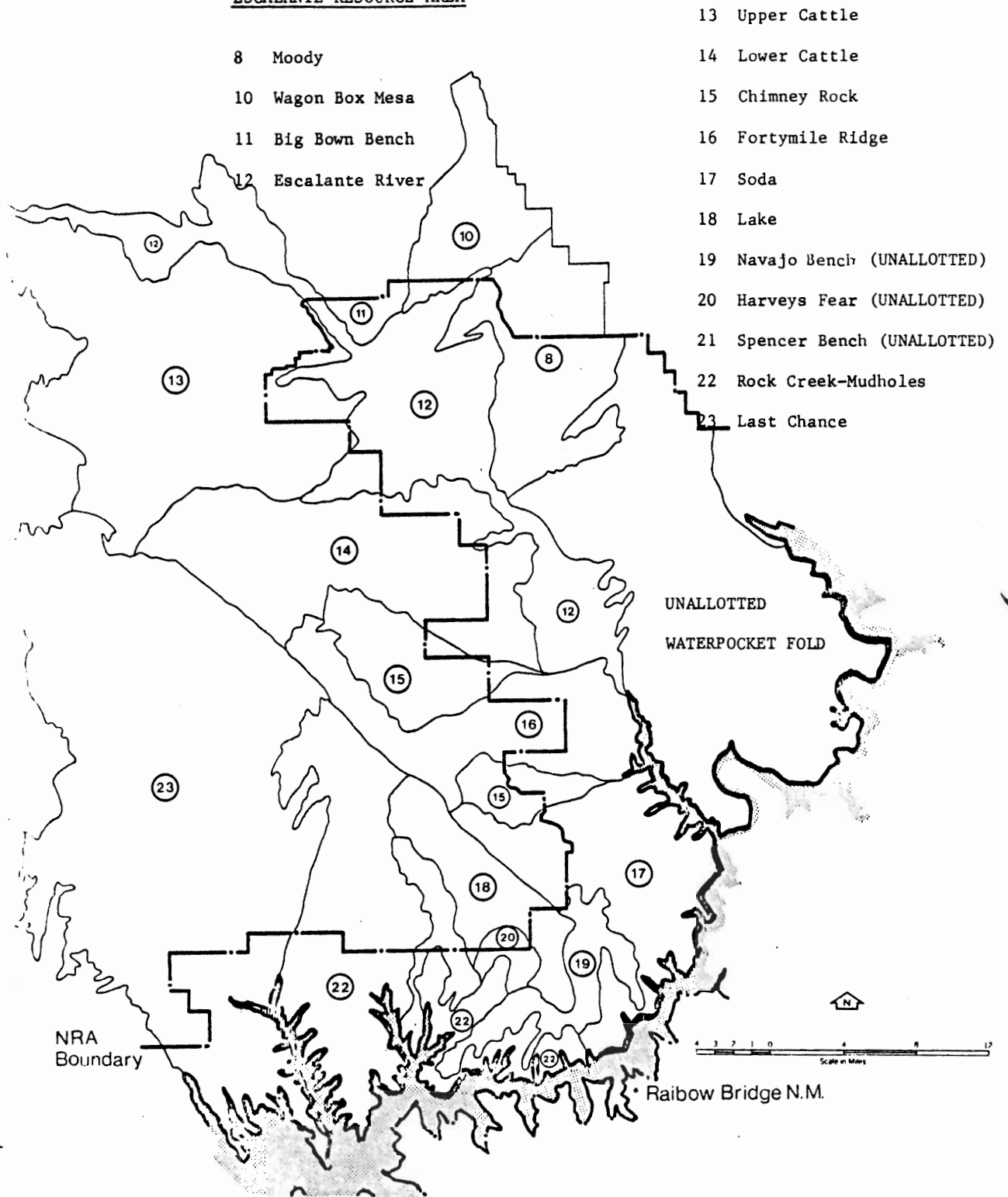


Figure 2. The Escalante BLM Resource Area and allotment boundaries within the Glen Canyon National Recreation Area.

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KANAB RESOURCE AREA

- 24 Upper Warm Creek
- 25 Lower Warm Creek
- 26 Nipple Bench
- 27 Clark Bench
- 28 Bunting Well (Judd Hollow)
- 29 Blue Pools

VERMILLION RESOURCE AREA

- 30 Ferry Swale - UT
- 31 Ferry Swale - AZ
- 32 Wahweap
- 41 Antelope Island
- 33 Lees Ferry

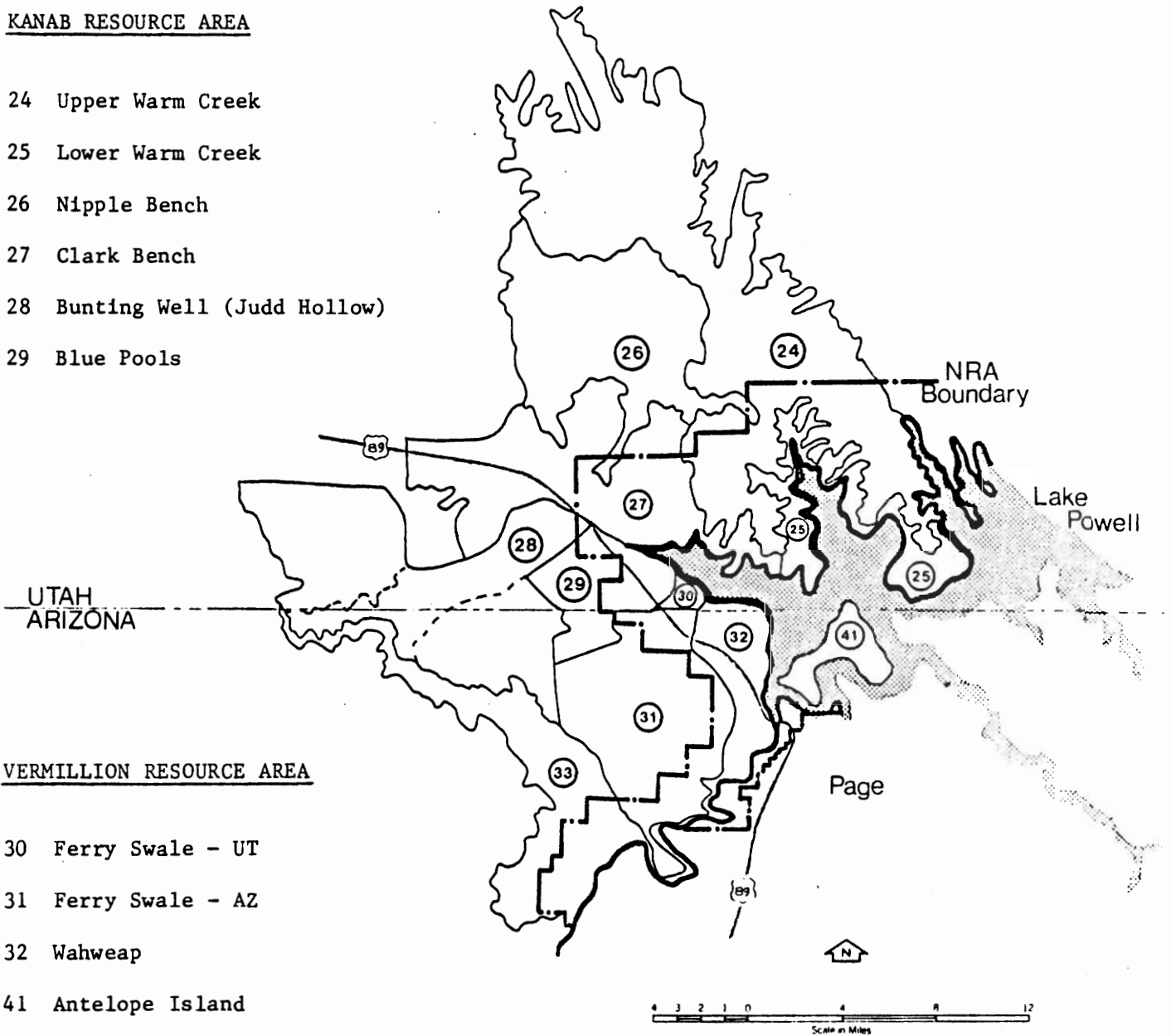


Figure 3. The Kanab and Vermillion BLM Resource Areas and allotment boundaries within the Glen Canyon National Recreation Area.

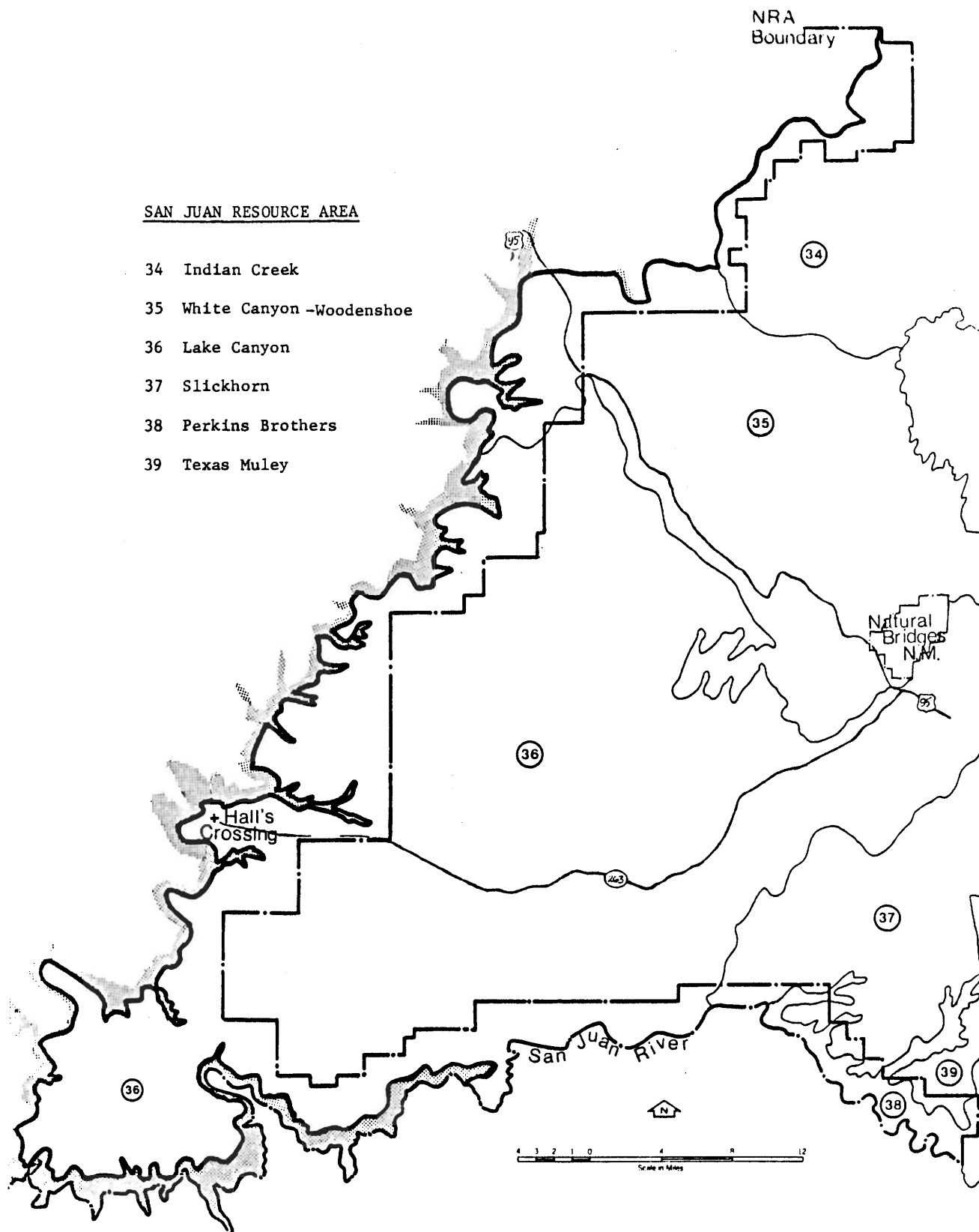


Figure 4. The San Juan BLM Resource Area and allotment boundaries within the Glen Canyon National Recreation Area.

METHODS

To determine the range condition and allotment status of BLM administered grazing land within the NRA, National Park Service personnel perused all available BLM grazing data, visited resource area offices and visited specific allotments for on-ground surveys.

BLM DATA REVIEWED

The BLM grazing data reviewed included the following Environmental Impact Statements (EIS): The Final Henry Mountain Grazing EIS (BLM 1983), The Draft and Final Kanab/Escalante Grazing Management EIS (BLM 1980) and the Vermillion Proposed Grazing Management Draft EIS (BLM 1979). In addition, information on area livestock grazing was taken from the Glen Canyon National Recreation Area General Management Plan (NPS 1979).

RESOURCE AREA OFFICE VISITS

In an attempt to verify data for each allotment and advise the BLM of the present NPS review of livestock grazing on the NRA, each Resource Area Office (except San Rafael in Price, Utah) was visited. At each Resource Area Office BLM personnel were asked a series of questions relative to specific problems and/or grazing management systems on each of the allotments they administer. The NPS Glen Canyon National Recreation Area General Management Plan summarized grazing data to 1974 and for the requirements of the present document more recent information on stocking levels and utilization information for each allotment was needed. Each resource area office was asked to provide information on the grazing management system, range condition, proposed and existing improvements and location of trend plots for each of their allotments. It was also the investigators' intent to establish whether or not NPS land was given any special considerations as per the Memorandum of Understanding between the BLM and NPS.

Throughout the course of the visits it became obvious that a standardized form to compile these data would be necessary and beginning the week of August 29th, NPS sent the form shown in Figure 5 for each allotment to the respective Resource Area Offices visited.

Visits to Resource Area Offices of the BLM were made between April 19 and August 26, 1983 by National Park Service staff, Dr. Steven W. Carothers, Research Scientist, Lawrence A. Belli, Natural Resource Management Specialist and Sandra A. Ott, Resource Management Technician.

The Vermillion Resource Area BLM office in St. George, Utah was visited on April 19th. The grazing allotments of this area on the NRA were discussed with Robert Sandburg, Supervisory Range Conservationist, Tina Kulinovich and Tim Leahy, Range Conservationists.

PERMITTEES ON _____ ALL BRANDS _____ THE NRA				LAND OWNERSHIP _____ Ownership _____ Acres _____ Public _____ GENRA _____ State _____ TOTAL _____							
				AUMs _____ ACTIVE PREFERENCE _____ Historical _____ Proposed or _____ Changed _____				ACTUAL USE _____ Cattle _____ (number) Sheep _____ Horses _____		1970-71 _____	
1974-(75)	1975-(76)	1976-(77)	1977-(78)	1978-(79)	1979-(80)	1980-(81)	1981-(82)	1982-(83)	1983-(84)	1984-(85)	
C _____											
S _____											
H _____											
TERAL LIVESTOCK/LOCATION Type _____ (number) _____		SEASON OF USE _____		RANGE CONDITION Present _____ Potential _____		PRESENT GRAZING SYSTEM _____		Classification _____			
TREND PLOTS Number _____ Frequency of _____ On NRA _____ Reading _____ (years) _____				PRODUCTION/UTILIZATION STUDIES Frequency _____ Proposed _____				AMP _____ (date) _____ NOLE or 19 _____ IMPLEMENTED Yes/No _____			
PROPOSED IMPROVEMENTS Water _____ Fences _____ Trails _____ Other _____		RESOURCE PROBLEMS/LOCATION Proposed Mitigation _____				ALLOTMENT NAME _____ MAP # _____					

Figure 5. Allotment Data Summary (ADS) form set to each BLM Resource Area Office.

Figure 5. Allotment Data Summary (ADS) form set to each BLM Resource Area Office.

On April 20th, in Kanab, Utah the Kanab Resource Area Office was visited and grazing allotments were discussed with Ken Knowles, Assistant Resource Area Manager, Bruce Greenwood, Supervisory Range Conservationist and Chris Colton, Range Conservationist.

The San Juan Resource Area Office in Monticello, Utah was visited on May 24th and the area allotments were discussed with the Resource Area Manager Nick Sandburg.

In Hanksville, Utah the investigators met with BLM Range Conservationist, Glen Patterson on August 25th and discussed the allotments in the Henry Mountain Resource Area.

The final office visited was on August 26th in Escalante, Utah where allotments were discussed with Bud Cribley, Range Conservationist and Gregg Christensen, Range Technician. Glenn Sherrill, NPS Ranger for the Escalante District of the NRA was also present to discuss the allotments in the Escalante Resource Area on the NRA.

The San Rafael Resource Area Office in Price, Utah was the only Resource Area office not visited. There is only one allotment on the NRA from this Resource Area and all pertinent information was obtained through telephone conversations with Range Conservationist Mary Beth Stulz.

ALLOTMENT SITE VISITS

A number of allotments were visited by the NPS investigators between April 29, 1983 and August 24, 1983. Sixteen allotments were site inspected on the ground and flown over by helicopter and an additional four allotments were surveyed only by fly over with helicopter. The ecological conditions and unique habitats at several locations within each of these allotments were subjectively assessed and recorded photographically. Feral and/or trespass livestock occupation was determined when possible. The effects of grazing degradation on resources, such as erosion, trailing (especially within riparian zones) and unusual conditions caused by livestock presences, such as sites heavily impacted by fecal matter were recorded when observed.

Specific areas site surveyed include Romana Mesa in the Upper Warm Creek allotment and Romana Bench in the Lower Warm Creek allotment; Padre Canyon, Last Chance Creek and Kane Point in Last Chance allotment; Paria River trailhead in Lees Ferry allotment; Middle Moody Canyon and Hall Mesa of the Waterpocket allotment; Coyote Canyon in the Escalante River allotment; Navajo Point on the Lake allotment; and the Grand Bench as part of Rock Creek-Mudholes allotment. Sites studied only by low-level helicopter over-flights include the Rockies, Moqui Canyon and Lake Canyon in Lake Canyon allotment, Navajo Bench and Harvey's Fear allotments. In the unallotted Waterpocket Fold area Iron Top Mesa was flown and on-ground site visits made in Cow Canyon and Bowns Canyon.

RESULTS AND DISCUSSION

1. A review of National Park Service and Bureau of Land Management agreements, policies, philosophies and regulations relative to grazing management on the NRA.

Grazing in the recreation area is authorized by Public Law 92-593, the Glen Canyon enabling legislation. Section 6 of the act states:

The administration of mineral and grazing leases within the recreation area shall be by the Bureau of Land Management. The same policies followed by the Bureau of Land Management in issuing and administering mineral and grazing leases on other lands under its jurisdiction shall be followed in regard to the lands within the boundaries of the recreation area, subject to the provisions of sections 3 (a) and 4 of this Act.

Section 3 (a) of the act states:

The lands within the recreation area, subject to valid existing rights, are withdrawn from location, entry and patent under the United States mining laws. Under such regulations as he deems appropriate, the Secretary shall permit the removal of the nonleasable minerals from lands or interests in lands within the national recreation area in the manner prescribed by section 10 of the Act of August 4, 1939, as amended (53 Stat. 1196; 43 U.S.C. 387 et seq.), and he shall permit the removal of leasable minerals from lands or interests in lands within the recreation area in accordance with the Mineral Leasing Act of February 25, 1920, as amended (30 U.S.C. 181 et seq.), or the Acquired Lands Mineral Leasing Act of August 7, 1947 (30 U.S.C. 351 et seq.), if he finds that such disposition would not have significant adverse effects on the Glen Canyon project or on the administration of the national recreation area pursuant to this Act.

Section 4 of the act states:

The Secretary shall administer, protect, and develop the recreation area in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented, and with any other statutory authority available to him for the conservation and management of natural resources to the extent he finds such authority will further the purpose of this Act: Provided, however, that nothing in this Act shall affect or interfere with the authority of the Secretary granted by Public Law 485, Eighty-fourth Congress, second session, to operate Glen Canyon Dam and reservoir in accordance with the purposes of the Colorado River Storage Project Act for river regulation, irrigation, flood control and generation of hydro-electric power.

The language of the act is vague about one critical point, the responsibilities of NPS and BLM in the administration of grazing. There is little legislative history to clarify the situation. This appears to have been a point of contention between NPS and BLM from the beginning. Shortly after the legislation was passed, the BLM Associate Utah State Director William G. Leavell wrote to the NPS Utah State Director saying:

As we interpret the Act, the specific provisions for BLM management limit our responsibilities to only those related to conduct of the livestock grazing and mineral leasing activities. We view our roll in GCNRA as a co-landlord with NPS and BR, with specific responsibilities authorized to administer livestock grazing and mineral leasing. We do not view our role as an agent of NPS, as is the case in those several national parks where we administer the livestock grazing upon request of NPS until the phaseout of such use is completed. In carrying out the specific livestock grazing and minerals leasing programs, we need to work closely with NPS and BR in regard to planning for future GCNRA management, and in providing for those activities relating to proper and effective management of our specific program such as road maintenance, administrative facilities, etc. I believe the cooperative agreements being developed will adequately consider the basic working relationships.

Phillip R. Iverson, NPS State Director, replied saying:

My interpretation of this is, the NPS administers the area in accordance with our organic act of August 25, 1916. The exception to this would be situations that would conflict with the Colorado River Storage Act. It is really a statement of neutrality, where each agency refrains from intruding into each others domain.

On the other hand, Sections 3 (mining and minerals), Section 5 (hunting and fishing), Section 6 (BLM administration of grazing and mineral leases), Section 7 (right-of-ways) all have one thing in common. They provide for certain activities within the area, but each section has a clause to protect the basic purpose of the Recreation Area. This really, in my judgment, gives the National Park Service veto power over these functions. Of course this is tempered by the normal agency limits of capricious and arbitrary decisions.

Despite the lack of guidance in legislative history, the National Park Service, and any prudent manager of the Service with responsibility over Glen Canyon NRA, recognizes the value and public benefit of close inter-agency cooperation. We do not interpret the law as a 'co-landlord' situation, for reasons stated above.

My dictionary defines 'agent' as, 'a person acting on behalf of another, called his principal, or one who or that which acts or has the power to act.' The term 'agent' best describes my interpretation of BLM responsibility in Glen Canyon NRA. I want to add that this does not convey a connotation of BLM in a menial role. On the contrary, we recognize the BLM as unexcelled experts in the responsibilities assigned to them by P.L. 92-593.

A similar view of the NPS role in grazing management was expressed in an earlier letter by Glen Canyon Superintendent C.E. "Corky" Johnson:

There is no language in section 6, or in any other portion of the Act which makes it mandatory that grazing be permitted--as is the case of Section 5 which governs hunting, fishing and trapping, or in any other sections which relate to specific permits, licenses, or studies. There is no question but that the Service is committed to permitting grazing in the recreation area, but subject to the entire language of Section 6.

The point I am trying to make is that although BLM is directed to administer any grazing leases which are authorized by the Service, the jurisdiction over the lands involved, and consequently the determination as to the lands to be grazed is vested in the National Park Service. Somewhere in our discussion with BLM, this important distinction in authority is being disregarded or overlooked, and I believe it must be clearly recognized as a foundation upon which any meaningful cooperation between the two agencies must be based.

Memorandum of Understandings (MOU) on grazing management were finalized on June 11, 1973. The MOU with the Utah State Office of BLM was developed as Supplement 1 to an overall BLM/NPS statewide MOU. It was finalized in September 29, 1973. Both agreements are still in effect. However, a recent (October 25, 1983) solicitor's opinion suggested that the Utah agreement be updated. Both MOUs cover similar points. The next few paragraphs will compare similarities and differences for each of the major sections of both MOUs.

Both MOUs have 2 paragraphs each not covered at all by the other. The Utah MOU has a paragraph stating that the MOU does not apply to wild and free-roaming horses and burros, wildlife habitat, watershed management, etc. and that any irreconcilable conflicts between agency representatives will be referred to the next higher organizational level for resolution. The Arizona MOU has a paragraph prioritizing the way grazing matters will be administered, citing P.L. 92-593 first and then the Taylor Grazing Act and BLM regulations. Another paragraph in the Arizona MOU cites the U.S. Treasury account in which grazing fees will be deposited and how receipts will be distributed.

Originally both MOUs called for two stipulations to be added to each grazing license. The first stipulation concerned the cancellation of the

permit on the national recreation area if the land is needed for recreational development or if grazing is determined to be not compatible with other public purposes. The second stipulation required permittees to comply with public use regulations on the national recreation area. The Arizona MOU still contains these stipulations. However, the Utah MOU was amended on July 1, 1974 to delete both stipulations. Apparently the permittees in the Escalante area were upset with the stipulations and managers at the time felt that both paragraphs were provided for under P.L. 92-593 and BLM grazing regulations at the time.

Both MOUs have several similar points. Both provide for NPS/BLM cooperation in cases of livestock violations with NPS bringing violations to BLM attention for their actions. BLM agreed to reimburse NPS for road maintenance on roads needed for grazing purposes. Neither MOU applies to Bureau of Reclamation lands. Grazing permits will be cancelled with 12 months notice unless in an emergency. Livestock use facilities will be removed at permittee cost.

Some differences exist on similar points. The Arizona MOU does not allow any predator control on the national recreation area. The Utah MOU does not rule out predator control. It requires NPS/BLM concurrence before predator control is carried out on the national recreation area. In Utah the livestock operator must construct or maintain fences at his expense to protect other values. (In actuality this has not occurred and NPS constructed fences to protect developed areas after BLM refused to do so at Hall's Crossing.) In Arizona the operator, BLM and NPS will cooperate in fence construction and maintenance to protect recreation sites. All other fences are constructed and maintained by the livestock operator.

Both MOUs address grazing developments or livestock use facilities. The Arizona MOU calls for the issuance of grazing development permits by NPS Special Use Permit. It is this procedure that has come into question during 1983. The operator of the Lower Warm Creek allotment proposed to construct stock trail off Ahlstrom Point onto Romana Bench. This would give him access to an area closed off to him by inundation about 10 years ago. The area in question is immediately across the bay from Wahweap Marina. NPS did not want the trail since it would affect the scenic quality of the area. BLM felt that since they administer grazing on the national recreation area that they were the agency to issue the permit with only input from NPS per the MOU. This prompted the request for a solicitor's opinion. On September 29, 1983 and on October 25, 1983, the U.S. Solicitor in Salt Lake City issued opinions on the issue (appendix IV). In summary, the solicitor's opinion (October 25, 1983) states:

The MOU indicates that BLM is to be the handling agency for the improvement permits, which would be consistent with requirements of the same standards and regulations be applied inside as well as outside the recreation area. However, since BLM does not have jurisdiction over the land involved any permit for the building of improvements logically should be issued by the National Park Service in accordance with the

standard grazing regulations of BLM. Since the time of the MOU there have been several changes both statutory and regulatory which involves grazing and the MOU should be modified to accommodate those changes and to spell out the agency that is to issue permits on land within the recreation area.

The dispute has not yet been settled at the time of this writing.

The last six sections of both MOUs deal with joint actions of BLM and NPS, where one or the other is required to provide information, developed after consultation with the other, or to meet with the other agency on an annual basis. These are the coordinating aspects of the agreement. Unfortunately there is no evidence to suggest that these actions have been carried out by either NPS or BLM. These actions are:

1. NPS develop a map, either jointly or with BLM consultation, to identify areas of sensitivity or conflict with grazing and where grazing may be eliminated.
2. Allotment management plans (AMP) be developed for each allotment on the national recreation area either jointly or with NPS input to BLM.
3. NPS and BLM meet periodically (UT) or yearly (AZ) to review the grazing plans.
4. NPS and BLM meet annually to inspect livestock use areas.
5. BLM provide NPS a map identifying all range improvements on the national recreation area.
6. BLM is to provide copies of all licenses and permits to NPS.

The first four actions are critical activities which should help resolve responsibilities, questions and keep communication lines open between the agencies. Actions 5 and 6, especially the latter, would also help communications. If these actions have taken place there is no record in park files and no mention of such activities was made by any of the BLM Range Conservationists, some of whom have been in their positions for several years. In fact, some range conservationists were not even aware of the existence of the MOUs themselves.

Communications between NPS and BLM were found to be lacking in several respects.

Since the Glen Canyon General Management Plan was developed, the number of allotments has increased from 38 to 40. One allotment was absorbed into another and two other allotments have been broken out of existing allotments. Some of these actions took place several years ago and no one in the national recreation area was aware of BLM's actions. Conversely BLM was not aware of NPS concerns and management

objectives for the NRA. Most were aware that the Glen Canyon General Management Plan existed but not its significance. This lack of communication may be the result of several factors including different agency views of their roles, responsibilities and philosophy. NPS has not devoted adequate personnel, time and attention to the issue in the past. BLM appears to have ignored any differences between the recreation area and natural resource lands entirely. The requirement that the same policies for issuing and administering grazing on the recreation area have been taken to the extreme. The caveat of this rule being subject to the NPS organic act has been ignored where possible. Both agencies need to improve in this area. This is especially true since BLM is in the process of revising their grazing regulations (43 CFR 4100).

The thrust of the new regulations is to get the BLM out of the detailed management of allotments. They propose to enter into cooperative management agreements (CMA) with permittees who have demonstrated good rangeland management practices. The BLM says that these CMAs are designed to "provide for greater incentives for private investments that will improve rangeland productivity. The permittee, leasee or association may manage livestock grazing on the allotment as they determine appropriate. . .". The new rules do not address situations, such as Glen Canyon's, where BLM administers grazing leases on land administered by NPS. There is a high probability that CMAs or other sections of the new regulations could conflict with NPS goals and objectives for Glen Canyon. One significant point of conflict could come in developing livestock use facilities. The new regulations will allow permittees to construct these developments under their CMA without any other review or stipulations. NPS needs a site specific environmental review before these developments are allowed.

Several sections of the new regulations conflict with the existing MOUs. Allotment management plans are all but abolished under the new regulations. These are required by both MOUs. A permit or license is no longer in jeopardy if a permittee violates an environmental law or regulation. This regulation was a determining factor in the deletion of that section from the Utah MOU. The new regulations have extended the time period for cancellation of a permit to five years. Both MOUs allow only one year and have an emergency provision for immediate cancellation. Permittees get a vested interest, similar to a concessioners possessory interest, in range improvements which they install. Before their permit can be transferred or cancelled they will have to be compensated for their interest.

The new regulations may also require cooperative management agreements consistent with and incorporating by references all applicable provisions of existing land use plans. Glen Canyon has an existing, approved General Management Plan (GMP); however, that plan does not directly address grazing management. Instead it calls for a Grazing Management Plan (GrMP) as a component of the general management plan. The grazing management plan has not been completed. This plan will assist both NPS and BLM managers in the day-to-day administration of grazing on the national recreation area. It should also provide some consistency to

management practices throughout the national recreation area and among the six BLM Resource Areas in their approach to managing on NPS lands. It may also help to clear up any inconsistencies between NPS and BLM in their approach to grazing management goals on the national recreation area.

The following example describes a problem that exists between the two agencies relative to mandated responsibilities and goals as well as differences in philosophical interpretations of what constitute sound land management. At present, the only existing data on the influence of livestock grazing on the NRA is provided by the BLM (the amount and comprehensiveness of the BLM data is discussed further in Section 6). The BLM range evaluation techniques (BLM Manual, 4100.0-2.) are based principally on the abundance and diversity of plants which are palatable to livestock. An allotment for which available data shows a decrease in nonpalatable species and an increase in palatable ones is considered by the BLM as "improving." Concomitantly, an allotment with a profusion of nonpalatable native and/or endemic plants and few palatable species is considered to be in "poor" condition. Further, if grazing management can result in limiting the proliferation of nonpalatable species in favor of increasing the palatable species, the area is considered by the BLM as having a "good potential." Hence, BLM grazing management objectives are focused on "improving" the land for livestock production. In contrast, NPS land management philosophy emphasizes the perpetuation of native ecosystems. Within the NPS philosophy, a clear distinction is made between native and exotic (introduced) species, not palatable vs. nonpalatable. These philosophical differences in grazing management goals has led to serious misunderstandings on what constitutes overgrazing land. Indeed, the term "overgrazed" is interpreted very differently by the BLM and the NPS. Within the NPS philosophy, overgrazing occurs when livestock begin to influence the successional patterns of vegetative development of an area. That is, under the influence of livestock grazing permanent or mostly permanent changes in the density and diversity of species within a vegetation association are often apparent, especially within arid land environments. From the BLM management perspective, the concept of overgrazing is more appropriately applied to ranges for which there is long-term evidence of a decreased potential for livestock production. This decrease in livestock production usually takes place long after the native ecological integrity of the range has been altered.

In the supplement to the original MOU (26 September 1973) it was recognized that the BLM administration of grazing on the NPS lands must take into consideration the protection of resources other than those contributing solely to livestock production. Specific guidelines for effecting this resource protection were, however, not presented and to this date, neither the NPS nor the BLM has developed a grazing management plan that recognizes these special considerations for the NRA.

2. A review of present range conditions on each of the forty (40) NRA allotments.

It was determined during the early planning stages of this project that an ecological study designed to evaluate the relative influence of livestock grazing on the NRA was not appropriate at this time. The ecological condition of the southern Utah rangelands is a matter of public record. Several documents have been published summarizing the general ecological conditions of the land in and adjacent to Glen Canyon National Recreation Area. From a recent publication (NPS 1974) the following is excerpted:

The disappearance or severe depletion of the pronghorn antelope, bighorn sheep, wolf, black bear, grizzly bear, mountain lion, Utah prairie dog and many other smaller faunal types, as well as significant changes in plant and animal species composition, distribution and abundance, soil erosion, changes in micro climate affecting survival of semiarid floral and faunal organisms, lowering of the water table, and competition with native animals for food and water have been attributed directly or indirectly to the grazing of domestic livestock (NPS 1974).

From the Kanab/Escalante draft EIS, the BLM states the following as justification for changing the grazing management on approximately 2.9 million acres of rangeland in Utah and Arizona, including NRA lands:

The need for action has been recognized by the BLM. Recent inventories (1975-1979) indicate that basic soils, vegetation and wildlife resources are in poor to fair condition. One of the many causes is the present level and manner of livestock grazing on public land (BLM 1980).

In the present review, it was the intention of the investigators to evaluate the general range conditions based on the BLM evaluation criteria and BLM published range reviews. The only evaluations included in this report which are not a result of BLM staff interviews and the perusal of BLM data, reflected NPS site visits where both "natural" (i.e., no apparent changes due to livestock use) and degraded resource conditions were studied and photographed.

Table 2 and 3 present a summary of all available data on the grazing management of the 40 allotments on the NRA. Additional information for each allotment may be found in the allotment work sheets in Appendix VI. At the present time, there are no means by which a determination may be made relative to the amount of livestock use that takes place within the NRA portion of an allotment.

Desert rangelands frequently have distribution problems related to the availability of water, and the land within and around the NRA is no exception.

Although many extenuating factors can influence annual stocking levels of allotments (e.g. climate, livestock economy, range condition, etc.) it is the intent of the present analysis to compare the Active Preference (total number of animal unit months that can be legally licensed) with the Average Licensed Use (the average actual use for several representative

years) while noting the condition and potential of the specific allotments. Conditions of concern will focus on allotments for which evidence exists that a) stocking levels are in excess of the Active Preference, b) Average Licensed use remains stable or increases while range trend declines and c) evidence of a decline in stocking level through time with no apparent change in range condition. Because of the many variables within the range and livestock industry, this analysis cannot provide definitive information on the adequacy or appropriateness of allotment use. However, when these data are compared with the known problems on each allotment, patterns of allotment use, both good and bad, can be inferred.

BLM range condition criteria include an evaluation of the present and potential conditions of each allotment. These conditions are rated by the following designations: unsuitable, poor, fair, or good. Frequently, in the relatively nonproductive rangelands of southern Utah and northern Arizona, large expanses of slickrock on an allotment can result in an "unsuitable," or an "unsuitable/poor" or a "fair" rating. The condition of eight of the allotments on the NRA are rated partially or totally unsuitable for livestock grazing. On these allotments, the potential is also rated unsuitable or no designation is given, indicating that, to date, the BLM does not know the range potential of the specific allotment. The eight allotments for which a major portion of the range is rated unsuitable, all within the Escalante Resource Area are: Moody, Wagon Box Mesa, Escalante River, Upper Cattle, Lake, Rock Creek-Mudholes, and Last Chance. Three of these allotments reflect past actual use in excess of the legal licensed use; Moody has apparently been stocked in excess of the licensed use for 10 of the past 15 years. During the period 1970-1974, this allotment was overstocked by almost 1,000 AUMs per year. Current use indicates an overstock level of approximately 100 AUMs. Sixty percent, or 29,576 acres, of the Moody allotment is on the NRA. Upper Cattle, with 6,946 acres on the NRA was overstocked by approximately 300 AUMs per year for the years within the period 1970-1974, however for the past 10 years the actual use has been within the Active Preference number. Last Chase, with 22,989 acres on the NRA has utilized over 500 AUMs in excess of the Active Preference every year since 1980. All three of the above allotments have been rated as static, or no apparent change in range trend.

Even given the unsuitable rating for the condition of the eight allotments, the combined actual use in animal unit months (AUMs) for the period 1980-1983 for these areas was 15,039 AUMs. The total acreage of the unsuitable ranges of the eight allotments included within the NRA is 126,367 acres or 13 percent of the entire NRA. The portion of the NRA that is actually grazed by the 15,039 AUMs within the unsuitable ranges is unknown. There is virtually no means by which most allotments can be evaluated as to the intensity of livestock utilization within specific sections of the allotment.

In addition to the allotments rated unsuitable, there are two allotments, Bullfrog, within the Henry Mountain Resource Area and Blue Pools, within the Kanab Resource Area, which continue to have annual grazing even

Table 2. Glen Canyon National Recreation Area Allotment Summary Data for Acres and Animal Unit Months

Allotment	Map Number	Total Allotment Acreage	Acreage Within NRA	%	Dates of Use	Class	Active Preference (AUMs)	Actual Use (AUMs)		
								Average 1970-74	Average 1975-79	Average 1980-84
Horseshoe Canyon	1	106,800	34,180	32	11/16-4/30	S	5,015	3,190	2,429	648
Robbers Roost	2	205,929	23,245	11	all year	C	5,288	4,424	3,097	3,754
Flint Trail	3	115,389	71,800	62	non-use	H	?	0	?	?
Sewing Machine	4	129,316	65,394	51	11/16-4/15	C	1,600	145	974	956
Rockies	5	169,038	35,573	21	11/1-5/31	S	5,600	455	0	0
Waterpocket	6	81,179	33,576	41	10/16-5/31	C	272	3,792	2,976	3,712
Bullfrog	7	92,824	855	1	11/1-5/31	S	2,861	0	0	160
Little Rockies	40	67,690	35,414	52	non-use	C	304	1,975	1,618	1,952
Moody	8	49,341	29,576	60	11/1-3/31	S	3,120	199	105	133
Wagon Box Mesa	10	28,041	770	3	11/1-3/31	C	322	1,756	1,369	2,242
Big Bown Bench	11	18,245	3,858	21	10/16-4/15	S	?	140	93	118
Escalante River	12	75,209	53,825	72	9/1-3/31	C	740	0	0	0
Upper Cattle	13	129,201	6,946	6	11/1-6/15	C	491	957	1,191	1,182
Lower Cattle	14	83,049	17,300	21	11/1-4/15	C	1,145	1,354	1,532	1,584
Chimney Rock	15	34,361	4,589	13	11/1-6/15	C	2,548	7,285	7,572	6,527
Fortymile Ridge	16	45,111	16,704	37	12/1-5/31	C	7,285	5,163	3,799	4,427
Soda Lake	17	66,048	54,690	83	10/1-5/31	C	6,876	3,397	2,206	3,023
Navajo Bench	18	23,441	5,283	23	6/1-9/30	C	2,820	2,112	1,575	1,339
Harveys Fear	19	7,682	7,682	100	non-use	C	1,600	1,064	1,219	1,429
Spencer Bench	20	4,566	2,466	54	non-use	C	1,308	914	862	1,093
Rock Creek-Mudholes	21	8,505	7,825	92	non-use	C	?	240	0	0
Last Chance	22	111,267	69,978	63	all year	C	2,100	0	0	0
Upper Warm Creek	24	253,522	22,989	9	all year	C	3,084	898	1,210	1,043
Lower Warm Creek	25	75,725	20,627	27	11/1-5/31	C	?	2,657	2,638	3,545
Nipple Bench	26	33,522	33,522	100	11/1-3/31	H	?	158	104	128
Clark Bench	27	29,906	554	2	11/1-4/30	C	?	0	13	0
Bunting Well	28	69,862	26,024	30	8/1-5/31	C	1,750	655	?	?
Blue Pools	29	12,321	1,030	9	11/1-5/31	H	50	1,406	1,192	1,183
Ferry Swale - UT	30	10,558	4,204	40	8/1-5/30	C	?	0	26	19
Ferry Swale - AZ	31	1,216	1,216	100	10/16-5/31	C	603	273	?	?
Wahweap	32	28,806	10,382	36	10/16-5/31	C	?	246	338	207
Antelope Island	41	10,702	10,702	100	all year	H	?	44	200	6
Lees Ferry	33	4,757	4,757	100	11/1-3/15	C	396	1,053	958	624
Indian Creek	34	20,060	3,760	19	11/1-5/15	C	400	777	538	285
White Canyon-Woodenshoe	35	234,680	20,930	9	12/1-6/15	C	8,518	0	56	8
Lake Canyon	36	248,257	34,915	14	all year	C	7,364	515	459	240
Slickhorn	37	651,060	184,210	28	10/6-6/5	C	43	5,845	6,180	4,117
Perkins Brothers	38	142,025	7,467	5	10/6-6/15	C	43	4,566	2,203	2,843
Texas Muley	39	106,102	6,855	6	11/1-5/31	C	324	0	101	108
TOTALS	40	3,624,231	976,801				93,221?	71,435	56,190?	59,491?
							5,913?	3,984	2,627	1,058
							417?	0	410?	372?
							AUMs	99,551?	75,419	59,227
										60,921

Table 3. Glen Canyon National Recreation Area Allotment Summary Data
for Management and Trend

Allotment	Number of Permittees	Dates of Use	Feral Livestock	Grazing System	Management Classification	A.M.P.	Plots T/On NRA	Trend	Present	Potential
Horseshoe Canyon	1	11/16-4/30	TC	SpW	I	Y/N	none	U	Fair	Good
Robbers Roost	1	all year	8-TC	P	M	none	8/0	508; 505	Fair/Good+	Good
Flint Trail	-	non-use	TC	P	M	none	none	U	Good+	Good
Sewing Machine	3	11/16-4/15	G/B	DR	I	Y/N	9/0	U	Fair	Good
Rockies	3	11/1-5/31	TC	P	C	Y/N	4/0	508S; 508D	Fair-	Poor-
Waterpocket	3	10/16-5/31	G	DR	M	none	7/0	U	Poor-	Good
Bullfrog	3	11/1-5/31	non-use	non-use						
Little Rockies	-	non-use								
Moody	2	11/1-3/31	13-H	SL	C	none	2/1	S	Unsuitable-	Unsuitable-
Wagon Box Mesa	2	11/1-3/31	13-H	SL	C	none	2/0	S	Unsuitable-	Unsuitable-
Big Bown Bench	1	10/16-4/15	TC	DR	M	Y/N	3/0	S	Fair	Unsuitable
Escalante River*	1	9/1-3/31	TC	DR	I	Y/N	8/6	S	Fair/Unsuitable-	Fair
Upper Cattle	8	11/1-6/15	TC	DR	I	Y/N	12/0	S	Fair/Unsuitable-	Fair
Lower Cattle	7	11/1-4/15	TC	SL	M	none	5/0	S	Fair	Fair
Chimney Rock	1	11/1-6/15	TC	DR	M	Y/N	8/1	S	Fair	Fair-
Fortymile Ridge	5	12/1-5/31	11-C	RR	I	Y/N	7/2	S	Fair	Fair-
Soda Lake	3	10/1-5/31	H	DR	I	Y/N	4/2	U	Poor/Unsuitable-	Fair-
Navajo Bench	3	6/1-9/30	H	SL	M	none	4/0	S	Non-range	Non-range
Harveys Fear	1	non-use	H	non-use			none	U	Non-range	Non-range
Spencer Bench	1	non-use	7-H	non-use			none	S	Unsuitable/Fair-	Unsuitable/Fair-
Rock Creek-Mudholes	1	all year	1-C	DR	I	Y/N	6/2	S	Unsuitable-	Unsuitable-
Last Chance	1	all year		RR	I	Y/N	9/2	S		
Upper Warm Creek	2	11/1-5/31		SpW	I	Y MD	6/2	S	Fair	Fair
Lower Warm Creek	1	11/1-3/31		W	M	N MD	2/2	S	Fair	Fair
Nipple Bench	1	11/1-4/30		-	I	Y/N MD	3/0	S	Unsuitable	Unsuitable
Clark Bench	2	8/1-5/31		DR	M	Y MD	8/1	S	Fair+	Fair+
Gutting Well**	1	11/1-5/31		RR	M	none	3/0	I	Good	Good
Blue Pools	1	8/1-5/30	TC	RR	I	Y MD	3/1	S	Poor-	Poor-
Ferry Swale - UT	1	10/16-5/31		DR	I	N MD	none	S	Fair	Fair
Ferry Swale - AZ	1	10/16-5/31		DR	I	N MD	none	S to D	Fair	Good
Wahweap	1	all year		RR	C	none	none	778S; 238D	Fair	Fair-
Antelope Island***	1	11/1-3/15		-	C	none	none	U	Good	Good
Lees Ferry	1	11/1-5/15	TC	DR	I	Y/N MD	none	758S; 258D	Fair	Poor-
Indian Creek	1	12/1-6/15		W	I	Y/N	39/0	U	Good	Good
White Canyon-Woodenshoe	1	all year		SpW	I	Y/N	9/0	U	Good	Good
Lake Canyon	1	10/6-6/5	TC	SpW	I	Y/N	14/1	U	Good	Good
Slickhorn	2	10/6-6/15	B/C	W	I	none	21/0	S	Good	Good
Perkins Brothers	4	11/1-5/31		SpW	M	none	4/0	D	Fair	Good
Texas Muley****	1	11/15-5/31		SpW	I	none	9/0	D		
Totals	75							219 Trends/ 23 on NRA		

* Silver Falls allotment was combined with Escalante River.
 ** Formerly Judd Hollow allotment. Figures shown are for Judd Hollow only, which is now just a pasture of Bunting Well since 1982.
 *** Antelope Island is a new allotment broken out of Wahweap in 1983.
 **** Texas Muley became an allotment in 1976, broken out of Slickhorn.

Key to Abbreviations:
 G/B - Goats/Burros
 TC - Trespass cattle
 P - One Pasture
 Sp - Spring Season
 W - Winter Season
 DR - Deferred Rotation
 SL - Season Long
 RR - Rest Rotation
 M - Maintain
 I - Improve(ing)
 C - Custodial

D - Declining
 U - Unknown
 S - Static
 Y/N - Yes, but not implemented
 MD - Management Decision
 + - Improved condition over GMP
 - - Declined condition from GMP
 A.M.P. - Allotment Management Plan

though they have been rated in poor condition with a good (Bullfrog) or unknown (Blue Pools) potential. Only 1 percent of the Bullfrog allotment is on the NRA (855 acres) while 40 percent (4,204 acres) of the Blue Pools allotment is within the NRA boundary. The available trend data for the Bullfrog allotment indicates a declining condition of the range, yet stocking levels have increased by almost 1,000 AUMs in the past 5 years compared with the 1970-1974 period of use.

Seventeen allotments are considered in fair condition with either unsuitable (Big Bown Bench), poor (Waterpocket, Antelope Island), fair (Soda, Fortymile Ridge, Ferry Swale UT, Clark Bench, Wahweap), good (Horseshoe Canyon, Robbers Roost, Rockies, Ferry Swale AZ, Perkins Brothers), or unknown (Chimney Rock, Upper and Lower Warm Creek, Lower Cattle) potential. Of these, only Chimney Rock has a history of actual use in excess of the Active Preference. From 1970-1974 the Chimney Rock allotment annually grazed about 550 AUMs in excess of the legally licensed number. Use was down to within legal limits for the period 1975-1979, however the past 5 years' use has exceeded the Active Preference by approximately 200 AUMs per year. There are 4,589 acres of the Chimney Rock allotment on the NRA. The Waterpocket allotment trend data indicate that 50 percent of the range (33,576 acres on the NRA) is in a declining condition, yet actual use increased by over 300 AUMs per year during the period 1980-84 compared with the previous 5-year period. Four other allotments for which declining range conditions have been determined are Ferry Swale AZ, Wahweap, Perkins Brothers, and Texas Muley. Stocking levels have steadily declined through the 15 year period of record for three of the allotments, Ferry Swale AZ, Wahweap, and Texas Muley are 50, 41, and 37 percent of Active Preference respectively (the Texas Muley allotment has not been classified as to condition and potential). The Perkins Brothers allotment is presently stocked at 53 percent of the Active Preference, however stocking level for the period 1980-84 is approximately 200 AUMs greater per year than the previous 5 year period.

Seven allotments are considered in good condition with good potential.

Three other allotments are considered non-range and are presently under nonuse. These allotments are Navajo Bench, Harveys Fear, and Spencer Bench with 100, 54, and 92 percent respectively of their total acreage (combined acres within the NRA = 17,973) within the NRA. Two other allotments, Little Rockies with 35,414 acres on the NRA, and Flint Trail with 71,800 acres on the NRA are presently unclassified as to range condition and potential. The Little Rockies allotment has been under nonuse since at least 1970 and remains free of livestock. The Flint Trail allotment had also been under nonuse for at least a decade until the winter of 1983 when a permittee of an adjacent allotment was allowed to place 200 weaned calves on the Flint Trail for an undetermined period.

3. The trespass domestic and/or feral livestock numbers, distribution and their influence on NRA allotments.

In this section a review of the known influence of trespass livestock and/or feral livestock on NRA allotments is provided. Often, it is difficult to distinguish between feral (previously domesticated, now wild and free roaming) and trespass (domestic animals left on the range after the close of the grazing period, or animals from one allotment invading adjacent allotments).

Nineteen of the 40 allotments (48%) are known to have populations of feral or trespass livestock. In most cases, no agency or permittee has assumed responsibility for the animals. The livestock species involved include cattle, horses, burros and goats. The total number of feral (wild) livestock on the NRA is unknown at this time; however, it is unlikely that more than 100 animals are involved.

The numbers of trespass animals fluctuate from season to season as a function of the care with which individuals permittees meet the conditions of their permits and the attention each allotment receives from range managers in the BLM. Both feral and trespass animals usually occupy the NRA range lands on a year-long basis and, in spite of the relatively low numbers, a substantial amount of resource degradation (especially to riparian and cultural resources) can be attributed to the uncontrolled livestock. In many areas, the rising lake waters during the period 1963-1980 isolated portions of some allotments from major roads and/or trailheads and permittees have been unable to collect some of their animals. At present, there are several bands of cattle, ranging from individuals to 10+ animals which are unbranded and free roaming in the unallotted Waterpocket Fold area as well as many of the isolated canyons on the north side of Lake Powell. Neither the BLM or allotment permittees presently claim ownership of the animals and no efforts have been proposed that would reduce or eliminate their populations.

Feral (wild) Horses. None of the unbranded horses on the NRA and adjacent lands have been free-roaming for very long. Most, if not all of the animals were grazing under permit when rising lake waters isolated portions of the various allotments. There are two free-roaming and unlicensed horse herds presently occupying the NRA. In the Kanab/Escalante EIS area (BLM 1980) horses are known from the Wagon Box, Moody, Death Hollow (not on the NRA), Spencer Bench, Harvey's Fear and Navajo Bench allotments. On the NRA, it is believed (BLM 1980) that 17 horses range on the Moody and Wagon Box allotments. At one time this herd numbered 35 animals; however, drastic winter conditions in 1978-79 caused substantial mortality (50%±) in the herd. The herd size is presently thought to be expanding; however, no efforts are being made to provide for their removal nor has a forage allocation been made to account for these animals (see Appendix 22, BLM 1980). Both the Wagon Box and Moody allotments are rated "unsuitable" for both condition and potential, and the Moody allotment is presently stocked in excess of the Active Preference. The presence of the horse herd on a year-long basis and the apparent overstocking of a range judged "unsuitable" by the BLM combine to exacerbate resource deterioration.

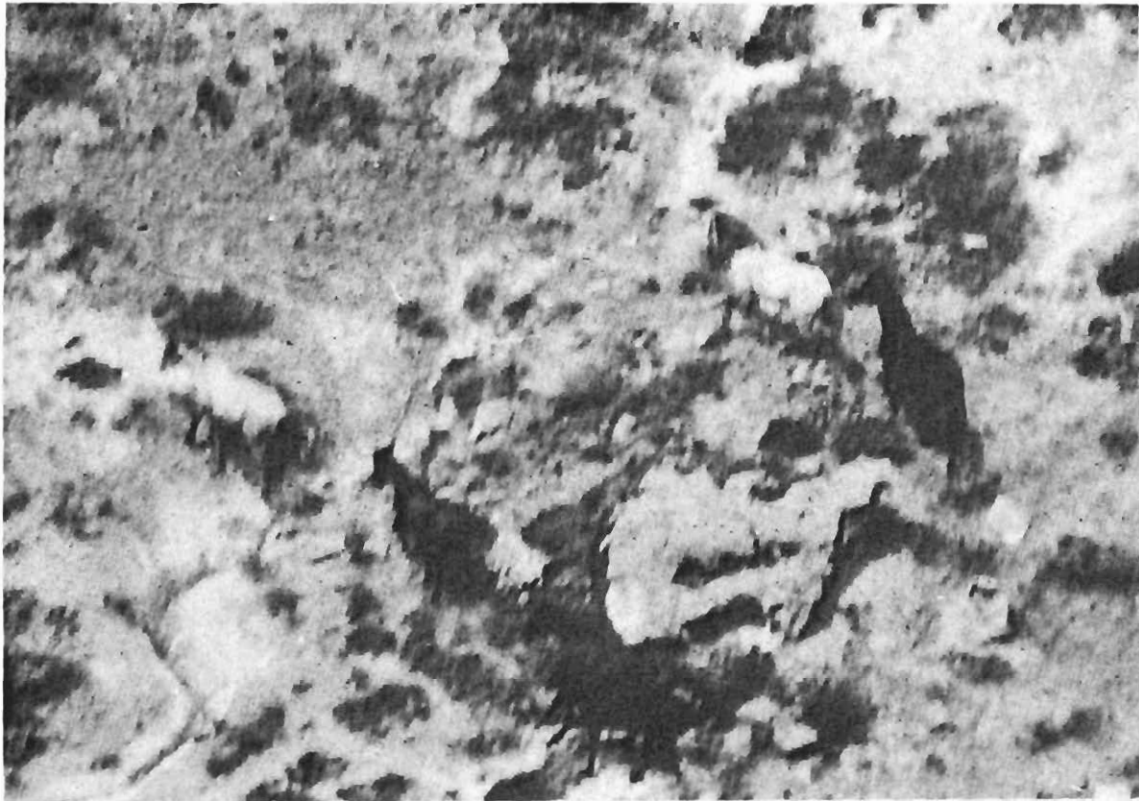


Figure 6. Unbranded and apparently abandoned horses on the Harvey's Fear allotment. These animals were previously owned by an allotment permittee; however, when rising lake waters isolated the animals in remote areas they were abandoned.

In 1978 the BLM made an attempt to capture the herd of horses presently occupying the Harvey's Fear, Spencer Bench and Navajo Bench allotments. The effort made was substantial, involving both a group of horsemen and a helicopter for support. The rugged terrain and great distances required to drive the horses to an area of containment was, however, too great to overcome and the capture effort met with failure. No further horse control actions have been considered. A group of seven of these horses was encountered in April 1983 by the NPS study team (see Figure 6). Although the Navajo Bench, Spencer Bench, and Harvey's Fear allotments are all in nonuse, the areas express the resource degradation associated with uncontrolled livestock use. Extensive trailings, spring site soil deflation and over-grazing in the limited riparian habitat are evident.

Feral Burros. A small herd of feral burros is located in the northeast section of the Henry Mountain Resource Area. These burros, numbering from 20 to 35 animals, are known to occasionally occupy the Robbers Roost and Rockies allotments. Unlike the other burro herds throughout the western United States, the population size of the Henry Mountain Resource Area herd is not rapidly expanding in size. It is thought that winter mortality due to lack of forage has effectively kept the burro herd below 35 total animals. The burros were first noticed in the 1940s, and at present the BLM has allocated 100 AUMs on the Robbers Roost allotment for burros. Another group of burros may occupy portions of the Lake Canyon allotment within the San Juan Resource area. Numerous feral burros range on the Navajo Indian Reservation in the vicinity of Clay Hills Crossing adjacent to the Lake Canyon allotment and occasional sightings of burros on the allotment have been made. At present the BLM has no data on burros within this area.

Feral Goats. Actual census data on feral goats are not available; however, small bands (2-7 animals) have been recorded as occurring on the Rockies and Little Rockies allotments. There are no proposed management plans for these animals nor have forage allotments been made to account for their grazing requirements.

Trespass Cattle. Abandoned and/or trespass cattle are responsible for some of the most serious impacts to riparian, cultural and paleontological resources on the NRA. Extreme problems caused by abandoned cattle presently exist in Padre Canyon (Last Chance allotment), Bowns and Long Canyons (unallotted Waterpocket Fold area), Cottonwood Canyon (Lake Canyon allotment), the Halls Creek drainage (Waterpocket allotment) and Dark Canyon (White Canyon-Woodenshoe allotment). Figure 7 and 8 present graphic examples of the impacts to riparian habitats caused by the grazing and movement activities of the abandoned cattle. There are presently no attempts being made by either the BLM or the responsible permittees to remove the abandoned cattle.

The occurrence of trespass livestock on the NRA is apparently common. These animals represent livestock that either has not been removed from an allotment at the end of the grazing season or livestock wandering off one allotment onto another. Serious problems (overutilization of range resources) presently occur on the following allotments:

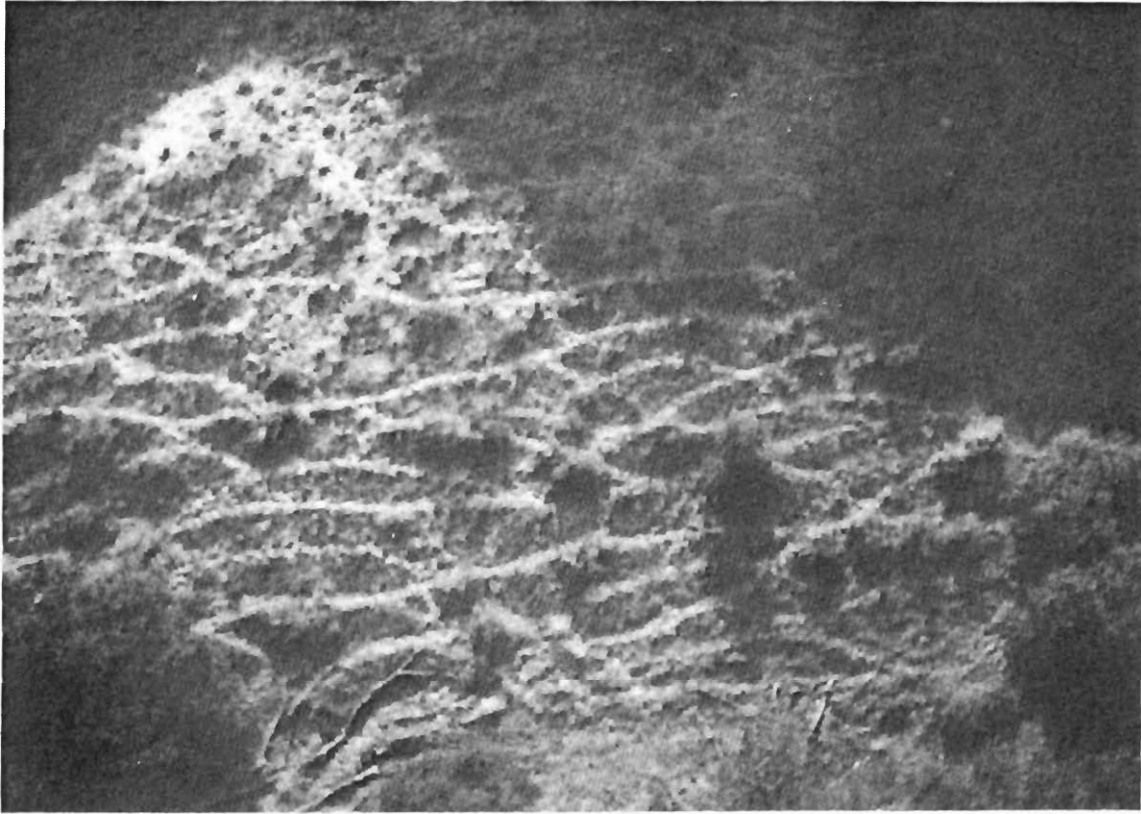


Figure 7. A network of trail systems, which has resulted in destruction of vegetation and increased soil erosion in Padre Canyon (Last Chance allotment). The impacts apparently are the result of a single abandoned bull.

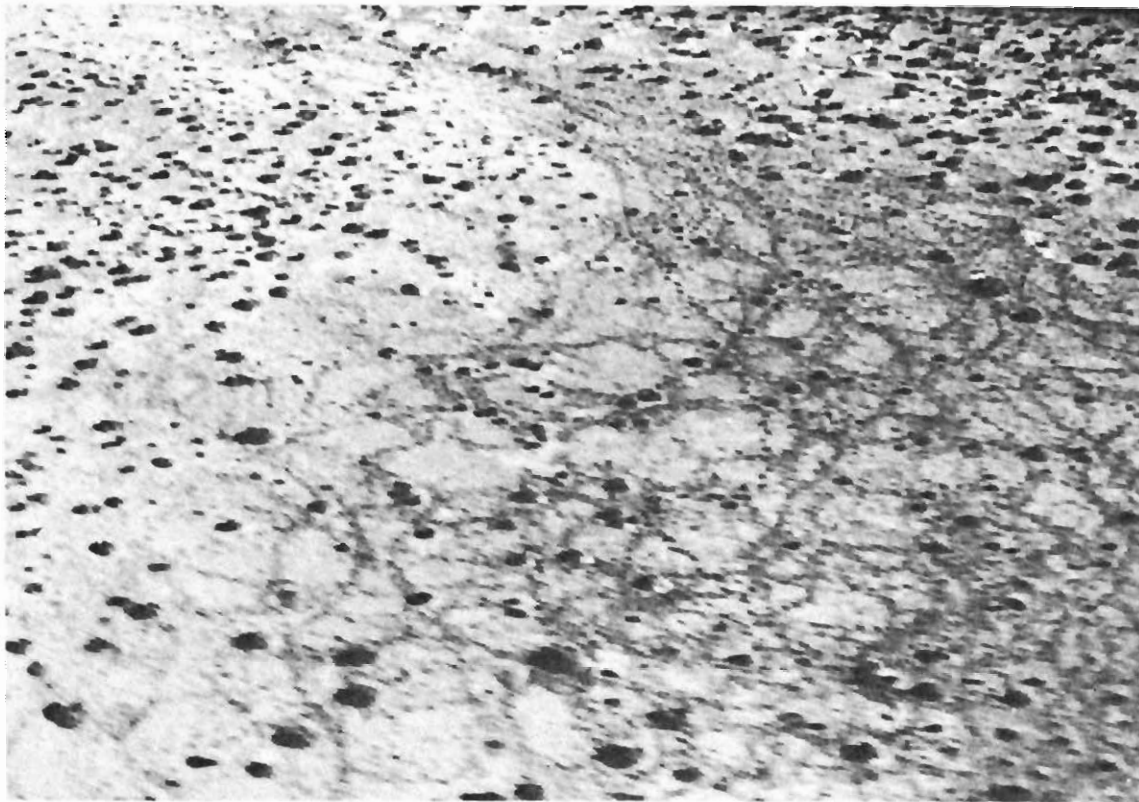


Figure 8. The influence of abandoned or trespass cattle on the riparian habitats of Cottonwood Canyon (Lake Canyon allotment).

Robbers Roost - the permittee on this allotment has apparently been uncooperative in terms of keeping his livestock within permitted allotment boundaries. Several occasions were noted during the BLM interviews wherein cattle or horses from the Robbers Roost allotment were found on the Flint Trail allotment, an area presently designated nonuse. The Flint Trail allotment has been designated nonuse, in part to protect a herd of bighorn sheep that were recently reintroduced into the area. Conflict between hikers and livestock is occurring in the Big Water Spring area at the base of the North Canyon Trail. The Hans Flat area of this allotment has been seriously overutilized and both trespass as well as permitted livestock grazing has contributed to the problem. Cattle from this allotment also trespass on the adjacent Horseshoe allotment.

Escalante River - The permittee on the Escalante River allotment failed to remove his livestock from the allotment at the end of the grazing season. The animals remained through the spring and summer of 1982 in the river bottom where impacts to an already deteriorated riparian habitat were further exacerbated.

Lower Cattle - During the BLM personnel interviews, there was an indication that some of the overutilization problems in Coyote Gulch and Coyote Creek (Fortymile Ridge allotment) may be caused by trespass cattle from the Lower Cattle allotment. A fence across Coyote Creek is the only barrier separating the two allotments and the fence is frequently knocked down by floods, cattle, and recreationists. The fence is constructed and maintained by NPS.

Chimney Rock - Cattle from the Chimney Rock allotment are also known to trespass into Coyote Gulch due to problems related to inadequately fenced stream bottoms.

Lake - There is extreme overutilization of the range resources on the Lake allotment, some of which may be attributed to the inability of the permittee to gather all the livestock at the end of a grazing season. There have been cattle on this allotment on a year-long basis (grazing season designated as June through September) for the past several years.

Lees Ferry - Livestock from the Lees Ferry allotment are frequently found in trespass within the Lonely Del Ranch Historic District and at the Paria Canyon Wilderness trailhead.

Lake Canyon - In addition to the presence of abandoned cattle in this allotment, the permittee has been cited by the BLM for having trespass cattle in Cottonwood Canyon. Cattle from this allotment have also invaded the Halls Crossing development area. Severe degradation of the riparian habitat of Cottonwood Canyon presently exists.

It is important to note that there is presently no attempt by the BLM to account for abandoned or trespass cattle when forage allocations are

made. Although the presence of abandoned livestock is recognized on several allotments, the actual use calculations do not take the extra livestock into account. Hence, on allotments where feral, abandoned and/or trespass livestock are present, actual use data as per the BLM records are underrepresentations of the total amount of livestock grazing use.

4. Areas where domestic livestock use is in conflict with the ecological, cultural and/or recreational resources of the NRA.

Ecological Resources. After livestock were first introduced into the southern Utah area in the late 1800s, heavy and unregulated grazing use led to drastic changes in the composition of the vegetative characteristics of the region. Under the heavy grazing pressure, there was a general trend (persisting to the present on overutilized allotments) for an increase in the spiny, unpalatable or poisonous species, with a concomitant decrease in those species preferred by the livestock (Stanton 1931, Fide, BLM 1983). The most land-damaging aspect of the early overgrazing was the erosion and soil loss associated with the removal of the vegetation by livestock. With only a single exception, areas within the NRA reflecting native or ungrazed habitat conditions are nonexistent. The one area within the NRA that has never been grazed is the top of Romana Mesa, located to the east and north of the Wahweap area. The mesa top, only about 200 acres in size, is connected to the land mass of the Romana Bench area by a thin "razorback" outcrop that cannot be traversed by either livestock or the larger native ungulates. The mesa top presents a profusion of native plant species (see Figure 9), including a striking assemblage of native perennial grasses which are virtually absent in all but the most protected and inaccessible areas of the NRA.

Regulation of grazing by the BLM in recent years has led to a reduction in the intensity of grazing pressures and a subsequent reduction in soil loss due to erosion.

There is, however, no possibility of restoring vegetative conditions to the pregrazing situation. Even if all livestock were permanently removed from the NRA rangelands, it is unlikely that there would be a change in the overall structure of the present vegetative community. A reduction in grazing pressures throughout most of the area would allow for a general increase in ground cover, an increase in vigor and density of some preferred forage plants, and a further reduction in area soil loss, but there would be no change toward the restoration of the original vegetative association.

Riparian Habitats. There are, however, unique habitats, especially the riparian or streamside communities, that would benefit significantly through a reduction in present livestock use intensity.

In recent years, it has come to be generally recognized that the riparian habitats of the southwestern United States are unique and important refuges for wildlife (Johnson and Jones 1977). Jahn and Threfether (1972) have stated that in Arizona, there are no habitats that have more importance to wildlife than those of the riparian ecosystem.

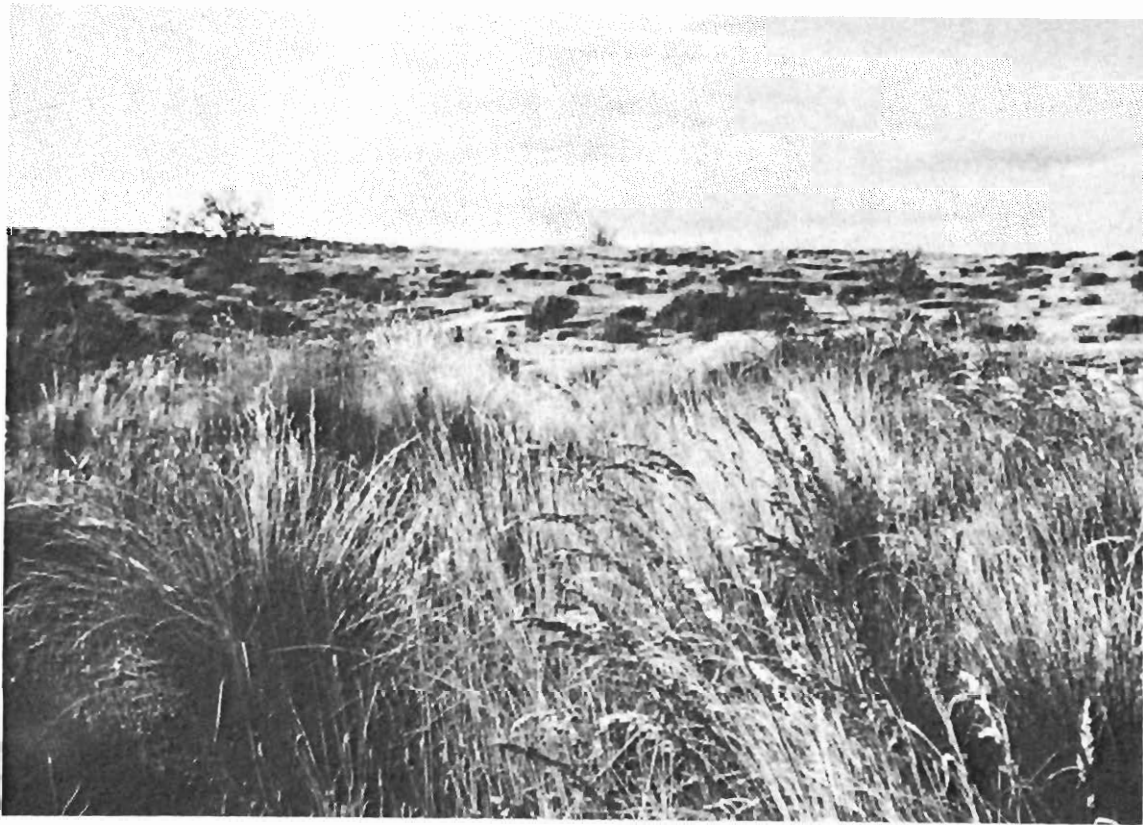


Figure 9. Romana Mesa, an area within the NRA that has never been utilized by livestock. Native perennial grasses grow in profusion on the mesa top. The grasses in the foreground are Poa fendleriana, a species which has almost disappeared throughout western rangelands as a result of livestock grazing.

Within the NRA, a few of the myriad riparian habitat include the gallery forests of cottonwood and willow trees along the Escalante River and Cottonwood Canyon, the buckthorn, gooseberry and oak communities of Coyote Gulch, the sedge and rush meadows of Bowns Canyon, pockets of cattails around springs and seeps and the unique hanging gardens that cling to the sandstone alcoves of the NRA. With the exception of the hanging gardens, the riparian communities of the NRA are in very poor condition. Without exception, the principal negative factor causing the poor condition of the riparian systems is livestock grazing.

Several factors can cause cattle to concentrate in riparian zones, especially in the spring and early summer. These include availability of desired forage, limitations on livestock movement imposed by steep slopes, and erratic distribution of watering areas away from streamsides. Therefore, vegetation in riparian areas is much more heavily utilized than that of surrounding upland areas. Studies have shown that a riparian zone constituting 1 or 2 percent of an area and 21 percent of available forage can account for 80 percent of the total herbaceous vegetation removed by livestock (Roath and Krueger 1982, BLM 1983).

It is of interest that the riparian habitats, although quickly disturbed by livestock grazing, are habitats which still represent a vegetative community typical of a pregrazing condition. The riparian species, adapted to the more moist conditions of streams and watershed drainageways, are also adapted to catastrophic flood conditions. It is the natural resiliency of the riparian species that has allowed the streamside and mesa habitat communities to survive to the present.

On the NRA and elsewhere throughout arid land systems, the major impact of livestock grazing on the riparian systems usually takes place under year-long grazing pressures. During the dry and hot summer months, it is not unusual for livestock to constantly remain in the vicinity of water. Areas around reservoirs and stock watertanks are often referred to as "sacrifice areas" because the vegetation and soils are completely disturbed by livestock congregating in the vicinity of the water.

Livestock severely deplete forage within a 250 ft. radius of water sources and less severely deplete forage within an additional 450 ft. radius (BLM, 1979).

Such is the fate of the NRA riparian habitats on those allotments subjected to year-long grazing pressures. Most of the NRA allotments have grazing seasons that would, if monitored appropriately, minimize impacts to the riparian habitats. That is, for most of the allotments the livestock are allowed on the range in October or November, then the stock is removed by April or May. Thus, the livestock is taken off the range before arid conditions have driven the animals to the water and shade of the riparian community.

Protection of the riparian habitat (without fencing) becomes almost impossible on the allotments grazed on a year-long basis. Allotments on the NRA with grazing permitted all year are: Robbers Roost, Rock Creek-Mudholes, Last Chance, Wahweap, and White Canyon-Woodenshoe. There are many other allotments on the NRA, however, which are grazed on a year-long basis in a clear contradiction of the stated management system. In most cases, there has been no attempt by either the BLM or the NPS to correct the situation. Allotments with unauthorized year-long grazing are as follows: Horseshoe Canyon, Flint Trail, Rockies, Waterpocket, Little Rockies, Moody, Wagon Box Mesa, Escalante River, Chimney Rock, Lake, Navajo Bench, Harvey's Fear, Spencer Bench, Blue Pools, Lees Ferry and Lake Canyon. Five of the above allotments are supposedly in nonuse. These are Flint Trail, Little Rockies, Navajo Bench, Harvey's Fear and Spencer Bench. Some of the year-long grazing on the allotments result from apparent definance or subterfuge among the permittees (e.g. Horseshoe Canyon, Robbers Roost and Escalante River); however, the majority of unauthorized year-long use results from the activities of feral, abandoned or trespass stock. For the most part, the BLM, the NPS, and the permittees have chosen to ignore the unauthorized animals when, in fact, many of the riparian habitat damaging activities of livestock on the NRA can be directly attributed to those relatively few animals for which no ownership is claimed.

The present situation in Bowns Canyon is a perfect example of a clear lack of grazing management and the subsequent deterioration of NRA resources. Located within the supposedly nonuse area of the Waterpocket Fold, fewer than 8 head of livestock were abandoned by permittee(s) several years ago. These few head of livestock have caused a significant amount of deterioration to the vegetation, soils, and cultural resources of the canyon bottom.

Although BLM management goals call for the protection and enhancement of riparian habitat (BLM Manual 4100.01), most NRA riparian areas are not specifically protected and they continue to decline while enhancement of the system is virtually nonexistent.

In the three grazing environmental impact statements recently released by the BLM (BLM, 1979, 1980, 1983), which include portions of the NRA, the following information on riparian habitats is excerpted:

Vermillion EIS - most of the riparian communities are in poor condition due to past livestock grazing and reproduction of cottonwood and willow is often nonexistent.

In the same EIS, the influence of the proposed changes in the grazing system on the riparian resource is discussed:

Riparian vegetation (11,164 acres) would not improve . . . the proposed grazing systems would allow perennial grasses, forbs, and sedges to improve and increase on streambanks and around springs. Woody riparian vegetation, however,

would not reproduce or recover on streambanks, since these grazing systems fail to provide enough rest for woody plant reproduction. These systems would also fail to prevent severe utilization of the riparian subtype during the graze cycle. (BLM, 1979).

Henry Mountain EIS - of the 113 streams in the planning area, 46 have been surveyed. Streams surveyed comprise 14,353 acres of riparian vegetation. Of these, 5,607 acres (39%) are in good condition, 1,583 acres (11%) are in fair condition and 7,163 acres (50%) are in poor condition. There is limited data available on the 67 unsurveyed streams.

Reviewing the future impacts of the BLM preferred grazing system for the Henry Mountain Resource Area, the following statement is made:

In the long term, after full implementation of either [the preferred alternative], grazing use would generally not exceed grazing capacity on any allotment. However, because of the nature of grazing animals, isolated areas of overutilization would probably still exist, especially along riparian zones and around reservoirs.

It is expected that there would be little or no change in the condition of any riparian zone under [the proposed alternative]. This is because no fencing or changes in the period of use for cattle are proposed to protect or change the pattern of use in riparian areas (BLM 1983).

Kanab/Escalante EIS - The condition of riparian vegetation in the study area has been classified as follows:

<u>Riparian Condition</u>	<u>Miles of Stream</u>	<u>Acres</u>
Very poor	15.8	265.0
Poor	162.4	4,031.9
Fair	104.95	1,548.9
Good	63.16	840.4
Excellent	<u>3.1</u>	<u>121.0</u>
Totals	349.41	6,807.2

In discussing the various features of the BLM preferred alternative grazing system for the Kanab/Escalante area, the following consideration for riparian habitats is given:

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 and continuous heavy utilization by wildlife would prevent long-term improvement (BLM 1980).

Desert Bighorn Sheep. Small bands of bighorn sheep are known to occupy several allotments on the NRA. Populations are presently known from the Rockies, Robbers Roost, Sewing Machine, Flint Trail, Little Rockies, Indian Creek and White Canyon-Woodenshoe allotments. The populations of these animals are thought to be on the increase (Dalton et al. 1978). However, the increase is probably due to the transplant programs of the Utah Division of Wildlife Resources (UDWR) rather than actual recruitment related increases in bighorn numbers. The most recent transplant was made during February 1983 when 20 sheep were released near the Elaterite Basin, in the Maze District of Canyonlands.

There exists the potential for conflicts between the bighorn sheep and livestock and at present there is no monitoring program that would evaluate the potential conflicts. Present plans for changes in grazing management on bighorn sheep occupied allotments within the Henry Mountain Resource Area could result in problems for the animals (BLM 1983). Under the preferred alternative the Henry Mountain EIS gives the following information on the status and potential for bighorn sheep survival in the area:

Desert bighorn sheep would be provided a total of 2,574 AUMs on the Rockies, Trachyte, Sewing Machine and Robbers Roost allotments . . . However, domestic livestock use would increase from 8,550 to 15,912 AUMs (186%) on these same four allotments. Domestic sheep would use 1,675 AUMs on the Trachyte and Rockies allotments. It is expected that the potential for increases in desert bighorn sheep numbers from increased forage use and water development projects could be offset by increases in livestock use, especially domestic sheep on Trachyte, Sewing Machine, Rockies and Robbers Roost allotments.

Under this [preferred] alternative, 1,356 AUMs would be provided to accommodate a desert bighorn sheep transplant program in the Little Rockies, and Flint Trail unalloted areas. Both of these are currently unallocated for livestock use. Therefore, desert bighorn sheep numbers would be expected to increase significantly on these two areas (BLM 1983).

Since the above was written, the BLM has authorized the permittee of the Robbers Roost allotment to winter 200 head of weaner calves on the Flint Trail allotment. It has not been determined whether or not the use of the Flint Trail by the livestock would invalidate the reasoning given for expecting increases in bighorn numbers. There is yet another factor which gives rise to concern about the veracity of the Henry Mountain EIS presentation of the Flint Trail allotment as a refuge for bighorn sheep. The BLM is presently considering a proposal that would allow the permittee of the Cedar Point allotment (actual use/year about 1,000 AUMs, September through May) to graze his entire herd on the Flint Trail allotment. The reasoning given for this change of allotments is that, because of poor management, the Cedar Point allotment is badly overgrazed and in need of a rest.

At the present time, no data on bighorn sheep numbers, population trend and potential conflicts with wildlife are available for the Indian Creek and White Canyon-Woodenshoe allotments of the San Juan Resource Area. Bighorn sheep are known to be common, however, on the south side of the Colorado River from Hite to Gypsum Canyon and the potential exists for conflicts between bighorn sheep and feral cattle within the Dark Canyon area. It is also well known that domestic sheep and desert bighorn sheep are incompatible within the same ranges. Apparently the transmission of diseases from domestic to bighorn sheep has previously debilitated populations of the latter (Monson and Summer 1983).

Cultural Resources. To date, an inventory of the cultural resource base of the NRA and surrounding lands has not been completed. The area is, however, well known for its rich concentrations of ancient sites (as high as 10 sites/sq mile, BLM 1980) and artifacts. The construction of rangeland improvements can potentially result in an irreversible loss of cultural resources and both the BLM and NPS intend to carefully monitor all rangeland improvements. An intensive cultural resource inventory is required prior to any ground disturbing action.

At present, the only positive confirmation available on livestock/cultural resources conflicts is in Bowns Canyon where abandoned cattle are known to be periodically inhabiting alcoves containing ruins.

Recreational Resources. The unique high quality recreational and scenic resources of the NRA are of national significance. The major recreational activities occurring within the NRA and surrounding areas include backcountry and lakeshore camping, hiking, picnicking, hunting, ORV exploration and geological, botanical and zoologic sightseeing.

The short- and long-term impacts of livestock grazing on the NRA are difficult, if not impossible, to evaluate and quantify. During the present study, a brief analysis was made of the livestock/recreation conflicts on only those allotments where recreationists have made specific complaints to the NPS.

Recreational conflicts are known to occur on the following allotments:

Robbers Roost - The Hans Flat area is presently overutilized by livestock and complaints have been received from visitors regarding accumulation of feces and the presence of livestock.

Flint Trail - Backpackers expecting to find this allotment free of cattle due to its nonuse status have complained of livestock on this allotment. They are trespass animals originating from the Robbers Roost allotment. Cattle are suspected of fouling Big Water Spring at the base of the North Canyon Trail.

Rockies - There are presently livestock/recreationist conflicts in side canyons and lake beach areas which are used as undeveloped campsites by motorboaters.

Waterpocket - There are reports of livestock/recreationist conflicts in the Halls Creek drainage area. Problems occur when recreationists inadvertently push cattle down narrow canyons, driving the stock through fences and into unallotted areas. The destruction of riparian habitat and fouling of water by livestock is also occurring.

Escalante River Area (including the Escalante River, Chimney Rock, Fortymile Ridge, and Lower Cattle allotments) - The area included within these allotments receives some of the most intensive backcountry use found within the NRA. For the last period of record (1979) the Escalante River drainage and tributaries (especially Coyote Gulch) received 6,110 visitors in a single year. Conflicts with livestock presently occur due to accumulation of livestock feces in the drainage bottoms with subsequent fouling of water and associated aesthetic impacts, and destruction of riparian vegetation. In addition, recreationists have also inadvertently driven cattle through fences onto adjacent allotments.

Lees Ferry - Trespass cattle from this allotment have been interfering with recreational activities in the vicinity of the Lonely Del Ranch Historic Site and at the Paria Canyon trailhead access.

Many of the livestock/recreationist conflicts could be reduced if the livestock were off the range by the beginning of the heavy human use period (i.e. the Easter weekend).

5. Existing and Proposed livestock management improvements on the NRA.

Table 3 presents the existing and proposed improvements related to improving the livestock management on the NRA. As stated in section 1 above, it has not been clearly established whether the BLM or the NPS has the authority to give approval for construction activities related to livestock management on the NRA.

Table 4. Existing and (Proposed) Livestock Management Improvements on the NRA

Allotment	Spring Development	Fences/Miles	Cattleguards	Reservoirs or Catchments	Corals	Pipeline	Roads/Miles	Stock Trail/Miles	Other
Horseshoe Canyon		(1/?)							(EIS 1988)
Robbers Roost		(1/?)	1						
Flint Trail				(2)					
Sewing Machine	(?)	(*)					3.5		(1/?) (*fence repairs)
Rockies									
Waterpocket									
Bullfrog									
Little Rockies									
Moody	1			3					
Wagon Box Mesa	(none)								
Big Bown Bench	(none)								
Escalante River	(none)								
Upper Cattle	(?)	(15)	(1)	2 (3)					
Lower Cattle				1					
Chimney Rock	(none)								
Fortymile Ridge	(none)			2					
Soda	3 (4)	4							
Lake	2	(1/2)			1			1	2 wells
Navajo Bench	(none)								
Harveys Fear	(none)								
Spencer Bench	(none)								
Rock Creek - Mudholes									
Last Chance	1	2 (2 1/2)	(2)	1 (1)			2/?	(1/?)	
Lower Warm Creek	2	3 (1)		(1)					
Upper Warm Creek		1		1					
Nipple Bench								2	
Clark Bench		1/4							
Bunting Well (Judd Hollow)									
Blue Pools		7 3/4	(1)						
Ferry Swale - UT	none								
Ferry Swale - AZ		(9 1/4)				(5.75)			(4 troughs)
Wahweap									
Antelope Island									
Lees Ferry	(2)								
Indian Creek									
White Canyon - Woodenshoe									
Lake Canyon		1/?		(4)					
Slickhorn									
Perkins Brothers									
Texas Muley									
Totals	9 (8+)	19+(28+) 1 miles	(4)	10 (11)		(5.75 miles)	3.5+ miles	3 (?) miles	2 wells (repaired) 4 troughs

The date presented in Table 3 may be incomplete, without the San Juan and San Rafael Resource Area Environmental Impact Statement it is difficult to accurately portray all existing facilities (both usable and deteriorated) that have resulted from the many years of livestock use on the area. These data should be constantly updated as new information becomes available. Nineteen of the allotments are thought to have no livestock related improvements on the NRA portions of the range. On the remaining allotments, the data indicate nine spring developments, 19 miles of fences, a single cattleguard, ten reservoirs or catchments, 3.5 miles of improved roads, 3 miles of stock trails and two wells within the NRA. The condition of these facilities is unknown at this time.

The BLM has proposed (BLM 1979, 1980, 1983 and personal communication) the additional construction of eight or more spring sites, 28 miles of fence, four cattleguards, 5.75 miles of pipeline, an unknown number of miles of livestock trails, and the repair and expansion of certain reservoirs and catchments.

There are no data presently available to the NPS for which justification is given for the proposed improvements.

6. BLM data base and grazing monitoring systems on the NRA.

To prevent the irreversible loss of range resources, the BLM and permittee are required by law to work together in planning allotment management programs, including range improvements, stocking rates and periods of use which will be compatible with the lands capacity for protecting forage. Often, due to manpower and funding ceilings and cutbacks, and the remoteness of some ranges, the BLM range technicians are unable to spend much time on each allotment.

In this section, a review of the available data providing the justification for initial allotment stocking levels and present level of use is presented. Also, each allotment is supposed to have a grazing management system which is appropriate for the variations in range production, availability of water, vegetation type and a myriad of other factors. Also, the BLM has designed specific monitoring programs whereby vegetation use on allotments is actually measured (trend plots and production/utilization studies). Data from these studies are used to ascertain the suitability of the grazing system on stocking levels. An evaluation of "trend" gives an indication of whether or not the range is improving, declining or remaining static.

For the most part, the Active Preference Number, or the number of AUMs a permittee can be legally licensed to put on the range has never been justified on the basis of scientific data. Dr. James Bowns, a well-known professional range scientist who has worked extensively on southern Utah grazing management problems, and is a frequent consultant to the BLM, has previously explained the method by which appropriate grazing levels were determined for most allotments:

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We don't have the manpower or the resources to go out and measure vegetation accurately enough to come up with stocking rates . . . we stock the range, and then we evaluate the range in subsequent years. That is what the BLM has done since 1967" (testimony of Dr. James Bowns to the Committee on Interior and Insular Affairs, House of Representatives, Ninety-Seventh Congress, 14 June 1982).

Hence, the active preference number for each allotment cannot be justified on the basis of range production data. Rather, the numbers reflect the historical situation. That is, the number of livestock that were originally placed on the range.

For each allotment, a review of the available scientific data is presented below. Also included are comments on the specific grazing management system that has been designed for each allotment. Table 2 includes a summary of most of these data. It is important to point out that trend plots are one meter square permanently marked study plots on the allotments. On the 3,624,231 acres included in all 40 allotments, there are currently 219 trend plots, 23 of which may be found on the 976,801 acres of the NRA. For the most part, the trend plots are not studied on a regular basis and more often than not, the evaluation of range conditions results from an estimation of "apparent trend." Apparent trend is nothing more than the subjective evaluation of the range by a range technician. As will become evident in the following discussion, more often than not, the "trend" of a particular allotment is actually an "apparent trend" estimate and there are usually no quantitative data to support the subjective evaluation.

Within the past few years, the BLM has developed a relatively new planning process that evaluates each allotment based on its ecological condition, and trend, potential for improvement, resource use conflicts, positive return on investments, and effectiveness of present management. These categories and stated allotment objectives are as follows:

Category (M) Maintain: No special management needs noted. Allotments are in a satisfactory condition and no major conflicts are apparent.

Category (I) Improve: Allotments in this category will receive priority for rangeland improvement as funding becomes available. Special management actions are needed because of major resource conflicts. These allotments have the potential for improved productivity.

Category (C) Custodial: No special management actions are feasible on these allotments. The present management system is judged to be the best possible and there is limited potential for improved productivity.

Horseshoe Canyon. There are no trend plots on this allotment. An allotment management plan (AMP) was written in 1968, but never implemented. Production/utilization (P/U) studies were apparently performed in 1979 and 1983; however, the data are not available.

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The range trend is unknown but thought to be static. The allotment classification is "Improve."

Robbers Roost. There are eight trend plots on this allotment, none of which are located on the NRA. The plots were read in 1969 and 1979. The two data points for trend indicate that 50 percent of the range is improving and 50 percent is static. There is no allotment management plan nor are there any production/utilization studies. The allotment classification is "Maintain."

Flint Trail. There are no trend plots, AMP or P/U studies. The allotment is classified as nonuse; however, the BLM allowed 200 head of weaner calves to be put on the range in 1983. The range trend is unknown.

Sewing Machine. There are no trend plots, AMP or P/U studies. The range trend is unknown and classification is "Maintain."

Rockies. There are nine trend plots on the allotment, none of which are on the NRA. The trend plots were read in 1968 and 1980; however, the trend designation is "apparent" and said to be static. There are no P/U studies and an AMP prepared in 1966 has been implemented. The allotment classification is "Improve."

Waterpocket. There are four trend plots on the allotment, none of which are on the NRA. The trend plots were read in 1968 and 1979 and the range trend is rated as static over 50 percent of the area and declining on the other 50 percent. An AMP was completed in 1966, but never implemented, and there are no P/U studies. The allotment classification is "Custodial."

Bullfrog. There are seven trend plots on the allotment, none of which are on the NRA. The trend plots were read in 1968 and 1980 and the range trend is in decline. There are no P/U studies nor has an AMP been written. The allotment classification is "Maintain."

Little Rockies. There are no trend plots on the allotment, and range trend is unknown. There are no P/U studies nor has an AMP been written. The allotment classification is nonuse.

Moody. There are two trend plots on the allotment, one of which is on the NRA. No data on trend is available, and apparent trend is static. There are no P/U studies nor is there an AMP. The allotment classification is "Custodial."

Wagon Box Mesa. There are two trend plots on the allotment, none of which is on the NRA. The trend plots are read every 3 years; however, no dates are available as to when the plots have been read. Trend is said to be static, there is no AMP nor have P/U studies been performed. The allotment classification is "Custodial."

Big Bown Bench. There are three trend plots on the allotment, none of which are on the NRA. The trend plots are read every 2 years (no dates) and trend is said to be static. An AMP was prepared in 1970 and is presently under implementation. There are no P/U studies and the allotment classification is "Maintain."

Escalante River. There are eight trend plots on the allotment, six of which are on the NRA. The range trend is said to be static. An AMP was written in 1981, but is not yet implemented and there are no P/U studies. The allotment classification is "Improve."

Upper Cattle. There are 12 trend plots on the allotment, none of which are on the NRA. The trend plots are read every 4 years (no dates) and trend is said to be static. An AMP was prepared in 1976, but is not yet implemented and there are no P/U studies. The allotment classification is "Improve."

Lower Cattle. There are five trend plots on the allotment, none of which are on the NRA. The trend plots are read every 5 years (no dates) and trend is said to be static to up. There is no AMP, nor have any P/U studies been performed. The allotment classification is "Maintain."

Chimney Rock. There are eight trend plots on the allotment, one of which is on the NRA. The trend plots are read every 2 years (no dates) and trend is said to be static. An AMP was prepared in 1976 and is presently implemented. There are no P/U study data available. The allotment classification is "Maintain."

Fortymile Ridge. There are seven trend plots on the allotment, two of which are on the NRA. The trend plots are read every 2 years (no dates) and trend is said to be static. An AMP was prepared in 1981, and implemented in 1982. There have been no P/U studies performed. The allotment classification is "Improve."

Soda. There are four trend plots on the allotment, two of which are on the NRA. No information is available on the frequency with which the plots are read, yet trend is said to be static. An AMP was prepared in 1982; however, it is not yet implemented. There are no data on P/U studies. The allotment classification is "Improve."

Lake. There are four trend plots on the allotment, none of which are on the NRA. The plots are read every 4 years (no dates) and trend is said to be static. There is no AMP nor are there P/U study data. The allotment classification is "Maintain."

Navajo Bench, Harvey's Fear, Spencer Bench. There are no trend plots, AMPs or P/U studies on these nonuse allotments.

Rock Creek-Muholes. There are six trend plots on the allotment, two of which are on the NRA. Two of the plots are apparently read every year, and the trend is said to be static. An AMP was written in

1982, but has not yet been implemented. There are no P/U study data. The allotment classification is "Improve."

Last Chance. There are nine trend plots on the allotment, two of which are on the NRA. Two of the plots are apparently read every year, and the trend is said to be static. An AMP was prepared in 1982, but has not yet been implemented. There are no P/U study data. The allotment is classified "Improve."

Upper Warm Creek. There are six trend plots on the allotment, two of which are on the NRA. The trend plots are read every 2 years (no dates) and range trend is said to be static. An AMP was written and implemented in 1981. A P/U study was done in 1983 and the results indicate light use on the key species, Indian rice grass, with 40 percent of the entire allotment being classified as "barren." The allotment classification is "Improve."

Lower Warm Creek. There are two trend plots on the allotment, both of which are on the NRA. The trend plots were established in 1983, and apparent trend is said to be static. There is no AMP and P/U studies were performed in 1983. The results of the P/U study indicate that there is only slight use on the key species, Indian rice grass. The allotment classification is "Maintain."

Nipple Bench. There are three trend plots on the allotment, none of which are on the NRA. The trend plots are read every 2 years (no dates) and trend is said to be static. There is no AMP, nor have there been P/U studies. The allotment classification is "Improve."

Clark Bench. There are eight trend plots on the allotment, one of which is on the NRA. The trend plots are read every 2 years (no dates) and the trend is said to be static. An AMP was written and implemented in 1982. P/U studies were performed in 1983 indicating that flowering saltbush is 50 percent utilized and Indian rice grass is 18 percent utilized. The allotment classification is "Maintain."

Bunting Well. There are three trend plots on the allotment, none of which are on the NRA. There are no data available on the frequency with which the plots are read, and apparent trend is said to be up. There is no AMP nor have P/U studies been performed. The allotment classification is "Maintain."

Blue Pools. There are three trend plots on the allotment, one of which is on the NRA. The only available date for trend plot reading is 1981 and apparent trend is said to be static. An AMP was written in 1982 and has been partially implemented. P/U studies were performed in 1983. Indian rice grass is the key species and utilization was demonstrated to be light to moderate. The allotment classification is "Improve."

Ferry Swale-Utah. There are no trend plots on the allotment, and apparent trend is said to be static. There is no AMP nor have there been P/U studies. The allotment classification is "Improve."

Ferry Swale-Arizona. There are no trend plots on the allotment; however, a range "survey" in 1974 indicated a trend of static to declining. There is no AMP nor have P/U studies been performed. The allotment classification is "Improve".

Wahweap. There are no trend plots on the allotment. The apparent trend is said to be 77 percent static and 23 percent declining. There is no AMP nor have P/U studies been undertaken. The allotment classification is "Custodial."

Antelope Island. There are no trend plots, AMP or P/U studies available on the allotment. No evaluation of trend has been estimated. The allotment classification is "Custodial."

Lees Ferry. There are no trend plots, AMP or P/U studies available on the allotment. A range "survey" was performed in 1974 and the results indicate that most of the allotment is in a declining condition. The allotment classification is "Improve."

Indian Creek. There are 39 trend plots on the allotment, none of which are on the NRA. The trend plots were read in 1977 and 1982; however, trend is rated as unknown. An AMP was written in 1970; however, it has not been implemented. The allotment classification is "Improve."

White Canyon-Woodenshoe. There are nine trend plots on the allotment, none of which are on the NRA. There are no trend data available and the trend is rated as unknown. An AMP was written in 1969; however, it has not been implemented and there are no P/U studies. The allotment classification is "Improve."

Lake Canyon. There are 14 trend plots on the allotment, one of which is on the NRA. Dates for trend plot readings are given as 1969, 1970, 1971, 1973, and 1976. The allotment trend, however, is rated as unknown. There is no AMP nor have there been any P/U studies undertaken. The allotment classification is "Improve."

Slickhorn. There are 21 trend plots on the allotment, none of which are on the NRA. There are no dates available on when the trend plots were read and the apparent trend is said to be static. There is no AMP and P/U studies have not been performed. The allotment classification is "Improve."

Perkins Brothers. There are four trend plots on the allotment, none of which are on the NRA. One of the four plots was read in 1966, 1977 and 1981 and on the basis of the single plot, the trend is apparently declining. There is no AMP nor have P/U studies been performed. The allotment classification is "Maintain."

Texas Muley. There are nine trend plots on the allotment, none of which are located on the NRA. Two trend plots were read in 1967, 1968, 1969, 1971 and 1973. The trend was previously static, but

may be in a declining mode at present. There is no AMP nor are there available data on P/U studies.

In general, the available scientific data, upon which judgments can be made relative to allotment trends is sparse. For the entire area included within the boundaries of the 40 allotments, there is, on the average, a single square meter study plot for every 16,549 acres. On the NRA, there is one study plot for every 42,469 acres. There is no overall systematic approach to evaluating the trend plots and it appears as if most trend evaluations are the subjective assessments of the range technicians.

On the 40 allotments, AMPs have been written for 19 but implemented on only four. Also, according to information made available to the NPS, production/utilization studies have been performed on five allotments. At present, there is apparently no scientific basis upon which the BLM may accurately portray the influence of livestock grazing on either BLM or NRA lands.

CONCLUSIONS

The 40 NRA grazing allotments are administered by six BLM Resource Area Offices located in widely separated southern Utah communities. Through the BLM, allotment permittees frequently request permission for structural and nonstructural range improvements on the NRA. Between the NPS, BLM and allotment permittees there is no clear and agreed upon understanding of which agency actually has authority for granting permission for certain land manipulating range improvements.

MEMORANDUM OF UNDERSTANDING

A recent solicitors opinion (1983) on the requirements of the enabling legislation and the existing Memorandum of Understanding (MOU) between the BLM and NPS in Utah indicates that the covenants included in the MOU do not clearly establish the respective roles and responsibilities of the two agencies. According to the solicitor, there are also inconsistencies in the GCNRA enabling legislation regarding grazing management and it has been recommended that it would be appropriate to revise the MOU. At present, neither the enabling legislation nor the MOU clearly establishes which agency has authority to issue permits for range improvements on the NRA.

NRA RANGE CONDITION AND TREND

Most BLM range management data reflect a need for change in the grazing systems and intensity throughout the southern Utah rangelands, including the allotments within the NRA. Recent soil and vegetation inventories and the range condition analysis of three area grazing Environmental Impact Statements (EIS) indicate that soils, vegetation and wildlife resources are in poor to fair condition (BLM 1979, 1980, 1983) within the NRA, eight allotments are rated (BLM) partially or totally unsuitable for livestock grazing. Most of these allotments are also given an unsuitable potential rating, meaning that there is little management can do to improve the sparseness of the forage or water resources. Three of the allotments rated unsuitable reflect past and present use patterns of stocking levels in excess of the legal licensed use. Two allotments are rated in poor condition with a good or unknown potential to improve with a change in grazing management. Seventeen NRA allotments are considered in fair condition with either unsuitable (1), poor (2), fair (3), good (5), or unknown (4) potential for improving.

Five allotments are presently classified as nonuse; however, one of these, the Flint Trail allotment was recently stocked against the wishes of the NPS. Seven allotments are considered in good condition with good potential.

TRESPASS FERAL AND ABANDONED LIVESTOCK

Nineteen of the 40 allotments are known to have populations of feral or trespass livestock. In most cases, no agency or permittee has assumed responsibility for the animals. The livestock involved include cattle, horses, burros and goats. The total number of feral (wild or abandoned) on the NRA is unknown; however, it is unlikely that more than 100 animals are involved. Trespass animals, livestock remaining on the allotments after the grazing season or animals in the wrong allotment, are a recurring problem with certain permittees who deliberately violate the terms of their grazing leases, or on allotments with inadequate fencing. A substantial amount of resource degradation (especially to riparian areas and cultural resources) can be attributed to the relatively small number of feral or abandoned animals allowed to remain on the NRA on a year-long basis. Three of the nonuse allotments are part of the range of a small herd of unbranded horses. Due to the horses, extensive trailing, spring site soil deflation and overutilization of the limited riparian habitat are evident on the nonuse allotments.

GRAZING CONFLICTS WITH OTHER NRA RESOURCES

After livestock were first introduced into the southern Utah area in the late 1800s, heavy and unregulated grazing use led to drastic changes in the composition of the vegetative characteristics of the region. Under the heavy grazing pressure, there was a general trend for an areawide increase in the spiny, unpalatable or poisonous plant species with a concomitant decrease in the vegetation preferred by livestock. Associated with the reduction in vegetation was excessive erosion and soil loss. Regulation of grazing by the BLM in recent years has led to a reduction in the intensity of grazing pressures and a subsequent reduction in soil loss due to erosion.

Although it will never be possible to restore most vegetation resources in the NRA to a pregrazing condition, there are unique habitats that would benefit significantly through a reduction in the intensity of present livestock use. Riparian or streamside habitats are known to be unparalleled in their value to wildlife. The riparian habitats of the NRA are rich and varied and, at present, very heavily impacted and deteriorated by livestock grazing.

Recently, desert bighorn sheep have been transplanted in the Elaterite Basin, an area of the NRA contiguous with Canyonlands National Park. There exists the potential for conflicts between the bighorn sheep and livestock. At present there is no grazing monitoring system that would evaluate the potential conflicts.

An inventory and analysis of the cultural resource base of the NRA is not yet completed; however, it is known that conflicts exist between livestock and the protection of NRA prehistoric cultural remains. This is especially evident in Bowns Canyon where a small herd of abandoned cattle are damaging soils, vegetation and cultural and paleontological sites.

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Direct conflicts between livestock and recreationists have occurred persistently for the past several years. There are frequent problems in the Coyote Gulch area of the popular Escalante River Drainage System. Conflicts associated with the livestock include overutilization of riparian vegetation, accumulation of feces and water pollution. Also, in the narrow creek bottoms frequently hiked by the recreationists, livestock are inadvertently "pushed" through fences onto unauthorized allotments. These conflicts constitute a problem to both the recreationist and the permittee. Many of the livestock/recreationist conflicts could be reduced if the livestock were off the range by the beginning of the heavy human use period (i.e. the Easter weekend).

EXISTING AND PROPOSED IMPROVEMENTS ON THE AREA

Although it has not yet been determined which agency has authority for authorizing land manipulating range improvements on the NRA, there exists a considerable backlog of improvement requests. Existing improvements include nine spring developments, 19 miles of fences, a single cattleguard, ten reservoirs or catchments, 3.5 miles of improved roads, 3 miles of stock trails and two wells, all within the NRA. The BLM has recently proposed the additional development of eight more spring sites, 28 miles of fence, four cattleguards, 5.75 miles of pipeline, an as yet undetermined number of miles of stock trails, and the repair and expansion of certain reservoirs and catchments.

BLM DATA BASE AND MONITORING SYSTEMS ON THE AREA

For the most part, the Active Preference Number, or the number of AUMs a permittee can legally license, has never been justified on the basis of a scientific analysis of the range productivity and carrying capacity. Moreover, the available scientific data upon which the influence of livestock grazing on the natural resources is based is sparse, at best. For the entire area included within the boundaries of the 40 allotments, there is, on the average, a single meter square study plot for every 16,549 acres of grazed habitat. On the NRA there is one study plot for every 42,469 acres of rangeland. There is no overall systematic approach to evaluating the trend plots and it appears as if most trend evaluations are the subjective assessments of range technicians. On the NRA, Allotment Management Plans (AMPs) have been written for 19 allotments, but implemented on only four. Production/utilization studies have been performed on only five allotments.

RECOMMENDATIONS

The Utah Memorandum of Understanding which is supposed to clarify the respective roles of the BLM and NPS in authorizing and monitoring the livestock grazing on the NRA should be revised.

Prepare an NRA grazing management plan consistent with the covenants of the Enabling Legislation and MOUs. This plan should identify areas of conflict between grazing, recreation and other sensitive resources. It should also spell out NPS policy on a variety of grazing management practices in relation to the management zones in the NRA.

All feral and abandoned livestock on the NRA should be removed as soon as possible.

NRA riparian habitats should be inventoried and evaluated for livestock grazing related impacts.

Areas where domestic livestock must be excluded in order to prevent irreparable damage to other resource values should be identified.

Remove all livestock from allotments where recreational conflicts presently exist by the beginning of the heavy human use period (i.e. the Easter weekend).

Encourage the BLM to effect a meaningful range monitoring system on the NRA.

Establish the lines of authority (BLM, NPS or permittee) for the maintenance and repair of range improvements.

Enforce the nonuse status of nonuse allotments.

Review and monitor the actual and potential conflicts between livestock and bighorn sheep in the Elaterite Basin.

REFERENCES

BROWN, D.E.

- 1982 Desert Plants, Volume 4, Numbers 1-4, 342 pages.
University of Arizona, Superior, Arizona.

CRONQUIST, A., A.H. HOLMGREN, N. HOLMGREN, J.L. REVEAL and
P.K. HOLGREN

- 1977 Intermountain Flora Vascular Plants of the Intermountain
West, U.S.A., Volume 6, 584 pages. Columbia University
Press, New York.

DALTON, L.B., C.B. FARNSWORTH, R.B. SMITH, R.C. WALLACE, R.B.
WILSON, and WINEGARDNER

- 1978 Vertebrate Species of Southeastern Utah, Utah State Division
of Wildlife Resources, 68 pages. Salt Lake City, Utah.

GILES, R.

- 1971 Wildlife Management Techniques, The Wildlife Society, 633
pages. Washington, D.C.

JAHN, L.R. and J.B. TREFETHEN

- 1972 Placing Channel Modifications in Perspective. In Watersheds
in Transition, proceedings of a symposium sponsored by the
American Water Resources Association and Colorado State
University, page 15-21. Fort Collins, Colorado.

JOHNSON, R.R. and D.A. JONES (eds)

- 1977 Importance, Preservation and Management of Riparian Habitat:
A Symposium, U.S. Department of Agriculture, Forest
Service, General Technical Report RM-43.

MONSON, G. and L. SUMMER

- 1980 The Desert Bighorn: Its Life History, Ecology and
Management, 369 pages. University of Arizona Press.

ROATH, L.R. and W.C. KRUEGER

- 1982 Cattle Grazing Influence on a Mountain Riparian Zone, Journal
of Range Management. Volume 35(1):100-103.

UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF LAND
MANAGEMENT

- 1979 Draft Environmental Statement, Vermillion Grazing, 198 pages.
Arizona Strip District.
- 1980 Draft Environmental Impact Statement on Grazing Management
in the Kanab/Escalante Area, Utah, 400 pages. Cedar City
District.
- 1983 Final Henry Mountain Grazing Environmental Statement, 334
pages. Richfield District.

UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK
SERVICE

- 1974 Wilderness Recommendation and Environmental Assessment,
Capitol Reef National Park, Utah."
- 1979 Proposed General Management Plan, Wilderness
Recommendation, Road Study Alternatives, Final Environmental
Statement, 347 pages. Glen Canyon National Recreation Area,
Arizona-Utah.
- 1982 Natural Resource Management Plan and Environmental
Assessment for Glen Canyon National Recreation Area, 88
pages. Glen Canyon National Recreation Area.

GLOSSARY

Active Preference - The total number of animal unit months of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee that can be licensed. Active preference does not include suspended non-use.

Allotment - Area of federal lands designated for the grazing use of a prescribed number and kind of livestock under one plan of management.

Allotment Management Plan - Basic management documents upon which the grazing Environmental Statements are written. Working with the individual ranchers involved BLM range managers study individual grazing allotments and complete an AMP for each. The AMP specifies how many cows may be grazed, when they may graze and what range improvements are required. Wildlife forage requirements are also to be determined and allowed in the AMP.

Allowable Use - (1) Degree of grazing use estimated to be proper until proper use is known. Thirty to fifty percent of the annual growth by weight is often used as a rule of thumb. (2) The amount of forage planned to be used in order to achieve specific management goals.

AMP - Allotment Management Plan.

Animal-Unit - One mature (1,000 lb.) cow or the equivalent based upon average daily forage allowance of 30 lbs. dry matter per day under range conditions. This allows for forage trampled or used by other animals.

Animal Unit Month - (1) Amount of forage required by an animal-unit for one month. (2) Tenure of one animal-unit for one month.

Annual Plant - A plant that completes its life cycle and dies in one year or less.

AUM - Animal unit month. One sheep AUW equals five cow AUMs.

Average Licensed Use - The average actual use of forage (expressed as AUM's) by livestock on an allotment during several representative years.

Carrying Capacity - Maximum stocking rate possible without including damage to vegetation or related resources. It may vary from year to year on the same area due to fluctuating forage production. (Same as grazing capacity.)

CMA - Cooperative Management Agreement.

Deferment - Daily or discontinuance of livestock grazing on an area for an adequate period of time to provide seed production, establishment of new plants or restoration of vigor of existing plants.

Deferred-Rotation Grazing - Moving grazing animals to various parts of a range in succeeding years or seasons to provide for seed production, plant vigor and for seedling growth.

Distribution Problem - When livestock grazing an allotment overutilize certain areas of the allotment because that is where water sources are located or terrain prevents them from movement about the entire area.

Ephemeral Plant - A plant lasting a very short time (may even only be one day) or which is transitory, i.e. temporary.

Feral Livestock - Once domesticated animals or livestock abandoned, stranded, injured or otherwise in difficulty.

Forage - All browse and herbaceous food available to and usable by grazing animals. Forage value varies with palatability, nutritive content, productivity, availability, season of use, type of animal being grazed, etc.

Grazing Capacity - Same as carrying capacity.

High-Intensity/Low-Frequency Grazing - Heavy, short duration grazing in which all livestock in a set of several range units or pastures graze one pasture at a time. The animals are left in a pasture until the desired degree of use is obtained then are removed to another pasture.

Holding Pasture - A pasture which would be used when cattle must be separated for handling or when cattle are being gathered for pasture changes, shipping, calving or weaning.

Indicator Species - (1) Species that signify the presence of certain environmental conditions, seral stages or previous treatments. (2) One or more plant species selected to determine the level of grazing use.

Key Species - Important forage species on which management of a grazing unit is based and whose use serves as an indicator of the proper degree of use of associated species.

Key Area - A portion of range which, because of its location, grazing use or other value, serves as an indicative sample of range conditions, trend or degree of use.

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Non-Range - Lands which do not support a cover of herbaceous or shrubby vegetation suitable for grazing by livestock or game.

One Pasture Grazing System - The entire allotment would be treated as one pasture, and three years would be needed to complete a grazing cycle. For 2 of the 3 years the pasture would be grazed from October 1 to May 15 for livestock production and seed trampling. During the third year the pasture would be completely rested from grazing to allow for seedling establishment and browse reproduction.

Overutilization - Use beyond the proportion of current year's forage production consumed by grazing animals. May refer to the use of a pasture or individual species.

Perrennial Plant - A plant with a life cycle of three or more years.

Potentially suitable ranges - Areas not currently suitable for livestock grazing because of (1) current erosion; (2) current low production of perrennial forage; (3) current inaccessability to livestock; and/or (4) lack of water for proper utilization by livestock. These areas may be made suitable by application of appropriate chemical or mechanical treatment, seeding, natural improvement or development of stock trails or water.

Proper Use - Degree and time of use of current year's growth which, if continued, will either maintain or improve the range condition consistent with conservation of other natural resources.

Range - Includes rangelands and forest lands that support a cover of herbaceous or shrubby vegetation suitable for grazing by livestock or game.

Range Condition - Current developmental stage of the range in relation to the potential or climax stage of which the area is naturally capable, either in terms of species composition or productivity.

Range Condition Class - One of a series of catagories usually expressed as either excellant, good, fair or poor.

Investigators compared the above judgments to the species composition data obtained on the transect. Transect data used were categories as follows:

Good Condition:	40 or more percent key species (see chapter 2 Vegetation)
Fair Condition:	15 to 39 percent key species
Poor Condition:	less than 15 percent key species

Range Condition Trend or Range Trend - Direction of change, whether stable, toward (upward) or away (downward) from the site's potential.

Up Trend

1. Vegetation restoring around water.
2. Vegetation restoring in wash bottoms.
3. Vegetation density increasing.
4. Vegetation composition of desirable plants improving.

Static Trend

All four conditions appear to be remaining static.

Down Trend

1. Vegetation not restoring around water.
2. Vegetation not restoring in wash bottoms.
3. Vegetation density decreasing.
4. Vegetation composition becoming monotypic rather than a mix.

Rangeland Suitability - Same as grazing suitability.

Ranges of Limited Suitability - Areas within an allotment classed as perennial-ephemeral or ephemeral range and (1) do not produce perennial forage sufficient to be determined as suitable; but (2) meet all other criteria for suitable range; and (3) can be grazed on a periodic basis as ephemeral vegetation is produced.

Rest-Rotation Grazing - A system in which one part of the range is ungrazed for an entire grazing year or longer, while other parts are grazed for portion, or perhaps all, of a growing season.

Rotation Grazing - A system in which animals are moved from one range unit or pasture to another on a scheduled basis.

Selective Management Categories or Classification Categories:

Category M - Maintain - Consists of highly productive allotments in good condition with no resource conflicts.

Category I - Improve - Consists of allotments in fair-to-poor condition which are not producing at a medium-to-high production potential and where resource conflicts exist.

Category C - Custodial - Consists of allotments in stable condition with no major resource conflicts and economically-limited production potential. When further deterioration needs to be prevented.

Species Composition - Proportions of various plant species in relation to the total on a given area. Proportions may be expressed in percentages based on weight, crown cover or basal intercept.

Stocking Rate - Number of animals on a given land at any time. It may be above, below or equal to the proper carrying capacity and may be expressed as animal unit months per acre, animal unit years per section or acres per animal unit month or year.

✓

Suitable Ranges - (1) Forage-producing land which can be grazed on a sustained-yield basis under an attainable management system. (2) Areas which can be grazed by livestock without damage to the soil and vegetation resources.

Transect - Vegetative analysis and sampling done along a straight line measurement. Data collection usually includes some measure of one or more of the following: Presence-absence, basal area, cover frequency, density, dominance and importance of plant material present. Generally used to determine browse condition, watershed erosion condition and trend.

Trend - See range condition trend.

Trend Plot - A measured area of an allotment used for vegetation analysis. Generally read by measuring ground cover and plant composition.

Unsuitable Ranges - Areas which are neither currently nor potentially suitable for livestock grazing because of: (1) steepness of slope or other physical barriers; (2) current erosion or inherent erosiveness of the soil which cannot be corrected through treatment or management; (3) current low production of perennial forage with little or no potential through either treatment or management to improve production.

Usable Range - Areas which can be grazed by livestock and are, therefore, usable, but they cannot be grazed year after year without damage to the soil and vegetation resources.

Utilization Study - Aid in determining whether stocking rates are at proper levels. Usually measured immediately after each pasture is grazed.

Yearlong Grazing - A grazing system which does not provide a pasture free of grazing by livestock.

APPENDIX 1
Public Law 92-593

An Act to establish the Glen Canyon National Recreation Area in the States of Arizona and Utah. (46 Stat. 1311)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to provide for public outdoor recreation use and enjoyment of Lake Powell and lands adjacent thereto in the States of Arizona and Utah and to preserve scenic, scientific, and historic features contributing to public enjoyment of the area, there is established the Glen Canyon National Recreation Area (hereafter referred to as the "recreation area") to comprise the area generally depicted on the drawing entitled "Boundary Map Glen Canyon National Recreation Area," numbered GNC-91,006 and dated August 1972, which is on file and available for public inspection in the office of the National Park Service, Department of the Interior. The Secretary of the Interior (hereafter referred to as the "Secretary") may revise the boundaries of the recreation area from time to time by publication in the Federal Register of a revised drawing or other boundary description, but the total acreage of the national recreation area may not exceed one million two hundred and thirty-six thousand eight hundred and eighty acres.

Sec. 2. (a) Within the boundaries of the recreation area, the Secretary may acquire lands and interests in lands by donation, purchase, or exchange. Any lands owned by the States of Utah or Arizona, or any State, political subdivisions thereof, may be acquired only by donation or exchange. No lands held in trust for any Indian tribe may be acquired except with the concurrence of the tribal council.

(b) Nothing in this Act shall be construed to affect the mineral rights reserved to the Navajo Indian Tribe under section 2 of the Act of September 2, 1938 (72 Stat. 1686), or the rights reserved to the Navajo Indian Tribal Council in said section 2 with respect to the use of the lands there described under the heading "Paragraph B".

Sec. 3. (a) The lands within the recreation area, subject to valid existing rights, are withdrawn from location, entry, and patent under the United States mining laws. Under such regulations as he deems appropriate, the Secretary shall permit the removal of the nonleasable minerals from lands or interests in lands within the national recreation area in the manner prescribed by section 10 of the Act of August 4, 1939, as amended (53 Stat. 1196; 43 U.S.C. 387 et seq.), and he shall permit the removal of leasable minerals from lands or interests in lands within the recreation area in accordance with the Mineral Leasing Act of February 25, 1920, as amended (30 U.S.C. 181 et seq.), or the Acquired Lands Mineral Leasing Act of August 7, 1947 (30 U.S.C. 351 et seq.), if he finds that such disposition would not have significant adverse effects on the Glen Canyon project or on the administration of the national recreation area pursuant to this Act.

cant adverse effects on the Glen Canyon project or on the administration of the national recreation area pursuant to this Act.

(b) All receipts derived from permits and leases issued on lands in the recreation area under the Mineral Leasing Act of February 25, 1920, as amended, or the Act of August 7, 1947, shall be disposed of as provided in the applicable Act, and receipts from the disposition on nonleasable minerals within the recreation area shall be disposed of in the same manner as moneys received from the sale of public lands.

Sec. 4. The Secretary shall administer, protect, and develop the recreation area in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented, and with any other statutory authority available to him for the conservation and management of natural resources to the extent he finds such authority will further the purpose of this Act: *Provided, however*, That nothing in this Act shall affect or interfere with the authority of the Secretary granted by Public Law 485, Eighty-fourth Congress, second session, to operate Glen Canyon Dam and reservoir in accordance with the purposes of the Colorado River Storage Project Act for river regulation, irrigation, flood control, and generation of hydroelectric power.

Sec. 5. The Secretary shall permit hunting, fishing, and trapping on lands and waters under his jurisdiction within the boundaries of the recreation area in accordance with applicable laws of the United States and the States of Utah and Arizona, except that the Secretary may designate zones where, and establish periods when, no hunting, fishing, or trapping shall be permitted for reasons of public safety, administration, or public use and enjoyment. Except in emergencies, any regulation of the Secretary pursuant to this section shall be put into effect only after consultation with the appropriate State fish and game department.

Sec. 6. The administration of mineral and grazing leases within the recreation area shall be by the Bureau of Land Management. The same policies followed by the Bureau of Land Management in issuing and administering mineral and grazing leases on other lands under its jurisdiction shall be followed in regard to the lands within the boundaries of the recreation area, subject to the provisions of sections 3(a) and 4 of this Act.

Sec. 7. The Secretary shall grant easements and rights-of-way on a nondiscriminatory basis upon, over, under, across, or along any component of the recreation area unless he finds that the route of such easements and rights-of-way would have significant adverse effects on the administration of the recreation area.

Sec. 8. (a) The Secretary together with the Highway Department of the State of Utah, shall conduct a study of proposed road alignments within and adjacent to the recreation area. Such study shall locate the specific route of a scenic, low-speed road, hereby authorized, from

Glen Canyon City to Bullfrog Basin, crossing the Escalante River south of the point where the river has entered Lake Powell when the lake is at the three thousand seven hundred-foot level. In determining the route for this road, special care shall be taken to minimize any adverse environmental impact and said road is not required to meet ordinary secondary road standards as to grade, alignment, and curvature. Turnouts, overlooks, and scenic vistas may be included in the road plan. In no event shall said route cross the Escalante River north of Stephens Arch.

(b) The study shall include a reasonable timetable for the engineering, planning, and construction of the road authorized in section 8(a), and the Secretary of the Interior shall adhere to said timetable in every way feasible to him.

(c) The Secretary is authorized to construct and maintain markers and other interpretive devices consistent with highway safety standards.

(d) The study specified in section 8(a) hereof shall designate what additional roads are appropriate and necessary for full utilization of the area for the purposes of this Act and to connect with all roads of ingress to, and egress from the recreation area.

(e) The findings and conclusions of the Secretary and the Highway Department of the State of Utah, specified in section 8(a), shall be submitted to Congress within two years of the date of enactment of this Act, and shall include recommendations for any further legislation necessary to implement the findings and conclusions. It shall specify the funds necessary for appropriation in order to meet the timetable fixed in section 8(b).

Sec. 9. Within two years from the date of enactment of this Act, the Secretary shall report to the President, in accordance with subsections 3(c) and 3(d) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132 (c) and (d)), his recommendations as to the suitability or unsuitability of any area within the recreation area for preservation as wilderness, and any designation of any such area as wilderness shall be in accordance with said Wilderness Act.

Sec. 10. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act, not to exceed, however, \$400,000 for the acquisition of lands and interests in lands and not to exceed \$37,325,400 for development. The sums authorized in this section shall be available for acquisition and development undertaken subsequent to the approval of this Act.

Approved October 27, 1972.

Legislative History

House Report No. 92-1446 accompanying H.R. 15716 (Committee on Interior and Insular Affairs)
Senate Report No. 92-136 (Committee on Interior and Insular Affairs)
Congressional Record:
Vol. 115 (1972): June 21, considered and passed Senate.
Oct. 13, considered and passed House. Amended, in lieu of H.R.

15716, Senate concurred in House amendment, with amendments. House concurred in Senate amendment, with amendments.
Worthy Compilation of Presidential Documents: Vol. 8, No. 44 (1972): Oct. 23, Presidential statement

APPENDIX II

MEMORANDUM OF UNDERSTANDING
between
NATIONAL PARK SERVICE, UTAH STATE OFFICE
and
BUREAU OF LAND MANAGEMENT, UTAH STATE OFFICE

DEPARTMENT OF THE INTERIOR

**TO PROVIDE FOR THE COORDINATION, AT THE FIELD LEVEL, OF MANAGEMENT
OF NATIONAL PARK AREAS AND ASSOCIATED BUREAU OF LAND MANAGEMENT
PUBLIC LAND AREAS IN UTAH**

This Memorandum of Understanding entered into this 1st day of February, 1973 between the Bureau of Land Management, acting pursuant to the authority granted by Public Law 86-649, 43 U.S.C. 1363, and the National Park Service, acting pursuant to 16 U.S.C. 1 et seq.

National Parks, Monuments, historic sites, and National Recreation Areas, administered by the National Park Service are intermingled with areas administered by the Bureau of Land Management throughout the state of Utah. Although the specific management objectives for these respective areas differ, there are many closely allied uses that require coordination.

The National Park Service has been established to manage the National Park System and cooperate with other federal agencies, state and local governments, and private citizens and organizations to preserve and interpret the nation's natural and cultural heritage.

The Bureau of Land Management has been established to provide for the orderly use, development, and protection of the lands and resources under its jurisdiction in a manner that will assure maximum public benefit for multiple use.

Recent expansions by Congress of the National Park System in Utah, including Canyonlands, Capitol Reef, and Arches National Parks, provide for grazing of livestock during a phase-out period, for administration of existing mineral leases, for recognition of valid rights in the form of mining claims, and for the consolidation of federal holdings in the public interest. Congressional designation of Glen Canyon National Recreation Area provides for continued multiple use as set forth in the Act.

Many of the programs, particularly management of grazing, mineral leasing, watershed, wildlife habitat, predator control, vehicle use, antiquities and historic sites, outdoor recreation, etc., involve programs of both the National Park Service and the Bureau of Land Management. In many instances the uses of and programs for lands within the National Park System impact on programs of the Bureau of Land Management in adjoining areas. Similarly, programs of the Bureau of Land Management could impact on National Park Service programs.

Because of these interrelationships, it is recognized that a joint effort must be made by the two agencies in carrying out the Department of Interior programs in accordance with laws, regulations, and established policy.

The National Park Service organization in Utah is made up of individual park units which receive overall direction from a State Director at Salt Lake City, Utah.

The Bureau of Land Management carries out its programs in Utah through eight district offices, with overall direction and supervision from the State Director at Salt Lake City, Utah.

It is recognized that the best approach to achieving the respective program goals and objectives of the two agencies is through comprehensive planning and coordinated program development, and that plans and programs for areas of common interest must be jointly developed, coordinated, and implemented.

THEREFORE, to accomplish this, it is hereby agreed that in developing and implementing joint, coordinated, comprehensive land use plans, the following approach will be used. The two agencies will:

- First: Identify and delineate geographic areas of common concern.
- Second: Identify interrelationships and areas of conflict of the respective programs.
- Third: Jointly develop basic management plans for carrying out respective agency responsibilities.
- Fourth: Establish priorities for accomplishment of development programs.
- Fifth: Develop coordinated annual operating programs for implementation of approved plans.

In determining areas of common concern, the two agencies will:

1. Jointly evaluate their respective programs for promotion of public understanding and appreciation of the Department of Interior programs in the National Park System and for National Resource Lands. In this regard, they will use common outlets for distribution and dissemination of approved brochures, maps, interpretive signs, and press releases.
2. Recognize the special expertise of each agency and provide for exchange of work force in the interest of efficiency in carrying out responsibilities, and will also provide an exchange of opportunities for training.
3. Exchange use of equipment on a short-term loan or longer term lease arrangement where it is jointly agreed that such will be in the interest of efficiency in carrying out the Department of Interior programs.

4. Jointly plan and coordinate programs for management of solid waste.
5. Coordinate respective radio and other communications networks, to consolidate repeater sites for joint development and avoid frequency disruptions.
6. Coordinate programs for access road development and maintenance and overall transportation network planning including delineation of roadless areas and management of vehicle use.
7. Jointly determine needs for signing, including interpretive signs, safety markers, directional signs, boundary markers, etc.
8. Give careful and joint consideration to protection and management of antiquities and historical values.
9. Jointly consider applications for rights-of-way for utilities such as powerlines, pipelines, etc., which may impact both jurisdictions.
10. Continually review the overall land use management plans of the respective jurisdictions in terms of discussing possible adjustments in boundaries or management responsibilities in the interest of promoting efficiency of operations and effective service to the public in accordance with laws establishing the parks and authorities of each agency.
11. Jointly review applications for special land use permits including those filed by packers, outfitters, guides, etc., to assure consistency in the application of Departmental regulations and policy in reference to fees and charges, sanitation, pollution, environmental protection and public safety.
12. Jointly conduct environmental analysis of projects or activities for respective programs in terms of requirements under the National Environmental Policy Act.
13. Jointly consider and develop programs for the management of wild animals and their habitat, giving special consideration to endangered species, predator control, wild horses and burros; recognizing the roles of the Utah State Department of Natural Resources and the Utah State Division of Wildlife Resources.
14. Jointly develop a plan for consolidating federal ownership of lands within the National Park System and within areas of critical concern under Bureau of Land Management jurisdiction, with a view of promoting the orderly use and management in the public interest, and in accordance with laws and regulations.
15. In areas where grazing by domestic livestock is authorized under law, jointly develop grazing management plans for specific areas to assure this use is accommodated, consistent with primary programs of the respective agencies and in accordance with laws and regulations.

16. Jointly review all applications for mineral leasing under federal law in areas within the National Park System where mineral leasing is permitted. The two agencies will be jointly responsible for assuring surface protection of the mineral lease areas, and where problems arise the Bureau of Land Management will work with the U. S. Geological Survey in assuring appropriate action is taken in accordance with Secretary's Order 2948.

17. Jointly develop plans for management of the watershed in terms of protection of the natural scenery and to minimize flood problems, soil loss, and unnatural watershed deterioration.

18. Jointly develop and execute a fire protection plan.

19. Exchange ideas and basic information relative to the development of plans and programs for accommodating outdoor recreation. Consideration will be given to identifying opportunities for accommodating such use and in developing plans and facilities for such accommodations consistent with the capacity of the resource, environmental quality, and in relation to needs and expectations.

20. Work together in minimizing vandalism, trespass, or unlawful acts.

In carrying out programs here identified it will be necessary to develop plans and programs in considerable detail for special projects and special areas. In such instances, supplements to this Memorandum of Understanding will be jointly developed which will spell out our respective responsibilities and working relationships.

In order to carry out our programs and provide for effective coordination, the two agencies will hold joint conferences at least annually at a time to be jointly determined, and at which our field representatives (district managers and state office staff of the Bureau of Land Management; park superintendents and other unit supervisors of the National Park Service) will confer in the interest of carrying out and coordinating respective programs in an orderly manner and in accordance with Departmental policy.

NATIONAL PARK SERVICE



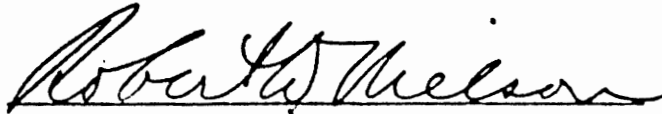
Utah State Director
National Park Service

Title

February 1, 1973

Date

BUREAU OF LAND MANAGEMENT



State Director, BLM-Utah

Title

February 1, 1973

Date

SUPPLEMENT NO. 1
TO MEMORANDUM OF UNDERSTANDING
BETWEEN

NATIONAL PARK SERVICE, UTAH STATE OFFICE
and
BUREAU OF LAND MANAGEMENT, UTAH STATE OFFICE
DEPARTMENT OF THE INTERIOR

TO PROVIDE FOR THE MANAGEMENT OF LIVESTOCK GRAZING WITHIN THE
GLEN CANYON NATIONAL RECREATION AREA IN UTAH

This agreement supplements the MASTER FIELD AGREEMENT between the National Park Service, Utah, and the Bureau of Land Management, Utah, dated February 1, 1973. Its purpose is to coordinate and promote the effective management of livestock grazing with the management of other resources in the Glen Canyon National Recreation Area, as provided by law.

WHEREAS, Public Law 92-593, 92nd Congress, S. 27, October 27, 1972, established the Glen Canyon National Recreation Area in the states of Utah and Arizona, and,

WHEREAS, the preamble to Public Law 92-593, entitled, "An Act to Establish the Glen Canyon National Recreation Area in the States of Arizona and Utah," reads, in part, as follows: "That in order to provide for public outdoor recreation use and enjoyment of Lake Powell and lands adjacent thereto in the States of Arizona and Utah and to preserve the scenic, scientific, and historic features contributing to public enjoyment of the area, there is established the Glen Canyon National Recreation Area," and,

WHEREAS, Sec. 3 (a) of Public Law 92-593, reads as follows: "The lands within the recreation area, subject to valid existing rights are withdrawn from location, entry, and patent under the United States mining laws. Under such regulations as he deems appropriate, the Secretary shall permit the removal of non-leasable minerals from lands or interests in lands within the National Recreation Area in the manner prescribed by Section 10 of the Act of August 4, 1939, as amended (53 Stat. 1196; 43 U.S.C. 387 et seq.), and he shall permit the removal of leasable minerals from lands or interests in lands within the Recreation Area in accordance with the Mineral Leasing Act of February 25, 1920, as amended (30 U.S.C. 181 et seq.), or the Acquired Lands Mineral Leasing Act of August 7, 1947 (30 U.S.C. 351 et seq.), if he finds that such disposition would not have significant adverse effect on the Glen Canyon project or on the administration of the National Recreation Area pursuant to this Act."

WHEREAS, Sec. 4 of Public Law 92-593, reads as follows:
"The Secretary shall administer, protect, and develop the recreation area in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented, and with any other statutory authority available to him for the conservation and management of natural resources to the extent he finds such authority will further the purposes of this Act: PROVIDED, HOWEVER, that nothing in this Act shall affect or interfere with the authority of the Secretary granted by Public Law 485, 84th Congress, second session, to operate Glen Canyon Dam and Reservoir in accordance with the purposes of the Colorado River Storage Project Act for river regulation, irrigation, flood control, and generation of hydroelectric power." and,

WHEREAS, Sec. 6 of Public Law 92-593 reads as follows:
"The administration of mineral and grazing leases within the Recreation Area shall be by the Bureau of Land Management. The same policies followed by the Bureau of Land Management in issuing and administering mineral and grazing leases on other lands under its jurisdiction shall be followed in regard to the lands within the boundaries of the Recreation Area, subject to the provisions of Sections 3(a) and 4 of this Act."

WHEREAS, the effective management of all resources in Glen Canyon National Recreation Area is dependent upon a closely coordinated and cooperative effort on the part of both agencies.

THEREFORE, subject to any over-riding requirements of the Glen Canyon Project, PL 84-485, the National Park Service and Bureau of Land Management agree to carry out a cooperative livestock grazing program through their local managers as follows:

General Planning

The local representatives of both agencies (Supt. of Glen Canyon NRA; district manager of BLM) will work together to: (1) identify areas where domestic livestock must be excluded in order to prevent irreparable adverse effects on other resource values; (2) identify areas where domestic livestock may be allowed to graze, noting any particular restrictions to prevent significant adverse effects from occurring. BLM will identify resource characteristics important to livestock grazing such as grazing suitability, capacity, and history of authorized livestock use including livestock classes, numbers, season, distribution, and range operator dependency by range areas. NPS will identify other resources such as wildlife, historic, archeologic, and recreational values which may be impacted by livestock grazing. NPS will relate to the Bureau of Reclamation as appropriate during this process. NPS and BLM will then jointly develop a livestock use availability map, indicating those areas where livestock will be allowed or not allowed. This map will provide an initial basis for the development of a sound domestic livestock grazing plan that is compatible with other resource uses and management objectives on the National Recreation Area.

The joint determination of areas as suitable or not suitable for livestock grazing will be supported by analysis of all pertinent values and in compliance with the National Environmental Policy Act 42 U.S.C. 4321 et seq. This analysis is to be prepared by NPS as a part of the Master Planning and Land Classification process, with BLM input. Upon such determination of areas suitable for livestock grazing, and in conduct of subsequent livestock grazing programs, the BLM will prepare the analyses under NEPA, with NPS input.

Grazing licenses or permits can be issued subject to periodic review by both agencies; such review will include livestock utilization and range trend studies. Pending the completion of this aspect of the agreement, BLM will continue to license grazing use in the area under the same conditions and requirements as in the past.

Allotment Management Plans

Upon determination of areas to be considered suitable for livestock grazing, BLM will develop allotment management plans (AMPs) and grazing systems to properly utilize the forage resource providing for any over-riding restrictions required to protect other resource values. NPS will make input into the development of AMPs, by assisting in developing priorities, in providing recommendations and stipulations, and in assisting in the joint consideration of livestock use facilitating developments which may be needed to implement AMPs. Allotment management planning will consider the adjacent national resource lands in developing grazing systems so as to best plan for proper use of all public lands.

It will be an objective to place all areas to be grazed by livestock under a grazing system as rapidly as funds and manpower allow.

Licensing-Permits

All applications for livestock grazing in the GCNRA will be referred to the appropriate district manager of BLM for his action. Applications which are significantly different from past use and could affect other values in the GCNRA will be referred to the superintendent for his recommendations, prior to action by the district manager. Similarly, the superintendent will provide the district manager(s) with current information on matters which may affect livestock operations. The district manager will deny all applications for use within those areas not classified for livestock grazing, subject to appeal procedures. He will take appropriate action on allowing livestock use in accordance with established qualifications and as provided by AMPs, in accordance with conditions and stipulations required of each area indicating the class of livestock, number, season and distribution to be authorized.

Copies of all licenses will be furnished upon issuance to the NPS. Administration of livestock use procedures, base property transfers, deposit of receipts, range studies, and other practices will be the same as conducted on adjacent national resource lands, and in accordance with the provisions of the Taylor Grazing Act.

3. Predator control requests by livestock operators will be received by BLM and referred to NPS for that agency's concurrence. If the request is approved by BLM and NPS, the BSWF will be requested to take appropriate action. Predator control efforts will be limited to removal of the offending animal and in accordance with requirements of Executive Order 11643.

4. Rodent and plant control activities will be permitted only after review and concurrence of the NPS, in addition to any clearance that may be required by Interior intradepartmental working groups on pesticides.

5. Grazing licenses issued by BLM in accordance with this Memorandum of Understanding will carry, in addition to other stipulations of BLM and/or recreation area, a stipulation:

"That portion of the grazing allotment located in Glen Canyon National Recreation Area is subject to cancellation or modification of those grazing privileges on the lands within the Recreation Area when such lands are required for recreational development or other public purposes that are determined to be not compatible with domestic grazing."

It is understood that BLM licenses will continue to inform the licensees of the GCNRA that the federal lands under license are available to the public with free access to approved recreational uses of the area, such as hunting, hiking, touring, back-country camping, etc.

6. This agreement does not apply to lands retained under the primary administration of the Bureau of Reclamation within the boundaries of GCNRA.

7. Licenses issued for grazing of livestock within GCNRA will contain a stipulation that the conduct of livestock operators within the GCNRA must be in accordance with the various regulations governing the public use and administration of the Recreation Area.

8. Periodic review of road maintenance needs in the GCNRA will be made by both agencies, and to the extent additional road maintenance is required by BLM to facilitate its management responsibilities in the GCNRA, BLM will provide funds for such road maintenance within budgetary limitations.

9. When emergency conditions require, and other resource values are endangered, the NPS may request BLM to take immediate action to close the range to further livestock grazing under appropriate procedures. Otherwise, areas to be eliminated from livestock grazing classification will be identified by the NPS one year previous to the anticipated closure date, with justifying data provided to BLM.

10. If desired by either agency, a joint inspection of range conditions will be made annually to determine future livestock utilization of areas within the GCNRA, and to determine other management needs.

Livestock Use Facilities

All existing or planned livestock use facilities will be covered under BLM cooperative agreement or by Section 4 permit, as provided under the Taylor Grazing Act. All applications for such developments will be made to the appropriate BLM district manager who will review for conformance to proper specification standards, allotment management plans or grazing systems, and will refer these to superintendent, GCNRA, for recommendations. The BLM will prepare an environmental analysis record on each such application with NPS input, and based on the conclusions reached, the BLM will either issue a permit or cooperative agreement for the development, or deny the application subject to appeal. In approving livestock use facilitating developments in the GCNRA, the district manager will provide for the removal of the facility at the applicant's expense, when necessary. All improvements will be maintained by the applicant or responsible parties to a standard of environmental quality to both BLM and NPS, as provided under the conditions of the authorizing document. Ownership of the improvement will be fully covered on the authorizing documents.

Licensing procedures will provide that a livestock operator may be required to construct or maintain fences and other developments at his own expense in order to protect other values and to facilitate his use of an area.

Livestock Use Supervision

BLM will be responsible for livestock use supervision in the GCNRA and will take the appropriate enforcement procedures in case of violations. NPS will cooperate in this program by reporting violations to the BLM, and assist in any impoundment or livestock gathering operations.

Other

1. The BLM will furnish the local office of NPS a current map showing grazing allotments, other boundaries, range improvements, and stock driveways within the GCNRA to assist in developing land use plans including livestock use. The NPS agrees to furnish the four local BLM offices a current map of the GCNRA showing, where possible, the present and planned (a) recreation improvements, (b) transportation system, (c) utility lines, (d) land classifications, and (e) other similar projects, all of which will help in the future coordinated planning of this area. Both agencies are to provide such maps within sixty (60) days of signing this agreement. The livestock availability maps will be developed within six months of the signing of this agreement and they will be reviewed and updated annually as needed.
2. This agreement does not apply to the management of wild and free-roaming horses and burros, wildlife habitat, watershed management, etc. There may be times during livestock utilization and range trend studies or similar efforts that a joint agency study would benefit both agencies. Both agencies will keep the other informed of such opportunities and will work together on these as practical.

11. Irreconcilable conflicts between agency representatives at the local level will be immediately referred to the next higher organizational level for resolution.

12. This agreement becomes effective immediately upon execution by the undersigned and shall remain in effect until cancelled or modified by joint agreement or as required by statute or regulations governing the respective agencies.

13. The performance of any obligation or expenditure of funds under this memorandum is contingent on Congress making necessary appropriations therefor.

NATIONAL PARK SERVICE

BUREAU OF LAND MANAGEMENT


State Director-Utah

9/26/1973
Date


State Director-Utah

Acting
2/26/75
Date

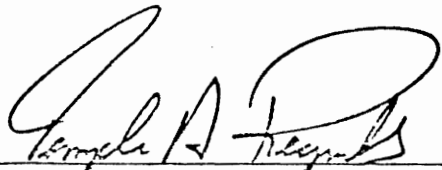
AMENDMENT TO SUPPLEMENT NO. 1 TO MEMORANDUM OF UNDERSTANDING
BETWEEN NATIONAL PARK SERVICE, UTAH STATE OFFICE AND BUREAU
OF LAND MANAGEMENT, UTAH STATE OFFICE, DEPARTMENT OF INTERIOR

TO PROVIDE FOR THE MANAGEMENT OF LIVESTOCK GRAZING WITHIN THE GLEN CANYON
NATIONAL RECREATION AREA IN UTAH

WHEREAS, paragraphs 5 and 7 of the subject agreement do not serve any
useful purpose since both are provided for under the act establishing the
Glen Canyon Recreation Area and the grazing regulations for the Bureau of
Land Management.

THEREFORE, the National Park Service and the Bureau of Land Management
agree to delete paragraphs 5 and 7 from page 5 of the agreement dated
9/26/1973.

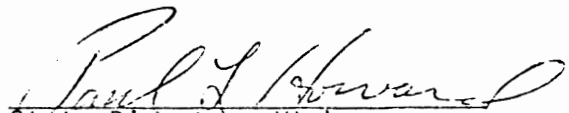
NATIONAL PARK SERVICE



Superintendent Temple A. Reynolds
Glen Canyon NRA

8/20/74
Date

BUREAU OF LAND MANAGEMENT



State Director, Utah

2/1/74
Date

APPENDIX III

MEMORANDUM OF UNDERSTANDING
Between the
BUREAU OF LAND MANAGEMENT
and the
NATIONAL PARK SERVICE
RELATING TO GRAZING IN THE GLEN CANYON NATIONAL RECREATION AREA
IN ARIZONA

Preamble

WHEREAS, pursuant to the Memorandum of Understanding between the National Park Service and the Grazing Service (Bureau of Land Management), approved by the Secretary of the Interior on September 3, 1943, which was designed for the purpose of coordinating range supervision with reference to livestock which graze part time in grazing districts under Grazing Service (Bureau of Land Management) regulations and part time in reservations under the jurisdiction of the National Park Service, and further pursuant to Section 6 of the provisions of Public Law 92-593 dated October 27, 1972, which established Glen Canyon National Recreation Area and;

WHEREAS, for the purpose of this Agreement, the Glen Canyon National Recreation Area shall hereafter be designated as the Recreation Area, and the Superintendent of the Recreation Area shall hereafter be designated as the Superintendent; the Arizona Strip District Manager, Bureau of Land Management, shall hereafter be designated as the District Manager; and

WHEREAS, grazing administration is specifically designated to the Bureau of Land Management by Section 6 of Public Law 92-593, and since grazing on the Recreation Area can best be coordinated by the Bureau of Land Management, particularly since the same stock may graze

part time on adjacent grazing district lands and part time on Recreation Area lands; therefore, it is mutually agreed that

1. All grazing matters will be administered first in accordance with P. L. 92-593 and the provisions of this Agreement. Then, in accordance with P. L. 92-593 and this Agreement, the Bureau of Land Management will administer all grazing by domestic livestock on the Recreation Area in the manner provided for in the Taylor Grazing Act of June 28, 1934 (43 U.S.C. 315a-315r), as amended, and the rules and regulations thereunder, commonly known as the Federal Range Code, approved September 23, 1942, and subsequent amendments thereto, insofar as grazing is not in conflict with the primary purposes of the said Recreation Area and the conditions and stipulations contained herein.

2. Grazing permits, or licenses issued, assigned, or renewed by the Bureau of Land Management in accordance with this Memorandum of Understanding will carry, in addition to stipulations of the Bureau of Land Management and/or Recreation Area, a stipulation:

"That portion of the grazing allotment located in Glen Canyon National Recreation Area is subject to cancellation or modification of those grazing privileges on the lands within the Recreation Area when such lands are required for public use purposes."

3. Except in emergency situations, advance written notice of twelve (12) months to the District Manager will be prerequisite to actual termination of grazing privileges, and notice of cancellation or modification and reasons therefor shall be given the District Manager, Bureau

of Land Management, in writing by the Superintendent, with copies of such cancellation notices or order to be provided all agencies concerned, and appropriate District Managers.

4. In accordance with Public Law 92-593 of October 27, 1972, governing administration of the Glen Canyon National Recreation Area, grazing fees collected by the Bureau of Land Management for grazing within the Recreation Area will be accounted for and deposited as follows: within grazing districts, the grazing revenues from Reclamation lands and Glen Canyon National Recreation Area lands administered by Land Management outside the boundaries of authorized or constructed projects shall be deposited to the U.S. Treasury Account 145032, Receipts from grazing, etc., public land within grazing districts. Receipts will be distributed in accordance with 43 U.S.C. 315i.

5. In order to secure the best possible management and use of the grazing resources of the Recreation Area, the Superintendent will furnish the District Manager with a map delineating those zones of the area not to be used for grazing. The District Manager will assist the Superintendent in the determination of such zones. When allotments include lands subject to this Agreement, an Allotment Management Plan or a grazing system will be developed jointly by the National Park Service and the Bureau of Land Management.

6. Permits for grazing developments such as ponds, fences, corrals, etc., on Recreation Area lands, will be initiated by the range user through the Bureau of Land Management for issuance by the Superintendent or his authorized representative on National Park Service Special Use Permit forms.

No permanent improvements will be permitted below elevation 3720 for Lake Powell and 3120 downstream from Glen Canyon Dam. Improvements or equipment placed on the lands must be removed by the licensee or permittee upon termination of his grazing permit or license unless otherwise authorized to remain in place by the Superintendent and/or District Manager, as the case may be. If not removed within sixty (60) days after the termination of the grazing permit or license, the improvement or equipment shall be considered abandoned and shall automatically become the property of the United States, under the jurisdiction of the National Park Service, to keep or dispose of as they see fit. This shall not, however, exempt the permittee or licensee from the legal obligation of paying for the removal or disposal costs of such abandoned improvement or equipment if disposal or removal of such equipment be determined appropriate by the Superintendent.

7. Before the beginning of each grazing season, or whenever necessary, the Bureau of Land Management District Manager and the Superintendent, or their respective authorized representatives, may review the plan for grazing and amend if needed, confer and decide upon areas to be grazed, the number and species of livestock to be grazed on each respective area, grazing season, duration, and other natural resources management activities of mutual concern.

8. There shall be performed each year, if desired by either the Bureau of Land Management or National Park Service, a joint inspection of the area or areas to be used by livestock, and said inspections may be the basis for issuance, cancellation, amendment, or modification of existing or proposed grazing permits or licenses. Such issuance,

cancellations, amendments, or modifications shall be implemented by Bureau of Land Management in accordance with all applicable laws and regulations and subject to concurrence by the Superintendent.

9. Copies of all permits or licenses, setting forth the area, number of AUM's, species of livestock, and duration of grazing, as well as the owner of the stock shall be furnished to the Superintendent by the Bureau of Land Management at the time of issuance.

10. It is understood by all concerned that there shall be no grazing on lands retained under the primary jurisdiction of the U. S. Bureau of Reclamation.

11. It is agreed that the National Park Service will cooperate with the Bureau of Land Management in any trespass by domestic livestock either from stock permitted by the Bureau of Land Management outside or inside the Recreation Area.

12. The Bureau of Land Management agrees to furnish the Superintendent maps indicating areas within the National Recreation Area under license or permit indicating allotments, boundaries, fences, ponds, and other improvements and their ownership and stock driveways crossing the National Recreation Area within sixty (60) days of the signing of this Agreement.

13. Under the rules of Executive Order 11643 of February 8, 1972, it is agreed that no predator control will be authorized, using poisons or other methods prohibited by this Order.

14. The Bureau of Land Management will cooperate with the National Park Service and the licensee in the construction of necessary fences to prevent livestock grazing on those areas of the National

Recreation Area designated by the Superintendent for use primarily for public recreation. All other fences which are required to control grazing will be the responsibility of the licensee and Bureau of Land Management. All future permits issued for grazing developments will contain a stipulation that fences and other structures not removed by the lessee prior to their inundation may be removed by the National Park Service and the permittee shall assume all related costs.

15. If maintenance of specific roads is required for the primary purpose of administering grazing activities, the Bureau of Land Management will reimburse the National Park Service for the costs incurred to the extent that it is authorized to expend funds, for such purpose, which are derived from grazing operations in Glen Canyon National Recreation Area.

16. All grazing operations shall be conducted in accordance with applicable laws and regulations governing the public use and administration of Glen Canyon National Recreation Area. All permits will contain a statement to this effect.

Necessary amendments to this agreement may be made from time to time in accordance with agreeable suggestions from the agencies involved, each of the agencies to be signatory to such amendments and to receive copies thereof.

May 30, 1973
Date

6-4-73
Date

6/11/73
Date

CC Johnson
Superintendent, Glen Canyon National
Recreation Area

Walter M. Colton
District Manager, Arizona Strip District

Joe T. Folini
State Director, State of Arizona

APPENDIX IV

L3019

July 28, 1983

Memorandum

To: Regional Director, Rocky Mountain Region

From: Superintendent, Glen Canyon National Recreation Area

Subject: NPS/BLM Grazing Management Responsibilities

Glen Canyon faces a precedent setting situation between National Park Service and the Bureau of Land Management over range improvements. The main question concerns the interpretation of the Glen Canyon enabling legislation and whether National Park Service or Bureau of Land Management has jurisdiction and final say over construction of range improvements on the national recreation area. Glen Canyon enabling legislation is vague on this issue. We would like a clarification of the responsibilities of both National Park Service and Bureau of Land Management on range improvements. We also feel that this may be an opportune time to bring it to the attention of the Washington Office. Bureau of Land Management grazing regulations are presently undergoing a major revision. It would be desirable to modify Bureau of Land Management grazing regulations to include a section similar to the Bureau of Land Management mineral management regulations (43 CFR 3109.5-2(e)) which requires consent of the National Park Service Regional Director before any actions are permitted. The comment period which originally ended on July 12, 1983 has been extended to August 11, 1983. If we are going to get anything done, immediate action must be taken.

Grazing is authorized on Glen Canyon National Recreation Area under Section 6 of the enabling legislation which reads as follows:

"The administration of mineral and grazing leases within the recreation area shall be by the Bureau of Land Management. The same policies followed by the Bureau of Land Management in issuing and administering mineral and grazing leases on other lands under its jurisdiction shall be followed in regard to the lands within the boundaries of the recreation area, subject to the provisions of Section 3 (a) and 4 of this act."

Section 3 (a) deals with valid existing mineral rights and United States mining law and Section 4 reads in part:

"The Secretary shall administer, protect and develop the recreation area in accordance with the provisions of the act of August 25, 1916 as amended and supplemented and with any other statutory authority available to him for the conservation and management of natural resources to the extent he finds such authority will further the purposes of this act:...."

Bureau of Land Management mineral regulations for surface management requirements as cited in the first paragraph recognize the need:

"to protect the surface and significant resources of the area, to preserve their use for public recreation, and to the condition that site specific approval on any lease will only be given upon concurrence by the Regional Director."

We feel that a similar provision should be made in the Bureau of Land Management regulations (43 CFR 4100) for actions which will affect the surface conditions of the area. This provision would be especially appropriate when considering range improvements (stock tanks, trail development, corrals, etc.), but may be needed in other aspects of grazing management, for example a situation involving seriously deteriorated range conditions. We feel that the Glen Canyon enabling legislation gives National Park Service the authority to carry out this type of provision under Section 4 of the Act. However, this interpretation authority is not universally accepted by all parties involved. The situation which is bringing this issue to a head is described below.

A grazing permittee has requested permission to build a trail off of Ahlstrom Point on to Romana Bench. The trail would come down the cliff in an area of high recreational use. Based on the cooperative agreement between National Park Service and the Bureau of Land Management of 1973 the Bureau of Land Management is carrying out an environmental assessment and at present intends to permit trail construction. National Park Service does not want trail construction because of the environmental impact and for its precedent in opening an area to grazing. In this situation the area was grazed prior to the construction of Glen Canyon Dam but rising waters of Lake Powell cut off livestock access. We have informed the Bureau of Land Management that boating cattle to the allotment is an acceptable alternative although we recognize this more costly to the permittee.

The allotment in question, the Lower Warm Creek Allotment, at one time took in all of the lower benches of Warm Creek Bay and all of the area that is now Padre Bay. Rising lake waters gradually inundated the vast majority of this allotment. The allotment is now just a fraction of the

size it once was with only 225 active AUM's. Gary Orton, the present permittee, apparently purchased the allotment permit about ten years ago, after inundation of most of the original allotment. He is authorized to run about forty-five cattle on the allotment from the 1st of November to the 31st of March each year. The cattle would be trucked from their summer range around Panguitch, Utah into the recreation area each fall and then trucked back out to the summer range in the spring. This is a distance of about 130 miles one way. There are no grazing fees being collected on AUM's on the bench that Mr. Orton wants access to. In fact, those AUM's were originally completely withdrawn from his allotment years ago when access was cut off. They are not now included on his permit at all.

Mr. Orton is reported to be acquainted with David Houseton, the Interior Deputy Assistant Secretary for Water Resources. Mr. Houseton is from Panguitch, Utah and has apparently shown an interest in this issue and reportedly has contacted the Bureau of Land Management on it.

At first the Bureau of Land Management said that Orton had just recently found a trail route onto the bench. However we have a memorandum dated January 31, 1979 that indicates the topic of this stock trail had come up before. The Park Service was not in favor of construction and recommended that that portion of the allotment that is no longer accessible be dropped from the permit. We have no record on any action that the Bureau of Land Management may have taken at that time.

The situation described is not unique. Range improvement projects are constantly coming in for review and discussion. One recent inquiry was for a boat dock on the lake to allow for improved access to an allotment. The scope and complexity of grazing management at Glen Canyon is so large that the potential exists for this situation to occur several times a year.

There are thirty-eight grazing allotments in Glen Canyon which cover about 72% of the recreation area or 891,632 acres supporting about 26,462 total animal unit months (AUM's). Grazing leases are administered by two Bureau of Land Management State Offices, four district offices and six resources area offices. There are cooperative agreements with the Bureau of Land Management State Offices in Arizona and Utah dating from 1973 which govern the procedures to be carried out in range management. These cooperative agreements are stale and many of the procedures outlined have not been followed in many years due to changes in the Bureau of Land Management grazing management techniques.

Glen Canyon is presently reviewing the status of grazing throughout the recreation area including interviews with all Bureau of Land Management range conservationists with allotment responsibilities on the recreation area and by a general field review of range conditions. A final report is due January 1, 1984. Grazing management needs have been recognized in the Glen Canyon Resources Management Plan as priority 7 out of 39. Priorities 1 thru 6 are mineral management related and are being addressed in the current Tar Sands EIS. An SRP on the subject was submitted to Region last year. One will be resubmitted again this year. The General Management Plan calls for a Grazing Management Plan.

We would like a clarification of the responsibilities of both National Park Service and Bureau of Land Management under the enabling legislation, specifically as they relate to the authorization of construction of range improvements on the recreation area. We feel that with the current revision of the Bureau of Land Management grazing regulations this may be an appropriate time to define procedures in those regulations similar to the procedures spelled out for surface protection in the Bureau of Land Management mineral management regulations. It may be necessary to bring this matter to the attention of the Washington Office. If so, we fully encourage it. Due to the short time frame for comments to the Bureau of Land Management grazing regulations, it is imperative that this matter be acted on as soon as possible. Note that we sent you comments on the content of the proposed Bureau of Land Management Grazing Regulations in a June 29, 1983 memorandum.

John O. Lancaster

LABelliJPE:drn

L3019



Memorandum

To: Regional Solicitor, Intermountain Region, Salt Lake City, Utah

From: Acting Regional Director, Rocky Mountain Region

Subject: NPS/BLM Grazing Management Responsibilities

Received Glen Canyon. A		
	INIT	DATE
Supt		
Asst Supt	1/11	8/24
Admin Off		
Ch Ranger	8	
Ch Maint		
Park Planner		
LE Spec		
Cons Mgmt		AUG 24 1983
Permit Mgt		
RF Unit Mgt		
Resource		
Rangers		

Glen Canyon National Recreation Area is one of the most active in the National Park System in terms of grazing permits. There are 38 allotments in the area, covering about 72% of the acreage, almost 900,000 acres. Leases are administered by the Bureau of Land Management.

In a recent memorandum (enclosed) the Superintendent expressed a need to clarify agency responsibility concerning range improvements (physical and habitat manipulation) as it involves the two agencies.

The Bureau has evidenced intent to approve proposed improvements for one of the allottees. The Glen Canyon Superintendent feels, and we concur, that for proper management of the area as a unit of the National Park System, we must be in a position to review and determine approval of such measures.

There is some question as to how agency regulations, mandates, and policies of the two agencies, combined with Glen Canyon's enabling legislation, should be interpreted in this regard.

We request that you review this issue and provide clarification of authorities and responsibilities.

A concurrent issue referenced in Superintendent Lancaster's memorandum involves proposed regulation changes by BLM regarding grazing management and their potential effects on allotments in NPS areas. A response to this issue has been made to BLM by Molly Ross in the WASO Solicitor's Office. She will share any information she has developed with you.

Given the scope of the proposed BLM regulation changes, we feel clarification of agency authority is very important.

(SGD) JAMES B. THOMPSON

Enclosure

cc: Office of the Solicitor (Wash, DC) enc.
JChapman:mak:8/22/83:234-3068



United States Department of the Interior

OFFICE OF THE SOLICITOR

INTERMOUNTAIN REGION
SUITE 6201, FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1180

September 29, 1983

Memorandum

To: Regional Director, National Park Service, Rocky Mountain Regional Office, 655 Parfet Street, P.O. Box 25287, Denver, Colorado 80225

From: Regional Solicitor, Intermountain Region

Subject: NPS/BLM Grazing Management Responsibilities in Glen Canyon National Recreation Area

You have requested our review and comment concerning the interpretation of the Glen Canyon enabling legislation, 86 Stat. 1311 (1972), 16 U.S.C.A. §§ 460dd to 460dd-9, and whether the National Park Service or the Bureau of Land Management has jurisdiction and control over construction of range improvements within the national recreation area. Apparently, this question stems from the request by a grazing permittee to build a livestock trail from Alstrom Point to the lower bench along Lake Powell called Romana Bench. This trail would provide access to a grazing area that is currently unavailable to grazing because the rising waters of Lake Powell have inundated the previous access route and blocked livestock access to this area of the NRA. NPS objects to the proposed trail construction because of the environmental impact and its impact on the administration of recreation activities. BLM, however, supports the trail construction.

The Glen Canyon enabling legislation does not provide a clear statutory provision as to whether NPS or BLM has jurisdiction over construction of range improvements within the NRA. Grazing is authorized within the NRA pursuant to section 6 of the enabling legislation. Section 6 provides:

The administration of mineral and grazing leases within the recreation area shall be by the Bureau of Land Management. The same policies followed by the Bureau of Land Management in issuing and administering mineral and grazing leases on other lands under its

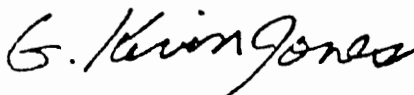
jurisdiction shall be followed in regard to the lands within the boundaries of the recreation area, subject to the provisions of sections 3(a) and 4 of this Act.

16 U.S.C.A. § 460dd-5.

However, the main purpose in establishing the NRA was "to provide for public outdoor recreation use and enjoyment... and to preserve scenic, scientific, and historic features contributing to public enjoyment of the area." 16 U.S.C.A. § 460dd. Further, the Secretary of the Interior "shall administer, protect, and develop the recreation area" in accordance with these principles. 16 U.S.C.A. § 460dd-3. Therefore, grazing and mineral activities within the NRA are to be compatible with the recreational use and enjoyment of Lake Powell and lands adjacent thereto. Further, these development activities are authorized by the Act so long as they do not have a significant adverse effect on the recreational use and enjoyment of the Glen Canyon National Recreation Area. 16 U.S.C.A. § 460dd-2(a). NPS is the agency best equipped to make this judgment.

However, the Glen Canyon enabling legislation does not adequately resolve the question whether NPS or BLM has jurisdiction over construction of range improvements within the NRA. Clarification of the responsibilities of NPS and BLM within the NRA is needed. Perhaps, this is best provided by policy guidance from Washington and a cooperative agreement. We concur in the suggestion made by John O. Lancaster, Superintendent, Glen Canyon NRA, to include in BLM's grazing regulations a regulation similar to 43 CFR § 3109.5-2(e) (1982). Such a regulation would clarify the jurisdiction over range improvements within the national recreation area.

REID W. NIELSON
Regional Solicitor

By 
G. KEVIN JONES
Attorney



United States Department of the Interior

OCT 27 1983

OFFICE OF THE SOLICITOR
INTERMOUNTAIN REGION
SUITE 6201, FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138 1180

October 25, 1983

Regional Director	
Deputy Regional Director	
Assistant Regional Director	
Regional Solicitor	
Regional Counsel	
Regional Administrator	
Regional Manager	
Regional Supervisor	
Regional Clerk	
Regional Secretary	
Regional File Clerk	
Regional Mail Room	
Regional Janitor	
Regional Custodian	
Regional Engineer	
Regional Electrician	
Regional Plumber	
Regional Painter	
Regional Carpenter	
Regional Welder	
Regional Machinist	
Regional Blacksmith	
Regional Farrier	
Regional Veterinarian	
Regional Nurse	
Regional Doctor	
Regional Pharmacist	
Regional Dietician	
Regional Nutritionist	
Regional Physiotherapist	
Regional Occupational Therapist	
Regional Speech Therapist	
Regional Audiologist	
Regional Optician	
Regional Ophthalmologist	
Regional Audiologist	
Regional Speech Therapist	
Regional Occupational Therapist	
Regional Physiotherapist	
Regional Nutritionist	
Regional Dietician	
Regional Pharmacist	
Regional Doctor	
Regional Nurse	
Regional Veterinarian	
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Regional Clerk	
Regional Secretary	
Regional Supervisor	
Regional Manager	
Regional Administrator	
Regional Counsel	
Regional Solicitor	
Assistant Regional Director	
Deputy Regional Director	
Regional Director	

Memorandum

TO: Regional Director, NPS, Rocky Mountain Region
P. O. Box 25287, Denver, CO 80225

FROM: Regional Solicitor, Intermountain Region
Salt Lake City, UT 84138

SUBJECT: NPS/BLM Grazing Management Responsibilities, Glen
Canyon National Recreation Area (NPS.SL.0008)

Reference is made to yours of August 24, 1983, and our memorandum of September 29, 1983, concerning the above subject.

As indicated in our memorandum of September 29, 1983, the area of responsibility provided in the Glen Canyon National Recreation Area Act of October 27, 1972, Pub. L. 92-593, is not clear cut, and there is an area of inconsistency within the Act. Because of the division of responsibility problems, we suggested and the National Park Service, through the Utah Director, and the State Director of the Bureau of Land Management entered into a master Memorandum of Understanding on February 1, 1973, covering the parks in Utah, and, Supplement No. 1 for Glen Canyon National Recreation Area, dated September 26, 1973. The Memorandum of Understanding for the Glen Canyon National Recreation Area attempted to spell out the procedures, the activities, and the responsibilities of the National Park Service and the Bureau of Land Management. A number of statutory and regulation changes have occurred over the years, and it appears to be necessary to revise the Memorandums of Understanding to reflect the changes or to cover areas which were not covered.

We suggest that a concerted evaluation of the MOU's be made for the parks in Utah and that the issue be taken up with the State Director for Bureau of Land Management. If the problems cannot be resolved on the local level, it may be necessary to advance the problems to a higher level to resolve the unsolved problems.

Both agencies must recognize that the continuation of grazing in Glen Canyon National Recreation Area is authorized by Congress and, under the provisions of Section 6 of that Act, the grazing

is to be administered by the Bureau of Land Management. The legislative history of Section 6 of the Act is rather sparse, but the original language was suggested by the Governor of the State of Utah in response to concerns over mining and grazing within the recreation area. Legislation for creation of the recreation area was being considered under both Senate and House Bills. Senate 27 did not have a provision similar to Section 6 and a letter from Director Hertzog to Senator Moss was introduced as a part of the record at a hearing held by the House on May 27, 1972, which provides:

I. Grazing: Use permits now administered by the Bureau of Land Management for grazing would continue to be administered as before if S.27 is enacted. The National Park Service would seek a cooperative agreement with the Bureau of Land Management which would assign this function to the Bureau. No present permit acreage would be changed unless a necessity arose to develop a visitor facility such as a camp site or marina at some point where livestock would have to be excluded.

The language proposed by the State of Utah was included in H.R.15716 of June 27, 1972, as Section 6. The first sentence provided, "the administration of mineral and grazing leases within the recreation area shall be under the jurisdiction of and shall be administered by the Bureau of Land Management." During the hearings, the National Park Service objected to the language, "shall be under the jurisdiction of," and in a letter from NPS. In H.R.92-1146 the committee recommended the striking of H.R.15716 and substituting therefore the basic language of S.27 with modifications, and Section 6 with the deletion of the objectionable words was recommended. The House and the Senate ultimately passed the Bill containing Section 6 without amendment and apparently no discussion on the floor of either house.

The second sentence of Section 6, as passed, requires BLM to follow the same policies as to grazing as it applies on lands outside of the recreation area. The last phrase, "subject to the provisions of Sections 3(a) and 4 of this Act," causes some additional confusion. Because Section 3(a) deals solely with mineral development, it may be argued that that provision of the last phrase relates only to mining for the term "mineral" was used before "grazing" in each instance in the paragraph. Such an interpretation would be consistent for the grazing uses were then in existence and the mineral development referred to obviously related to new mineral developments within the area. Adopting this rationale, then the language, "if he finds that such disposition would not have significant adverse affects on the Glen Canyon Project or on the administration of the National Recreation Area pursuant to this Act," is not applicable to

grazing leases in the recreation area. This application is consistent because grazing use is not a disposition as the word is used in the above-quoted sentence. This, then, leaves the conditioning factor for the grazing leases to be that imposed by Section 4 which applies the National Parks Organic Act to the recreation area.

In summary, Congress recognized the continuation of grazing uses for the Glen Canyon National Recreation Area, that BLM was to administer the grazing use and was to apply the same regulations on grazing use to the recreation area lands as it applied generally. Because of the above discussion, the language contained in the penultimate paragraph of memorandum of September 29, 1983, is modified to read as above set forth.

The specific issue, contained in the attached letter from the Superintendent and in your letter, concerns the issuance of a permit under Section 4 of the Taylor Grazing Act to a grazing permittee to make improvements within Glen Canyon National Recreation Area. The procedure for this activity is covered by the memorandum of understanding between NPS and BLM, supra. The MOU indicates that BLM is to be the handling agency for the improvement permits, which would be consistent with requirements of the same standards and regulations be applied inside as well as outside the recreation area. However, since BLM does not have jurisdiction over the land involved any permit for the building of improvements logically should be issued by National Park Service in accordance with the standard grazing regulations of BLM. Since the time of the MOU there have been several changes both statutory and regulatory which involves grazing and the MOU should be modified to accomodate those changes and to spell out the agency that is to issue permits on land within the recreation area.

The Superintendent of Glen Canyon suggested an inclusion in BLM's grazing regulation similar to 43 CFR 3109.5-2(e), and our memorandum of September 29, incurred in that suggestion. We hereby modify that concurrence because that particular regulation is one of general application and is too broad to be applicable to grazing within Glen Canyon National Recreation Area. Any amendment to the grazing regulations of BLM should be limited to the issuance of permits for the construction of improvements within the recreation area, and must be consistent with the requirements of Section 6 that the same principles are applicable within the area as are applied outside of the area.

We appreciate that over the years there has developed a differing philosophy and perhaps a breakdown in communications between the two agencies and in the attempt to spell out the precise responsibility of the two agencies is difficult. We will be very happy to assist both agencies an amendment to the memorandum of understanding to the end that the differing philosophies maybe

resolved at the local level. Because this problem affects the activities of the Bureau of Land Management, we have taken the liberty of furnishing a copy of this memorandum to the Utah State Director, Bureau of Land Management. If we can be of further service in this matter please advise.

David K. Nielson, for

REID W. NIELSON
Regional Solicitor

cc: State Director, BLM, Salt Lake City, UT

APPENDIX V
NAMES OF ALLOTMENT PERMITTEES
AND LIVESTOCK BRAND DESIGNATIONS

<u>ALLOTMENT NAME</u>	<u>PERMITTEES</u>	<u>BRANDS</u>
*SAN RAFAEL RESOURCE AREA		
Horseshoe Canyon Nov 16 - April 30	Chuehuru Brothers	unknown
*HENRY MOUNTAIN RESOURCE AREA		
Robbers Roost all year	Cross S Cattle Company % A.C. Ekker	+S
Flint Trail	UNALLOTTED	unknown
Sewing Machine Nov 16 - April 15	Charles D. Wells	D-W 4
	William Wells } William L. Wells }	T T ↓ X
Rockies Nov 1 - May 31	John Alexander	CI
	Evan Taylor	O
	Dyle Williams	↑
Waterpocket Oct 16 - May 31	Don E. Taylor } Don E. and Afton Taylor }	Y 4
	Berta Taft	7
Bullfrog Nov 1 - May 31	Bliss Brinkerhoff	KI B /
	Norman Van Dyke	
	Guy Coombs	G
Little Rockies	UNALLOTTED	unknown

<u>ALLOTMENT NAME</u>	<u>PERMITTES</u>	<u>BRANDS</u>
*ESCALANTE RESOURCE AREA		
Moody Nov 1 - March 31	Leland Haws Estate % Gary Haws	H 1
	Alfred and Connie Jepson % Kirk Lyman	V
Wagon Box Mesa Nov 1 - March 31	Leland Haws Estate % Gary Haws	H 1 W
	Stucki Land and Livestock % Darrel Stucki	X
Big Bown Bench Oct 16 - April 15	Ivan Lyman and Dell LaFevre % Ivan Lyman	J I F U
Escalante River Sept 1 - March 31	Glenn and Irvin Heppner % Glenn Heppner	M
Upper Cattle Nov 1 - June 15	Burns K. Black	H
	Mary Bullock	69
	Keith Carter	J I L N
	Myron Carter	44
	Anthony Coombs	4 X 4
	E.D. Haws	H 4
	Dell LeFevre	7x F J/
	Arthur and Ivan Lyonal	J I A

<u>ALLOTMENT NAME</u>	<u>PERMITTEES</u>	<u>BRANDS</u>
Lower Cattle Nov 1 - April 15	Barry and Robert Barnson	/B
	Brooks Ranches % Melvin Brooks	↑ IS
	Grand Liston	x
	Neal Liston	£
	Robert Liston	X
	Stanley Liston	A
	Thurman Spencer	IV
Chimney Rock Nov 1 - June	John Townsend	~ x
Fortymile Ridge Dec 1 - May 31	Arthur Evans	AE
	A. Delane Griffin	△ m
	Bobby Gene Griffin	4 ↵
	Cecil Griffin	74 71
	John Townsend	~
Soda Sept 1 - May 31	A. Delane Griffin Bobby Gene Griffin Cecil Griffin	same as above
Lake June 1 - Sept 30	Same as above for Soda Allotment	
Navajo Bench	UNALLOTTED	
Harveys Fear	UNALLOTTED formerly Robert Langston	unknown; see Last Chance Allotment
Spencer Bench	UNALLOTTED	

ALLOTMENT NAMEPERMITTEESBRANDS

Rock Creek - Mudholes
all year

Andy Anderson

A

Last Chance
all year

Robert Langston

X

Y

*KANAB RESOURCE AREA

Upper Warm Creek
Nov 1 - May 31

James A. Peterson

OY

Roland Allen

H X XI Y

Lower Warm Creek
Nov 1 - March 31

Gary Orton

H

Nipple Bench
Nov 1 - April 30

Arthur Evans

J

Clark Bench
Aug 1 - May 31

Merrill MacDonald

=X

/DA

J

X

Dennis MacDonald

Q

Bunting Well (Judd Hollow)
Nov 1 - May 31

Preston Bunting and Son

X

Blue Pools
Aug 1 - May 30

Jackson Cattle Company

n'

*VERMILLION RESOURCE AREA

Ferry Swale - UT
Oct 16 - May 31

Kanab LDS Stake
% Evan McAllister

Y

Ferry Swale - AZ
Oct 16 - May 31

same as above

<u>ALLOTMENT NAMES</u>	<u>PERMITTEES</u>	<u>BRANDS</u>
Wahweap all year	Melvin Schoppman	YΓ Y WL
Antelope Island Nov 1 - March 15	same as above	
Lees Ferry Nov 1 - May 15	E.J. Graff	KE EK
*SAN JUAN RESOURCE AREA		
Indian Creek Dec 1 - June 16	Indian Creek Cattle Company %Robert B. Redd	∇ T ///
White Canyon - Woodenshoe all year	White Canyon Cattle Company %Cloyde Johnson (Sandy)	↙
Lake Canyon Oct 6 - June 5	TY Cattle Company % Mel Dalton	Y
Slickhorn Oct 6 - June 15	Preston Nielson } Dorothy Nielson }	Δ
Perkins Brothers Nov 1 - May 31	Clarence and Ray Perkins Kloyd Perkins (Dorthy) George Perkins % Clarence Perkins Clarence Perkins Ray Perkins	K+ =
		↑
		H
		4 7
Texas Muley Not 15 - May 31	AA Cattle Company % Lisle Adams	IN

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APPENDIX VI
ALLOTMENT WORK SHEETS

ALLOTMENT NAME Horseshoe Canyon BLM RESOURCE AREA San Rafael
NPS MANAGEMENT ZONE Recreation & Resource Utilization (75%) Natural (25%)
Total Acres 106,800; Acres on NRA 34,180; %Total Acres on NRA 32

Vegetational Characteristics

Association(s): Northern Desert Shrub

Communities (%): Blackbrush

Unique Allotment Resources

Ecological:

Recreational Opportunities/use: Canyons adjacent to Canyonlands National Park

Cultural:

Permitees: (1) Names: Chuehuru Brothers

Type and Number of Livestock: Sheep (1,300)

Season of Use: November 16 to April 30

Grazing System: Spring/Winter

Allotment Classification: Improve

Feral Livestock: species(number) Cattle may be trespass from adjacent allotments,
Range Condition and Trend numbers unknown

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Fair

Range Potential: Good

Range Trend: unknown - probably static

Allotment Management Plan: Completed 1968, never implemented

Production/Utilization Studies: None; some transects on the allotment were read in 1983 and 1979. Results not in hand.

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Fence construction to prohibit trespass cattle.

An EIS for the resource area is due to be written in 1988. The BLM intends to perform range studies prior to 1988 for inclusion of data in the final document.

Known Problems on the Allotment:

Trespass cattle from the adjacent Robbers Roost allotment, some with brands and others without are known to be on the area; some of the more heavily used riparian and sandy areas are known to be in poor condition due to livestock overutilization. Present permittee classified as a problem permittee by BLM range conservationist.

ALLOTMENT NAME Horseshoe Canyon

BLM Proposed Mitigation of Impacts: Fence construction to prohibit trespass cattle.

COMMENTS: (General):

Effective December, 1983, a new permittee will become the "new owner" and the class of livestock will change to cattle. An EA is being done and it was mentioned to NPS that their input is desired regarding this change. By the first of 1984, all AUM's will be recalculated and the number of cattle to be grazed will be definitely determined. The range can estimated approximately 2030 AUM's to be used in the 1984 season. Presently (1982-1983) only 44 were utilized though the active preference is for 5015 active and 2507 AUM's in non use. The last high use year was 1978-79 with 3,773 AUM's and most other years less than 1,000.

This is the northernmost allotment within the NRA and one of the most distant from the resource area office of the BLM which manages it and the only allotment of the NRA managed out of Price. A visit to this RA office was not scheduled or done, but all contacts made by telephone with the range conservationist handling the permit there.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Robbers Roost BLM RESOURCE AREA Henry Mountain
 NPS MANAGEMENT ZONE Recreation & Resource Utilization, Development - Hans Flat area
 Total Acres 205,929; Acres on NRA 23,245; %Total Acres on NRA 11

Vegetational Characteristics

Association(s): Pinyon Juniper Woodlands

Communities (%): grass (18%), mixed desert shrub (2%), Sand Sage (3%), barren (35%).
 Blackbrush (16%), Mormon Tea (5%), pinyon/juniper (15%), annual forbs (3%)

Unique Allotment Resources

Ecological: Desert Bighorn Sheep were reintroduced into the district in February of 1982.

Recreational Opportunities/use: Developed recreational overlooks in Orange Cliffs area.

Cultural:

Permitees: (1) Names: A.C Ekker (Cross S Cattle Co.)

Type and Number of Livestock: Cattle (440); Horses (20)

Season of Use: Year Long

Grazing System: Single Pasture

Allotment Classification: Maintain

Feral Livestock: species(number) In trespass situation with adjacent allotments.

Range Condition and Trend

Number of Trend Plots on Allotment 8; on NRA 0

Dates trend plots read: 1969, 1979

Range Condition: Fair to Good

Range Potential: Good

Range Trend: 6 of 8 plots rated fair
 50% improving, 50% static as of 1979 (only for plots outside NRA)

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): cattle guard (*constructed by NPS in 1983*)

Proposed Improvements(on the NRA): NPS is presently constructing a fence along allotment boundaries to constrain livestock.

Known Problems on the Allotment: The Hans Flat area is being overutilized by cattle, and the BLM has identified impacts to vegetation and soils in the area; there exists a potential conflict between the livestock and the recently re-introduced desert bighorn sheep; the permittee allegedly has made no effort to constrain trespass cattle.

A utilization study would reveal a "distribution problem" (cattle not spread over the entire allotment and only 63% of this allotment is considered range-land as given in ETS) and the allotment cannot support proposed cattle number increases.

ALLOTMENT NAME Robbers Roost

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

Ekker in January of 1983, was adamant about cattle and two horses found on the Flint Trail allotment - that there was no way of telling they were unbranded unless they were shaved, but didn't deny they were his and removed them but they were found back there later.

The preference is for 5,288 AUM's and all have been utilized this past season, 3/1 to 2/28 - it has always been an all year season for use as well. Ten years ago there was a preference for 1,325 sheep AUM's but nothing since before 1970 shows "use" by sheep.

There have been numerous past problems with this permittee (A.C. Ekker) and the recurring current status is of cattle trespass (on Horseshoe and into the unallotted Flint Trail allotment in the Elaterite Basin area).

(NPS Site Visit): Overutilization of range in the Hans Flat area has been verified

(BLM Allotment Manager):

ALLOTMENT NAME Flint Trail BLM RESOURCE AREA Henry Mountain
NPS MANAGEMENT ZONE Natural (75%) Recreation & Resource Utilization (25%)
Total Acres 115,389; Acres on NRA 71,800; %Total Acres on NRA 62

Vegetational Characteristics

Association(s): Northern Desert Shrub

Pinyon Juniper Woodland

Communities (%): grassland (8%); shadscale (6%); mixed desert shrub (9%);
sagebrush (2%); Pinyon-Juniper (12%); Barren (46%)

Unique Allotment Resources

Ecological: Desert bighorn sheep re-introduced in 1983 in Elaterite Basin area

Recreational Opportunities/use: Adjacent to Canyonlands; considerable hiking
in area; conflict with backpackers.

Cultural:

Permitees: (0) Names: unallotted *(will be ^{A.C.} Ekker)*

Type and Number of Livestock: none *cattle (200) - See General Comments*

Season of Use: non-use

Grazing System: non-use

Allotment Classification:

Feral Livestock: species(number) cattle and horses in trespass from adjacent Robbers

Range Condition and Trend Roost allotment; numbers unknown

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: unknown *Fair* *as per GMP*

Range Potential: unknown *Good* Range Trend: unknown

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA): *2 tanks*

Proposed Improvements(on the NRA): 2 of 4 stock tanks rescently proposed are on
the NRA; these tanks are to be reconstructed.

Known Problems on the Allotment: Tresspass livestock from adjacent Robbers Roost
allotment. Conflicts with recreationists in the Elaterite Basin area.

ALLOTMENT NAME Flint Trail

BLM Proposed Mitigation of Impacts: BLM has considered a request from the permittee(s) of the adjacent Cedar Point allotment (none on NRA) to utilize the Flint Trail allotment for a period of two years to give the Cedar Point allotment an "emergency rest".

COMMENTS: (General): The position of the NPS is that the Flint Trail remain unallotted to avoid conflicts between livestock and recreationists as well as ecological and cultural resources; the NPS prefers "no action" on stock tank reconstruction.

Presently under "emergency use" from 11/21/83/31/1984 ; 200 head of cattle — no indicated AUMs .

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Sewing Machine BLM RESOURCE AREA Henry Mountain
 NPS MANAGEMENT ZONE Recreation & Resource Utilization (90%) Natural (10%)*
 Total Acres 129,316; Acres on NRA 65,394; %Total Acres on NRA 51

Vegetational Characteristics

Association(s): Northern Desert Shrub
Pinyon Juniper Woodlands

Communities (%): grassland (9%); shadscale (11%); mixed desert shrub (5%);
pinyon-juniper (9%); Barren (43%)

Unique Allotment Resources

Ecological: Desert bighorn sheep reintroduced into the Elaterite Basin area in February 1983.

Recreational Opportunities/use:

Cultural:

Permitees: (3) Names: C.D. Wells, W. Wells, W.L.Wells

Type and Number of Livestock: cattle (120); sheep (unknown)

Season of Use: November 16 to April 15

Grazing System: Single Pasture Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Good

Range Potential: Good Range Trend: unknown

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 3.5 miles of road is kept maintained (not upgraded) for the transportation of cattle on and off the allotment.

Proposed Improvements(on the NRA): Water improvements were proposed to mitigate distribution problems were proposed in 1982 - there has been no action on this.

Known Problems on the Allotment: This allotment is adjacent to the Elaterite Basin area where desert bighorn sheep have recently been re-introduced, and it is also adjacent to Canyonlands National Park in the vicinity of Water Holes Flat near Sunset Pass; there is a livestock distribution problem - only 63% of the total acreage is rangeland and 57% of that is in the mid-successional stage.

* Natural Zone is that area of the Colorado River through Cataract Canyon.

ALLOTMENT NAME Sewing Machine

BLM Proposed Mitigation of Impacts: Water improvements to lessen distribution problem.

COMMENTS: (General): The BLM range conservationist indicated in 1983 that the Wells family are model permittees. Range condition on this allotment has gone from fair to good. A site visit in 1978 showed vegetative conditions as being excellent.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Rockies BLM RESOURCE AREA Henry Mountain
NPS MANAGEMENT ZONE Natural (50%) Recreation and Resource Utilization (50%) Development*
Total Acres 169,038; Acres on NRA 35,573; %Total Acres on NRA 21

Vegetational Characteristics

Association(s): Northern Desert Shrub

Pinyon Juniper Woodlands

Communities (%): grassland (4%); Shadscale (3%); mixed desert shrub (14%); Sagebrush (3%); Blackbrush (28%); pinyon-juniper (11%); Barren (33%)

Unique Allotment Resources

Ecological: Mt. Holmes and Mt. Ellsworth are of significant scenic value, both are within the allotment adjacent to the NRA boundary.

Recreational Opportunities/use: Lake boating and hiking

Cultural:

Permitees: (3) Names: J. Alexander, E. Taylor, D. Williams

Type and Number of Livestock: Cattle (680); sheep (unknown)

Season of Use: November 1 to May 31

Grazing System: Deferred Rotation (2 pastures) Allotment Classification: Improve

Feral Livestock: species(number) goats and burros**

Range Condition and Trend

Number of Trend Plots on Allotment 9; on NRA 0

Dates trend plots read: 1968, 1980

Range Condition: Fair; 75% of total allotment acreage is considered rangeland, 73% of which is in stable condition.

Range Potential: Good

Range Trend: no apparent overall trend - static

Allotment Management Plan: AMP prepared in 1966; presently implemented.

Production/Utilization Studies: insufficient information

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment: There are presently livestock/recreationist conflicts in side canyons and beach areas used as undeveloped campsites by lake recreationists.

Over-utilization of riparian areas.

Burros in Millard Canyon on NRA.

**Previous verified sighting (7 individuals) May 1976 at the north rim of Swett Canyon, impacts unknown. Goats and burros on BLM land adjacent to NRA.

* Development Zone is only that travel corridor along Highway 95

ALLOTMENT NAME Rockies

BLM Proposed Mitigation of Impacts: The recreation/livestock conflicts could be minimized if the livestock were removed from the allotment prior to the Easter weekend invasion of recreationists.

COMMENTS: (General):

(NPS Site Visit): Flown by helicopter in June 1983 as part of a review study on the Little Rockies National Natural Landmark status. Accompanied by BLM Surface Protection Specialist from the resource area office.

(BLM Allotment Manager):

ALLOTMENT NAME Waterpocket BLM RESOURCE AREA Henry Mountain
NPS MANAGEMENT ZONE Recreation & Resource Utilization (95%) Development (5%)*
Total Acres 81,179; Acres on NRA 33,576; %Total Acres on NRA 41

Vegetational Characteristics

Association(s): Northern Desert Shrub

Communities (%): grassland (13%); Shadscale (14%); mixed desert shrub (6%); Blackbrush (33%); Snakeweed (3%); Mormon Tea (5%); Barren (25%)

Unique Allotment Resources

Ecological:

Recreational Opportunities/use: Adjacent to Capitol Reef National Park.

Cultural:

Permitees: (3) Names: D. Taylor; A. Taylor; B. Taft

Type and Number of Livestock: Cattle (360); Sheep (25)

Season of Use: October 16 to April 31

Grazing System: Single Pasture

Allotment Classification: Custodial

Feral Livestock: species(number) Trespass cattle in Halls Creek drainage

Range Condition and Trend

Number of Trend Plots on Allotment 4; on NRA 0

Dates trend plots read: 1968, 1979

Range Condition: Fair

Range Potential: Poor (1983 EIS)

Range Trend: 50% static; 50% declining

Allotment Management Plan: Completed in 1966; not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): Stock trail from Halls drainage to Halls Mesa. Fence repairs are needed; BLM has proposed bouys on fences which are inundated by rising lake levels.

Known Problems on the Allotment: Available trend studies indicate a lower number of cattle should graze on the allotment than the numbers which could be allowed to graze if soil vegetation inventory information were used.

Rising lake levels and recreationists have damaged fences.

Current EIS calls for 100% increase in stocking levels in spite of trend conditions which indicate a range condition decline.

Over-utilization of riparian habitat. Distribution problem.

* Development Zone includes Bullfrog and the travel corridor along the Burr Trail.

ALLOTMENT NAME Waterpocket

BLM Proposed Mitigation of Impacts: To avoid conflicts with recreationists, cattle should be removed from the allotment prior to or by April 15th and the Easter weekend.

COMMENTS: (General): Capitol Reef's in park part of this allotment may be the most environmentally sensitive area in that park. They view the Hall Creek Narrows of particular scientific and visitor interest. They want special protection, with fencing, of natural water sources and if necessary, piping water outside of any natural riparian zone. Halls Creek is a long, roadless, proposed wilderness within Capitol Reef.

(NPS Site Visit): Halls Mesa was walked in June 1983 and the Halls Creek drainage flown by helicopter the same week. Verified locations of use by cattle where known cattle/recreationist conflicts have been known to occur.

(BLM Allotment Manager):

ALLOTMENT NAME Bullfrog BLM RESOURCE AREA Henry Mountain
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 92,824; Acres on NRA 855; %Total Acres on NRA 1

Vegetational Characteristics

Association(s): Northern Desert Shrub
Pinyon Juniper Woodland

Communities (%): grassland (7%); Shadscale (19%); mixed desert shrub (6%);
Sagebrush (3%); Blackbrush (7%); Mormon Tea (2%); pinyon-juniper (4%); Barren (48%)

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (3) Names: B. Brinkerhoff, N. VanDyke, G. Coombs

Type and Number of Livestock: Cattle (355), Sheep (unknown)

Season of Use: November 1 to May 31

Grazing System: Deferred Rotation Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 7; on NRA 0

Dates trend plots read: 1968, 1980

Range Condition: Fair; 51% of allotment is considered rangeland, 43% of which is improving, 28% declining and 29% static

Range Potential: Good Range Trend: 3 of 7 plots rated Poor

Allotment Management Plan: none (Grazing system implemented in 1969)

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment: Over-utilization of riparian areas.

ALLOTMENT NAME Bullfrog

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Little Rockies BLM RESOURCE AREA Henry Mountain
NPS MANAGEMENT ZONE Natural
Total Acres 67,690; Acres on NRA 35,414; %Total Acres on NRA 52

Vegetational Characteristics

Association(s): Northern Desert Shrub

Communities (%): Shadscale (5%); mixed desert shrub (8%); Blackbrush (38%);
Barren (46%)

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (0) Names: Unallotted

Type and Number of Livestock: none

Season of Use: non-use

Grazing System: non-use

Allotment Classification:

Feral Livestock: species(number) Goats (small, apparently not expanding herd)

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: unknown - 56% of the allotment is rangeland, 76% of which is in
the mid-successional stage

Range Potential: unknown Range Trend: unknown

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment: Lack of good water distribution,

ALLOTMENT NAME Little Rockies

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): This allotment is a new allotment that NPS has only been aware of since 1983 - it apparently was broken out of the Rockies allotment.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Moody BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural (60%) Recreation & Resource Utilization (40%)
Total Acres 49,341; Acres on NRA 29,576; %Total Acres on NRA 60

Vegetational Characteristics information undetermined
Association(s):

Communities (%):

Unique Allotment Resources
Ecological: Purple Hills

Recreational Opportunities/use:

Cultural:

Permitees: (2) Names: L. Haws (Estate of), A. & C. Jepson

Type and Number of Livestock: Cattle (151)

Season of Use: November 1 to March 31

Grazing System: Season Long

Allotment Classification: Custodial

Feral Livestock: species(number) Horses (13)

Range Condition and Trend

Number of Trend Plots on Allotment 2; on NRA 1

Dates trend plots read:

Range Condition: unsuitable (33,468 acres), poor (7,548 a), fair (8,325 a)

insufficient information

Range Potential: to rate Range Trend: static

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 1 spring development
put in 1983 — 3 reservoirs (tanks)

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Wild Horses in Colt Mesa, indications of heavy trailing (soil deflation).

During the period 1980-83, licensed use of AUMs was in excess of active preference.

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ALLOTMENT NAME Moody

BLM Proposed Mitigation of Impacts: Remove wild horses.

COMMENTS: (General):

(NPS Site Visit): Middle Moody Canyon was hiked in June 1983. Cattle have heavily impacted sites along the canyon rim. Road into the canyon up to the NRA boundary had been recently graded.

(BLM Allotment Manager):

ALLOTMENT NAME Wagon Box Mesa BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 28,041; Acres on NRA 770; %Total Acres on NRA 3

Vegetational Characteristics information undetermined
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (2) Names: L. Haws (Estate of), D. Stucki (Stucki Land and Livestock)

Type and Number of Livestock: Cattle (59)

Season of Use: November 1 to March 31

Grazing System: Season Long

Allotment Classification: Custodial

Feral Livestock: species(number) Horses (13)

Range Condition and Trend

Number of Trend Plots on Allotment 2; on NRA 0

every year
Dates trend plots read:

Range Condition: unsuitable (16,142 acres), fair (7,410 a), poor (4,139 a),
good (350 a)

Range Potential: unsuitable Range Trend: static

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment: Presence of wild horses in *Wagon Box and
Silver Falls areas*

ALLOTMENT NAME Wagon Box Mesa

BLM Proposed Mitigation of Impacts: Remove wild horses.

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Big Bown Bench BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 18,245; Acres on NRA 3,858; %Total Acres on NRA 21

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (1) Names: I. Lyman and D. LaFevre

Type and Number of Livestock: Cattle (198)

Season of Use: October 16 to April 15

Grazing System: Deferred Rotation Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 3; on NRA 0

Dates trend plots read:

Range Condition: Fair (11,155 acres), Poor (3,165 a), Unsuitable (1,691 a),
Good (236 a)

Range Potential: unknown Range Trend: static

Allotment Management Plan: AMP prepared in 1970; presently implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Big Bown Bench

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Escalante River BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 75,209; Acres on NRA 53,825; %Total Acres on NRA 72

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Coyote Canyon

Cultural:

Permittees: (1) Names: G. & I. Heppner

Type and Number of Livestock: Cattle (223)

Season of Use: September 1 to March 31

Grazing System: Deferred Rotation Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 8; on NRA 6

... 2 years
Dates trend plots read:

Range Condition: Fair to Unsuitable; fair(36,059 acres), unsuitable (20,796 a), poor (13,606 a), good (5,483 a) Riparian Condition/Trend: Fair / Static

Range Potential: unknown Fair Range Trend: static

Allotment Management Plan: Prepared in 1981; not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 2 catchments (tanks)

Proposed Improvements(on the NRA):
1 cattleguard
1 slickrock dam
15 miles of fencing
enlargement of 2 existing slickrock tanks

Known Problems on the Allotment: Over-utilization in Coyote Canyon.

Egypt Bench is heavily over grazed with little or no use on the rest of the allotment - there are limited water sources.

The permittee has filed for bankruptcy and had been charged by the BLM for being in trespass by having cattle on the river bottom all year.

Hiker/cattle conflicts in Coyote Gulch. March through June and August through September are heavy hiker use periods and these dates partially overlap with livestock use. Fences put in at the head of Coyote Gulch do not appear to hold cattle - they are pushed right over by the cattle trying to get to water or driven through the Canyon ahead of hikers.

ALLOTMENT NAME Escalante River

BLM Proposed Mitigation of Impacts: Improve water sources.

COMMENTS: (General): The Escalante River Canyon was designated as a Natural Area in December 1970 and qualifies as an instant Wilderness Study Area (BLM designation) because it was designated as "natural" prior to November 1975. BLM considers the maintenance of fences put in at the head of Coyote Gulch to constrain cattle the responsibility of NPS.

(NPS Site Visit): Several miles of Coyote Gulch were hiked and verification of cattle impacts were made.

(BLM Allotment Manager):

ALLOTMENT NAME Upper Cattle BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 129,201; Acres on NRA 6,946; %Total Acres on NRA 6

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (8) Names: (See Appendix I)

Type and Number of Livestock: Cattle (957)

Season of Use: November 1 to June 15

Grazing System: Deferred Rotation, 2 pasture Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 12; on NRA 0

every 4 years
Dates trend plots read:

Range Condition: Fair to Unsuitable; fair (68,970 acres), unsuitable (24,751 a),
poor (22,458 a), good (13,212 a) Riparian Condition/Trend: Fair / Static

Range Potential: unknown Range Trend: static

Allotment Management Plan: Prepared in 1976; not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA): 1 reservoir (tank)

Proposed Improvements(on the NRA): Develop water on all parts of the allotment.

Known Problems on the Allotment: Lack of water, in traditional winter use areas,
for spring grazing period. This creates a situation where the same areas are
grazed in the spring every year.

ALLOTMENT NAME Upper Cattle

BLM Proposed Mitigation of Impacts: Develop water sources,
Implement a 3 pasture deferred rotation grazing system.

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Lower Cattle BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 83,049; Acres on NRA 17,300; %Total Acres on NRA 21

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Coyote Gulch

Cultural:

Permitees: (7) Names: (See Appendix I)

Type and Number of Livestock: Cattle (680)

Season of Use: November 1 to May 15

Grazing System: Season Long *April*

Allotment Classification: Maintain

Feral Livestock: species(number)

Range Condition and Trend

Number of Trend Plots on Allotment 5; on NRA 0

every last Dates trend plots read:

Range Condition: Fair (49,065 acres), poor (14,656 a), unsuitable (11,646 a), good (7,682 a)

Range Potential: unknown

Range Trend: static to up

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Cattle in Coyote Gulch may be coming down from this allotment. Coyote Creek forms the allotment boundary between this allotment and Chimney Rock allotment.

✓
ALLOTMENT NAME Lower Cattle

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit): Hiked several miles of Coyote Gulch and verified the cattle impacts to the riparian areas.

(BLM Allotment Manager):

ALLOTMENT NAME Chimney Rock BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 34,361; Acres on NRA 4,589; %Total Acres on NRA 13

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Heavy recreational use times in Coyote Gulch
are from March to June and August and September.

Cultural:

Permitees: (1) Names: J. Townsend

Type and Number of Livestock: Cattle (356)

Season of Use: November 1 to June 15

Grazing System: Deferred Rotation Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 8; on NRA 1

2 plots
Q
Dates trend plots read:

Range Condition: Fair (23,018 acres), Poor (9,612 a), Unsuitable (1,496 a),
Good (235 a)

Range Potential: unknown Range Trend: static

Allotment Management Plan: Prepared in 1976; presently implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Cattle continually get into Coyote Gulch because
the fences at the head of the canyon do not hold them back. There are livestock/
recreationist conflicts in Coyote Gulch.

✓
ALLOTMENT NAME Chimney Rock

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): In February of 1983, Townsend found 10 head of his cattle in Coyote Gulch and drove them out. It is felt that responsibility for maintaining fences at the head of the canyon belongs to NPS.

(NPS Site Visit): Hiked several miles of Coyote Gulch to verify the impacts created by cattle.

(BLM Allotment Manager):

ALLOTMENT NAME Fortymile Ridge BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural Cultural (1%)
Total Acres 45,111; Acres on NRA 16,704; %Total Acres on NRA 37

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Coyote Gulch

Cultural:

Permittees: (5) Names: A. Evans, A. Griffin, B. Griffin, C. Griffin, J. Townsend

Type and Number of Livestock: Cattle (289)

Season of Use: December 1 to May 31

Grazing System: Rest Rotation

Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 7; on NRA 2

2 plot
Dates trend plots read:

Range Condition: Fair

Range Potential: ~~unknown~~ Fair Range Trend: Static

Allotment Management Plan: Prepared in 1981 and implemented in 1982

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 4 miles of fence
2 water catchments

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Cattle/ recreationist conflicts.

ALLOTMENT NAME Fortymile Ridge

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit): Hiked several miles of Coyote Gulch and verified cattle impacts.

(BLM Allotment Manager):

ALLOTMENT NAME Soda BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural (78%) Development (20 %)* Cultural (2%)
Total Acres 66,048; Acres on NRA 54,690; %Total Acres on NRA 83

Vegetational Characteristics
Association(s):

Communities (%): Blackbrush

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural: Davis Gulch (the designated Cultural Zone)

Permitees: (3) Names: A., B. and C. Griffin

Type and Number of Livestock: Cattle (164)

Season of Use: October 1 to May 31

Grazing System: Deferred Rotation

Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 4; on NRA 2

1 plot on Dates trend plots read:

Range Condition: Fair

Riparian Condition/Trend: Unknown/Static

Range Potential: ~~unknown~~ Fair Range Trend: Static

Allotment Management Plan: Prepared in 1982; not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): *2 wells
1 mile stock trail
3 spring developments
1 Corral*

Proposed Improvements(on the NRA): 4 spring developments and $\frac{1}{2}$ mile of fence

Known Problems on the Allotment: Lack of water.

*Development Zone is the travel corridor along the Hole-in-the-Rock Trail.

ALLOTMENT NAME Soda

BLM Proposed Mitigation of Impacts: Develop water sources.

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Lake BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 23,441; Acres on NRA 5,283; %Total Acres on NRA 23

Vegetational Characteristics

Association(s): Pinyon Juniper Woodlands

Communities (%): Pinyon-juniper

Unique Allotment Resources

Ecological: Deer range, Eagle nesting sites. Wildfires have occurred over the area and are generally left to extinguish themselves.

Recreational Opportunities/use: 50 Mile Mountain hiking trails; use light but extensive. Area has potential to absorb increased backpacking use.

Cultural: see General COMMENTS

Permitees: (3) Names: A., B. and C. Griffin

Type and Number of Livestock: Cattle (237)

Season of Use: June 1 to September 30

Grazing System: Season Long

Allotment Classification: Maintain

Feral Livestock: species(number) Cattle (11)

Range Condition and Trend

Number of Trend Plots on Allotment 4; on NRA 0

Dates trend plots read: every year

Range Condition: Poor to Unsuitable; poor (12,125 acres), unsuitable(5,735 a), fair (5,461 a), good (120 a)

Range Potential: unknown

Range Trend: static

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 2 spring developments

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Feral cattle. There is extreme over-utilization by both feral and domestic cattle.

ALLOTMENT NAME Lake

BLM Proposed Mitigation of Impacts: Removal of feral cattle.

COMMENTS: (General):

There have been 1,550 cultural sites recorded by BLM in the K/E EIS area. In order of most frequent occurrence, they are: open sites (indicative of limited activity areas), architectural sites (storage and habitation), and petroglyph and pictographic sites. The open sites include chipping stations, seasonal campsites, explorative quarry sites, and burial sites. Architectural sites are characterized by cists, granaries, pithouses, kivas, pueblos, and rock shelters.

Data on the cultural affiliation associated with these sites is limited, but it is assumed that cultures represented are: Anasazi, Virgin/Kayenta, Fremont, Southern Paiute, Pueblo, Ute, Shoshone, and Navajo.

The interpretive and scientific values of sites in the area are high. Site densities might range from 6.4 per square mile in the Zion area to 10 to 12 sites per square mile in the remaining areas: an average of 10 is not unrealistic. All sites are considered important and have the potential to yield information regarding historical, cultural, and natural aspects of our heritage. (BLM 1980)

(NPS Site Visit): Navajo Point was surveyed on the ground and the cliff faces of Fiftymile Mountain were surveyed and photographed from the air by helicopter in April 1983. Locations of cliff dwellings verified.

(BLM Allotment Manager):

ALLOTMENT NAME Nayajo Bench BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 7,682; Acres on NRA 7,682; %Total Acres on NRA 100

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (0) Names: unallotted (formerly Robert Langston)

Type and Number of Livestock: none

Season of Use: non-use

Grazing System: non-use

Allotment Classification:

Feral Livestock: species(number) Horses (unknown)

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Non-Range

Range Potential: none Range Trend: unknown

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Lack of water.
Feral horses.

7
ALLOTMENT NAME Navajo Bench

BLM Proposed Mitigation of Impacts: Retain as unallotted.

COMMENTS: (General): Because of lack of water and extreme isolation this area cannot be grazed by livestock, Restricting livestock use from this allotment will maintain the present, satisfactory wildlife habitat.

(NPS Site Visit): Area flown by helicopter in April 1983 and the presence of feral horses was verified as being in this general area of Harvey's Fear.

(BLM Allotment Manager):

ALLOTMENT NAME Harveys Fear BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 4,566; Acres on NRA 2,466; %Total Acres on NRA 54

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (0) Names: Unallotted (formerly Robert Langston)

Type and Number of Livestock: none (20 years ago use was by Sheep)

Season of Use: non-use

Grazing System: non-use

Allotment Classification:

Feral Livestock: species(number) Horses(7)

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Non-Range

Range Potential: none Range Trend: unknown

Allotment Management Plan: none

Production/Utilization Studies: none

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Geologic erosion will continue as a watershed problem.

Presence of wild horses has caused heavy trailing and spring soil deflation.

This rough area of low productivity could be further damaged by any appreciable build-up of wild horse numbers. Four horses had been verified by BLM in 1975.

NPS counted seven horses in April 1983 - one of which was a colt.

ALLOTMENT NAME Harveys Fear

BLM Proposed Mitigation of Impacts: Retain as unallotted.

COMMENTS: (General): Because of lack of water and extreme isolation this area cannot be grazed by livestock,
Restricting livestock use from this area will help maintain the present satisfactory wildlife habitat.

(NPS Site Visit): Verification of presence of feral horses when the area was flown by helicopter in April 1983,

(BLM Allotment Manager):

ALLOTMENT NAME Spencer Bench BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural
Total Acres 8,505; Acres on NRA 7,825; %Total Acres on NRA 92

Vegetational Characteristics undetermined information

Association(s):

Communities (%):

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (0) Names: Unallotted (formerly Robert Langston)

Type and Number of Livestock: none

Season of Use: non-use

Grazing System: non-use

Allotment Classification:

Feral Livestock: species(number) none known; *7 horses on adjoining allotments*

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Non-Range (Rated Fair in E.I.S.)

Range Potential: none Range Trend: Static in E.I.S.

Allotment Management Plan: none

Production/Utilization Studies: *none*

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): *none*

Known Problems on the Allotment: Lack of water.

ALLOTMENT NAME Spencer Bench

BLM Proposed Mitigation of Impacts: Not allowing any future grazing on the allotment

COMMENTS: (General): Because of lack of water and extreme isolation this area cannot be grazed by livestock. Restricting livestock use from the allotment will help maintain the present satisfactory wildlife habitat.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Rock Creek - Mudholes BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Natural (90%) Development (10%)*
Total Acres 111,267; Acres on NRA 69,978; %Total Acres on NRA 63

Vegetational Characteristics

Association(s): Pinyon Juniper Woodlands

Communities (%):

Unique Allotment Resources

Ecological: Elevations range from the 6000' Junipered Kaiparowits Bench to the 3700' slickrock shoreline of Lake Powell

Recreational Opportunities/use: Lake boating

Cultural: Rescently found Rock Creek archeological site

Permitees: (1) Names: A. Anderson

Type and Number of Livestock: Cattle (92)

Season of Use: Year Long

Grazing System: Deferred Rotation Allotment Classification: Improve

Feral Livestock: species(number) None known

Range Condition and Trend

Number of Trend Plots on Allotment 6; on NRA 2

2 plots
@ Dates trend plots read:

Range Condition: Unsuitable to Fair; unsuitable (61,968 acres), fair (27,910 a), poor (13,989 a), good (7,400 a)

Range Potential: unknown Range Trend: static

Allotment Management Plan: Prepared in 1982; presently not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 2 miles fence
1 water catchment

Proposed Improvements(on the NRA): 1 catchment,
2 springs and 2.5 miles of fence

Known Problems on the Allotment: Lack of water.

*Development Zone consists of the area of Dangling Rope Marina.

ALLOTMENT NAME Rock Creek - Mudholes

BLM Proposed Mitigation of Impacts: Development of water on the Grand Bench portion of the allotment was seen as feasible, but the expense of such a development would prohibit any such project for livestock use alone.

COMMENTS: (General): Stocking of bighorn sheep above the Rock Creek drainage was considered at one time.
Glen Canyon's Wilderness recommendation included these lands lying north and east of the main thread of Rock Creek.

(NPS Site Visit): NPS flew by helicopter and did on-ground surveys of Kane Point and the Grand Bench area in April 1983.

(BLM Allotment Manager):

ALLOTMENT NAME Last Chance BLM RESOURCE AREA Escalante
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 253,522; Acres on NRA 22,989; %Total Acres on NRA 9

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Lake boating

Cultural:

Permitees: (1) Names: Robert Langston

Type and Number of Livestock: Cattle (263)

Season of Use: Year Long

Grazing System: Rest Rotation

Allotment Classification: Improve

Feral Livestock: species(number) cattle (unknown) - *1 bull Padre Canyon verified*

Range Condition and Trend

Number of Trend Plots on Allotment 9; on NRA 2

2 plot year
Dates trend plots read:

Range Condition: Unsuitable (to Poor in E.I.S.); unsuitable (157,645 acres), fair (49,526 a), poor (30,644 a), good (14,326 a)

Range Potential: unknown

Range Trend: static

Allotment Management Plan: Prepared in 1982; not yet implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): Two-wheel drive road maintained by BLM and a 4 x 4 road beyond Little Valley onto the Grand Bench.

*1 cattle guard
1 spring development
3 miles fence*

Proposed Improvements(on the NRA): 1 catchment

1 mile of fence

2 cattle guards

Known Problems on the Allotment: Lack of water in some pastures.

Feral bull sighted by helicopter assumed trapped in the canyon by rising waters of Lake Powell.

The actual use has exceeded active preference for last four years 1979-1982.

7
ALLOTMENT NAME Last Chance

BLM Proposed Mitigation of Impacts: Develop water sources.

COMMENTS: (General): In July 1983 a lawyer contacted the Glen Canyon National Recreation Area Superintendent about putting in a boat dock on this allotment on Lake Powell in order to gain access to Croton Canyon,

(NPS Site Visit): Flew Padre Canyon in April of 1983 to verify presence of feral cattle and cattle impacts to the canyon. In June of 1983 NPS personnel boated to Padre Canyon and hiked up the canyon and photographed impacts of feral livestock. Verified heavy trailing, did not site bull spotted by helicopter in April.

(BLM Allotment Manager):

ALLOTMENT NAME Upper Warm Creek BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 75,725; Acres on NRA 20,627; %Total Acres on NRA 27

Vegetational Characteristics undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (2) Names: J. Peterson, R. Allen

Type and Number of Livestock: Cattle (221)

Season of Use: November 1 to May 31

Grazing System: Spring/Winter Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 6; on NRA 2

Dates trend plots read:

Range Condition: Fair (Good in E.I.S.); only 22,479 acres considered suitable for livestock grazing

Range Potential: Fair

Range Trend: static

Allotment Management Plan: AMP from 1981 is implemented.

Production/Utilization Studies: data for one done June 2, 1983 (see General COMMENTS) A study is done annually.

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): Reservoir/catchment on Ahlstrom Point
2 spring developments
1 mile fence

Proposed Improvements(on the NRA):

Known Problems on the Allotment:

ALLOTMENT NAME Upper Warm Creek

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): Utilization Study Data : 40% of allotment shows slight use (<10%) of Indian Rice Grass; 40% shown as barren and waste areas; 20% of allotment has light use (30-36%) of Indian Rice Grass

(NPS Site Visit): Vegetative on -ground survey of Romana Mesa was performed in April 1983. At the same time the Ahlstrom Point water tank was looked at. It was noted that the concrete catchment had not as yet been painted as requested when constructed the year before (the color to blend with the natural slickrock color).

(BLM Allotment Manager):

ALLOTMENT NAME Lower Warm Creek BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 33,522; Acres on NRA 33,522; %Total Acres on NRA 100

Vegetational Characteristics Undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Lake boating and fishing; access also by road
into Warm Creek bay.

Cultural:

Permittees: (1) Names: G. Orton

Type and Number of Livestock: Cattle (40); Horses (5)

Season of Use: November 1 to March 31

Grazing System: Winter

Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 2; on NRA 2

Dates trend plots read: Established June 7, 1983.

Range Condition: Fair (Good in E.I.S.); only area accessible to grazing is 2,346 acres

Range Potential: Fair

Range Trend: static

Allotment Management Plan: none

Production/Utilization Studies: Done April 8, 1983 only on the 2,346 acres that are
presently utilized. See General COMMENTS for data.

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): Stock trail off Ahlstrom Point to access Romana
Bench

Known Problems on the Allotment:

ALLOTMENT NAME Lower Warm Creek

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): Utilization Study Data: 50% has use of Indian Rice Grass as slight (20%); 20% of acreage is light use of Indian Rice Grass; and 10% each of moderate (41-60%), heavy (61-80%) and severe (81-100%) utilization of Indian Rice Grass

Warm Creek bay area is frequented yearlong by car-top and trailered boaters and fishermen when the rough roadway down Crsby Canyon is usable - inclement weather may make access impassible.

(NPS Site Visit): Boated around Romana Bench and Warm Creek basin to sites where trend plots were established in June 1983. Hiked up Warm Creek a short distance and verified recreational use as heavy.

(BLM Allotment Manager):

ALLOTMENT NAME Nipple Bench BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 29,906; Acres on NRA 554; %Total Acres on NRA 2

Vegetational Characteristics Undetermined Information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (1) Names: ~~unknown~~ Arthur Evans

Type and Number of Livestock: Cattle (unknown)
Season of Use: November 1 to April 30

Grazing System: unknown Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 3; on NRA 0

every ~~is~~ Dates trend plots read:

Range Condition: Non-Range on NRA; remainder in Fair condition (as given in E.I.S.)

Riparian Condition/Trend: Poor/Static

Range Potential: unknown - none on NRA Range Trend: static

Allotment Management Plan: unknown

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment:

ALLOTMENT NAME Nipple Bench

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): NPS kept being told by BLM that because the 554 acres of this allotment on the NRA is Non-Range the remainder of the allotment shouldn't concern NPS and therefore little information on the allotment condition was provided - what is known is interpolated from the 1979 E.I.S.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Clark Bench BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 69,862; Acres on NRA 26,024; %Total Acres on NRA 30

Vegetational Characteristics Undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (2) Names: M. MacDonald, D. MacDonald

Type and Number of Livestock: Cattle (170); Horses (7)

Season of Use: August 1 to May 31

Grazing System: Deferred Rotation

Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 8; on NRA 1

every ~~Dates~~ trend plots read: , 1983

Range Condition: Fair; only 30,054 acres considered suitable for livestock grazing

Riparian Condition/Trend: Poor/Up

Range Potential: Fair Range Trend: Static

Allotment Management Plan: A 1982 AMP is implemented.

Production/Utilization Studies: April 21, 1983 50% average utilization of Flowering

Saltbush, 18% use of Indian Rice Grass and 10% utilization of Galleta Grass
Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 2 mile stock trail
1/4 mi fence

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Clark Bench

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Bunting Well (Judd Hollow) BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & resource Utilization
Total Acres 12,321; Acres on NRA 1,030; %Total Acres on NRA 9

Vegetational Characteristics Undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (1) Names: P. Bunting

Type and Number of Livestock: Cattle (unknown)

Season of Use: November 1 to May 31

Grazing System: Rest Rotation

Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 3; on NRA 0

Dates trend plots read:

Range Condition: Good for entire allotment; Judd Hollow Condition/Trend: Fair/Static

Riparian Condition/Trend: Poor/Static

Range Potential: Good Range Trend: Up

Allotment Management Plan: None

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment:

ALLOTMENT NAME Bunting Well (Judd Hollow)

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): Judd Hollow became a pasture of Bunting Well in 1982, formerly it was an allotment alone. Known information is taken from the 1979 E.I.S. NPS was not given any significant amount of information from BLM on this allotment because only a small portion of one pasture is on the NRA.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Blue Pools BLM RESOURCE AREA Kanab
NPS MANAGEMENT ZONE Recreation & Resource Utilization (50%) Development (50%)
Total Acres 10,558; Acres on NRA 4,204; %Total Acres on NRA 40

Vegetational Characteristics Undetermined information
Association(s):

Communities (%):

Unique Allotment Resources
Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (1) Names: Jackson Cattle Company

Type and Number of Livestock: Cattle (65)

Season of Use: August 1 to May 30

Grazing System: Rest Rotation

Allotment Classification: Improve

Feral Livestock: species(number) Cattle in trespass with Ferry Swale-Ut (unknown)

Range Condition and Trend

Number of Trend Plots on Allotment 3; on NRA 1

Dates trend plots read: 1981

Range Condition: Poor (Fair in E.I.S.)

Range Potential: unknown

Range Trend: Static

Allotment Management Plan: A 1982 AMP is implemented *(but only partially)*

Production/Utilization Studies: Done April 1, 1983. See General COMMENTS for data.

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): 7 3/4 miles of fence

Proposed Improvements(on the NRA): 1 cattleguard

Known Problems on the Allotment: trespass cattle

ALLOTMENT NAME Blue Pools

BLM Proposed Mitigation of Impacts: Construction of cattleguard between Blue Pools and Ferry Swale - Ut allotment to prevent cattle trespass.

COMMENTS: (General): Utilization Study Data: 40% of allotment shows light use (21-40%) of Indian Rice Grass; 35% utilization of Indian Rice Grass is moderate (41-60%) and 15% use of Rice Grass is heavy (61-80%) and 10% each of severe use (81-100%) and slight use (<20%) of Indian Rice Grass.
BLM noted that Indian Rice Grass is utilized (average) at 65%, but 60 % is what is desirable on this allotment.

(NPS Site Visit): On-ground visit in early spring of 1983 done by Dr. Carothers and Larry Belli

(BLM Allotment Manager):

ALLOTMENT NAME Ferry Swale-UT BLM RESOURCE AREA Vermillion
NPS MANAGEMENT ZONE Development
Total Acres 1,216; Acres on NRA 1,216; %Total Acres on NRA 100

Vegetational Characteristics

Association(s):

Communities (%): Desert Shrub

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural:

Permittees: (1) Names: Kanab LDS Stake

Type and Number of Livestock: Cattle (65) none at present

Season of Use: October 16 to May 31

Grazing System: Deferred Rotation Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Fair

Range Potential: Fair Range Trend: static

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): none

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Ferry Swale-UT

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): Continuous spring grazing on this allotment would not result in any improvement so BLM has not utilized this allotment. Last AUMs used in 1977-78 grazing season.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Ferry Swale-AZ BLM RESOURCE AREA Vermillion
NPS MANAGEMENT ZONE Recreation & Resource Utilization (75%) Natural (25%)*
Total Acres 28,806; Acres on NRA 10,382; %Total Acres on NRA 36

Vegetational Characteristics

Association(s): Cold-Temperate (Great Basin) Desertlands

Communities (%): predominately Blackbrush with Mixed Desert Shrubs (96%); Barren (4%)

Unique Allotment Resources

Ecological: Colorado River

Recreational Opportunities/use: Hiking (Spencer Trail), four-wheel driving

Cultural:

Permitees: (1) Names: Kanab LDS Stake

Type and Number of Livestock: Cattle (126)

Season of Use: October 16 to May 31

Grazing System: Deferred Rotation Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read: 1974 survey

Range Condition: Fair

Range Potential: Good (10,188 acres); Poor (7,212 acres)

Allotment Management Plan: none

Production/Utilization Studies: no data

Static to down for the
7,212 acres in
Poor condition

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): 4 troughs

9.25 miles fence
5.75 miles pipeline

Known Problems on the Allotment:

*Natural Zone is that area along the Colorado River corridor.

ALLOTMENT NAME Ferry Swale - AZ

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit): Hiked Spencer Trail in Oct. 1983 having driven to within 3 miles of trailhead on four wheel drive roads (badly washed out). Found two old rock catchment dams and a corral; both catchments were filled in solid with sand and the corral was badly deteriorated. These "improvements" were not on the NRA (BLM Allotment Manager):

ALLOTMENT NAME Wahweap BLM RESOURCE AREA Vermillion
NPS MANAGEMENT ZONE Recreation & Resource Utilization (50%) Development (50%)
Total Acres 10,702; Acres on NRA 10,702; %Total Acres on NRA 100

Vegetational Characteristics
Association(s):

Communities (%): Desert Shrub (77%); Barren (23%)

Unique Allotment Resources
Ecological:

Recreational Opportunities/use: Highway US 89 represents a travel-people influence zone paralleling colorful Wahweap Bay and transects the allotment along its length.
Cultural:

Permitees: (1) Names: M. Schoppman

Type and Number of Livestock: Cattle (23); Horses (3)

Season of Use: Year Long

Grazing System: Rest Rotation

Allotment Classification: Custodial

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Fair

Range Potential: Fair Range Trend: Static (77%) Down (23%)

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Wahweap

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit): Location of NPS District Ranger Office and Wahweap.

(BLM Allotment Manager):

ALLOTMENT NAME Antelope Island BLM RESOURCE AREA Vermillion
NPS MANAGEMENT ZONE Natural
Total Acres 4,757; Acres on NRA 4,757; %Total Acres on NRA 100

Vegetational Characteristics

Association(s):

Communities (%): Blackbrush; grasses (Indian Rice Grass)

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural: Archeological sites

Permitees: (1) Names: M. Schoppman

Type and Number of Livestock: Cattle (88)

Season of Use: November 1 to March 15

Grazing System: none

Allotment Classification:

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read:

Range Condition: Good ; total grazeable acreage is only 3,920 acres

Range Potential: Good

Range Trend: _____

Allotment Management Plan: none

Production/Utilization Studies: 2 transects were established in Dec. 1982 by NPS to determine "percentage of composition". A BLM "range inventory" worked out to 9.7 acres/
Areas where domestic livestock excluded (as per MOU): AUM

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): none

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Large rabbit population.

ALLOTMENT NAME Antelope Island

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

Antelope Island became isolated in 1973 and provided a unique opportunity to study an area of minimum of disturbance by virtue of its isolation. The island is to be managed in accordance with NPS Natural Zone criteria which include no

permanent structures of any kind, no mechanized equipment on the island and a minimum of disturbance to the ecosystem by any allowed activity.

Access to the island will not be denied for loading and unloading of cattle, but NPS will control the means and the place of access.

Fencing of archeological sites would also be required.

The allottee must receive yearly NPS approval of transporting livestock to and from the island. Cattle only allowed, no grazing of horses.

An intensive range condition monitoring program should be instituted to provide an early warning system to protect the island from any significant impacts. These stipulations should be included in the AMP for the allotment.

(NPS Site Visit): In Dec 1982 a range inventory was performed by NPS and BLM personnel.

(BLM Allotment Manager)

ALLOTMENT NAME Lees Ferry BLM RESOURCE AREA Vermillion
NPS MANAGEMENT ZONE Natural (50%) Rec & Res Utilization (20%) Development (25%) Cultural*
Total Acres 20,060; Acres on NRA 3,760; %Total Acres on NRA 19

Vegetational Characteristics
Association(s):

Communities (%): Shadscale (17%); Desert Shrub (33%); Riparian (6%); Barren (44%)

Unique Allotment Resources

Ecological: Colorado River. Pediocactus bradyi occurs in the allotment, a known endangered plant species. Its total range is entirely within the NRA part of the allot.

Recreational Opportunities/use:

Cultural: * Lonely Dell Ranch and Lees Ferry Historic Districts

Permitees: (1) Names: E. Graff

Type and Number of Livestock: Cattle (100)

Season of Use: November 1 to May 15

Grazing System: Rest Rotation

Allotment Classification: Improve

Feral Livestock: species(number) trespass cattle

Range Condition and Trend

Number of Trend Plots on Allotment 0; on NRA 0

Dates trend plots read: 1974 survey

Range Condition: Fair (11,970 acres) Poor (3,560 acres)

Grazable acreage: 15,330 acres

Range Potential: Poor

Range Trend: 4,110 acres Static; 11,420 acres

Allotment Management Plan: none

Down trend

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): Spring developments at Fisher and Lawrie Springs

Known Problems on the Allotment: Trespass cattle on Lonely Del Ranch Historic ditrict and at the Paria Canyon Wilderness trailhead.

ALLOTMENT NAME Lees Ferry

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit): Photographic on-ground survey of cattle impacts done at Paria Canyon trailhead. Helicopter fly-over and photographs taken of the Fisher and Lawrie Spring sites. Verified presence of slight amount of water in fisher Spring on June 13, 1983.

(BLM Allotment Manager):

ALLOTMENT NAME Indian Creek BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Natural (75%) Recreation & Resource Utilization (25%)
Total Acres 234,680; Acres on NRA 20,930; %Total Acres on NRA 9

Vegetational Characteristics

Association(s): Plains and Great Basin Grassland
Pinyon Juniper Woodlands

Communities (%): Blue Grama(mixed or short grass), Indian Rice grass, Saltbush,
Winterfat and Sagebrush

Unique Allotment Resources

Ecological: Deer Range and Dark Canyon proposed wilderness

Recreational Opportunities/use:

Cultural:

Permittees: (1) Names: Indian Creek Cattle Company

Type and Number of Livestock: Cattle (850)

Season of Use: December 1 to June 15

Grazing System: Winter

Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 39; on NRA 0

Dates trend plots read: 1977, 1982

Range Condition: good

Range Potential: good Range Trend: unknown

Allotment Management Plan: Prepared in 1970; not as yet implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Indian Creek

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): An important deer winter range was being impacted several years ago. Sagebrush which is the bulk deer feed, was in a decadent, non-productive state, with no evidence of browse seedlings and annual production of existing plants was very low. The current trend for the deer range is also unknown.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME White Canyon - Woodenshoe BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Recreation & Resource Utilization and Development (Hite area only)
Total Acres 248,257; Acres on NRA 34,915; %Total Acres on NRA 14

Vegetational Characteristics

Association(s): Pinyon Juniper Woodlands
Northern Desert Shrub

Communities (%): Desert Shrub (42%), Pinyon/Juniper (37%), Salt Shrub, Sagebrush and
grasses (6%), Barren (15%)

Unique Allotment Resources (also see General COMMENTS)

Ecological: Deer and bighorn sheep range. Dark Canyon proposed wilderness area.

Recreational Opportunities/use: BLM has inventoried 13 recreational sites.

Cultural: Ruins and "mounds".

Permittees: (1) Names: White Canyon Cattle Company

Type and Number of Livestock: Cattle (450); *Horses (12)*

Season of Use: Year Long

Grazing System: Spring/Winter Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 9; on NRA 0

Dates trend plots read:

Range Condition: Good

Range Potential: Good Range Trend: unknown

Allotment Management Plan: Prepared 1969; not implemented.

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual
4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA):

Known Problems on the Allotment: The entire allotment is very susceptible to wind and
water erosion in terms of watershed because of the Pinyon/Juniper and light sandy soil.

ALLOTMENT NAME White Canyon - Woodenshoe

BLM Proposed Mitigation of Impacts:

COMMENTS: (General): Elevations of the allotment vary from 3800' in the western portion near the Colorado River to 8400' in the Woodenshoe area. The upper elevations are important deer use areas and the entire allotment is important bighorn sheep range. The recreational sites inventoried include: scenic views and overlooks, picnic sites, campgrounds and campsites and ruin sites. The archeological sites are primarily in the canyons and the "mounds" in the Pinyon/Juniper vegetation.

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Lake Canyon BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Natural (70%) Recreation & Resource Utilization (30%) Cultural *
Total Acres 651,060; Acres on NRA 184,210; %Total Acres on NRA 28

Vegetational Characteristics

Association(s): Northern Desert Shrub

Pinyon Juniper Woodland

Communities (%): Desert Shrub (68%), Pinyon/Juniper (9%), Grassland (1%), Barren (22%)

Unique Allotment Resources

Ecological: Mule Deer and Desert Bighorn Sheep

Recreational Opportunities/use: Halls Crossing Development area

Cultural: Archeological sites in Moqui Canyon

* Cultural Zone is the corridor following Hole-in-the-Rock Mormon Trail

Permittees: (1) Names: TY Cattle Company

Type and Number of Livestock: Cattle (600); Horses (12)

Season of Use: October 6 to June 5

Grazing System: Spring/Winter

Allotment Classification: Improve

Feral Livestock: species(number) Cattle in trespass in Cottonwood Canyon

Range Condition and Trend

Number of Trend Plots on Allotment 14; on NRA 1

Dates trend plots read: Plot on NRA established on Wilson Mesa, Oct 1983; no data in

Range Condition: Good Two close plots read 1969, 71, 73, 76 and 1970. hand

Range Potential: Good Range Trend: _____

Allotment Management Plan:

Production/Utilization Studies:

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA): Halls Crossing fence

Proposed Improvements(on the NRA): 4 reservoirs - *Wilson mesa water catchments;*
4 needed because soil is sandy and they may not hold The 4
are apparently an experiment

Known Problems on the Allotment: Permittee sited by BLM for trespass cattle in Cottonwood Canyon. Cattle have also gotten into Halls Crossing development area numerous times.

Heavily impacted riparian zone with severe trailing. Wilson and Grey Mesas have distribution problems because of lack of water.

ALLOTMENT NAME Lake Canyon

BLM Proposed Mitigation of Impacts: Sited permittee for leaving cattle in Cottonwood Canyon beyond use date,
Develop water improvements.

COMMENTS: (General): This is the largest allotment of the NRA; bounded on the west by the Colorado River (Lake Powell) and on the south by the San Juan River. It has been shown that the intensive recreational developments at Halls Crossing are not compatible with grazing.

(NPS Site Visit): Flew lake Canyon and Moqui Canyon by fixed wing in May and again they were flown by helicopter in June 1983. Photographs of cattle impacts and archeological sites were taken both times site was surveyed.

(BLM Allotment Manager):

ALLOTMENT NAME Slickhorn BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 142,025; Acres on NRA 7,467; %Total Acres on NRA 5

Vegetational Characteristics

Association(s): Pinyon Juniper Woodland

Communities (%): Pinyon/Juniper (63%), Sagebrush (8%), Desert Shrub (6%),
Crested Wheatgrass "Seeding" (5%), lesser amounts of grassland and saltbush, (18%)

Unique Allotment Resources

Ecological: Deer winter range. Grand Gulch primitive area.

Barren

Recreational Opportunities/use:

Cultural: Grand Gulch and Hole-in-the-Rock Mormon Trail

Permittees: (2) Names: P. and D. Nielson

Type and Number of Livestock: Cattle (219); Horses (5)

Season of Use: October 16 to June 15

Grazing System: Winter

Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 21; on NRA 0

Dates trend plots read:

Range Condition: Good

Range Potential: Good

Range Trend: Static

Allotment Management Plan: none

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Slickhorn

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Perkins Brothers BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Natural
Total Acres 106,102; Acres on NRA 6,855; %Total Acres on NRA 6

Vegetational Characteristics

Association(s):

Communities (%): (Galleta Grass, Indian Rice Grass)

Unique Allotment Resources

Ecological:

Recreational Opportunities/use:

Cultural:

Permitees: (5) Names: (See Appendix I)

Type and Number of Livestock: Cattle (340); Horses (9)

Season of Use: November 1 to May 31

Grazing System: Spring/Winter

Allotment Classification: Maintain

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 4; on NRA 0

Dates trend plots read: 1966, 1977, 1981 (for the one plot near the NRA)

Range Condition: Fair

Range Potential: Good Range Trend: declining from NPS interpolation
Allotment Management Plan: none of trend plot data

Production/Utilization Studies: no data

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment:

ALLOTMENT NAME Perkins Brothers

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):

ALLOTMENT NAME Texas Muley BLM RESOURCE AREA San Juan
NPS MANAGEMENT ZONE Recreation & Resource Utilization
Total Acres 38,918; Acres on NRA 1,128; %Total Acres on NRA 3

Vegetational Characteristics

Association(s):

Communities (%): Indian Rice Grass; Seeding of Crested Wheat Grass done prior to 1968.

Unique Allotment Resources

Ecological:

Recreational Opportunities/use: Muley Point affords a spectacular view of Monument Valley.

Cultural:

Permitees: (1) Names: AA Cattle Company

Type and Number of Livestock: Cattle (274); Horses (4)

Season of Use: November 15 to May 31

Grazing System: Spring/Winter

Allotment Classification: Improve

Feral Livestock: species(number) none known

Range Condition and Trend

Number of Trend Plots on Allotment 9; on NRA 0

Dates trend plots read: 2 plots near NRA read 1967, 1968, 1973, 1969, 1971

Range Condition: unknown

Range Potential: unknown

Range Trend: was Static then vigor dropped off

Allotment Management Plan: none

because grazing became moderate to heavy

Production/Utilization Studies: no data

around the trend plots (NPS interp. of data from 2 trends close to NRA)

Areas where domestic livestock excluded (as per MOU):

Areas/plans for riparian habitat protection and enhancement (as per BLM manual 4740 and E.O. 11990):

Existing Improvements(on the NRA):

Proposed Improvements(on the NRA): none

Known Problems on the Allotment: Noted physical disturbances from discing or chaining methods used by BLM when analysing trend plot data.

ALLOTMENT NAME Texas Muley

BLM Proposed Mitigation of Impacts:

COMMENTS: (General):

(NPS Site Visit):

(BLM Allotment Manager):