United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SURPRISE RESOURCE AREA
P.O. BOX 460
CEDARVILLE, CALIFORNIA 96104-0460

IN REPLY REFER TO:
4370(CA-028)

June 22, 1993

Commission for the Preservation
of Wild Horses
c/o Cathy Barcomb
Stewart Facilities - Capitol Complex
Carson City, NV 89710

Dear Cathy:

You have expressed an interest in receiving information about the 1993 wild horse management actions within the Susanville District of the Bureau of Land Management.

Enclosed for your review and comment is the Proposed Action and Environmental Assessment for four wild horse herd management areas on the Surprise Resource Area for 1993. If no adverse comments are received, the Proposed Decision will become the Final Decision. The comment period will be for 30 days, from June 28, 1993, until the close of business on July 28, 1993.

All comments and questions should be sent to the Surprise Resource Area Manager for his consideration and use in issuing the Final Decision. Please address your correspondence to:

J. Anthony Danna
Surprise Resource Area Manager
P.O. Box 460
Cedarville, CA 96104

Sincerely,

J. Anthony Danna
Surprise Resource Area Manager

Enclosure (1)
EA No. CA-028-93-03

go to process of defining terms important to them "BLM"

look at area's then go back to
LUP #'s

try to justify old #'s w/monitoring

modified #'s for h's by 10% until fit
and left livestock the same

disclose recruitment rate & justify w/data
migration/seasonal movement

more into justifying removal rather than
justify AML

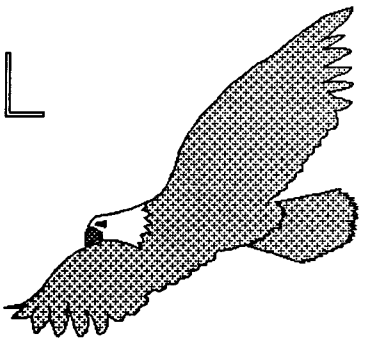
census
Bitner + Nut
45 h's

FEB not 225 for fall
20 h's

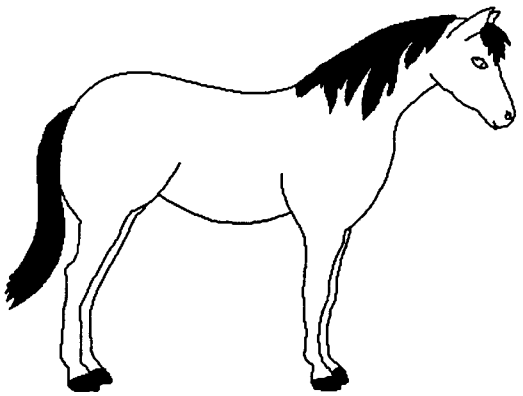
how come AUM for cow/calf = 800 lbs
but for h's = 1,000 lbs
an aum is an AUM

6-22-93

WILD HORSE GATHERING AND REMOVAL



BITNER, HIGH ROCK, NUT MOUNTAIN, AND WALL CANYON HERD MANAGEMENT AREAS



ENVIRONMENTAL ASSESSMENT
SURPRISE RESOURCE AREA
JUNE 22, 1993

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SURPRISE RESOURCE AREA

ENVIRONMENTAL ASSESSMENT CA-028-93-03

BACKGROUND

The Proposed Action would occur on the Surprise Resource Area, Cowhead/Massacre Planning Unit, Washoe County, Nevada.

The Proposed Action is subject to the Cowhead/Massacre Management Framework Plan 3 (MFP), and has been reviewed for conformance with the MFP (43 CFR 1610.5, BLM MS 1617.3). Actions on four Herd Management Areas (HMA) are evaluated. For the High Rock HMA East of Canyon Home Range the proposed action is in conformance with sub-unit 1; Decision #3 as amended on 11/3/83 and Decision #7. For the Bitner, Nut Mountain, and Wall Canyon HMAs the proposed action is in conformance with Sub-unit 2; Decisions #4 and #15. The proposed action complies with the resource management goals for the High Rock Canyon area and the utilization standards for the other areas.

NEED FOR PROPOSED ACTION

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

An analysis of the current monitoring data, utilization mapping, 1992 wild horse counts, and the most recent trend data, found that there were excess wild horses on the four HMAs. With the current numbers, on the Bitner, Nut Mountain, and Wall Canyon HMAs a thriving natural ecological balance could not be maintained.

HIGH ROCK HMA, EAST OF CANYON HOME RANGE

The 11/3/83 amendment to the MFP referring to the High Rock sub-unit (sub-unit 1) states in part; when additional forage becomes available, "allocations will only be made to wildlife and non-consumptive uses for the canyon bottoms and east of the canyon."

Through the EIS and MFP processes the primary resource values in the High Rock area were determined to be scenic, cultural, historical, wildlife, and primitiveness. Sub-unit 1; Decision # 6 states, "manage all ecological sites within Subunit 1 to achieve site potential." Grazing by livestock and wild horses was determined to be detrimental to the primary values and Decision #6. Livestock grazing was ended in 1984. A small number of wild horses was determined to be compatible with these values and Decision #6. The Herd Management Area Plan (HMAP) set the management level at 30 - 40 wild horses on the East of Canyon Home Range. 1992 counts found 55 wild horses in High Rock and east of the canyon.

DATE?

JUST BECAUSE IT WAS SET DOESN'T MEAN SET IN STONE

DEFINITION

Site Potential Part of ecological theory is that we can predict what plant community will exist in a specific setting in the absence of disturbances. This plant community, which will take some number of years after the last disturbance to develop, will have a stable species composition for many years. This assemblage of plant species is called site potential.

The process for arriving at the recommended wild horse management levels conforms with BLM Instructional Memo No. 90-30 (IM 90-30) issued October 12, 1989.

PROPOSED ACTION

DESCRIPTION OF PROPOSED ACTION

Gather wild horses on the Bitner, Nut Mountain, Wall Canyon HMAs to the minimum recommended management levels. Gather wild horses on the High Rock HMA, East of Canyon Home Range, and reduce their numbers to the minimum number set in the MFP. Each HMA will be gathered to the minimum management level and allowed to increase to the maximum management level before further analysis.

Table 1. Herd Management Areas and Wild Horse Population Levels.

HMA	Recommended Management Levels	1992 Census	1993 Projection	Approximate Number to be Removed
Bitner	15 - 25	40	48	33
Nut Mountain	30 - 55	52	62	32
Wall Canyon	15 - 25	78	94	79
High Rock East of Canyon Home Range	30 - 40	55	66	36

These herds would also be restructured at this gather. Herd integrity will be carefully preserved. The goal is that only horse which are four years old and younger will be removed. Younger horses are more adoptable, so they cost BLM less for holding and maintenance.

DEFINITIONS

Base Herd is the reproductive horses returned to a herd management area following a gather. In Susanville District, this number is the minimum management level.

Structured Herd Management is: Gathering as many horses from a herd management area as practical. Selecting horses for return to the HMA which are five years old and older and appear capable of propagating offspring which are well adapted to the herd's habitat. Selecting younger horses needed to complete the "base herd" for return to the herd management area. At subsequent gathers replacing "base herd" horses that have died with horses four years old and younger either from the herd or from other wild horse herds.

Structured herd management was developed by the Susanville District. It is analogous to, but more detailed than, the general BLM policy of selective removal.

Herd Integrity is choosing horses for the "base herd" which reflect existing characteristics in the herd that have made it well adapted to its habitat.

For specifics of the gather see the "Helicopter Gathering Plan for Wild Horses in the Bitner, Wall Canyon, Nut Mountain and High Rock Herd Management Areas," (appendix 1).

OTHER ALTERNATIVES

1. Gather wild horses on the four HMAs, but do not structure the herds. This alternative was not given further consideration, because it violates the BLM policy of selectively removing young horses at gathers.

2. Do not gather wild horses at this time. Wait until monitoring data shows that there has been a degradation in the condition of upland vegetation.

3. Remove all the wild horses from the High Rock HMA. This alternative would be in conformance with the MFP's Objective 2; subunit 1, land use goals 1 and 2 and decision #6. This alternative would not comply with decision #3, the forage allocation decision.

As long as wild horse numbers can be kept low, 70 - 100 head in the High Rock HMA, with 30 - 40 head in the East of Canyon Home Range, and the vegetation continues to progress towards site potential and impacts to cultural sites are acceptable, then there is no need to consider removing all wild horses from the High Rock HMA. The proposed action has been meeting the MFP's vegetation and cultural resources goals, therefore, the complete removal of wild horses from the High Rock HMA alternative will not receive further consideration.

ISSUES

Three main issues will be addressed in this EA: 1) Riparian area utilization. 2) Wild horse populations in balance with the primary resource management goals in the High Rock Canyon area, preservation of cultural resources, wildlife habitat enhancement, and reestablishment of a primitive setting. 3) Affects on wild horses.

On the Bitner, Nut Mountain, and Wall Canyon HMAs heavy and severe utilization of riparian areas is occurring. In 1992, as a result of the drought and subsequent reductions in cattle numbers, there were areas where, in the complete absence of cattle, wild horses produced heavy and severe utilization on riparian areas.

High Rock HMA has two home ranges, East of Canyon and Little High Rock, separated by High Rock Canyon. High Rock Canyon is an Area of Critical Environmental Concern and a proposed National Conservation Area. The Canyon contains the Lassen/Applegate Trail, a National Register historical site. It also has many National Register quality archeological sites. These historical and archeological values, along with the improving condition of the vegetation in High Rock and its tributary canyons, both for its own value and for wildlife habitat, are being negatively impacted by the current number of wild horses using the canyons.

The proposed action is to gather wild horses. The alternative is to not gather horses at this time. The impacts and affects of both actions on the retained and removed horses will be assessed.

DESCRIPTION OF THE ENVIRONMENT

WATER

1992 was the sixth consecutive year of drought (below normal precipitation) in northwestern Nevada. As a result drinking water amounts and sources for all animals have been greatly reduced. Generally 50% of the drinking water locations were dry in 1992. The result has been the concentration of animals at the remaining water sources and increased intra- and inter-specific interaction and stress. It resulted in direct competition between wild horses and antelope for drinking water. Increased animal concentrations also resulted in heavier than normal trampling impacts on riparian vegetation and soils.

The winter of 1992-93 was wetter than normal. Drinking water problems are likely to be reduced in 1993. However, the adverse affects of severe use on the areas around water sources during the drought persist. Also the amount of ground water recharge required for recovery of normal spring and stream flows is not known.

Badger Creek, which crosses about one mile of public land, is the only perennial creek on the Bitner HMA. Most of the creek lies on fenced, private land. The East of Canyon Home Range has one intermittent creek, High Rock Canyon. The Nut Mountain HMA has one perennial creek, Hanging Rock Canyon. The Wall Canyon HMA has one perennial creek, Cottonwood Creek.

Most of the drinking water sources on the Bitner HMA are reservoirs. On the East of Canyon Home Range most of the drinking water is at springs. On the Nut Mountain HMA drinking water sources include reservoirs, springs, and Hanging Rock Canyon. On Wall Canyon HMA drinking water sources are mainly springs and the creek.

SOILS AND VEGETATION

The four HMAs lie along the eastern side of the Surprise Resource Area in northeastern Washoe County, Nevada. The soils are desert and volcanic influenced soils typical of the region. Sagebrush/grassland is the dominant vegetation community. There are large areas of low sagebrush. Big sagebrush is abundant in areas with deeper soils. Areas with higher salinity are dominated by greasewood. At higher elevations and in some areas with better moisture regimes, mountain brush species enter the plant community. Grasses and grass-like plants make up about 15% of the total vegetation. Riparian areas occupy much less than 1% of the total area. The plant communities on the four HMAs range from early to late successional stages. Trend is generally up in upland areas, as a result of improving livestock management over the past 10 - 20 years and maintaining wild horse populations around carrying capacity.

DEFINITION

Riparian Area is an area of land directly influenced by permanent water. It has different physical, soil, and vegetation characteristics than the surrounding uplands reflecting the influence of permanent water. Riparian areas occur as stream side corridors, lake shore margins, and meadows below springs.

Unlike most of the surrounding uplands, the riparian area vegetation has not been improving. Riparian areas in the Bitner, Nut Mountain, and Wall Canyon HMAs are in unacceptable condition. The soils have received perennial, year long trampling producing hummocks in meadows and destabilizing creek banks. Trampled stream banks slough into the creek. As a result the creek becomes shallower, wider, and siltier. Loss of protective bank vegetation results in gully formation during runoff events. In combination these changes change perennial creeks into intermittent or ephemeral creeks. The desirable perennial sedges, grasses, and shrubs have been replaced by annual grasses and forbs, less desirable grasses and sedges, and sagebrush and junipers.

These changes did not happen recently. Probably most of the creek and meadow riparian areas had been degraded by the first decade of the twentieth century as result of the thousands of cattle and tens of thousands of sheep grazed in this area beginning in the late 1800s. The entire area was overgrazed. As a result there are no known riparian relict areas on the Surprise Resource Area. We cannot point to some area as an example of what the meadows and creeks should look like. We must extrapolate from other areas with similar soils, climate, and hydrology.

The BLM's "Riparian-Wetland Initiative for the 1990's" directed that 75% of BLM riparian areas be in "properly functioning condition" by 1997. This standard is not currently being met in these four HMAs. Additional measures are required for riparian area improvement.

WILDLIFE

The four HMAs provide habitat for the large variety of wildlife typically found in the region. The most common species are pronghorn antelope, sage grouse, black-tailed jackrabbits, Brewer's sparrows, deer mice, coyotes, raptors, and bobcats. There are mule deer in areas with big sagebrush and other taller shrubs which provide cover.

During the summer of 1992 competition for water between antelope and wild horses was observed at several different locations. Wild horses would be at a water hole. Antelope would stand around until the horses left. When antelope approached too closely, one or two mares would move towards the antelope, which would move away from the water hole.

Riparian areas are also important, because of their wildlife habitat value. Over half of the wildlife species in this area are dependant upon riparian communities for habitat during some portion of the year. Many of the less common species, including voles, killdeer, amphibians, and song birds would not occur in the area without riparian habitats. Sage grouse are dependent upon the meadows at springs for brood rearing habitat. Most wildlife species depend on the riparian areas as a source of drinking water. It is likely that where there were willow and other riparian shrub communities, there were birds, amphibians, and reptiles which no longer use this area.

The main affect of the proposed action, or any of the alternatives, on wildlife values will be through impacts on riparian areas.

THREATENED AND ENDANGERED SPECIES

No federally listed plants or animals are known to occur within the four HMAs.

WILD HORSES

Generally these four herds appeared in good health and condition before the winter of 1992-93. Helicopter observations of the four HMAs on February 10, 1993, found the horses to be active and still healthy looking. The snow ranged from two to three feet deep. It had several inches of icy crust over softer, crystally snow. Fewer horses were seen than in the fall '92 counts. About 225 horses were counted on the four HMAs during the Fall of '92. Only 20 horses were found in the same areas in February, 1993. (The winter flight was not as comprehensive as the fall counts.) Some recognizable bands that have been associated with certain areas could not be found in those areas, nor on "traditional" winter ranges. This shows that in a winter with heavy, persistent snow there is very little winter range on these four HMAs. By mid-March around 45 wild horses had returned to the area of the Bitner and Nut Mountain boundary. They were active, but bony. On May 13, 1993, there was a lot of horse manure in High Rock Canyon. Perhaps many of the horses form these four HMAs wintered in High Rock. One of the important gaps in our knowledge is where these horses go during deep snow winters. In recent years it has not been a factor. If winters return to a more "normal" regime, the amount of winter range may be an important limiting factor for these HMAs.

Conformance with the HMAPs, specifically keeping wild horse numbers within the carrying capacity of the range in combination with the other uses of the range, has resulted in thriving wild horse herds. This was reflected by the absence of death loss during the winter of 1992-93. Also the average reproductive rate for the herds on the Surprise Resource Area is 20% per year.

SHOW ME

Wild Horse Diets

A study of herbivore diets on the Surprise Resource Area using fecal analysis found that through the year wild horse diets contained 89.76% grass and grass-like plants. Spring diets were the most varied. Several early spring samples contained less than 50% grass and up to 60% forbs and shrubs. Winter samples were mostly grasses and grass-like species. Some samples contained 100% grass. Fifty six samples were collected from four different habitat types, juniper/shrub, sagebrush/mixed shrub, mountain shrub, and wet meadow/juniper habitat types.

Two important conclusions were drawn from this study: Wild horse diets concentrated on riparian area species. Wild horse diets had very little overlap with antelope or mule deer.

Of the 56 samples 42 contained riparian species, such as sedges, rushes, bulrushes, and hairgrass. When this is compared to the very small amount of riparian vegetation present and the amount that a horse eats plus their year long presence, the severe impact of wild horses on riparian areas becomes apparent.

The other conclusion from this study was that wild horse diets have very little overlap with antelope or deer. The time of greatest overlap was during the spring, when there was an abundance of forage, and all herbivores appeared to be selecting the greenest forage available. During the rest of the year there was very little dietary overlap. Three of the 56 wild horse samples contained small amounts of bitterbrush. The results indicated that there was little or no competition for forage between wild horses and antelope or deer. Wild horse and cattle had very similar diets. Both depended on grasses.

Wild Horse Riparian Forage Demand

How much riparian forage can the wild horses eat and how much is being produced on the four HMAs? In appendix 3 these values were calculated. In any such determination there are many generalizations. A summary of riparian forage production and wild horse demand for each HMA is shown in table 2.

Table 2. Wild Horse Riparian Species Summer Forage Demand and Current Riparian Species Forage Production.

	BITNER HMA	HIGH ROCK HMA East of Canyon Home Range	NUT MOUNTAIN HMA	WALL CANYON HMA
1992 Counts	40 horses	55 horses	52 horses	78 horses
Summer Riparian Forage Demand	78,560 pounds	108,020 pounds	102,128 pounds	153,192 pounds
Recommended Minimum Number	15 horses	30 horses	30 horses	15 horses
Summer Riparian Forage Demand	29,460 pounds	58,920 pounds	58,920 pounds	29,460 pounds
Recommended Maximum Number	25 horses	40 horses	55 horses	25 horses
Summer Riparian Forage Demand	49,100 pounds	78,560 pounds	108,020 pounds	49,100 pounds
Total Riparian Forage Production	2,380 pounds - 354,380 pounds	311,400 pounds	17,290 pounds	23,800 pounds

Table 2 clearly illustrates two points. On the Nut Mountain and Wall Canyon HMAs wild horses, at any likely population level, could eat the total annual production of riparian forage each summer. The Bitner HMA has several dry lakes, in some years, like 1992, they did not produce any vegetation. In other years, maybe 1993, they do not produce much vegetation, because they are flooded most of the growing season. They have the potential to be very productive. In years when the lake beds are productive, they can provide forage for both horses and livestock. Unfortunately productivity is extremely variable.

This table also shows that potential production from riparian habitats is great. The High Rock HMA and the Wall Canyon HMA both have large canyon areas. In Wall Canyon most of those areas are producing upland vegetation. In High Rock many of those areas are abundantly producing riparian vegetation. As a result High Rock is producing 13 times more riparian vegetation than Wall Canyon is producing. A similar comparison cannot be made for the Bitner and Nut Mountain HMAs, because Bitner has no canyons, and Nut Mountain only has Hanging Rock.

Current Wild Horse Population Levels

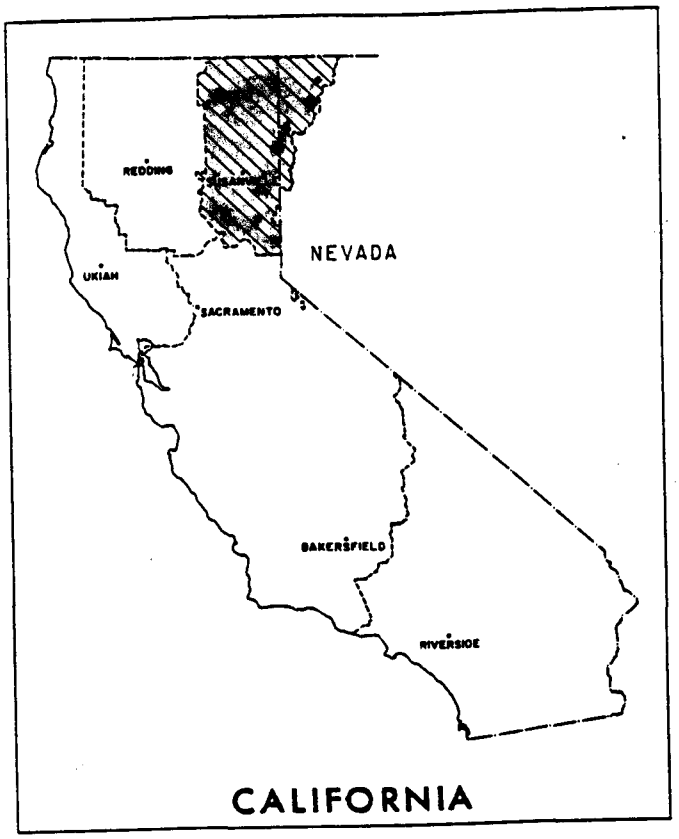
Comparison of the 1992 wild horse counts with population estimates found that estimated populations were less than the actual counts, 30% on Bitner and 50% on Wall Canyon. On Wall Canyon there were 19 horses in the fall, 1988 and 79 in October, 1992. This was an average annual increase of 43%. A wild horse recruitment rate much greater than 20% per year due to reproduction alone is improbable. There are two likely reasons for there being so many more horses than estimated. There was a lot of movement from the Winnemucca District onto the Surprise Resource Area. This has occasionally been observed. Another reason for higher counts has been the mild winters over the past several years and resultant decline in winter death loss. This had two affects. More foals survived, and then there were more mares to bare foals.

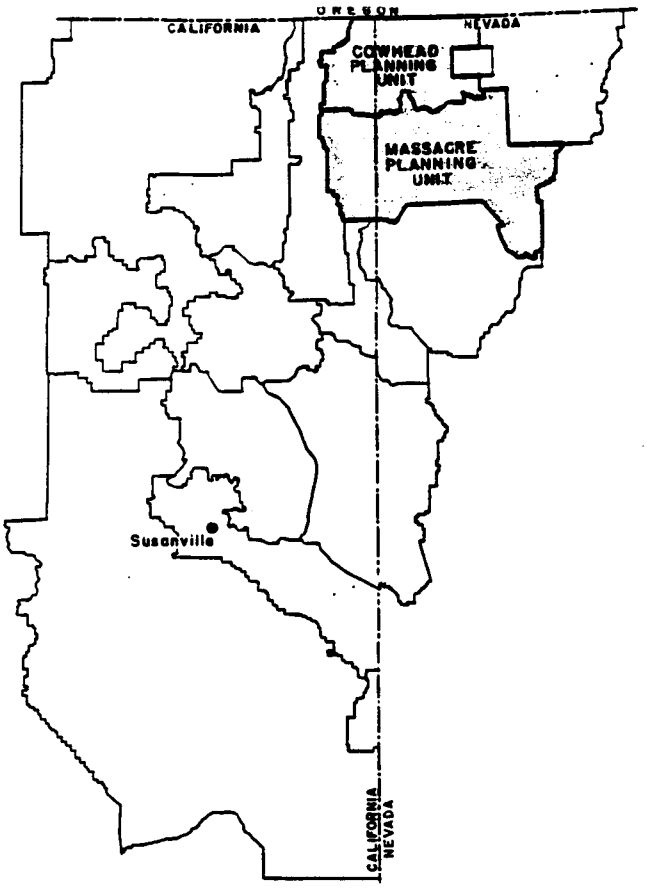
Bitner HMA (Herd Area #CA-267)

The four HMAs are located approximately 40 miles east and southeast of Cedarville, CA and form a contiguous block of HMAs (maps 1 - 2).

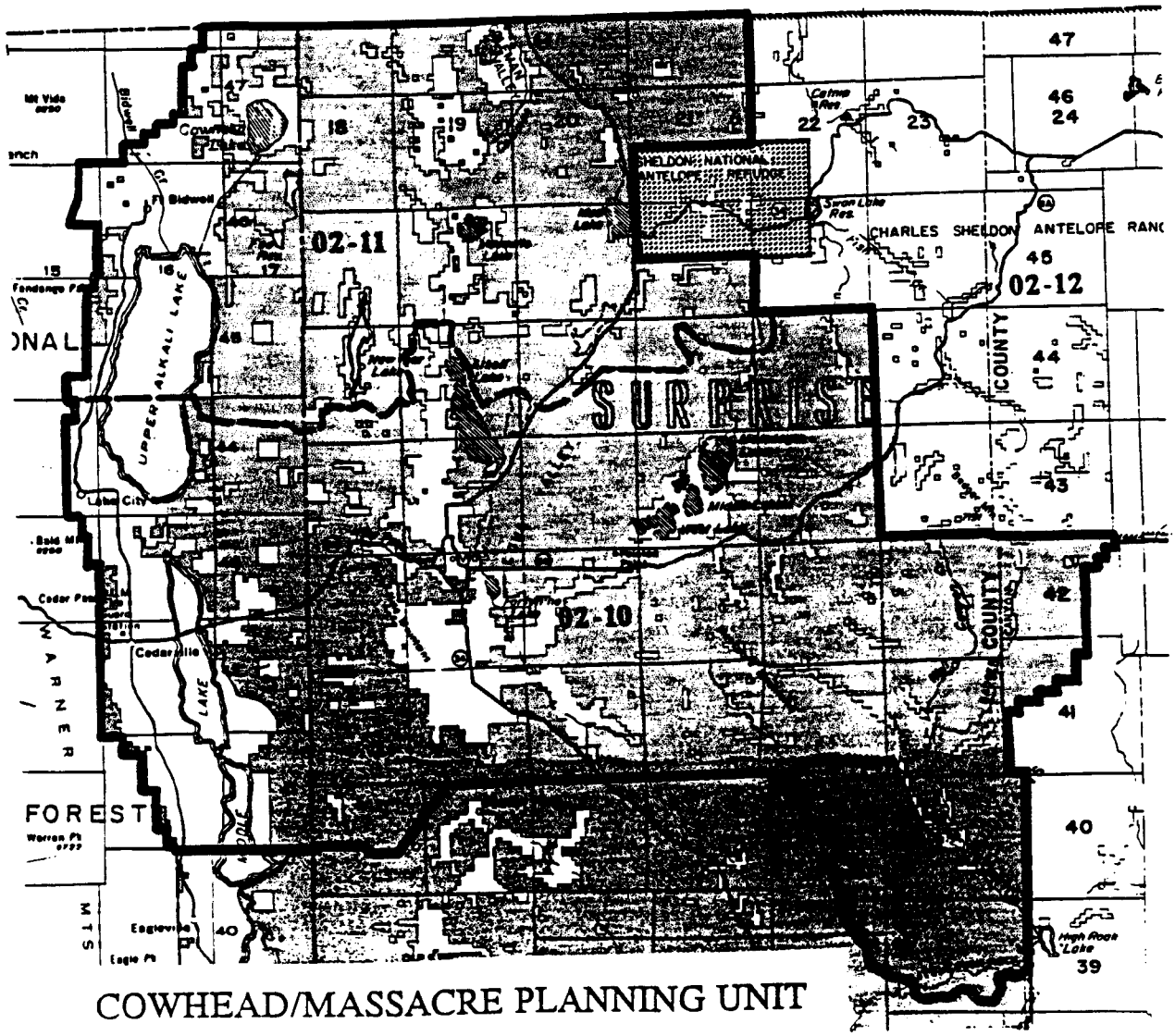
The Bitner HMA (map 3) contains 50,660 acres. The area was first separated in 1964 when a boundary fence was built between the Massacre Lakes and Nut Mountain Allotments. In 1982 the Bitner Allotment was created from the old Nut Mountain Allotment by fencing off the norther portion. This fence split the Bitner HMA. Five 50 foot long "wild horse" gates were placed in the new fence. These gates are opened each fall to allow access to the lower elevation winter ranges. Tracks and observations show that horses move back and forth through these gates. So far they have been successful. The MFP specified a population of 15 - 25 wild horses on the Bitner HMA. This allocation of forage is shown in Table 3. The Analysis determined that there was sufficient forage for 15 - 25 horses. BUT IS THAT ALL!

These horses descended from feral ranch stock. They are light horses. Horses from this HMA probably mix with wild horses on the Massacre Lakes and Nut Mountain HMAs and the Sheldon Antelope Range.



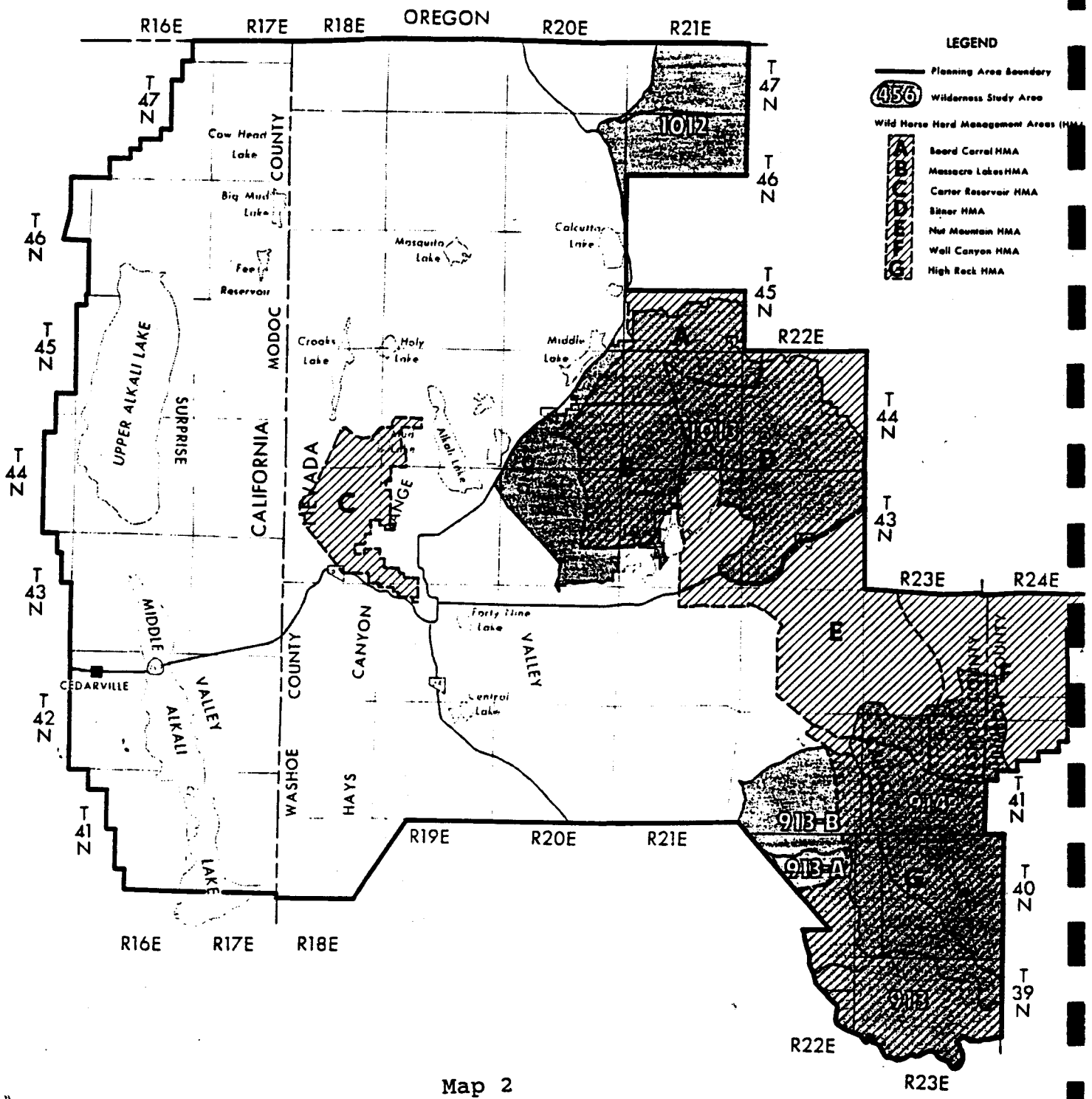


SUSANVILLE DISTRICT



COWHEAD/MASSACRE PLANNING UNIT

Map



Map 2

COWHEAD/MASSACRE
PLANNING AREA
MFP 3

WILDERNESS STUDY AREAS
&
WILD HORSE
HERD MANAGEMENT AREAS

Bitner HMA

Map 3

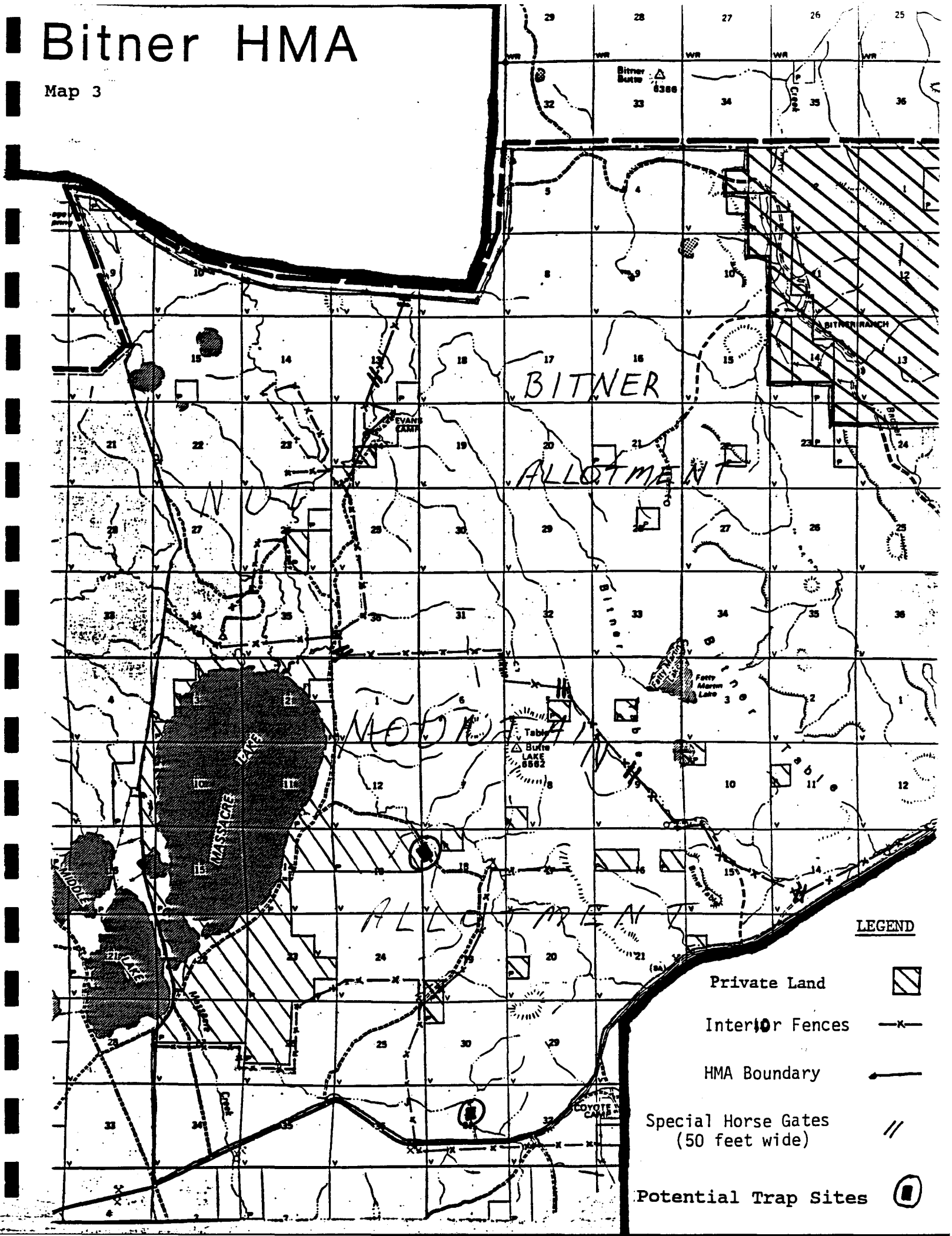


Table 3. Forage Allocation for the Area Containing the Bitner, Nut Mountain, and Wall Canyon HMAs.

AREA	EXISTING FORAGE PRODUCTION (AUMs)[1]	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs)[2] Deer	Antelope	Bighorn	Total	LIVESTOCK Class	Season	AUMs	WILD HORSES Numbers[3]	AUMs	GRAND TOTAL
2A	4,104	2,052					Cattle	4/15-10/15	1,446	--	--	
2B	3,430	1,715					Cattle	4/15-9/30	1,715	13	156	
Part of	*Bitner HMA*											
2C	4,138	2,069					Cattle	4/16-8/31	1,342	7	84	
2D	800	800					--	--	--	--	--	
2E	31,922	15,961					Seeding: Cattle	4/16-5/15		80	960	
							Natives[4] Sheep	5/1-6/30				
							Sheep	10/8-11/30				
									20,347			
Part of	*Bitner and all of*	Nut Mtn and Wall	Canyon HMAs									
TOTAL	44,394	22,597	1,350	770	–	2,120			24,850	100	1,200	50,767[4]

The area including the Bitner HMA was counted in February and August, 1973, 116 and 127 horses were counted. In August, 1984, 138 horses were removed from the area with 15 horses being returned to the Bitner HMA. In the fall of 1988, 33 horses were gathered from the Bitner HMA. This was a 21% increase per year from 1984 to 1988. Thirteen horses were returned to the HMA. This HMA was placed under structured management in 1988. It was estimated that there would be 27 horses by the fall of 1992, however, when the horse gates were opened in November, 1992, 40 horses were counted.

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1 Estimate based on 1979 and 1980 BLM actual use and utilization data except for Massacre Mountain Allotment. Livestock forage production is 22,597 AUMs at 50% use levels in the livestock use areas, except Massacre Mountain Allotment (the entire 800 AUMs within Area 2D is allocated to non-consumptive uses). Total production is 44,394 AUMs.

2 Allocation is made on a unit wide basis.

3 Average numbers. Numbers may vary from a low of 70 to a maximum of 125.

4 Actual use data for the Massacre Mountain Allotment is incomplete. Therefore, total active use is being allocated until a production survey is completed in the Sub Unit 2 and 3 portion of the Massacre Mountain Allotment.

High Rock HMA (#CA-264)

The High Rock HMA (map 4) contains 115,000 acres. The HMAP split the HMA into two home ranges. The East of Canyon Home Range lies north of Grassy Canyon and East of High Rock Canyon. The Little High Rock Home Range is the area between Grassy Canyon and Little High Rock Canyon. The home ranges tend to represent summer ranges. The horses from both home ranges share a common winter range. The East of Canyon Home Range is proposed for gathering at this time. The Little High Rock Home Range is not. There are no fences within this HMA. The MFP allocated forage for 70 - 100 wild horses in the High Rock HMA. This allocation of forage is shown in Table 4. The HMAP specified 30 - 40 horses on the East of Canyon Home Range and 40 - 60 on the Little High Rock Home Range.

Table 4. Forage Allocation for the Area Containing the High Rock HMA.

EXISTING FORAGE PRODUCTION (AUMs)[5]	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs)[6]				LIVESTOCK[7]			WILD HORSES		GRAND TOTAL
		Deer	Antelope	Bighorn	Total	Class	Season	AUMs	Numbers[8]	AUMs	
21,696 *High Rock HMA*	10,848	250	350	120	720	Sheep	4/01-4/30 12/01-12/15[9]	500	100	1,200	13,268

Some mustang characteristics appear in this herd, dorsal stripe and barred or striped legs. Sorrel and palomino pintos are more typical colors on this HMA. These are light horses. Horses from this HMA mix with horses from the Wall Canyon, Nut Mountain, and Fox Hog HMAs. There is also movement into this HMA from the Winnemucca District.

In 1973, 136 horses were counted in this area (including today's Nut Mountain and Wall Canyon HMAs). In October, 1981, 25 horses were removed from the area east of High Rock Canyon. In 1985, 235 horses were counted in the East of High Rock Home Range. In July 1985, 102 horses were trapped in this Home Range and removed. At least 45 horses were known to have been left on the Home Range.

In the fall of 1988, 53 horses were gathered on the East of Canyon Home Range; 33 were returned to the range, and 20 were removed. Four horses were known to have been missed. Forty horses were counted after the gather. The East of Canyon Home Range was placed under structured management and the base herd established in 1988. 1988 was another drought year and some of the horses were in poor condition due to lack of drinking water. These poor condition horses were included among those removed. It was estimated that there would be 84 wild horses

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5 Existing livestock forage production is 10,848 AUMs at 50 percent use level. Therefore, total production is 10,848 AUMs x 2 = 21,696 AUMs.

6 Allocation is made on a unit wide basis.

7 Livestock use area is west of High Rock Canyon and north of Little High Rock Canyon.

8 Maximum numbers. Numbers can vary from 70 head to 100 head.

9 One week trail during a two week period.

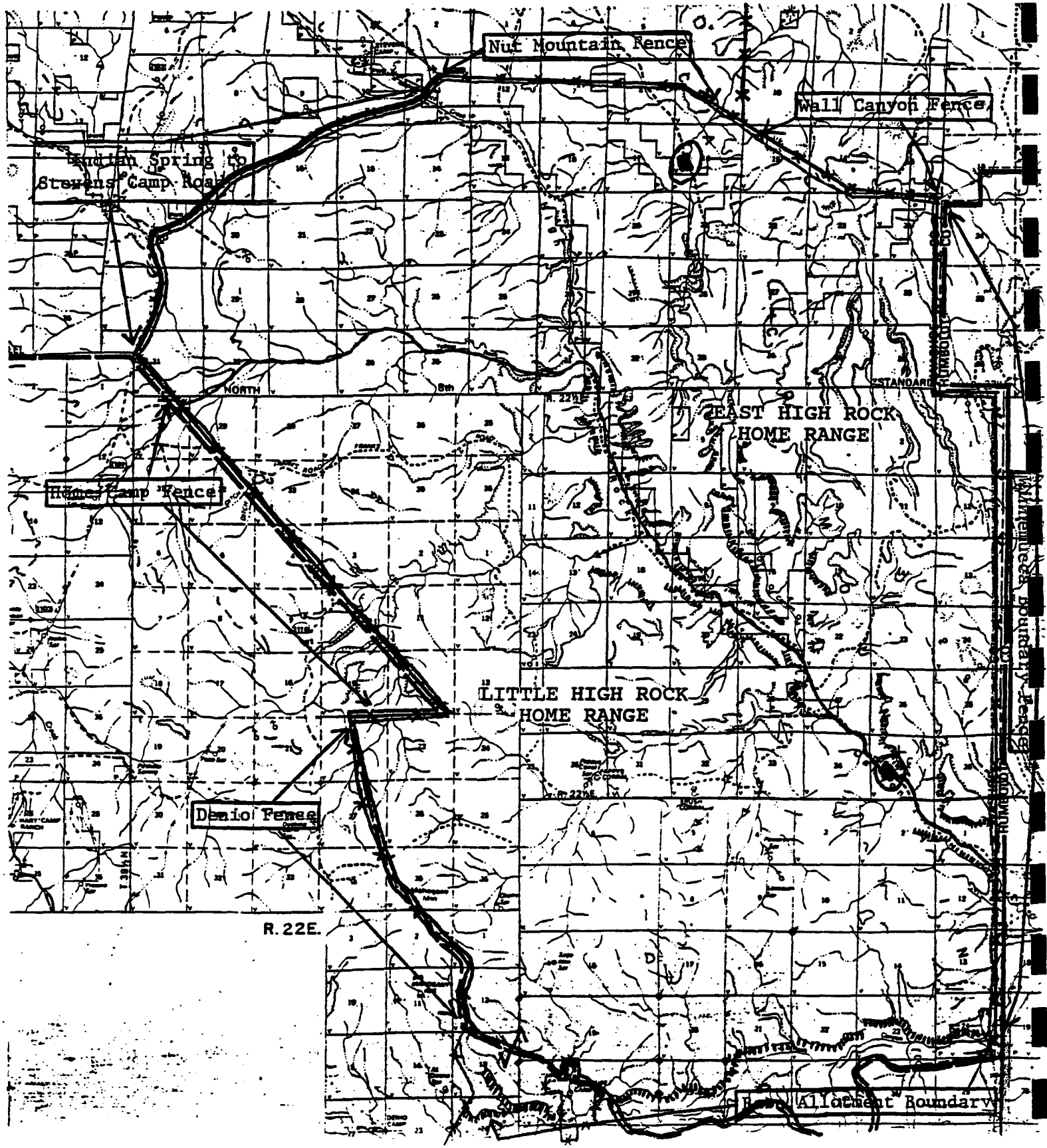
HIGH ROCK

HERD MANAGEMENT AREA

Map 4

Legend:

- HMA Boundry
- Prominent Rims & Canyon Faces
- Fences
- Potential Trap Sites



in the East of Canyon Home Range in the fall of 1992. A flight over High Rock Canyon in the fall of 1992 found 55 horses in the canyons. A flight in February, 1993 found 20 horses at the two lowest springs in Pole Canyon at its junction with High Rock. These horses were active and looked in good condition. No horses were seen in the uplands and there were no tracks in the snow.

Wild horses were last gathered on the Little High Rock Home Range in November, 1990. Horses gathered showed albino traits, signs of distemper, and drought stress.

Nut Mountain HMA (#CA-266)

The Nut Mountain HMA (map 5) contains 40,680 acres. The Nut Mountain HMA lies between the Bitner, Wall Canyon, and High Rock HMAs. The MFP specified a population of 30 - 55 horses for this HMA. This allocation of forage is shown in Table 3. The Analysis determined that there was sufficient forage for 30 - 55 horses.

These horses descended from feral ranch stock. They are light horses. Blacks and bays are the most common colors. There are some piebald horses. There are several easily identifiable bands with black or palomino paint studs and subsequent off spring.

This herd was last gathered in 1988, 70 horses were gathered, 40 were removed and 30 returned to the range. This HMA was placed under structured management and the base herd was established at this gather. It was estimated that there would be 61 horses on the HMA by the fall of 1992. Counts during the summer and fall of 1992 found about 52 horses on the HMA.

Wall Canyon HMA (#CA-265)

The Wall Canyon HMA (map 6) contains 49,277 acres. This HMA lies along the eastern boundary of the resource area. It is bordered on the north by the Sheldon Antelope Range and on the east by the Winnemucca district. Horses from this HMA mix with horses from Winnemucca, the Sheldon, and the High Rock and Nut Mountain HMAs. These horses are similar to the Nut Mountain HMA horses, with fewer paints. The MFP specified a population of 15 - 25 horses for this HMA. This forage allocation is shown in Table 3. The Analysis determined that there was sufficient forage for 15 - 25 horses.

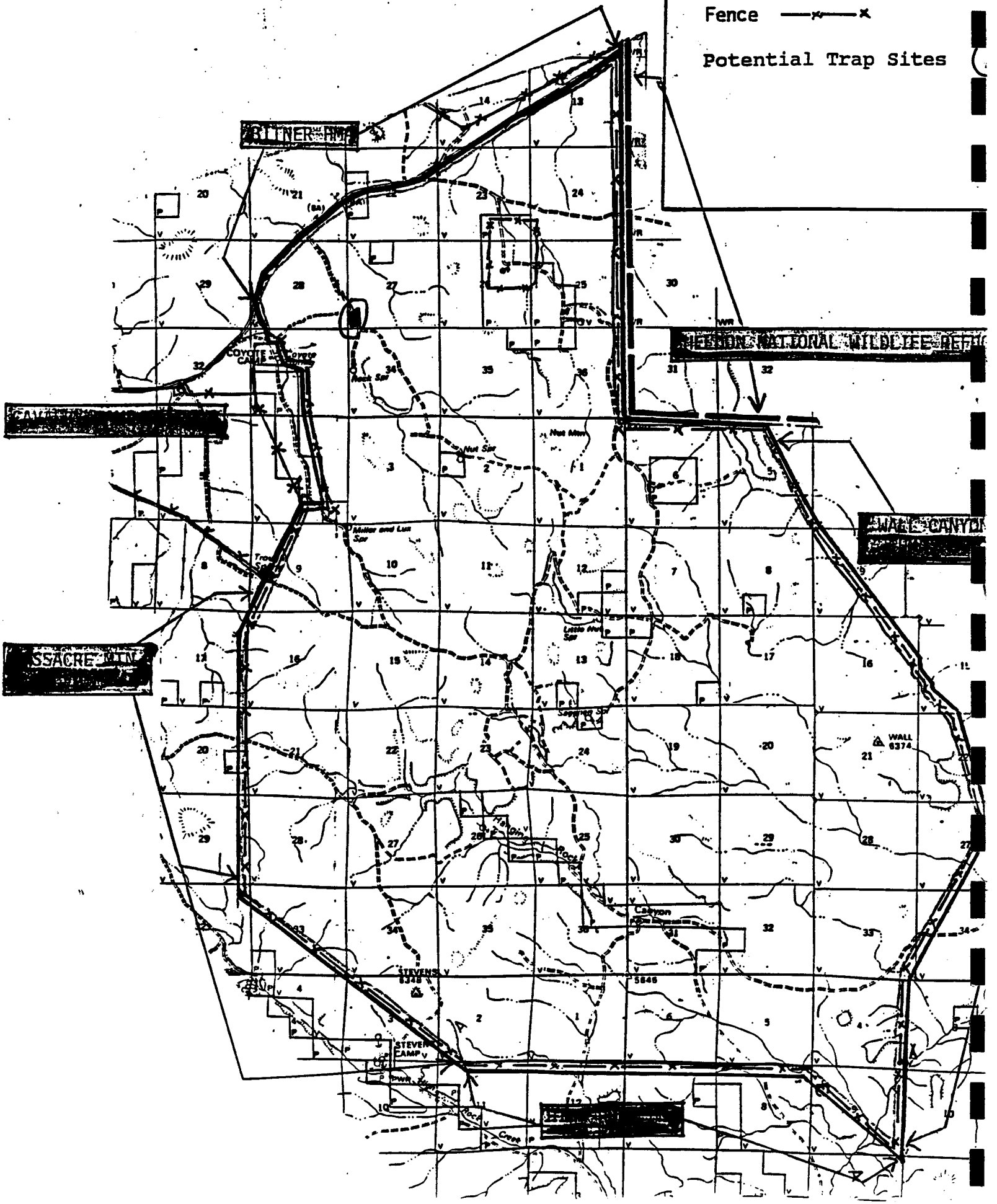
This HMA was also last gathered in 1988, when 142 horses were trapped, and 123 were removed leaving a population of 19 horses. This herd was placed under structured management and the base herd was established in 1988. It was estimated that there would be 40 horses on the whole HMA in the fall of 1992. A helicopter count of the northern part of the HMA in October 1992, found 78 horses. Also in the fall of 1992, coincidental observations along the boundary between Wall Canyon and Winnemucca found many horses and severe utilization on the Winnemucca side and slight utilization on the Wall Canyon side. Undoubtedly there is movement of horses from Winnemucca onto this HMA.

Monitoring Results and Recommended Management Levels

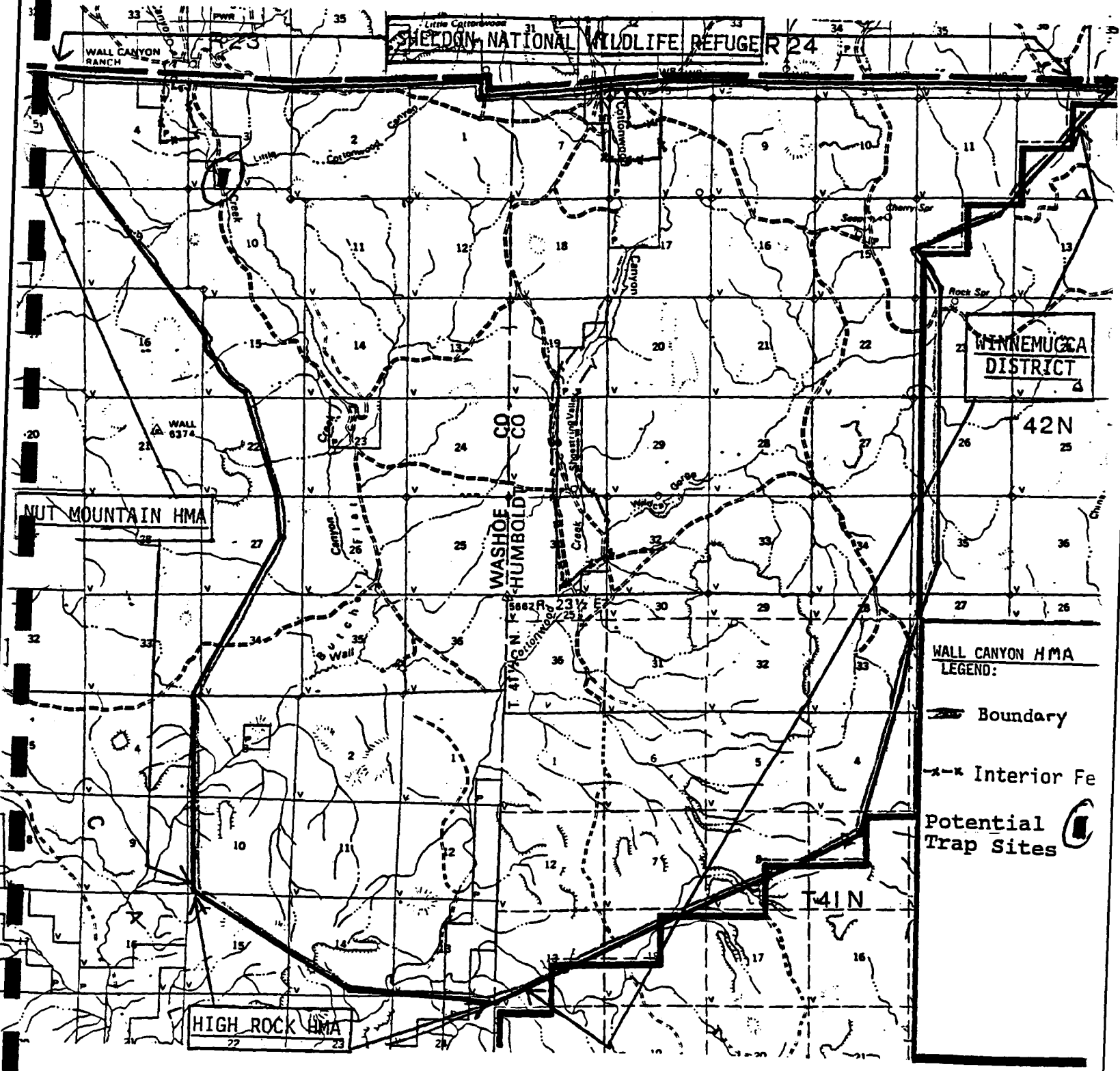
The current monitoring data (appendices 4 - 6) found that the current wild horse numbers were deleterious to the concept of "thriving natural ecological balance and multiple use relationships" on the Bitner, Nut Mountain, and Wall Canyon HMAs. IM 90-30 defined "thriving natural ecological balance" as "the condition of the public range that exists when resource objectives related to wild horses and burros in approved land use and/or activity plans have been achieved."

Nut Mountain HMA

Map 5



WALL CANYON
HERD MANAGEMENT AREA
Map 6



The MFP defined thriving natural ecological balance for the area of these three HMAs as occurring when ecological sites are in mid-successional vegetative condition. The MFP further defined grazing's place in the multiple use relationships as moderate utilization of grasses.

In 1992, wild horse utilization on key areas in the three HMAs exceeded utilization standards specified in the MFP. As a result of the drought and reduced cattle numbers, there were key areas on these three HMAs which were used by wild horses, but not by cattle. 1992 wild horse utilization was determined in these key areas.

DEFINITIONS

Slight Utilization occurs when less than 20% of the annual production of forage plants has been consumed.

Light Utilization occurs when 20% - 40% of the annual production of forage plants has been consumed.

Moderate Utilization occurs when 40% - 60% of the annual production of forage plants has been consumed.

Heavy Utilization occurs when 60% - 80% of the annual production of forage plants has been consumed.

Severe Utilization occurs when 80% - 100% of the annual production of forage plants has been consumed.

Riparian areas were chosen as key areas, because they were targeted for improvement in the MFP, but have remained in poor condition, and 75% of riparian areas must be in properly functioning condition by 1997. Upland areas generally have an upward condition trend. A summary of the most recent trend monitoring data is contained in appendix 4. Utilization monitoring over the past several years has shown that the areas in poorest condition, riparian communities, have continued to receive unacceptably heavy utilization. Utilization monitoring for the allotments which contain the Bitner, Nut Mountain, and Wall Canyon HMAs is shown in appendix 5.

The trend data and subsequent utilization mapping, indicated that upland vegetation condition trend was, and remains, unchanged or upward. While riparian area condition was poor. Utilization has been heavy and severe in riparian areas since the last condition studies. This level of utilization would be expected to maintain poor condition. Actual Use Reports (appendix 6) for the period 1988-92 showed steady cattle use, with reductions during the past several years in response to the drought and changes in management.

Appropriate management levels based on the monitoring data were developed in appendix 1. The recommended wild horse management levels from appendix 1 and several other management levels are shown in Table 5.

Table 4. Wild Horse Management Levels for the Bitner, Nut Mountain, and Wall Canyon HMAs.

HMA	MFP MIN	MFP MAX	RECOMMENDED MIN	RECOMMENDED MAX	ANALYSIS MIN	ANALYSIS MAX
BITNER	15 horses	25 horses	15 horses	25 horses	16 horses	34 horses
NUT MOUNTAIN	30	55	30	55	25	52
WALL CANYON	15	25	15	25	28	58

The management levels based on the 1992 monitoring data were very close to the management levels in the MFP for the Bitner and Nut Mountain HMAs. For Wall Canyon the management levels from the 1992 monitoring data were about twice the MFP's levels. It was decided that the management levels based on the 1992 monitoring data were similar enough with the MFP's management levels to support the MFP's management levels. The recommended appropriate management levels for all three HMAs were the same as in the MFP.

The conclusion drawn from the 1992 utilization pattern mapping and the observations made on the HMAs was, there was not additional forage to allocate to additional users. This was particularly the case in riparian areas. Also, although 1992 was a very poor production year, cattle numbers on these HMAs were from 56 - 24% of normal. In more normal years there will neither be this lack of production, nor the reduction in cattle. The other conclusion from the 1992 monitoring plus experience was at the recommended wild horse management levels and normal cattle numbers the users are generally in balance with the forage. There is not additional forage to allocate to additional users.

WILDERNESS

All four HMAs contain Wilderness Study Areas (WSA). Parts of the Nut Mountain and Wall Canyon HMAs and the East of Canyon Home Range are within the East Fork High Rock Canyon WSA (#914). Much of the Bitner HMA lies within the Massacre Rim WSA (#1013). All the potential trap sites in the East of Canyon Home Range are in WSA. None of the potential traps sites on the Bitner, Nut Mountain, or Wall Canyon HMAs are in WSA.

The Interim Management Plan (IMP) permits installation of temporary facilities in WSAs for the purpose of gathering wild horses, as long as they satisfy the nonimpairment criteria.

CULTURAL RESOURCES

Several and continuing inventories and excavations have found that High Rock Canyon is rich in historical and archeological sites. Massacre Bench has many, high quality archeological sites. Many of these archeological and historical sites are at springs. When horses or cattle congregate, trample, and disturb the soil surface at springs, they destroy the context of artifacts and can damage them.

The Cowhead/Massacre EIS determined that cultural resources in High Rock area and on the Massacre Bench required special management actions. Decisions HR009 and HR010 stated that if wild horse impacts were shown, through monitoring, to be causing significant impacts on cultural resources, the wild horses would be adjusted. This would be accomplished by fencing and/or herd reduction. Decision MN009 stated that factors which may destroy the high archeological values in Area 2D were to be excluded. The 1,600 acre Massacre Bench Cultural Resource Management Area exclosure in the Bitner HMA was one result. The second MFP goal for the High Rock area was, "preserve 1,953 archeological sites, 12 historical sites, and 16 miles of the Lassen/Applegate Trail."

Throughout the MFP and technical review team processes grazing use in the canyons was an intensely debated issue. At one point it was decided that there would be no cattle or horses in the canyons. Eventually a compromise was reached. Cultural resources, wildlife habitat, and a primitive setting were affirmed as the primary values. In order to protect the primary resource values, there would only be a small wild horse herd, 30 - 40 head, and no cattle grazing in High Rock and the uplands to the east. Some archeological site survey forms from the High Rock area are in appendix 6. The locations and identifiers have been removed, because this is proprietary information. These examples correspond with horse populations of 45 to 250 in the East of Canyon Home Range (see page 5, High Rock HMA discussion). When horse numbers were higher than the levels set in the HMAP, damage to archeological sites was noted.

All the proposed trap sites have received cultural surveys and been approved for use.

LIVESTOCK

There are four grazing allotments in the proposed gather area. The Bitner HMA contains the Bitner Allotment plus the part of the Nut Mountain Allotment north of highway 8A. The High Rock HMA lies within the Massacre Mountain Allotment. The Nut Mountain HMA contains the part of the Nut Mountain Allotment south of highway 8A. The Wall Canyon HMA contains the entire Wall Canyon (east) Allotment.

Beginning in 1934, with the passage of the Taylor Grazing Act and the end of nomadic sheep bands, and continuing through several livestock adjudications and the Grazing Environmental Impact Statement and resulting MFP and AMPs, cattle numbers in this area have been reduced to around carrying capacity. All the permittees currently on these allotments have taken stocking rate cuts for the purpose of making cattle numbers compatible with the other plant community values, specifically soil protection and fertility, functioning watersheds, healthy productive plant communities, and secondary values of wildlife habitat, scenery, wild horse habitat, and livestock forage production.

For the past several years cattle numbers have been reduced on all these allotments. In 1992 Actual Use was 24% of active preference on the Bitner Allotment, 56% on the Nut Mountain Allotment, and 47% on the Wall Canyon (east) Allotment. Also High Rock Canyon and the area to the east in the East of Canyon Home Range has been closed to domestic livestock use since 1984.

DEFINITION

Active Preference is the amount of livestock use permitted based on the amount of forage available for livestock grazing established in the land use plan, MFP.

The Bitner Allotment is part of a Coordinated Resource Management Plan which includes this allotment, the Bitner Ranch, and the South Catnip Allotment on the Sheldon Antelope Range. The planned season of use is April 16 to July 7 each year. The planned use has been greatly reduced in the past three years in response to the drought and changes in the permittees operation.

The Nut Mountain Allotment has three pastures divided into five use areas. A deferred-rest rotation grazing system is used on the allotment. The two early use pastures are rested every other year. Cattle are moved south to north and north to south through the allotment in alternating years. The grazing season is April 16 to October 15. The grazing pattern has been altered, and the number of cattle reduced for the past several years due to the drought.

The Wall Canyon (east) Allotment has one pasture. It was used as part of a grazing system which included the Badger Mountain Allotment on the Sheldon Antelope Range. The season of use is April 16 to September 30 with approximately two month use each year. The use period rotated between spring, summer, and fall. The grazing pattern has been altered, and the number of cattle reduced for the past

several years due to the drought. Actual use has been about 51 % of active preference over the past three years. Work is in progress to include the Soldier Meadows Allotment on the Winnemucca District in this grazing system.

IMPACTS OF THE ALTERNATIVES (per HMA)

Three issues were identified for assessing the alternatives, heavy and severe utilization of riparian areas, protection of specific resources in the High Rock Canyon area, and affects on wild horses. The impacts of the proposed action and alternative 2 will be assessed. The other resource values discussed are secondary results of riparian area condition. For example the main wildlife impacts result from the availability of properly functioning riparian areas to provide habitat. An important wilderness impact is the degradation of the feeling of a pristine setting due to degradation of riparian areas. The analysis of alternatives will focus on these three issues. Also, for this analysis, the Bitner, Nut Mountain, and Wall Canyon HMAs will be discussed separately from the High Rock HMA, because in the three HMAs, the main issue is habitat damage, while in High Rock the main issue is the selection of other resource values over wild horses and maintenance of wild horses within the limits specified.

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

Riparian Issues

Proposed Action

Implementing the proposed action will help address the riparian community concerns and the MFP objectives in riparian areas. Reducing wild horse numbers to levels which are within the carrying capacity of the plant communities which they are most likely to damage, riparian areas, in conjunction with the livestock grazing management which exists on the allotments in these HMAs, will result in acceptable utilization levels on the riparian areas. Due to the presence of water in riparian areas the vegetative response to sound grazing management and proper utilization is faster and more dramatic than on surrounding upland communities.

In spring meadows the first steps to recovery will be the presence of litter in the spring and an increase in more desirable sedges such as Nebraska sedge. It will take several years of weathering, after implementation of proper use, to reduce the hummocks.

Along creeks the first step to recovery will be the presence of residual vegetation to catch silt during runoff events. Proper utilization of the creek side corridor will allow the more desirable sedges and grasses to increase. Gradually the banks will build up producing a narrower and deeper creek. Improvement in the creek will raise the water table adjacent to the creek. This will provide habitat for riparian plants such as willows. The cumulative affects of these changes in the creek will be a longer period of flow each summer. This happens because there is less evaporation from the narrower, deeper, shaded channel, and the properly functioning riparian zone captures more water during runoff, so it can release water during a longer period each summer.

These changes in vegetation and its affects on hydrologic functions are the first steps in changing a non-functioning riparian area to a properly functioning riparian area.

Alternative 2

Wild horse use on riparian areas will continue to increase as the populations continue to grow. Riparian communities will continue to be dominated by upland plants, in particular big sagebrush. Continued trampling of spring meadows will spread out some springs so much that they no longer produce water. Creeks will continue to down cut making runoff faster and the period of summer stream flow shorter. The amount and quality of vegetation produced in the riparian corridors will

remain low compared to their potential. The riparian areas which are not now properly functioning will continue to get worse. Riparian areas which are functioning, but at risk, will become non-functioning.

Wild Horses

There is a finite amount of range available. Since wild horses are not native to North America, they have no natural predators to keep populations under control. Since the passage of the Wild Horse and Burro Act, they cannot be captured by the general public. Wild horses can either be allowed to increase, over populate their range, and, as in the winter of 1992-93, starve to death during a snowy winter. Or they can be gathered, in this case by the BLM, and some of them removed from the range.

Proposed Action

The main benefit to wild horses of being gathered is reduced competition between bands for water, forage, space, and seasonal ranges. Implementing the proposed action will result in the removal of approximately 180 wild horses from these three HMAs. The selection of excess horses for removal and placement in the Susanville adoption program will be carried out following the procedures and policies in the Susanville Wild Horse Management Plan. The goals of this plan are to make wild horse gathering as safe as possible for the horses, assure that the excess horses are adopted into adequate, healthy settings, and the horses that remain on the range are healthy and vigorous and within the carrying capacity of their habitat.

Gathering and structuring a herd maintains herd integrity. Only younger horses are removed from the range, so band social structures and use areas are left intact. Younger horses are also more adoptable. Gathering provides the opportunity to see many of the horses in the herd. It is the only time that accurate age structures, sex ratios, and reproductive rates of the herds are determined. This information is necessary for BLM to properly manage the horses.

The BLM is required to manage public lands in a multiple use context, including wild horses. These herds have not been gathered since 1988. In the four years from fall, 1988 to fall, 1992, we lost track of how many horses were on these HMAs, and what their seasonal ranges were. So far in spring, 1993 we have had some reports and observations that some bands have returned to their traditional summer use areas, but some have not. Only one dead horse has been reported on these HMAs and two on an adjacent HMA. Where are the other horses? Did last winter make horses abandon some areas? Will they move back, or will these areas be repopulated by neighboring bands? There are too many questions to assume that BLM is providing good wild horse management. The HMAP files show that when BLM had ongoing wild horse management activities most of these questions were answered. As the program has lagged, so has knowledge about the herds.

Gathering is inherently risky. Running wild horses into a trap then loading them onto a truck, is a source of risk and stress for the animals. Horses have been injured and killed during gathering, but it is not common. Foals can be separated from mares. Band social structure can be disturbed by mixing with other bands or leaving a band with too few individuals.

Alternative 2

Implementing alternative 2 will mean that horses will not be gathered from these HMAs at this time. The horses will not face any of the stress or potential dangers associated with gathering. There will be no disruption of band structure or separation of foals from mares due to gathering.

Implementing alternative 2 will mean increasing intraspecific competition among wild horses. The 1992 counts found that there were more wild horses on the HMAs than could be accounted for through reproduction. 1992 utilization data showed that wild horses were in excess of carrying capacity of their habitat based on how they use the areas they occupy.

Implementing alternative 2 moves the horse herds closer to the possibility of die offs during heavy winters. It is believed that the history of regular gathering and removal of wild horses and keeping their populations within the carrying capacity of the range accounts for the absence of winter kill this year on these four HMAs specifically and the Surprise Resource Area generally.

Implementing alternative 2 will mean that the current estimated numbers, age structure, sex ratio will continue to be used in managing these herds. Management based on estimates will continue. The much needed infusion of information will not happen.

Table 6 shows projected wild horse populations on the HMAs for the "Proposed Action" and "Alternative 2."

Table 6. Wild Horse Population Projections: Proposed Action and Alternative 2.

HMA	1992 COUNTS	1993		1994		1995		1996		1997	
		PROP	ALT 2	PROP	ALT 2	PROP	ALT 2	PROP	ALT 2	PROP	ALT 2
BITNER	40 horses	15	48	19	58	23	69	26	83	31	100
HIGH ROCK East of Canyon Home Range	55	30	66	38	79	45	95	53	114	62	137
NUT MOUNTAIN	52	30	62	38	74	45	89	53	107	62	129
WALL CANYON	78	15	94	19	113	23	135	26	162	31	195

Wilderness

Both the Proposed Action and Alternative 2 comply with the IMP's nonimpairment criteria for WSAs (see appendix 7).

When a final determination is made on status of the WSAs, it may prohibit gathering using helicopters, it may require the complete removal of wild horses as an incompatible use, or wild horse gathering may be a legislated or grand fathered activity. The WSAs also may not be designate wilderness. There is no clear indication at this time.

Proposed Action

None of the potential trap sites for these three HMAs are in WSAs.

A helicopter will be used over the Massacre Bench WSA to gather horses on the Bitner HMA. This will disturb the feeling of solitude more present at other times. This activity will take place during two or three days, and will not be repeated for about four years. There will be no residual impacts following the gather. No reclamation will be required. Wild horse gathering using

helicopters is a permitted activity under the WSA Interim Management Plan. This activity will not affect the WSA's potential for being designated a wilderness area.

Alternative 2

Wild horses will not be gathered at this time. Impacts to solitude caused by helicopter operations will not occur.

Cultural Resources

The alternatives are not expected to have significantly different impacts on cultural resources within the three HMAs. The National Register quality area in the Bitner HMA has been fenced off.

HIGH ROCK HMA, EAST OF CANYON HOME RANGE

Riparian Issues

Proposed Action

In High Rock Canyon riparian areas have progressed towards the site potential goal as a result of the livestock grazing closure implemented in 1984 and regular wild horse removals begun in 1985. In the past few years, as wild horse populations have increased, year long use of springs in the canyons has resumed. Implementing the proposed action, which was originally designed to prevent year round wild horse use in High Rock and tributary canyons, will allow plant communities in the canyons, including riparian communities, to continue improving.

Alternative 2

Grazing pressure will continue to increase in the canyons. Use at springs in the canyons will increase and more springs will be impacted as horse numbers increase. The riparian plant communities, along with adjacent areas, will not be able to reach site potential. Areas that had begun to recover from heavy cattle grazing will degrade due to year long wild horse use.

Cultural Resources

Proposed Action

The springs that wild horses have been using in Pole and High Rock Canyons are identified archeological sites. Continued horse use of these areas disturbs the sites destroying the context of the artifacts and in some cases damaging the artifacts. Implementation of the proposed action will end, or reduce to an acceptable level, wild horse use of these springs. Based on past experience populations of 30 - 40 wild horses in the East of Canyon Home Range results in little use of the canyons which tends to be limited to winter when the sites are frozen and may be snow covered.

Alternative 2

Implementation of this alternative will increase the amount of wild horse use of cultural sites at springs. As the number of horses, and amount of use, increases, the amount of damage to the sites will increase.

Wild Horses

Proposed Action

In the High Rock Canyon area the MFP stated that any additional forage would be allocated to wildlife and non-consumptive uses. The purpose for this decision was to protect the primary resource values from damage by wild horse use. Allowing wild horse numbers to be above the MFP management levels is de facto allocation of additional forage to wild horses, a consumptive use. The proposed action would comply with the MFP by reducing wild horses on the East of Canyon Home Range, so that their numbers were in compliance with the MFP.

Alternative 2

Implementation of this alternative would not be in compliance with the MFP's direction for wild horse management in the High Rock Area.

Wilderness

Both the Proposed Action and Alternative 2 comply with the IMP's nonimpairment criteria for WSAs (see appendix 7).

Proposed Action

There is a potential trap site in the East Fork of High Rock WSA. There is a road to the site. The horse trailer and trucks will use that road. There will be a turn around at the trap site. This will be the only off road travel. The trap is completely portable. No sign of its presence remains following the gather. In conjunction with removing the trap at the end of the gather, the site is completely reclaimed. No residual impacts remain from the gathering activity.

A helicopter will be used to drive wild horses through the East Fork of High Rock WSA to the trap site. This activity will take place during two to four days, and will not be repeated for approximately four years. During the gather, the helicopter and horses will disturb the sense of solitude that is normally present. When the gather is completed, there will be no residual affects, and no reclamation will be required.

The Wilderness Study Area, Interim Management Plan permits wild horse gathering within WSAs. This activity will not affect the WSA's potential for being designated a wilderness area.

Alternative 2

Wild horses will not be gathered, so there will be no helicopter or other gathering activity intrusions at this time.

DESCRIPTION OF MITIGATION MEASURES AND RESIDUAL IMPACTS

Implementation of the proposed action following the Susanville District wild horse management policies will result in safe and humane treatment of the horses. No residual impacts are anticipated and no mitigation measures will be required.

PERSONS/AGENCIES CONSULTED:

Surprise Resource Area staff
Richard Westman; SRA Supervisory Range Conservationist
Rob Jeffers; Susanville District Wild Horse and Burro Specialist
Vern Shulze; National Wild Horse and Burro Program Specialist
George Barrier; Modoc/Washoe ESP Wild Horse and Burro Representative and American Mustang and Burro Association, Inc.
Catherine Barcomb; Nevada Commission for the Preservation of Wild Horses
Dawn Lappin; Wild Horse Organized Assistance
Modoc/Washoe Experimental Stewarship; Executive Committee
Permittees within the HMAs; Don Coops, John Laxague, R.C. Roberts, Jack Wilkinson
Wild Horse mailing list
WSA mailing list

PREPARER: Bill Dragt; SRA Range Conservationist

DATE: June 21, 1993

APPENDICES

DRAFT

APPENDIX 1

HELICOPTER GATHERING PLAN

FOR WILD HORSES IN THE

BITNER, HIGH ROCK, NUT MOUNTAIN, AND WALL CANYON

HERD MANAGEMENT AREAS

DRAFT

HELICOPTER GATHERING PLAN FOR WILD HORSES IN THE BITNER, HIGH ROCK, NUT MOUNTAIN, AND WALL CANYON HERD MANAGEMENT AREAS

INTRODUCTION

The purpose of this removal plan is to outline the methods and procedures to be used in removing approximately 180 wild horses from the Bitner, Wall Canyon, Nut Mountain and High Rock Herd Management Areas. The proposed action would take the wild horse population to the lower limit of the established population range for each area. The populations of wild horses would then be allowed to increase for four years, at which time, it is projected that the populations would be at the upper end if the established population range. At that time, the need for another removal would be determined based upon the actual wild horse populations present.

The proposed removals would begin sometime after September 1, 1993 and would take two to three weeks to complete. If funding does not allow completion of the removal during September, 1993, the removal will take place starting in October, 1993 (Fiscal Year 1994).

GENERAL AREA DESCRIPTION - BACKGROUND DATA

The HMAs are located approximately 40 miles east of Cedarville, California. The HMAs are in northern Washoe and Humboldt Counties, Nevada. See Map 1 for general locations.

The acreage and land status for each HMA is as follows:

HMA Name	Acres Private	Acres Public	Total Acres
Bitner	7,110	43,550	50,660
Nut Mountain	1,840	38,840	40,680
Wall Canyon	1,400	47,877	49,277
High Rock	653	114,447	115,100

The Herd Management Areas are located in the Cowhead Massacre Planning Unit of Surprise Resource Area. See Map 2- Planning Unit Map. The Environmental Impact Statement for the Unit was completed in 1980.

Elevations range from 5,000 feet to 6,900 feet within the areas.

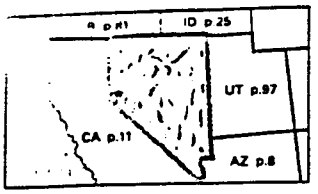
Vegetation is typical of the western Great Basin Ecosystem. Various species of sagebrush dominate the aspect. The dominant perennial grasses are Sandberg bluegrass, bottlebrush squirreltail, Thurber's needlegrass, and Idaho fescue.

Appropriate management levels for wild horses in the Bitner, Wall Canyon and Nut Mountain HMAs came from an analysis of the current monitoring data (appendix 2). In these three HMAs the goal is to have wild horses be part of a thriving natural ecological balance among the multiple uses.

The AML for the High Rock HMA, including the East of Canyon Home Range, was also established to maintain a thriving natural ecological balance. The resource management goals in the High Rock area, as defined in the land use plan, were to maintain the canyons in a primitive state and preserve archeological and historical sites. Grazing was determined to be incompatible with these goals. Therefore, forage was allocated for a low number of wild horses and livestock grazing was eliminated.

60 Nevada

Land Area [illegible] sq mi (7)
Population 800 493 (43)
Dimensions N-S 485 miles, E-W 315 miles
Highest Point Boundary Peak 13,143 ft., K-4
Capital Carson City, H-2 *
Largest City Las Vegas, N-10
Index page 124



Selected Recreational & Historical Sites

Cathedral Gorge State Natural Area, K-11
Churchill State Historical Area, H-3
Hoover Dam, O-11
Humboldt National Forest, D-9
Lake Mead National Recreation Area, N-12
Las Vegas, N-10
Lehman Caves National Monument, H-11
Valley of Fire State Natural Area, N-11

How to Determine Distance

0 10 20 30 Miles
0 10 20 30 40 Kilometers

For explanation of all map symbols, see pp. 1, Index of counties and towns, page 120.

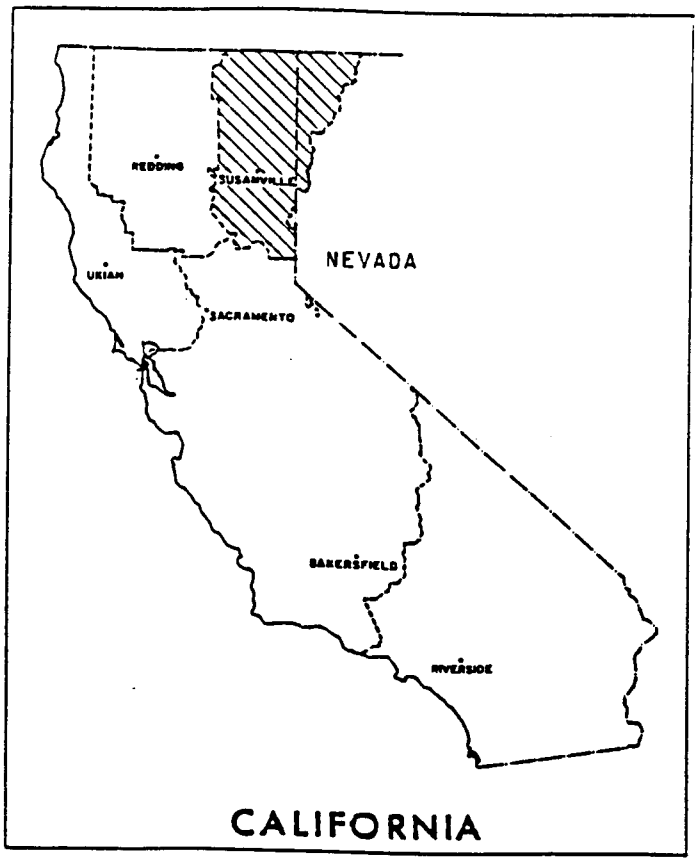
Mileage

Boulder C
Carson Ci
Elko
Ely
Las Vegas
Reno

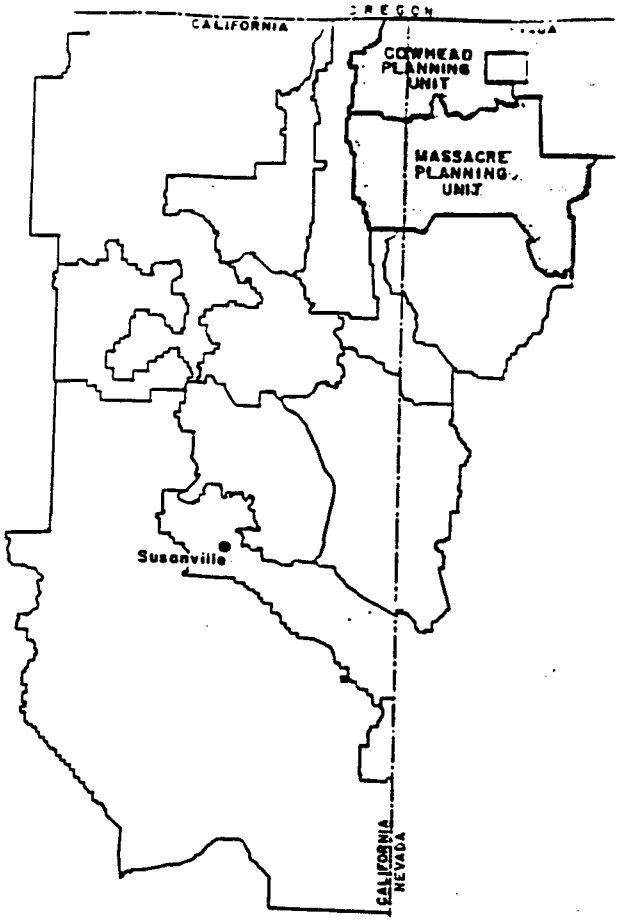
Nevada Commission on Tourism, Capitol Complex, 600 East Will

BITNER HMA
WALL CANYON HMA
NUT MOUNTAIN HMA
HIGH ROCK HMA

MAP 1



CALIFORNIA



SUSANVILLE DISTRICT

MAP 2

Proposed gathering and removal for FY 1993 will be conducted in the "East of Canyon" Home Range of the High Rock HMA (CA-264), the Bitner HMA (CA-267), the Wall Canyon HMA (CA-265), and the Nut Mountain HMA (CA-266). See Maps 3, 4, 5 and 6 for specific locations.

JUSTIFICATION

The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195) as amended, Section 3(b)(2) states "...if an overpopulation exists on a given area of public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels. Such action shall be taken, in the following order and priority until all excess animals have been removed so as to restore a thriving natural ecological balance to the range, and protect the range from the deterioration associated with the overpopulation."

The 1993 Analysis for the Bitner, Nut Mountain, and Wall Canyon HMAs conducted in March, 1993, established the AMLs for the HMAs as follows:

HMA Name	Appropriate Management Level (AML)
Bitner	20
Wall Canyon	20
Nut Mountain	43

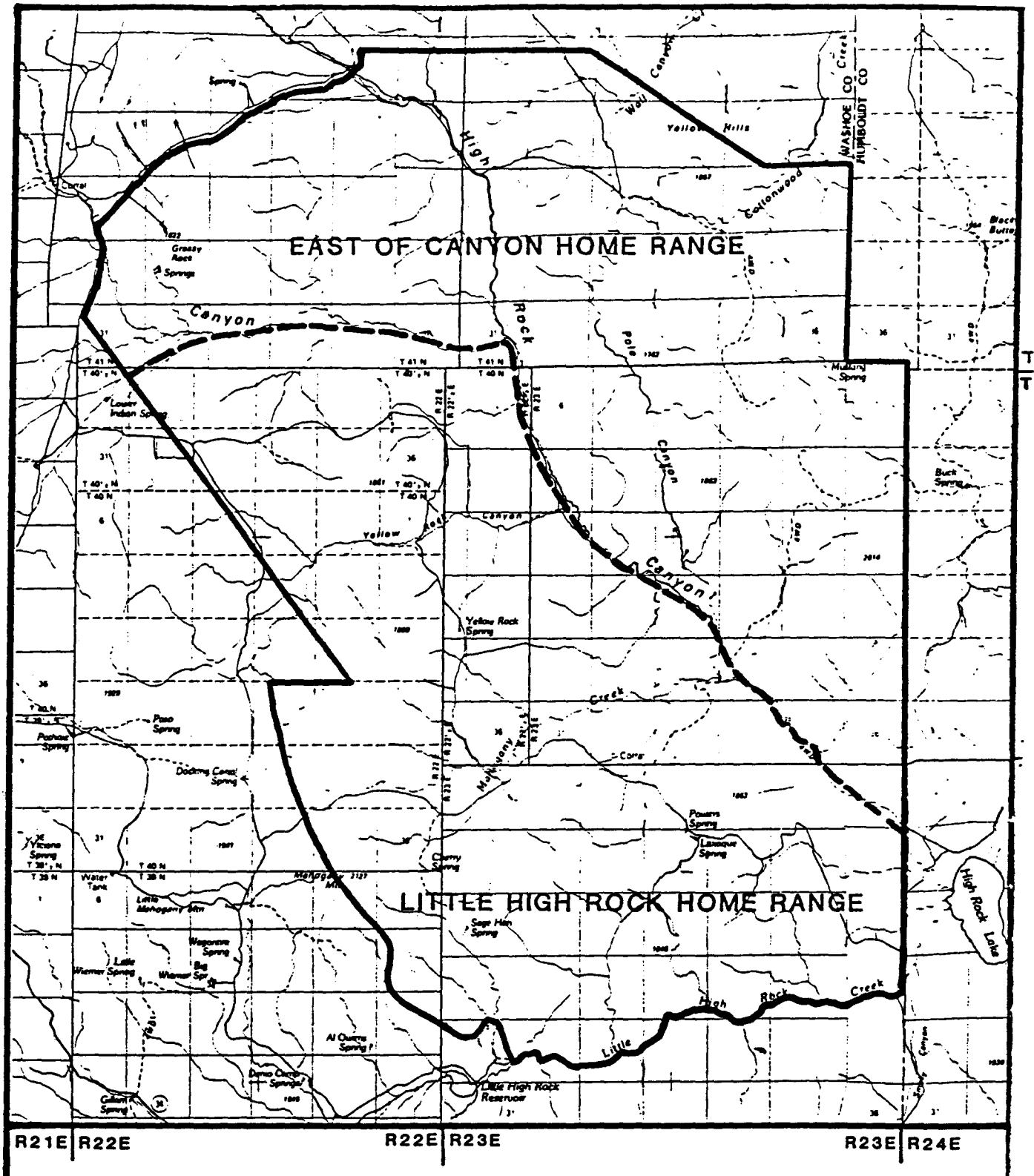
The AML is the median number between the maximum and minimum management levels necessary to achieve and maintain a thriving natural ecological balance in each area.

For the East of Canyon Home Range of the High Rock HMA, the AML has been established at 35. Maintenance of wild horse numbers at this level since 1985 has protected cultural and historic sites, permitted the plant communities to move toward site potential, and preserved the primitive nature of the canyons. When wild horse numbers increase above the upper range of the established population level, the resource management goals are not met.

Based on the carrying capacity for horses, management levels have been established as follows (calculations in appendix 2):

HMA Name	Population Range.
Bitner	15-25
Wall Canyon	15-25
Nut Mountain	30-55
High Rock (East of Canyon Home Range)	30-40

The maximum number for each HMA is the wild horse carrying capacity on the HMAs from the analysis of the 1992 monitoring data. The minimum number is the number of horses which in four years, at the average rate of increase, will reach the maximum number. It is calculated from the maximum number. In four years, the existing populations will be evaluated, and a decision made regarding the need for further removal.



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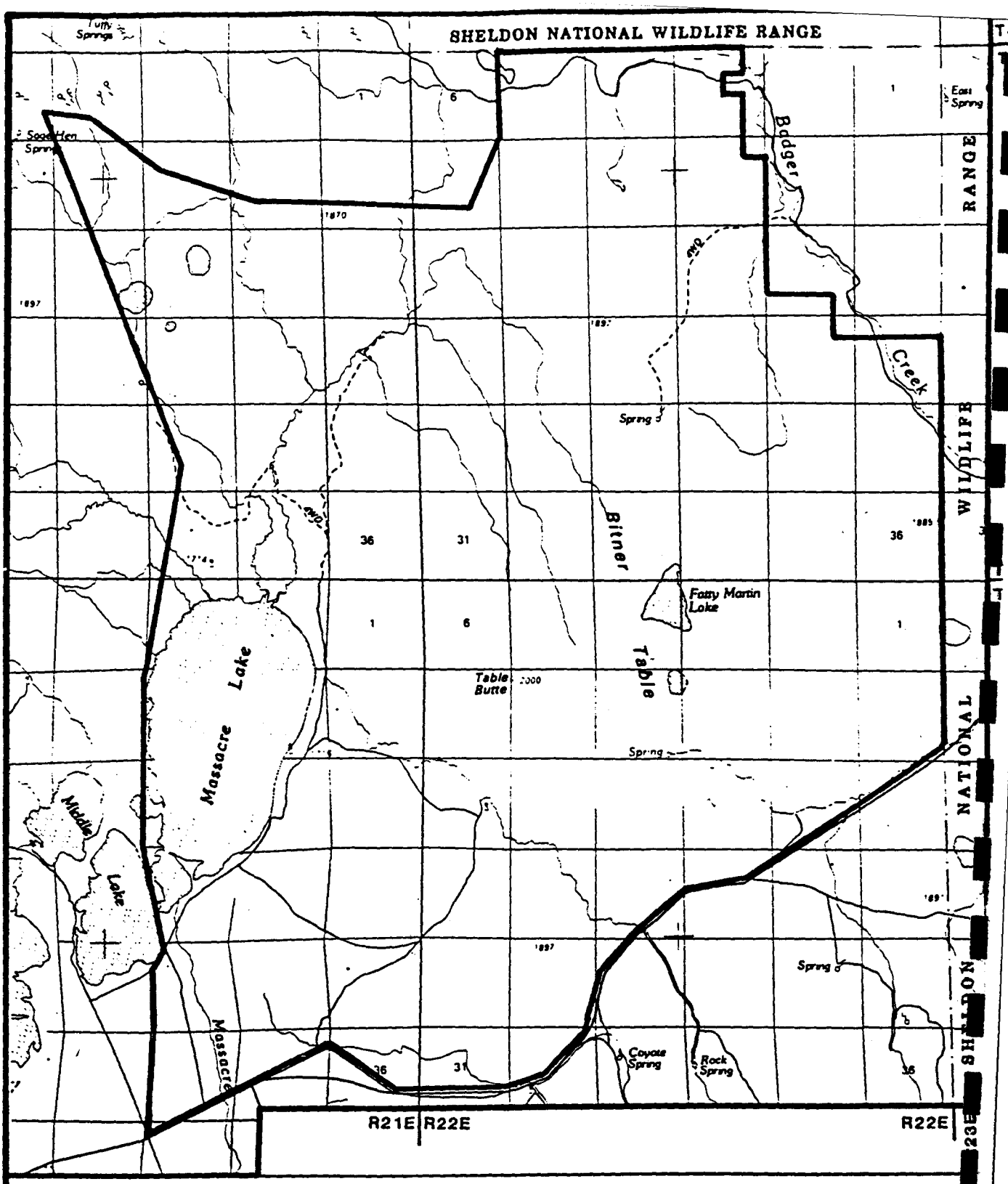
HERD MANAGEMENT AREA
HIGH ROCK

MAP 3

CA-264



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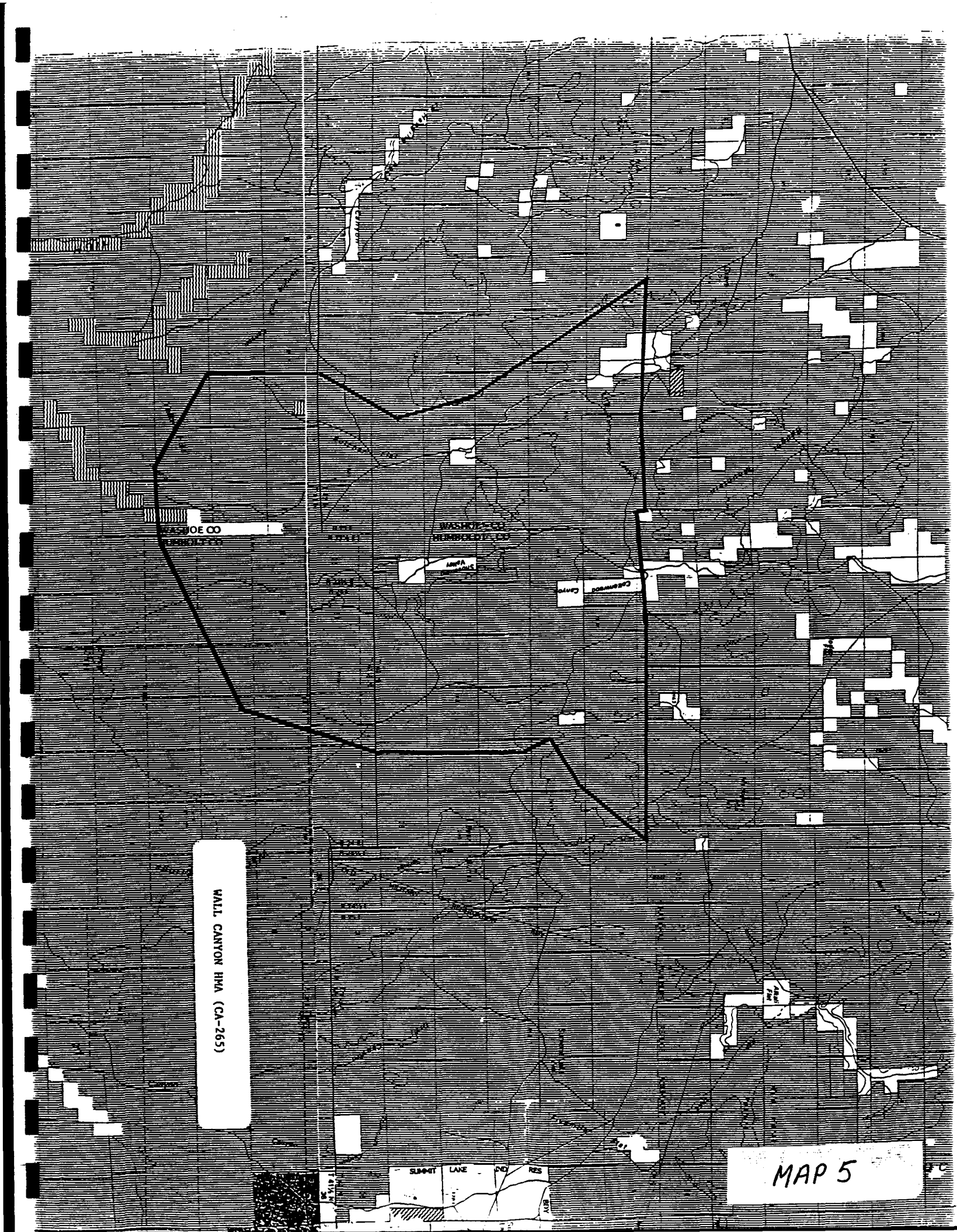
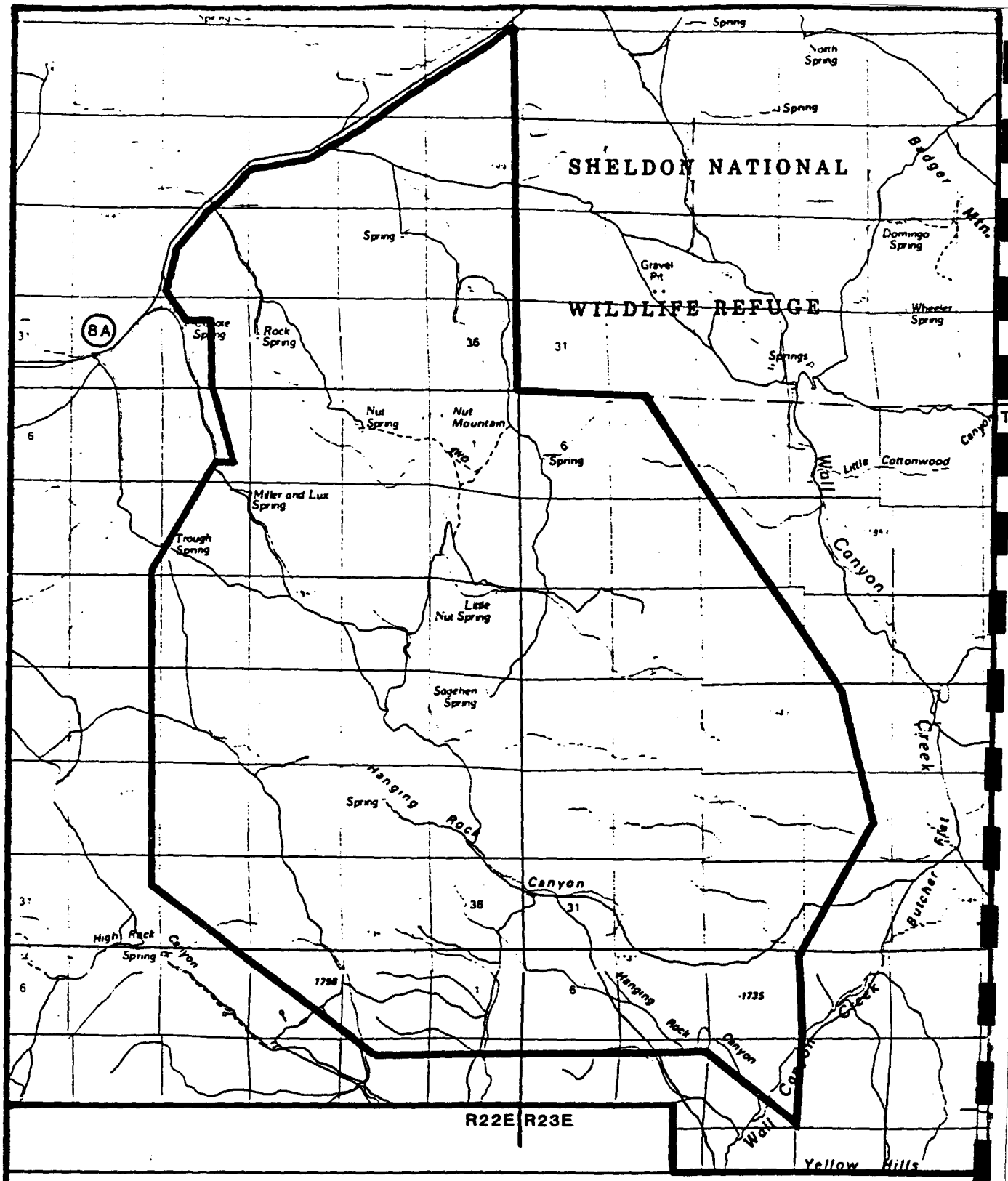
HERD MANAGEMENT AREA
BITNER

MAP 4

CA-2


WALL CANYON HMA (CA-265)
MAP 5



Herd Management Area boundary

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HERD MANAGEMENT AREA
NUT MOUNTAIN

MAP 6

CA-26

POPULATION AND REMOVAL DATA

The Bitner HMA was last gathered in the fall of 1988 when 33 horses were gathered. Thirteen horses were returned to the HMA at that time. The HMA was placed under structured management[10] with the removal.

The Nut Mountain HMA was last gathered in the fall of 1988. At that time 70 animals were gathered and 30 were released back to the HMA. The herd was structured at that time.

The Wall Canyon HMA was also last gathered in 1988 when 142 animals were gathered with 123 being removed. A population of 19 animals was left on the HMA at that time.

The last removal in the East of Canyon Home Range of the High Rock HMA occurred in the fall of 1988. At that time, 53 animals were gathered, 33 released back to the range, and 20 removed.

The population of wild horses in each area is estimated as follows:

HMA Name	1992 Census	9/1993 Projection
Bitner	40	48
Nut Mountain	52	62
Wall Canyon	78	94
High Rock (East of Canyon Home Range)	55	66

Estimates for wild horses are based on the projected average annual increase of 20%

Estimated gathering and removal for each area is as follows:

HMA Name	Est. # to Gather	# Return To The Range	# to Remove	Total to Remain
Bitner	48	15	33	15
Nut Mountain	62	30	32	30
Wall Canyon	94	15	79	15
High Rock (East of Canyon Home Range)	66	30	36	30
Totals	270	90	180	90

The above figures for capture and removal are estimates. It is recognized that all animals within each area cannot be practically captured. Enough animals will be released to insure that the number of wild horses falls within the established population range. Any base herd horses that have died since the last structuring and removal will be replaced with young animals from those gathered. It is recognized also that the minimum range figure may not be able to be achieved by removing only horses four years and younger. The removal of older horses will only be

[10]A base herd within a herd management area that has been established through the selection and retention of primarily older animals which are well adapted to the specific area.

done if they can be readily placed through adoption or put into the prison gentling program. This is likely to be the case on Wall Canyon where many horses cross over from the Winnemucca District.

METHODS OF REMOVAL

Gathering will conducted by the Susanville District wild horse gathering crew.

Gathering of wild horses will be done by using a helicopter to herd the animals to a trap constructed of portable pipe panels. The helicopter will be used in such a manner that bands will remain together. Rate of movement and distance animals travel will be based on terrain, physical barriers, weather and condition of animals. All traps and wings will be constructed in such a manner to facilitate safe, humane capture of animals. At all times, gathering will be the under direct supervision of a duly authorized employee of the Bureau of Land Management. Humane procedures prescribed by the BLM will be used in all gathering and handling operations.

The majority of the wild horses in each herd management areas will have to be gathered so AML can be achieved by removing only horses four years or younger. This will be done only if practical and at no time will horses be placed under undue stress during the gathering operation. The welfare and humane treatment of the animals will remain the district's highest priority.

Captured animals will be shipped to the BLM's Litchfield Wild Horse and Burro Holding Facility in straight deck trucks. Here the animals will be sorted by age and sex. The Litchfield Facility is well set up to provide for humane handling, preparation, and care of captured animals, with a minimum of stress. It is planned to excess only animals of the ages 4 and under. Older animals will be released back to the area from which they were captured. Animals to be released back to the home range will be kept separate from the other animals and released back to the home range as quickly as possible. Younger animals will be released back to the home range as necessary to insure the population of animals falls within the population range established from the appropriate management level.

All publicity, formal public contact and inquiries will be handled through the Surprise Resource Area Manager.

REFERENCE TO ENVIRONMENTAL ASSESSMENT

Environmental Assessment No. EA-CA-028-93-03 was prepared in April, 1993 to analyze impacts associated with the removal and age structure re-adjustment.

DRAFT

PUBLIC NOTIFICATION

The proposed use of a helicopter and motor vehicles for removal of wild horses from the Bitner, Wall Canyon, Nut Mountain and High Rock HMAs will be presented at the Susanville District Multiple Use Advisory Council Meeting on June 16, 1993 in Susanville, California. The Board Meeting will be open to the public.

Prepared by: _____ Date _____
Wild Horse and Burro Specialist

Recommended by: _____ Date _____
Area Manager, Surprise R.A.

Approved by: _____ Date _____
District Manager, Susanville

APPENDIX 2

WILD HORSE POPULATION ANALYSIS

AND

MANAGEMENT LEVEL RECOMMENDATIONS FOR

BITNER, HIGH ROCK, NUT MOUNTAIN, AND WALL CANYON

HERD MANAGEMENT AREAS

WILD HORSE POPULATION ANALYSIS AND RECOMMENDATIONS FOR THE BITNER, NUT MOUNTAIN, AND WALL CANYON HERD MANAGEMENT AREAS

INTRODUCTION

The purpose of this stocking rate analysis was to determine the current appropriate management levels (AMLs) for wild horses on the Bitner, Nut Mountain, and Wall Canyon Herd Management Areas (HMAs). The most recent monitoring data was used. The existing wild horse population levels, based on a 1977 vegetation inventory and follow up utilization monitoring, were established in 1983 in the Cowhead/Massacre Management Framework Plan 3 (MFP). During the intervening years, the Surprise Resource Area has been gathering wild horses on approximately a four year rotation. This analysis was done to justify the proposed 1993 gathers in compliance with BLM Instructional Memo No. 90-30.

The utilization pattern mapping for these HMAs is in appendix 4. Utilization was done by grazing allotment, because it was part of the range monitoring program. Utilization was determined using a standard BLM method (BLM Technical Reference 4400-3, Section 5.23). Cattle reductions, due to the drought, resulted in some areas only being used by wild horses. The "Key Areas" in the following calculations were riparian areas used only by horses.

The focus was on riparian areas for two reasons. Recent evaluations and observations have found that while upland vegetation was either unchanged or improving, riparian area vegetation and hydrologic conditions were poor and not improving. One of the BLM's management goals is by 1997, 75% of the riparian-wetland areas on public lands will be in properly functioning condition.

The maximum appropriate wild horse population levels were determined using the "Desired Stocking Rate" formula. Wild horse "Actual Use" was calculated from the 1992 counts. The "Desired Key Management Area Utilization" was the utilization maximum from the MFP. "Key Management Area Utilization" came from the 1992 utilization pattern mapping.

The Desired Stocking Level formula is:

$$\frac{\text{Actual Use}}{\text{Key Management Area Utilization}} = \frac{\text{Desired Actual Use}}{\text{Desired Key Management Area Utilization}}$$

(BLM Technical Reference 4400-7, Appendix 2, Page 1, p. 54)

For each HMA the formula was solved for the unknown, "Desired Actual Use." This was the maximum appropriate wild horse use. Maximum wild horse numbers were calculated from the maximum appropriate use. Minimum wild horse numbers were calculated from the maximum numbers using the average rates of increase for structured wild horse herds. The AML was the median of the maximum and minimum numbers.

The abbreviation "AUMs" was used in this analysis. An AUM is an Animal Unit Month. An AUM is the amount of forage required to sustain a cow with a calf for one month. In the 1977 inventory and the MFP an AUM was 800 pounds of useable forage. AUMs are used for forage allocations, because there are standard conversions for the large herbivores on the western rangelands. For example, one horse for one month equals one AUM, while five deer for one month equal one AUM.

ANALYSIS

BITNER HMA

Forage Demand

1. Livestock 1,702 AUMs
   Wild Horses 480 AUMs
   Total 2,182 AUMs

2. Forage demand is livestock active preference plus current wild horse numbers for the HMA.

Maximum Wild Horse Use

1. Desired Utilization x Actual Use _ Desired Use
   Actual Utilization

2. 60% x 480 AUMs _ 411 AUMs Desired Use
   70%

3. The Maximum Wild Horse Use was 411 AUMs.

Calculation of Maximum and Minimum Wild Horse Numbers

1. Maximum Numbers

   411 AUMs / 12 months = 34 horses

2. Calculation of Minimum Numbers
   (Assumption: Gather every four years)

   34 horses (maximum number) / 1.178 average population increase 4th year post gather for a structured herd = 29 horses

   29 horses / 1.157 average population increase 3rd year post gather for a structured herd = 25 horses

   25 horses / 1.1873 average population increase 2nd year post gather for a structured herd = 21 horses

   21 horses / 1.276 average population increase 1st year post gather for a structured herd = 16 horses (minimum number)

Calculation Of AML

1. Calculation of Median

   34 (max. number) - 16 (min. number) = 18; 18 / 2 = 9; 16 + 9 = 25

2. The AML is 25 wild horses

Wild Horse Population Adjustments

1. 48 horses (projected '93 population)
   - 16 horses minimum allowable
   32 horses to be removed

2. In the fall 1993, there will be approximately 48 wild horses on the Bitner HMA. As many of these horses as practical will be gathered. Enough horses will be returned to the range to assure that there are at least 16 wild horses in the HMA. If all 48 horses were gathered 32 would be removed and 16 returned to the HMA.

NUT MOUNTAIN HMA

Forage Demand

1.

Livestock	4,893 AUMs
Wild Horses	960 AUMs
Total	5,853 AUMs

2. Forage demand is livestock active preference plus current wild horse numbers for the allotment.

Maximum Wild Horse Use

1. Desired Utilization x Actual Use _ Desired Use
   Actual Utilization

2. 60% x 960 AUMs _ 823 AUMs Desired Use
   70%

3. The Maximum Wild Horse Use was 823 AUMs.

Calculation of Maximum and Minimum Wild Horse Numbers

1. Maximum Numbers

   823 AUMs / 12 months = 69 horses

2. Calculation of Minimum Numbers
   (Assumption: Gather every four years)

   69 horses (maximum number) / 1.178 average population increase 4th year post gather for a structured herd = 59 horses

   59 horses / 1.157 average population increase 3rd year post gather for a structured herd = 51 horses

   51 horses / 1.1873 average population increase 2nd year post gather for a structured herd = 43 horses

   43 horses / 1.276 average population increase 1st year post gather for a structured herd = 33 horses (minimum number)

Calculation of AML

1. Calculation of Median

   69 (max. number) - 33 (min. number) = 36; 36 / 2 = 18; 33 + 18 = 51

2. The AML is 51 wild horses

Wild Horse Population Adjustments

1. 62 horses (projected '93 population)
   - 33 horses minimum allowable
   29 horses to be removed

2. In the fall 1993, there will be approximately 62 wild horses on the Nut Mountain HMA. As many of these horses as practical will be gathered. Enough horses will be returned to the range to assure that there are at least 33 wild horses in the HMA. If all 62 horses were gathered 29 would be removed and 33 returned to the HMA.

WALL CANYON HMA

Forage Demand

1.

Livestock	3,215 AUMs
Wild Horses	936 AUMs
Total	4,151 AUMs

2. Forage demand is livestock active preference plus current wild horse numbers for the allotment.

Maximum Wild Horse Use

1. $\frac{\text{Desired Utilization x Actual Use}}{\text{Actual Utilization}}$ = Desired Use

2. $\frac{60\% \times 936 \text{ AUMs}}{80\%}$ = 702 AUMs Desired Use

3. The Maximum Wild Horse Use was 702 AUMs.

Calculation of Maximum and Minimum Wild Horse Numbers

1. Maximum Numbers

   702 AUMs / 12 months = 58 horses

2. Calculation of Minimum Numbers
   (Assumption: Gather every four years)

   58 horses (maximum number) / 1.178 average population increase 4th year post gather for a structured herd = 49 horses

49 horses / 1.157 average population increase 3rd year post gather for a structured herd = 43 horses

43 horses / 1.1873 average population increase 2nd year post gather for a structured herd = 36 horses

36 horses / 1.276 average population increase 1st year post gather for a structured herd = 28 horses (minimum number)

Calculation of AML

1. Calculation of Median

   58 (max. number) - 28 (min. number) = 30; 30 / 2 = 15; 28 + 15 = 43

2. The AML is 43 wild horses

Wild Horse Population Adjustments

1. 94 horses (projected '93 population)
   - 28 horses minimum allowable
   66 horses to be removed

2. In the fall 1993, there will be approximately 94 wild horses on the Wall Canyon HMA. As many of these horses as practical will be gathered. Enough horses will be returned to the range to assure that there are at least 28 wild horses in the HMA. If all 94 horses were gathered 66 would be removed and 28 returned to the HMA.

RECOMMENDATIONS

COMPARISON OF MFP MANAGEMENT LEVELS AND MANAGEMENT LEVELS CALCULATED IN THIS ANALYSIS

HMA	MFP MANAGEMENT LEVELS	ANALYSIS MANAGEMENT LEVELS
Bitner	15 - 25	16 - 34
Nut Mountain	30 - 55	33 - 69
Wall Canyon	15 - 25	28 - 58

For the Bitner and Nut Mountain HMAs the management levels from this analysis and the MFP were similar. On the Wall Canyon HMA the management levels from the analysis were about double the MFP management levels.

INFLUENCE OF LIVESTOCK MANAGEMENT ON THE ANALYSIS' MANAGEMENT LEVELS

Livestock numbers on the allotments in these HMAs were between 24% and 56% of the permitted amount. This was in response to the drought that has been affecting the area. This was not a permanent reduction in livestock. For example, in 1993 the Bitner and Nut Mountain Allotments are expected to be stocked around 90% of normal, while the Wall Canyon Allotment will be stocked at around 50% of normal.

It is believed that the increased management levels for wild horses that were calculated in this analysis resulted from the reduction in livestock during the 1992 grazing season, not from an increase in available forage on the HMAs.

DISCUSSION

Bitner HMA

The recommended management levels for the Bitner HMA are 15 - 25 wild horses. This analysis supported the management levels first established in the MFP, because both were so similar. While livestock numbers were way down in 1992, so was production, because of the drought. The analysis showed that there was not extra forage to allocate on this HMA, that the current 40 wild horses were too many, and that the 15 - 25 wild horses was in the area of the optimum number considering the other uses of the area.

Nut Mountain HMA

The recommended management levels for the Nut Mountain HMA are 30 - 55 wild horses. The reasoning is similar to for the Bitner HMA.

Wall Canyon HMA

The recommended management levels for the Wall Canyon HMA are 15 - 25 wild horses. This analysis found that in 1992 there was habitat for up to 58 wild horses in this HMA.

One of the issues of concern on the Wall Canyon HMA was poor riparian area condition and too heavy riparian area utilization. There is potential riparian habitat along both Wall Canyon Creek and Cottonwood Creek. Most of these areas have been converted to upland vegetation by the long history of overgrazing. The few meadows and riparian areas that remained along Cottonwood Creek were wild horse concentration areas during 1992. In other words the most sensitive sites received some of the heaviest wild horse use.

Another problem on the Wall Canyon HMA is movement of wild horses from the Winnemucca District. In 1988 there were 19 wild horses on this HMA. In 1992 there were 79. This was an average population increase of 43% per year. This was double the normal rate of increase on the Surprise Resource Area and double the maximum known rate of increase for a closed population of horses. There are 5,000 wild horses on the HMA to the east of Wall Canyon. Although the boundary fence is in good condition, horses are continually moving onto Wall Canyon. Because of the influx of

horses from the east, it would not matter if this HMA were managed for no horses. There would always be horses present.

Using the 15 - 25 management levels means that, at the 1988 - 1992 rate of increase, horses would be above the maximum allowable use level, 58 horses, determined in this analysis, in four years. Implementing the 28 - 58 management levels from this analysis, at the 1988 - 1992 rate of increase, would mean that the horses would be at the maximum allowable use level in two years.

APPENDIX 3

RIPARIAN AREA FORAGE PRODUCTION

AND

WILD HORSE DEMAND FOR RIPARIAN SPECIES

RIPARIAN AREA FORAGE PRODUCTION
AND
WILD HORSE DEMAND FOR RIPARIAN SPECIES

INTRODUCTION

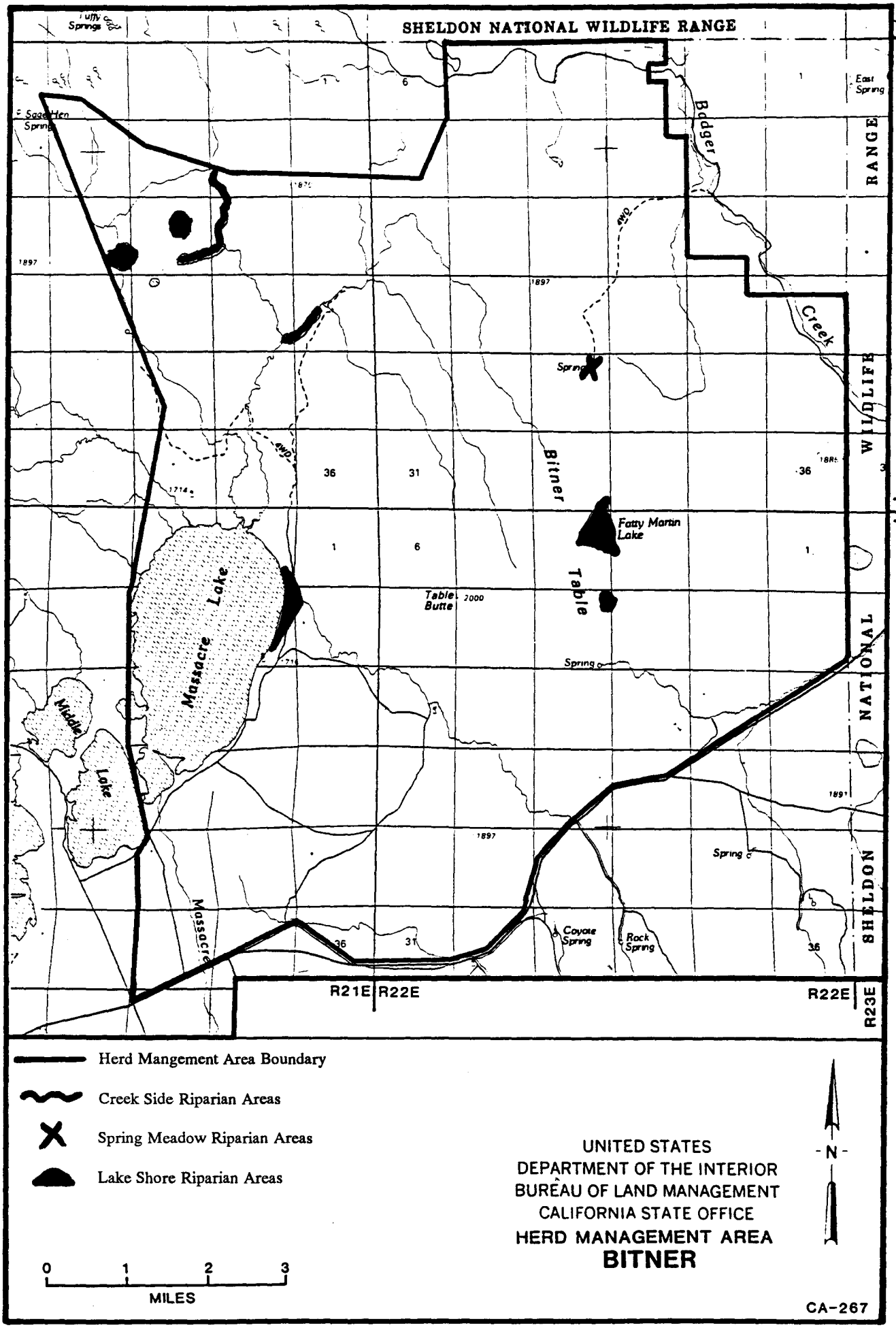
The purpose of this appendix is to compare the amount of forage being produced by riparian areas with the wild horse dietary demand for riparian species. On the Bitner, Nut Mountain, and Wall Canyon HMAs the justification for the recommended management levels was the heavy wild horse impact on riparian areas. The following will document that impact to the best of our ability.

There are many generalizations and assumptions in what follows.

The riparian areas identified on the maps in this appendix are areas which currently produce riparian vegetation. They are not all the areas which have the correct landscape position to potentially have, or historically may have had, riparian vegetation. In the Wall Canyon HMA, Wall Canyon Creek is not mapped as a riparian area, because the potentially riparian locations are producing upland vegetation. Therefore the number of riparian acres identified in this appendix are likely conservative.

The range sites are from the Soil Conservation Service, Nevada MLR 23, Range Site Guide. However, in Nevada, range sites are not broken down to production per condition class. Also, because riparian areas have generally been lumped with surrounding uplands, there is not a range site which corresponds to a riparian willow community which would likely be the climax community in some of the riparian areas in these HMAs. As a result all the production estimates came from the Soil Conservation Service, Oregon High Desert Province, Range Site Guide.

The wild horse diet information came from a one year study on the Tuledad Allotment. The method of diet component identification was fecal analysis. Fecal analysis tends to over estimate course plants such as grasses, rushes, and shrubs, and under estimate succulent plants such as spring forbs. Tuledad Allotment is about 40 miles southwest of the HMAs being evaluated. The upland vegetation is similar, but the Tuledad Allotment does not have canyons like High Rock, Wall, and Cottonwood, which are important potential riparian areas in the HMAs. In the Tuledad Allotment much of the basin wildrye grows in open, dry lake areas. In the HMAs, and particularly in High Rock, basin wildrye is an important component of the canyon riparian community. The difference between open lake beds and canyon bottoms could affect wild horse use of these two different sources of basin wildrye. The data from the Tuledad study was applied directly to the HMAs.


SHELDON NATIONAL WILDLIFE RANGE
T45N
T44N
T44N
T43N
RANGE
WILDLIFE
NATIONAL
SHELDON
Badger
Creek
Bitner
Table
Fatty Martin Lake
Table Butte
Massacre Lake
Middle Lake
Massacre
Coyote Spring
Rock Spring
East Spring
Spring
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R22E
R22E
R23E
Herd Mangement Area Boundary
Creek Side Riparian Areas
Spring Meadow Riparian Areas
Lake Shore Riparian Areas
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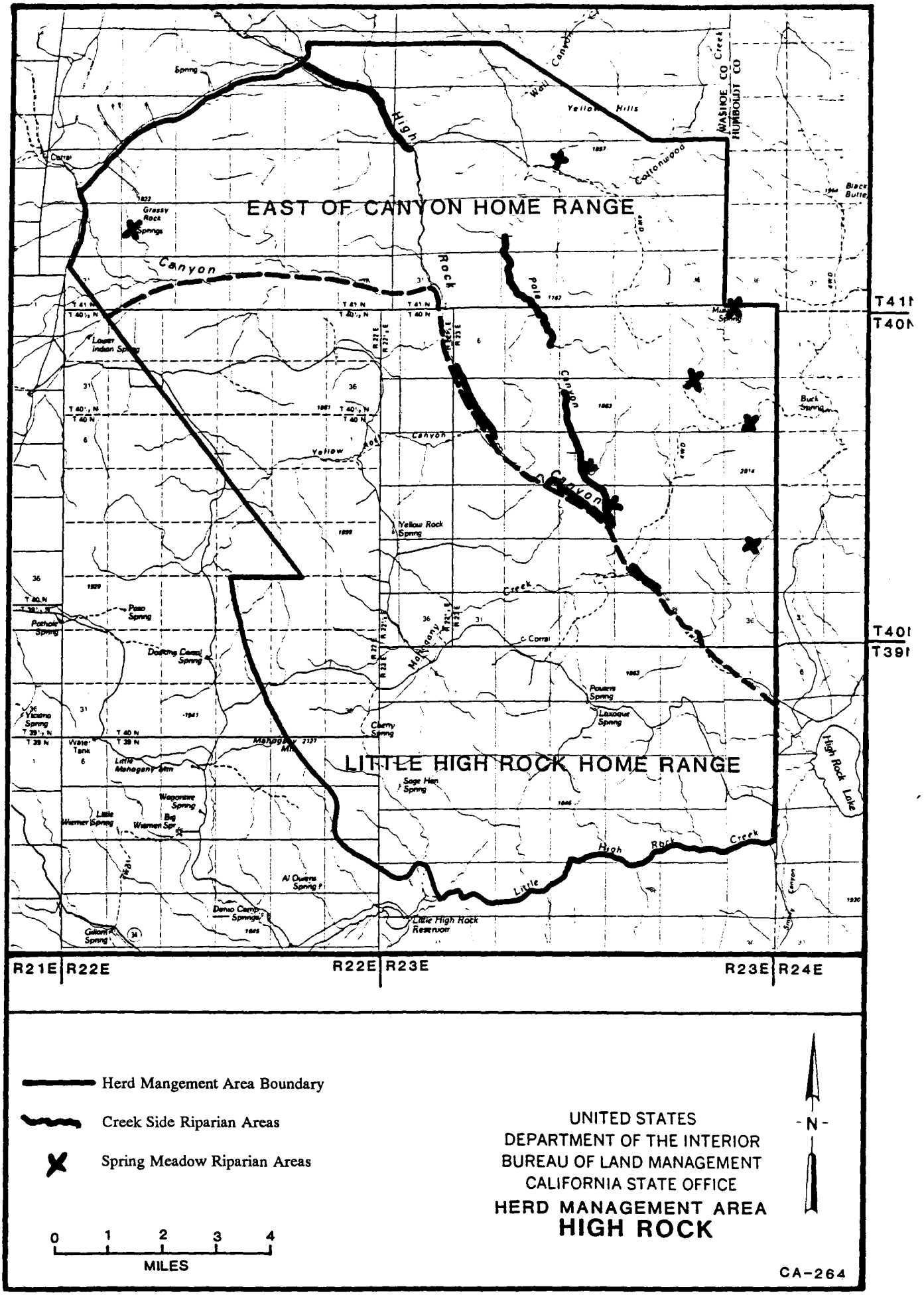
EAST OF CANYON HOME RANGE
LITTLE HIGH ROCK HOME RANGE
Herd Mangement Area Boundary
Creek Side Riparian Areas
Spring Meadow Riparian Areas
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R22E
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R23E
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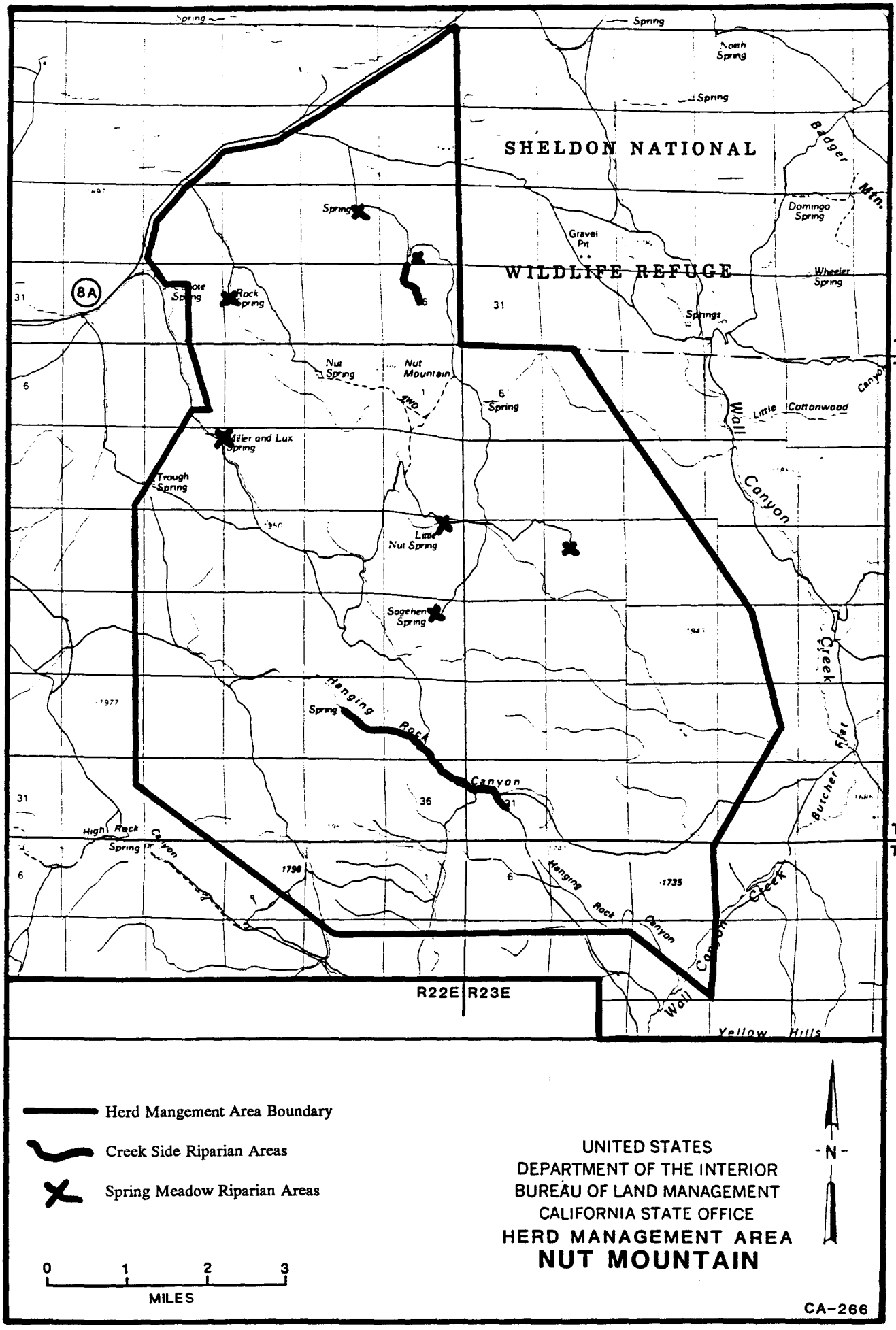
SHELDON NATIONAL
WILDLIFE REFUGE
Spring
North Spring
Badger Mtn.
Domingo Spring
Gravel Pit
Wheeler Spring
Springs
Rock Spring
Nut Spring
Nut Mountain
Miller and Lux Spring
Trough Spring
Little Nut Spring
Sagehen Spring
Hanging Rock Spring
Hanging Rock Canyon
High Rock Spring
High Rock Canyon
Little Cottonwood Canyon
Wall Canyon
Creek
Flat
Butcher
Yellow Hills
8A
T43N
T42N
T41N
R22E
R23E
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6
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1977
Herd Mangement Area Boundary
Creek Side Riparian Areas
Spring Meadow Riparian Areas
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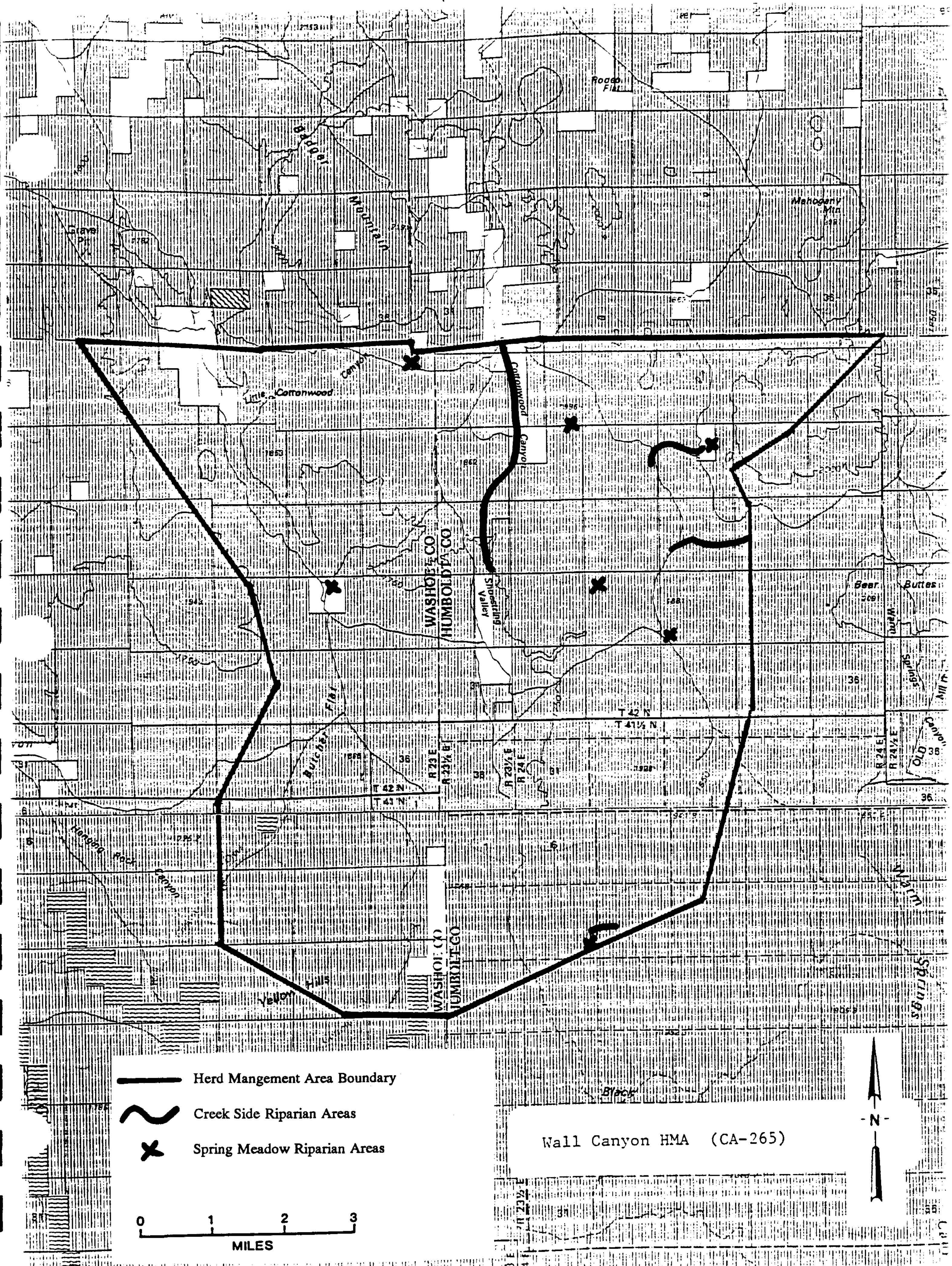
RIPARIAN AREA FORAGE PRODUCTION

BITNER HMA					
Riparian Type	Nevada Range Site	Acres	Successional Stage	Production Rate (pounds/acre) (OR Range Site #)	Production (pounds)
Stream Corridor		12	early	90 (HDP 6143)	1,080
Spring Meadows	Dry Meadow (MLR 23-13)	2	early	650 (HDP 1116)	1,300
Lake Shore & Lake Bed	Clay Basin (MLR 23-3)	440	early NA	0 - 800 (HDP 6172&1135)	0 - 352,000
TOTAL		454			2,380 - 354,380

HIGH ROCK HMA - East of Canyon Home Range					
Riparian Type	Nevada Range Site	Acres	Successional Stage	Production Rate (pounds/acre) (OR Range Site #)	Production (pounds)
Stream Corridor	Loamy Bottom 8-12" (MLR 23-9)	100	late	1,750 (HDP 1104)	175,000
Stream Corridor		120	mid	1,050 (HDP 1116)	126,000
Spring Meadows	Dry Meadow (MLR 23-13)	16	early	650 (HDP 1116)	10,400
TOTAL		236			311,400

NUT MOUNTAIN HMA					
Riparian Type	Nevada Range Site	Acres	Successional Stage	Production Rate (pounds/acre) (OR Range Site #)	Production (pounds)
Stream Corridor		39	early	210 (HDP 1104)	8,190
Spring Meadows	Dry Meadow (MLR 23-13)	14	early	650 (HDP 1116)	9,100
TOTAL		53			17,290

WALL CANYON HMA					
Riparian Type	Nevada Range Site	Acres	Successional Stage	Production Rate (pounds/acre) (OR Range Site #)	Production (pounds)
Stream Corridor		70	early	210 (HDP 210)	14,700
Spring Meadows	Dry Meadow (MLR 23-13)	14	early	650 (HDP 1116)	9,100
TOTAL		84			23,800


Herd Mangement Area Boundary
Creek Side Riparian Areas
Spring Meadow Riparian Areas
Wall Canyon HMA (CA-265)
N
0 1 2 3
MILES
WASHOE CO
HUMBOLDT CO
Little Cottonwood Canyon
Cottonwood Canyon
Shoesting Valley
Butcher Flat
Hanging Rock Canyon
Yellow Hills
Bear Buttes
Warm Springs
Mahogany Mtn
Rodeo Flat
T 42 N
T 41 N
T 41½ N
R 23 E
R 23½ E
R 24 E
R 24½ E

WILD HORSE DEMAND FOR RIPARIAN SPECIES

1 wild horse eats
1,000 pounds of forage/month
x 4 months (April through July)
4,000 pounds of forage are consumed by each horse during the summer.

The wild horse food habits study on the Surprise Resource Area found that during the April
x.491 through July period, on average, wild horse diets contained 49.1% riparian species.
1,964 pounds of riparian forage is consumed by each horse during the summer.

	BITNER HMA	HIGH ROCK HMA East of Canyon Home Range	NUT MOUNTAIN HMA	WALL CANYON HMA
1992 Counts	40 horses	55 horses	52 horses	78 horses
Riparian Forage Demand (1,964# x N horses)	78,560 pounds	108,020 pounds	102,128 pounds	153,192 pounds
Recommended Minimum Number	15 horses	30 horses	30 horses	15 horses
Riparian Forage Demand (1,964# x N horses)	29,460 pounds	58,920 pounds	58,920 pounds	29,460 pounds
Recommended Maximum Number	25 horses	40 horses	55 horses	25 horses
Riparian Forage Demand (1,964# x N horses)	49,100 pounds	78,560 pounds	108,020 pounds	49,100 pounds
Riparian Forage Production	2,380 pounds - 354,380 pounds	311,400 pounds	17,290 pounds	23,800 pounds

APPENDIX 4

VEGETATION

CONDITION AND TREND TRANSECTS

BITNER, NUT MOUNTAIN, AND

WALL CANYON (EAST) ALLOTMENTS

IN THE

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

Photo #
21, 22, 23, 24

Transect Number: 54322203 : Allotment Num.: 1006:

Pasture Name: South : State: CA: Off: 068: Plan Unit: 10: Cnty: 031:

Township ID: T43N R22E S03 : Aliquot Part: NWSE : Water Shed: [illegible]:

Topographic Position: M: Local Landform: BNC: Range Site: [illegible]:

Elevation: 6300: Aspect: 302°: Azmuth: 34°: Slope Length: [illegible]:

Slope Shape: U : Percent Slope: 4 : Slope Factor: .27 :

K factor: .43 : R factor: 7 : Soil Series: Stampede

Soil Phase: gravelly loam : Avg Ann Precip: 10 : MeanSea Precip: 9 :
Plot Frequency: 1020: Number of Plots: 2 : Date Establish: 7-15-85
Lithic scatter (Y OR (N): N: Frame Size: 1000cm: 850715

ID Photos

21 Azimuth
22 1st Rebar
23 Aspect to Fat Martin
24 162° to Nut Mtn

TRANSECT #:S432203 DATE READ: 850715 RECORDER: Cooper ALLOTMENT NAME: Bitner # of Plots for FREQ: 100

===Q U A D R A T C A N O P Y C O V E R ==

=										1										2										3										4										5										6	======	%	%	#	%	====
SPECIES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	SUBT	PCOV	PCOM	HITS	FREQ	KEY
AGSP								1																																																					2.5	0.1	0.1	4	4	Y
STTH2																				1		1	1			1																																			10.0	0.3	0.6	3	3	Y
POSE				1																			1																																						5.0	0.1	0.3	5	5	N
SIHY		1			2						1						1										1				1						1	1																							32.5	0.8	1.8	12	12	N
POCA																																																													0.0	0.0	0.0	5	5	N
AAFF	1	1	1		1		1	1	1		1	1	1	2	1	1	1	1	1		1	1		1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1																					97.5	2.4	5.4	82	82	N
BRODI										1								1	1								1																																		10.0	0.3	0.6	24	24	N
PHLO2			1	1		1					1																																																		10.0	0.3	0.6	16	16	N
PPFF									1				1																								1																								7.5	0.2	0.4	10	10	N
SIAL2																																																													0.0	0.0	0.0	5	5	N
DEGE																																																													0.0	0.0	0.0	2	2	N
MELO4																																																													0.0	0.0	0.0	0	0	N
TRIFO							1									1																			1		1																								10.0	0.3	0.6	5	5.0	N
LUCA																																																													0.0	0.0	0.0	1	1.0	N
PUTR2		1												2		3								5			5						3				3	4									4						5	5						1	597.5	10.0	22.2	4	4.0	Y
PUTRS	2									1															1																																				20.0	0.3	0.7	0	0.0	Y
ARAR8	2	4	2	1	3		1	1	1	3	5	4	4		3		4	5	5	5	2	5	1	2		1			5		4	4	3	4	1	2	2	2		2	3	2	1	2	1	3		3	3	3	5	4			2		4	2	2	5	1797.5	30.0	66.8	35	35	N
TECA2																																																													0.0	0.0	0.0	7	7	N
LTTR	1	3	1	2	2	1	2	2	3	2	4	2	2	3	2	5	4	4	3	4	1	2	2	2	5	2	2	2	3	3	3	3	2	3	2	3	2	3	5	1																					1185.0	29.6				N
ROCK	3	1	2	1	1	1		2		2	1	2	1	2	2	1	2		1	2	1	2	1	1	1		2		1	1	1		3		1		1	2		1																					285.0	7.1				N

TOTALS 4070 81.62 LIVE COVER TOTAL 44.8

Transect Number: 5442205 : Allotment Num.: 1006:

Pasture Name: North : State: CA: Off: 0_: Plan Unit: 10: Cnty: 031:

Township ID: T44N, R22E, Sec. 5 Aliquot Part: NENE : Water Shed: 1712000_ :

Topographic Position: M: Local Landform: SDL: Range Site: [illegible] :

Elevation: 6000' : Aspect: SE: Azmuth: 219: Slope Length: 40':

Slope Shape: [illegible] Percent Slope: 5 : Slope Factor: .32 :

K factor: .32 : R factor: 7 : Soil Series: Martinson [illegible]

Soil Phase: gr loam : Avg Ann Precip: 10" : MeanSea Precip: 9.1 :
Plot Frequency: 1020 : Number of Plots: 2_ : Date Establish: 6/27/85 :
Lithic scatter (Y OR N): N: Frame Size: 1000 cm:

TRANSECT #:S442205 DATE READ: 850627 RECORDER: Cooper ALLOTMENT NAME: Bitner # of Plots for FREQ: 100

QUADRAT CANOPY COVER

=										1										2										3										4										5										6	=======	%	%	#	%	====
SPECIES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	SUBT	PCOV	PCOM	HITS	FREQ	KEY
STTH2	1							2	2				2						1	1	1						2				2		2		1	2			2	2																					147.5	3.7	11.2	31	31	Y
AGSP																																																													0.0	0.0	0.0	1	1	Y
SIHY	1								1																1		1	1				1					1	1																							20.0	0.5	1.5	4	4	N
POSE	1		1	2	2	2	2	2	2	2	1		1		1				2	1								1											1																						140.0	3.5	10.6	71	71	N
POCA						2																																																						15.0	0.4	1.1	6	6	N
CAREX								1												1		1		1																																			10.0	0.3	0.8	5	5	N
AAFF		1	1	1		1	1			1			1	1	1	1		1	1			1	1	1	1	1	1		1	1	1	1		1	1	1	1		1	1																					70.0	1.8	5.3	88	88	N
ANRO2																				2																																								15.0	0.4	1.1	1	1	N
PHLO2								1				1				1					1	1		1	1	1	2							1	1					1																					42.5	1.1	3.2	7	7	N
TRIFO								1									1	1																																										7.5	0.2	0.6	4	4	N
LUCA	1			2						2			2													1									1				1																						55.0	1.4	4.2	23	23	N
CRAC2																				1																																								2.5	0.1	0.2	12	12	N
ASTER											1		1																																															5.0	0.1	0.4	8	8.0	N
ACMIL																																																													0.0	0.0	0.0	3	3.0	N
ERIOG																																																													0.0	0.0	0.0	2	2.0	N
ARAR8	3	3	2	1	2	1			3					5	3	2	2	1	3		4			3	3	1	4	5	3	5	2	4			1		5	4		3	1	3	1	2			2	2	2	1		2	2	2	1		1	1			1172.5	19.5	59.1	37	37.0	N
ARARS																																																													0.0	0.0	0.0	2	2	N
CHVIB																																2																													15.0	0.3	0.8	1	1	N
LTTR	2	3	2	2	1	1	1	2	2	1	1	1	1	5	2	1	2	1	2		3	1	1	3	1	1	3	4	4	3	2	3	1	1	1	1	4	3	1	1																					717.5	17.9				N
ROCK	2	2	2	2	3	3	4	2	2	3	4	4	2	1	2	4		2	2	4	1	1		2		1				1	1		2	4	2	1	1		2	3																					755.0	18.9				N

TOTALS 3190 69.85 LIVE COVER TOTAL 33.0

APPENDIX 5

1988-1992 UTILIZATION MONITORING

BITNER, NUT MOUNTAIN, AND

WALL CANYON (EAST) ALLOTMENTS

IN THE

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

New Cover sheet needed

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #1

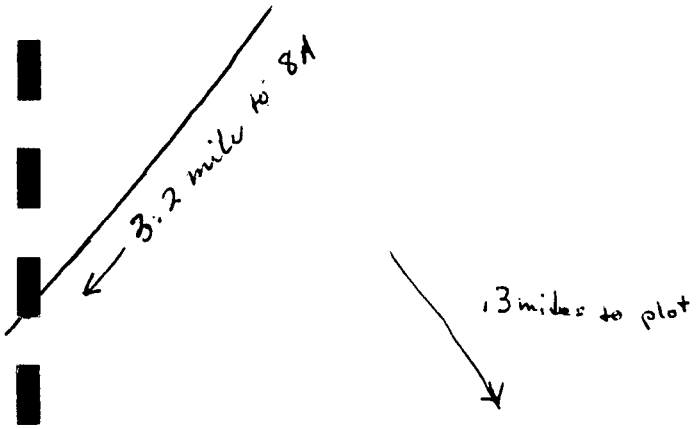
Allotment Nut Mt Habitat Type Artr - Sitk

Location T 43 R 22 S 19 1/16th NESW Date Estab. 6-26-83

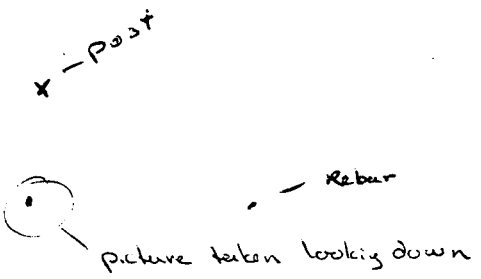
Soil Newlands Aspect North Elevation 5780

% Slope 5 Slope Length 200 ft Type of Slope (Circle One) Uniform / Convex / (Concave)

Position on Slope Top R Factor _____ K Factor _____



PLOT LAYOUT:



TRANSECT #:S432219 DATE READ: 830626 RECORDER: Irons ALLOTMENT NAME: Nut Mountain # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	Quadrat hits (1 2 3 4 5 6 7 8 9 0 … ×6)	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
STTH2	2 1 1 1 1 1 2 2 2 1 1 1 2 1 1 1	102.5	2.6	7.8	70	35	Y
ORHY	1	2.5	0.1	0.2	1	0.5	Y
FEID		0.0	0.0	0.0	1	0.5	Y
SIHY	1 1 2 2 1 1 1 1 1 1 1	52.5	1.3	4.0	32	16	N
POSE	1 1 1 1 1 1	15.0	0.4	1.1	20	10	N
PONE3		0.0	0.0	0.0	4	2	N
AGFI		0.0	0.0	0.0	8	4	N
CRAC2		0.0	0.0	0.0	6	3	N
ALLIU	1	2.5	0.1	0.2	4	2	N
ASTRA	1 1	5.0	0.1	0.4	6	3	N
PHLO2	1 1 1	7.5	0.2	0.6	15	7.5	N
PHHO	2 2	30.0	0.8	2.3	33	16.5	N
LUCA	1 2	17.5	0.4	1.3	6	3.0	N
TRIFO		0.0	0	0.0	18	9.0	N
ASTER		0.0	0	0.0	31	15.5	N
AAFF	1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 1	130.0	3.25	9.9	186	93.0	N
ARTRW	2 4 4 6 5 1 1 3 5 4 2 3 2 3 3 1 3 2 3 1 2 1 2 3 2 1 5 1 2 1	942.5	15.7	72.1	45	22.5	N
LITR	1 1 2 1 2 1 2 1 1 1 6 2 2 5 3 4 3 1 2 2 4 5 2 1 5 2 5 1 5 1 2 4 5 2 2 1 3 3 2 2 1 2 1 2 2 2 1 3 2 1 5 1 3 2 2 2 2 2 3	1545.0	25.8				N
ROCK	1 3 5 2 4 2 1 1 3 2 1 2 1 1 1 1 1 3 3 1 1 1 3 1 1 1 1 2 2 1 1 1 1 1 1 3 3 3 3 3 3 5 2 2 2 1 3 3 4 4 3 1 2 1 2	1110.0	18.5				N
BG	5 3 1 5 4 5 1 2 5 3 1 5 1 2 5 3 2 4 4 5 1 1 3 6 1 2 1 5 1 6 4 1 1 4 5 4 3 3 4 2 5 4 3 4 3 3 3 4 5 5 1 3 3 3 2 3 5 4 5 4	2780.0	46.3				N

TOTALS 6742.5 115.4 LIVE COVER TOTAL 24.8

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #2

Allotment Nut Mt. Habitat Type Artr-Putr-Agsp-Feid

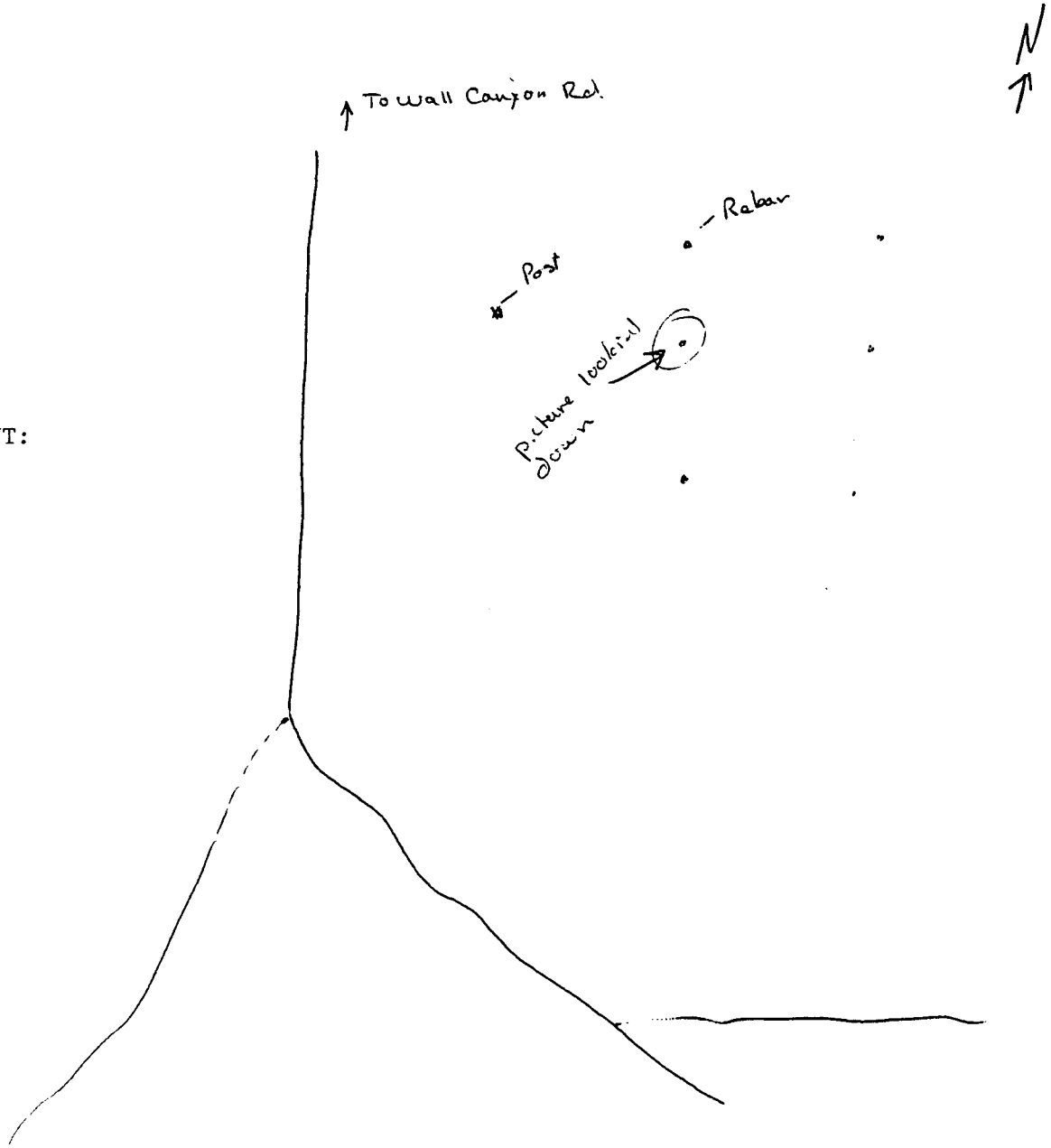
Location T 42 R 22 S 01 1/16th NENE Date Estab. 6-27-83

Soil Newlands Aspect SW Elevation 6520

% Slope 5 Slope Length 200 Type of Slope (Circle One) Uniform (Convex) Concave

Position on Slope Top (1) R Factor _____ K Factor _____

PLOT LAYOUT:



313 checked

TRANSECT #:S422001 DATE READ: 830627 RECORDER: Irons ALLOTMENT NAME: Nut Mountain # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	Quadrats 1–60	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
FEID	1 1 2 2 3 2 1 1 1 1 1 1 2 1 1 1 2 2 2 1 2 3 1 1 3 3 2 2	335.0	8.4	20.2	128	64	Y
POSE	1 1 1 2 1 2 1 3 2 3 1 3	172.5	4.3	10.4	104	52	N
SIHY	1 2 1 1 1 1 1	30.0	0.8	1.8	23	11.5	N
STTH2		0.0	0.0	0.0	22	11	N
[illegible]	1 1 1	7.5	0.2	0.5	1	0.5	N
AGSP		0.0	0.0	0.0	2	1	Y
[illegible]		0.0	0.0	0.0	1	0.5	N
CRAC2	1 1	5.0	0.1	0.3	11	5.5	N
PHLO2	1	2.5	0.1	0.2	16	8	N
PHHO	1 1 1 1 1 1 1 2	32.5	0.8	2.0	64	32	N
[illegible]	1 1 2 1 3 1	62.5	1.6	3.8	16	8	N
ASTRA		0.0	0.0	0.0	5	2.5	N
ASTER	2 2	30.0	0.8	1.8	1	0.5	N
TRIFO	1 1 1	7.5	0.187	0.5	29	14.5	N
ZYPA	1 1	5.0	0.125	0.3	2	1.0	N
ALLIU		0.0	0	0.0	25	12.5	N
[illegible]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	75.0	1.9	4.5	46	23	N
ERIOG	1 1 1 1	10.0	0.3	0.6	42	21	N
ARTRV	2 4 1 2 1 3 2 3 1 1 1 1 1 4 3 3 3 1 1 4 3 4 1 3 1 2 3 4 1 3 1 5 3 2 3 3 2 1 4	1035.0	17.3	41.8	82	41	N
PUTR2	4 4 1 3 3 3 1	242.5	4.0	9.8	30	15	Y
CHVI8	1 1 1	7.5	0.1	0.3	5	2.5	N
TEDA2	1 2 2 1	35.0	0.6	1.4	20	10	N
LITR	1 1 2 1 2 1 1 2 2 1 1 3 1 1 2 2 4 1 1 1 2 1 2 3 1 1 2 2 1 1 4 1 3 4 2 3 1 1 2 1 2 1 1 3 2 2 1 4 3 2 1 2 3 1 3 1 2 1 1 1	895.0	14.9				N
ROCK	5 5 1 4 3 4 4 3 2 3 4 1 4 3 4 2 3 1 4 4 4 4 3 3 4 4 5 1 4 4 1 4 4 2 1 1 4 2 1 1 4 3 5 1 4 3 3 1 3 1 4 3 2 3 3 4 4 4 4 2	2485.0	41.4				N
BG	2 1 1 1 2 2 3 2 4 2 3 1 4 4 4 4 3 2 4 4 4 4 3 4 4 4 4 1 4 4 2 4 4 2 2 3 5 4 4 4 4 4 2 2 1 2 3 2 3 1 4 2 3 4 3 3 4 3 3 3	2362.5	39.4				N
TOTALS		7837.5	137.1	LIVE COVER TOTAL	41.4		

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #3

Allotment Nut Mountain Habitat Type Low Sage - Losa

Location T 42 R 22 S 15 1/16th SE¼NW Date Estab. 6-28-83

Soil Espil Aspect Southwest Elevation 6420

% Slope 5% Slope Length 450 ft Type of Slope (Circle One) Uniform Convex (Concave)

Position on Slope 2 (middle) R Factor _____ K Factor _____

N

← 1.5 miles to Trough Spr.

PLOT LAYOUT:

TRANSECT #:S422215 DATE READ: 830628 RECORDER: Irons ALLOTMENT NAME: Nut Mountain # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	6	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
FEID			1		1		5.0	0.1	0.3	1	0.5	Y
ETTH2		1			1		5.0	0.1	0.3	4	2	Y
SIHY	1 1	2 1 1	1	1	1	1 1	37.5	0.9	1.9	6	3	N
FEBE	3 2 2 2 2 2 2 1 2 1 2 1 2 1 1 1 2 3 2 2 2 2 2 2 3 2 3 3 3 3 1 1 1 2 2 2 2 3 2 3						690.0	17.3	35.2	198	99	N
CRAC2							0.0	0.0	0.0	8	4	N
TRIFO	1	1	1	2 1	1	1 1	1			35.0	0.9	1.8	23	11.5	N
BAHO				1 1	2	1	1 1 1 4			92.5	2.3	4.7	22	11	N
ASTER	1	1 1 2 1	1 2	2 1	1	1				65.0	1.6	3.3	15	7.5	N
HOAC	3		2							52.5	1.3	2.7	21	10.5	N
ALLIU										0.0	0.0	0.0	1	0.5	N
ERFI2	1	2	2	2 2 2	1 1	1 1 1	2			92.5	2.3	4.7	51	25.5	N
BAHO	1	1 1	1	1	1	1	1			20.0	0.5	1.0	28	14	N
IVDA					1 1					5.0	0.1	0.3	1	0.5	N
ASTRA					2					15.0	0.375	0.8	5	2.5	N
ARFF	1				1					5.0	0.125	0.3	5	2.5	N
ERIOG	1 1 2 1 1		1		1	2				45.0	1.125	2.3	49	24.5	N
ARAR8	5 1 6 1 1 3 5 3	4 1 1 1 4 3	4 3 3 2 1 3 3 2 1 2	4 3 2 1 1 2	1 5 1 2 2 2 2 1 2	1 1 3 1 2 1 1 1 1 1	1157.5	19.3	39.3	64	32	N
CHVA2		3					37.5	0.6	1.3	2	1	N
LITR	1 1 3 2 2 1 1 1 3	1 1 1 1 1 1 1 1 3	1 2 1 1 1 1 1 1 1	2 1 1 3 1 1 1 2 1 1	3 1		337.5	8.4				N
ROCK	1 5 3 2 3 4 3 3 2	4 3 4 4 3 4 3 5	4 4 2 3 4 4 4 4 4	4 4 5 4 3 4 4 4 4	3 2 4 3 4		2042.5	51.1				N
BG	1 1 2 1 2 3 3 2 2	2 3 2 2 3 2 2 2	1 2 2 2 2 2 2 3 3	3 3 3 3 2 2 3 3 2	2 4 4 5 3 3 2		1007.5	25.2				N

TOTALS 5747.5 133.7 LIVE COVER TOTAL 49.0

Transect Number: 5432125 : Allotment Num. : 1010 :

Pasture Name: Cavalry Camp : State: CA : Off: 068 : Plan Unit: 10 : Cnty: 031 :

Township ID: T43N R21E S 25 : Aliquot Part: NWNE : Water Shed: 16040204 :

Topographic Position: M : Local Landform: BNC : Range Site: 6 - Loamy :

Elevation: 5700' : Aspect: L : Azmuth: 320 : Slope Length: ~~410~~ 80

Slope Shape: U : Percent Slope: 2 : Slope Factor: .15 :

K factor: .20 : R factor: 7 : Soil Series: Langston :

Soil Phase: silt loam 0-4% : Avg ~~Ann~~ Precip: 10 : MeanSea Precip: 9.1 :
Plot Frequency: 1020 : Number of Plots: 4 : Date Establish: 840821 :
Lithic scatter (Y OR N): N : Frame Size: 1000cm²

TRANSECT #:5432125 DATE READ: 840821 RECORDER: Irons ALLOTMENT NAME: Nut Mountain # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	6	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
AGCR	1 1 2 3 3 2 1 1 1 2	2 1 1 1 2 2 1 2	2 3 1	1 1 1	2 1 2 2	1 1 2	332.5	8.3	54.9	109	54.5	Y
AGSM							0.0	0.0	0.0	4	2	N
BRIV				1	1		5.0	0.1	0.6	24	12	N
BRTE	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1 1 1 1 1 1 1 1 1	92.5	2.3	15.3	189	94.5	N
CRCA	1	1 1 1		1			12.5	0.3	2.1	19	9.5	N
CYLI	1 1						5.0	0.1	0.8	1	0.5	N
ARFF	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1	1 1 1 1 1 1 1 1 1			85.0	2.1	14.0	198	99	N
HOSS	2	2	1 1				35.0	0.9	5.8	25	12.5	N
OPUR			1 2	3 1			57.5	1.0	6.3	1	0.5	N
Orvi8							0.0	0.0	0.0	7	3.5	N
LITR	1 2 2 3 2 1 1 1 1 1 3 4 3 2 1 1 1 4 1 2 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 2 1 2 1 1 1 1 3	1 1 1 1 3 2 1 1 1 1 3	1 2 3 3 2 1		747.5	12.5				N
STLT		1					2.5	.0				N
ROCK	1 1 1 1	1 1	1 1 1 1	1	1	1 1 1 1 2	102.5	1.7				N

TOTALS	1477.5	29.35	LIVE COVER TOTAL	15.1

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #1

Allotment Wall Canyon W Habitat Type Arar - P...

Location T 42 R 23 S 01 1/16th Date Estab. 8-19-82

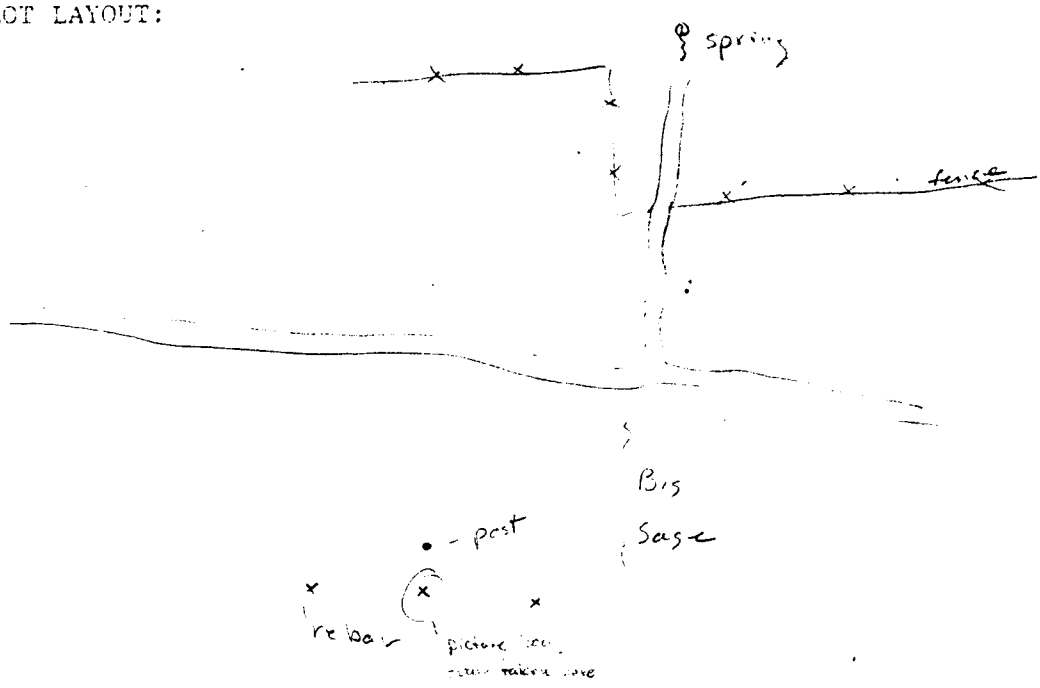
Soil Newlands - Esgil Assoc. Aspect SE Elevation 6160

% Slope 5 Slope Length 1/4 mi Type of Slope (Circle One) Uniform Convex Concave

Position on Slope 1/3 R Factor _____ K Factor _____

1/5 mile off south side of road before big sage ... out on flats

PLOT LAYOUT:



TRANSECT #:S422301 DATE READ: 820819 RECORDER: Irons ALLOTMENT NAME: Cottonwood (Wall Canyon) # of Plots for FREQ: 200

Q U A D R A T C A N O P Y C O V E R

=										1										2										3										4										5										6	=======	%	%	#	%	=====
SPECIES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	SUBT	PCOV	PCOM	HITS	FREQ	KEY
STTH2				1							1														1																																				7.5	0.2	0.6	3	1.5	Y
POSE	2	1		1	1	2	2	1	3	1					1	1	3		2	1	1	1	2	3	2	2	3	2	3	2	1	2	1	1	1	1	3	3	1	3																					490.0	12.3	39.5	192	96	N
SIHY																																1																													2.5	0.1	0.2	1	0.5	N
BRTE												1	1	1						1																																									10.0	0.3	0.8	0	0	N
PHHO						1	1	1	1		1					1	1				1	1	1	1	1						1																														32.5	0.8	2.6	1	0.5	N
PPFF		1												1	1	1	1	2	1								1				1				1				1																						40.0	1.0	3.2	100	50	N
ARAR8	1	2		1	3	2			1	2	1	1	2						1	3	1	3	1		1	1		3	3	1	1	4	4	5		1	3		1	4		1	4		2	2	1			3	1	3	3	1	3		3	3	4	1	985.0	16.4	53.0	108	54	N
LTTR	1	1	2	1	2	2	1	1	3	3	2	1	4	1	1	1	1	1	1	3	4	3	1	1	1	2	1	2	1	1	2	3	3	4	2	1	2	2	1	4																					675.0	16.9				N
BG	1	1	4	3	4	4	1	2	1	3	5	5	3	4	3	4		1	3	1	1		2		1	1	1	2	3	2	3	3	1	4	2	1	1	3	5	2																					1090.0	27.3				N
ROCK	4	5	3	4	1	1	5	5	4	2	3	3	1	4	4	4	4	5	3	3	3	3	4	5	4	5	5	3	3	5	3	1	3	1	4	5	2	2	1	1																					1865.0	46.6				N

TOTALS 5197.5 121.7 LIVE COVER TOTAL 30.9

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #2

Allotment Wall Canyon East   Habitat Type Artr - Stth - Sihy

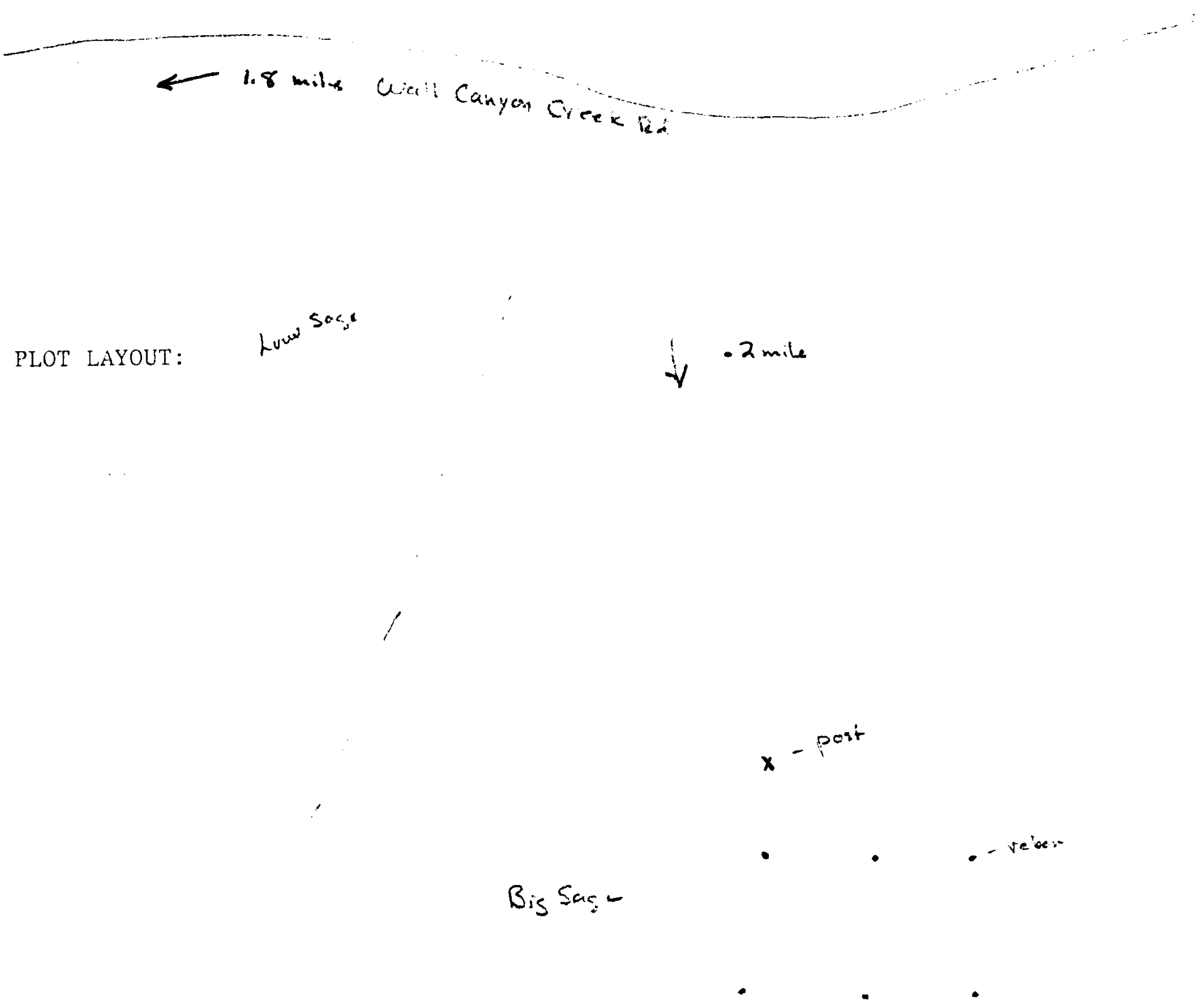
Location T 42 R 23 S 13 1/16th ~~NE~~ ~~South~~ SWSW   Date Estab. 7-5-83

Soil Olson   Aspect North   Elevation 5690

% Slope 5%   Slope Length 1000   Type of Slope (Circle One): Uniform / Convex / **Concave** (circled)

Position on Slope 2 (middle)   R Factor ______   K Factor ______

PLOT LAYOUT:



TRANSECT #:S422313 DATE READ: 830705 RECORDER: Irons ALLOTMENT NAME: Cottonwood (Wall Canyon) # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
STTH2	1	1		1	1	2		2	1	1	2	1			1	1						1	2	1		1			1	
STCO4																						1								
SIHY								1							1				1		2	2			2					
ORHY																														
PONE3																														
POSE								1														1								
CAREX	1	1	1						1	1	1	1	1	1																
AGGL															1	1														
LUCA	1																													1
ASTRA																								1						
DEGE																									1					
ASTER			1				2		2	1													1						1	
TRMA8								1	1																					
PHLO2					1		1					1																		1
ANRO2							1	1	1		1										1	1								
AAFF	1		1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1		1			1	1	1	1
ARTRT	2		2	3		2		1	2						2		5	5	3		2	4			3		1	5	1	
CHVI8																														
LTTR	1	2	1	1	1	2	1	3	2	2	1	1	1	1	5	1	3	4	3	1	1	2	2	1	3	1	1	3	1	1
BG	5	4	4	5	5	4	5	3	3	4	4	5	6	6	1	5	1		3	5	5	2	3	5	1	6	6	1	5	5
ROCK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1		1	1		1	1

SPECIES	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
STTH2			1	1	1																										100.0	2.5	10.2	42	21	Y
STCO4																															2.5	0.1	0.3	22	11	Y
SIHY				1					1																						57.5	1.4	5.8	33	16.5	N
ORHY							1																								2.5	0.1	0.3	7	3.5	Y
PONE3																															0.0	0.0	0.0	9	4.5	Y
POSE	1	1		1		1																									15.0	0.4	1.5	17	8.5	N
CAREX																															22.5	0.6	2.3	0	0	N
AGGL																															5.0	0.1	0.5	10	5	N
LUCA																															5.0	0.1	0.5	5	2.5	N
ASTRA																															2.5	0.1	0.3	6	3	N
DEGE																															2.5	0.1	0.3	5	2.5	N
ASTER																															40.0	1.0	4.1	3	1.5	N
TRMA8					1																										7.5	0.2	0.8	0	0.0	N
PHLO2	1	1	1							1																					20.0	0.5	2.0	10	5.0	N
ANRO2																															15.0	0.4	1.5	8	4.0	N
AAFF	1	1	1	1	1	1	1	1	1	1																					85.0	2.1	8.6	155	77.5	N
ARTRT		1		3			2		2			5		5	4		3						2			1	2			1	902.5	15.0	61.1	30	15	N
CHVI8																															0.0	0.0	0.0	14	7	N
LTTR	1	1	1	5	1	1	3	1		1																					607.5	15.2				N
BG	5	5	5	1	6	5	3	4	1	5																					2440.0	61.0				N
ROCK	1	1	1		1	1	1	1		1																					87.5	2.2				N

TOTALS 4420 102.9 LIVE COVER TOTAL 24.6

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number # 3

Allotment Wall Canyon East Habitat Type 4rtr - Sihy - Orhy

Location T 42 R 23 S 35 1/16th NESE Date Estab. 7-5-83 (old plot)

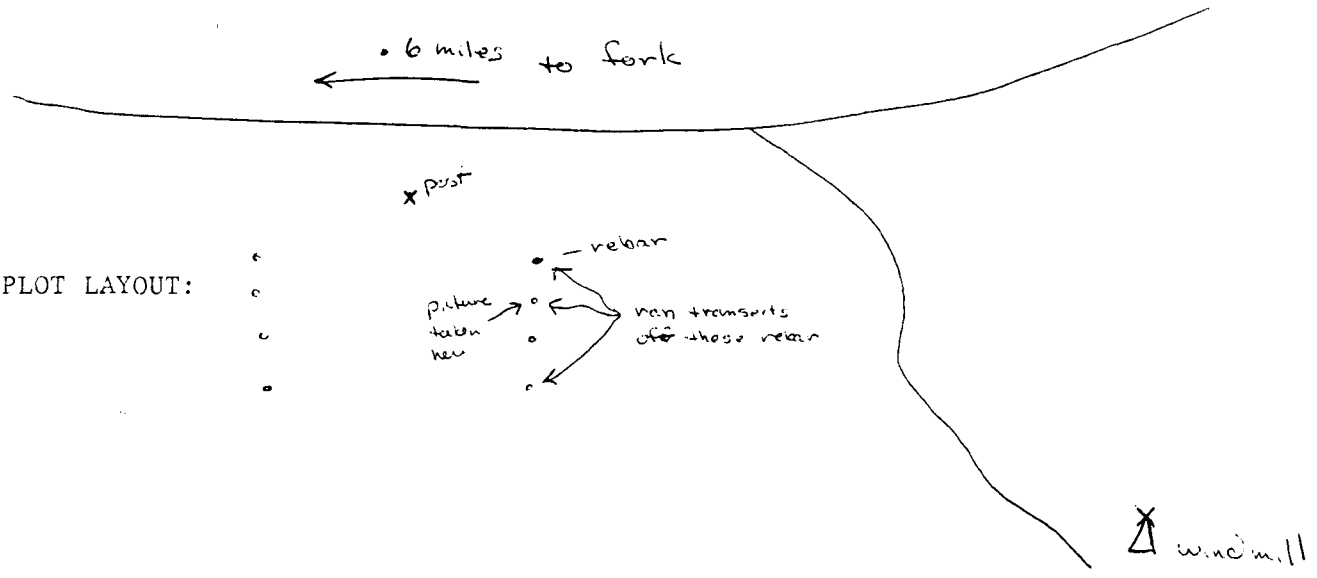
Soil Olson Aspect NE Elevation 5500

% Slope 3 Slope Length 300 ft Type of Slope (Circle One) Uniform / Convex / (Concave)

Position on Slope 2 R Factor _____ K Factor _____

This is an old plot, measuring 40 x 100 ft. Rebar was placed 10 ft apart, four in a straight line and then 100 ft width.

N



TRANSECT #:S422335 DATE READ: 830705 RECORDER: Irons ALLOTMENT NAME: Cottonwood (Wall Canyon) # of Plots for FREQ: 200

QUADRAT CANOPY COVER

SPECIES	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	6	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
ORHY	1						2.5	0.1	0.3	7	3.5	Y
AGSM		1	1 1				10.0	0.3	1.3	27	13.5	Y
SIHY	1 2		1 2				35.0	0.9	4.7	43	21.5	N
PPFF	1 1 1 1 1 1 1 1 1 1	2 2 2 1 1 1 2 1 1 2	2 2 2 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1			170.0	4.3	22.8	184	92	N
AAFF	1 1 1 1 1 1 1 1 2 1	1 1 1 1 1 1 1 1 1 1	1 2 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1			125.0	3.1	16.8	181	90.5	N
ARTRW	1 1 1 2	2 1 5 2 1	1 1 2 1 1	3 3 4 4 1 5	2 3 1 1 1 2 3 3		605.0	10.1	54.1	27	13.5	N
LTTR	1 1 2 1 1 1 2 2 3 1	4 1 2 1 1 2 1 2 2 3	1 2 2 2 1 1 1 1 1 1	2 2 2 2 2 3 2 1 4 1			525.0	13.1				N
BG	4 5 4 5 5 5 5 5 2 5	1 5 5 5 5 2 4 4 4 1	5 4 4 4 5 5 5 5 5 5	5 2 2 2 4 1 1 5 4			2410.0	60.3				N
ROCK	3 1 2 1 1 2 1 1 1 2	1 1 1 1 1 1 1 1 1 1	2 1 1 1 1 1 1 1 1 1	1 1 1 1 1 2 2			202.5	5.1				N

TOTALS 4085 97.08 LIVE COVER TOTAL 18.6

Check location?
Camp - [illegible]

TULEDAD/HOME CAMP
Monitoring System
Condition/Trend Site

Plot Number #4

Allotment Wall Canyon East   Habitat Type Artr - Sihy - Stth

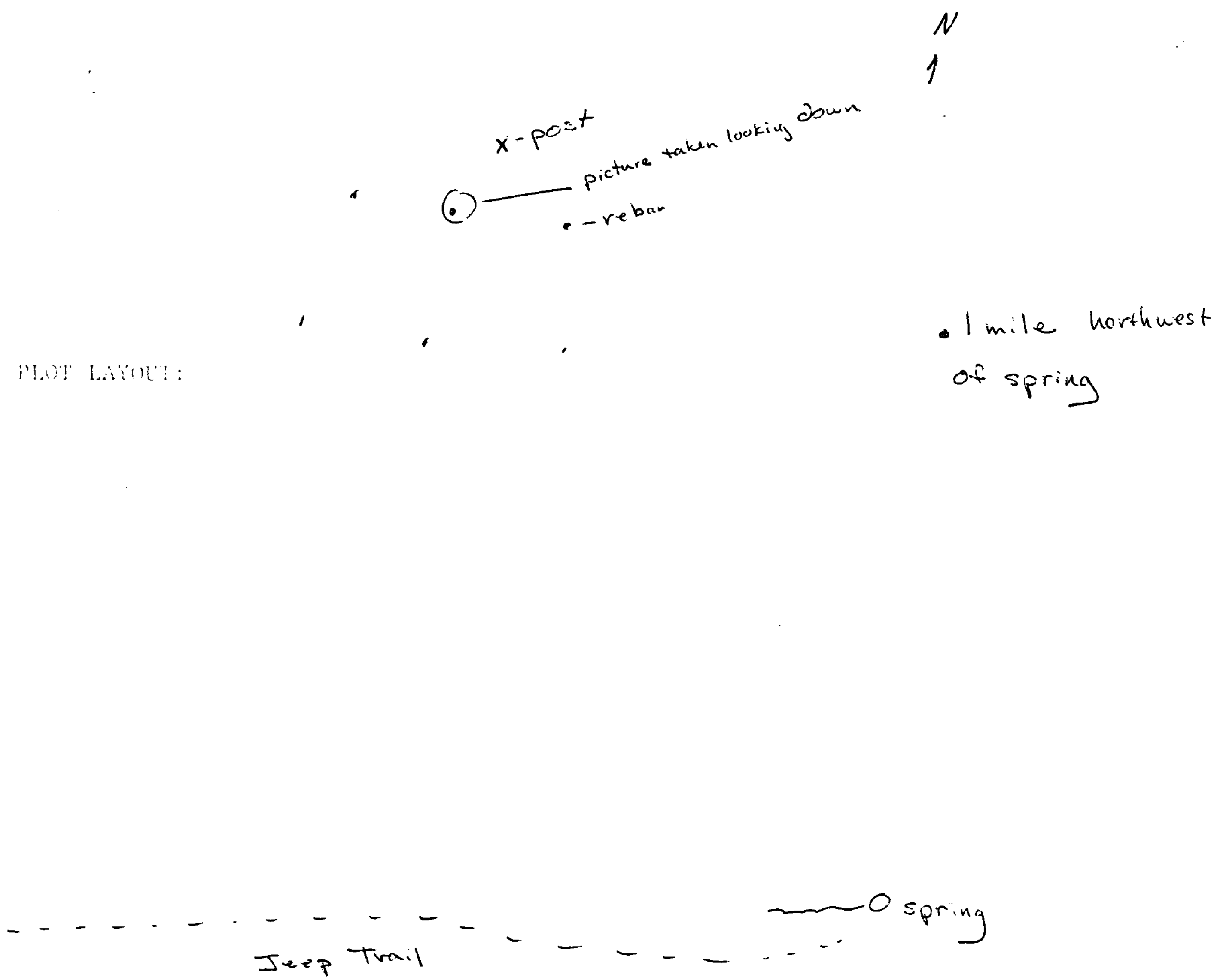
Location T 41 R 24 S 06 1/4 1/4 NENW   Date Estab. 7-11-83

Soil Saraph   Aspect Southwest   Elevation 5820

% Slope 10%   Slope Length 1000 ft   Type of Slope (Circle One) **(Uniform)** Convex Concave

Position on Slope middle   R Factor ____   K Factor ____

PLOT LAYOUT:



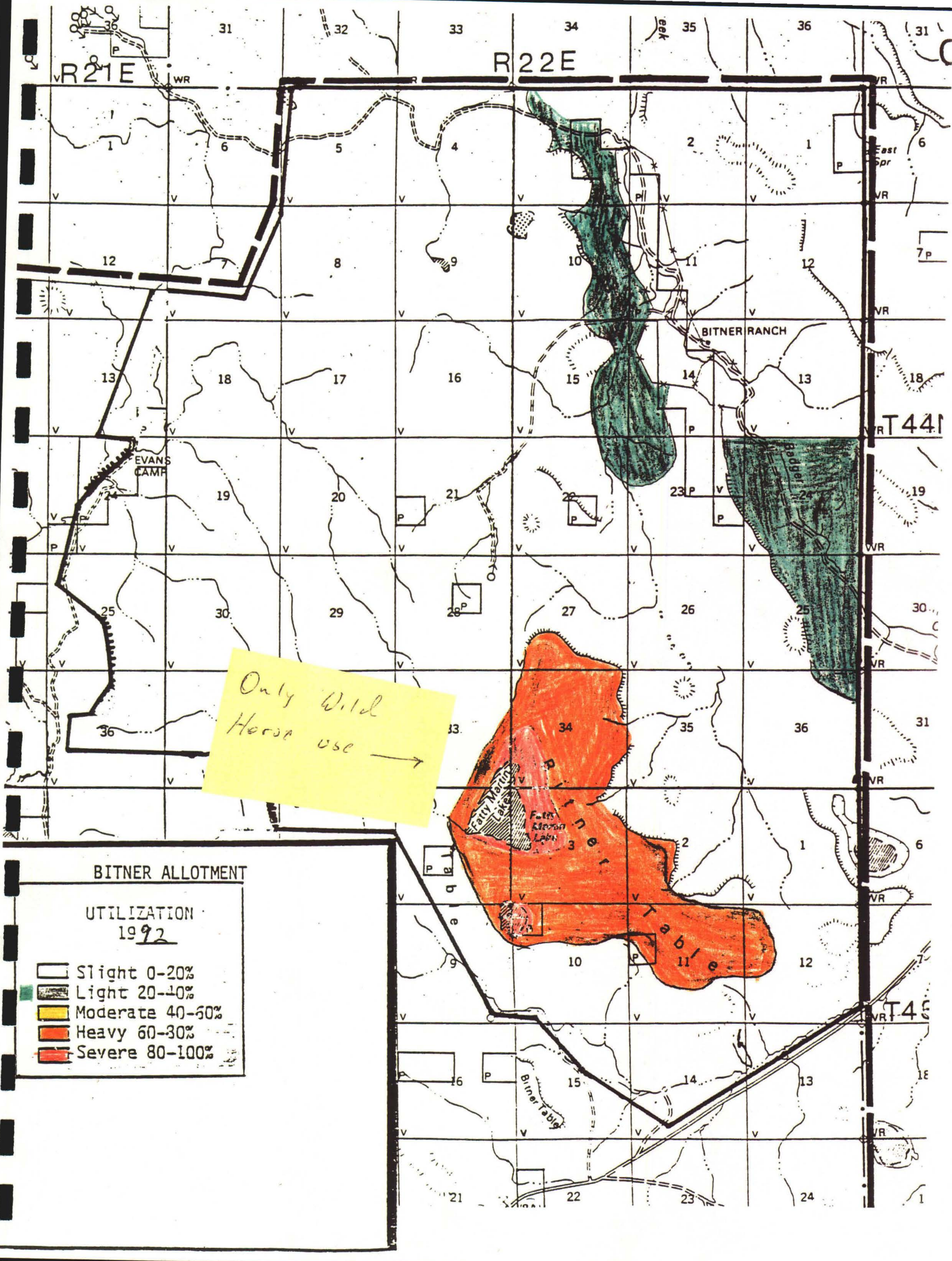
TRANSECT #: 5 41 1/2 23 1/2 31 ~~9422406~~ DATE READ: 830711 RECORDER: Irons ALLOTMENT NAME: Cottonwood (Wall Canyon) # of Plots for FREQ: 200

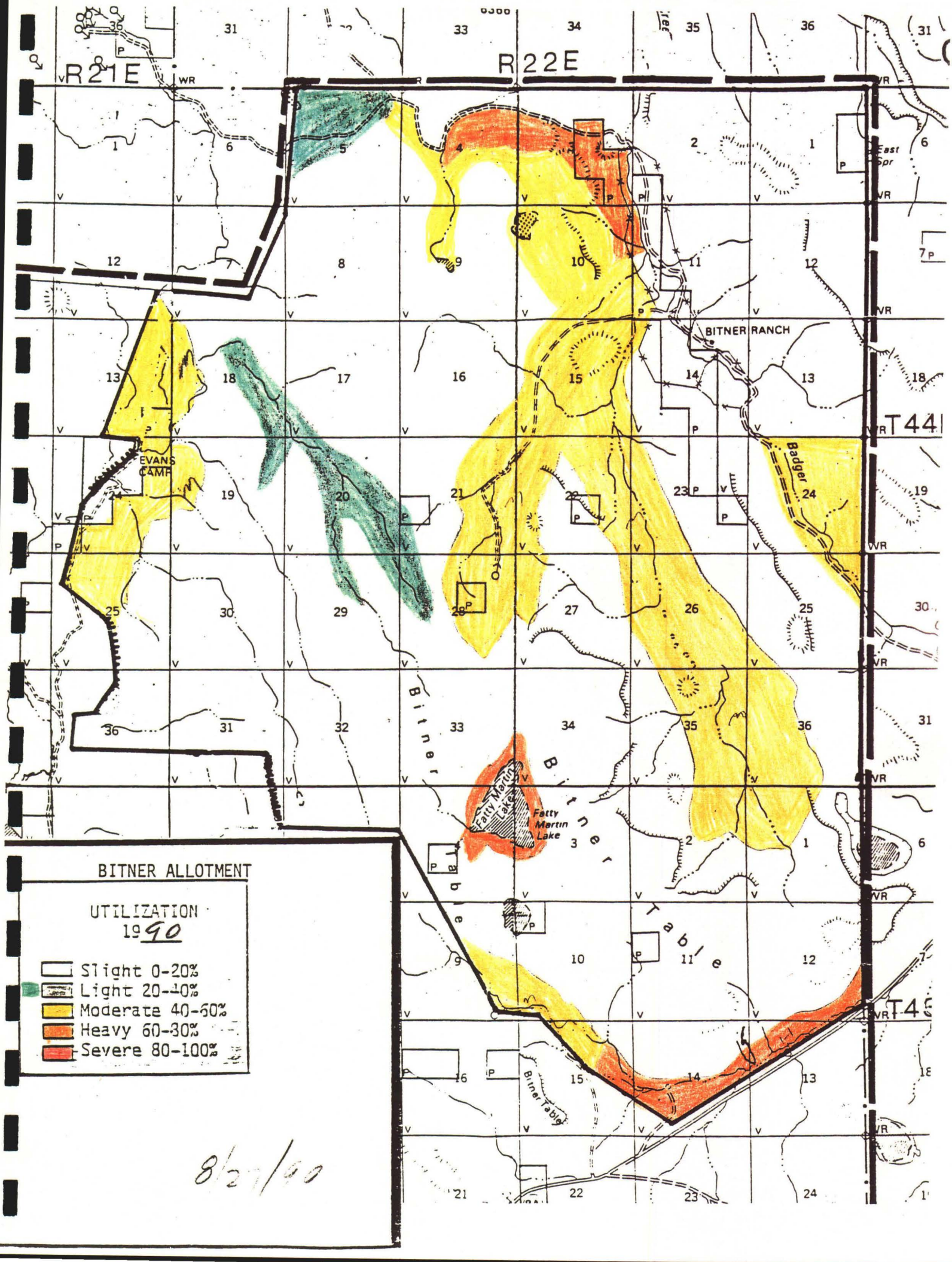
Q U A D R A T   C A N O P Y   C O V E R

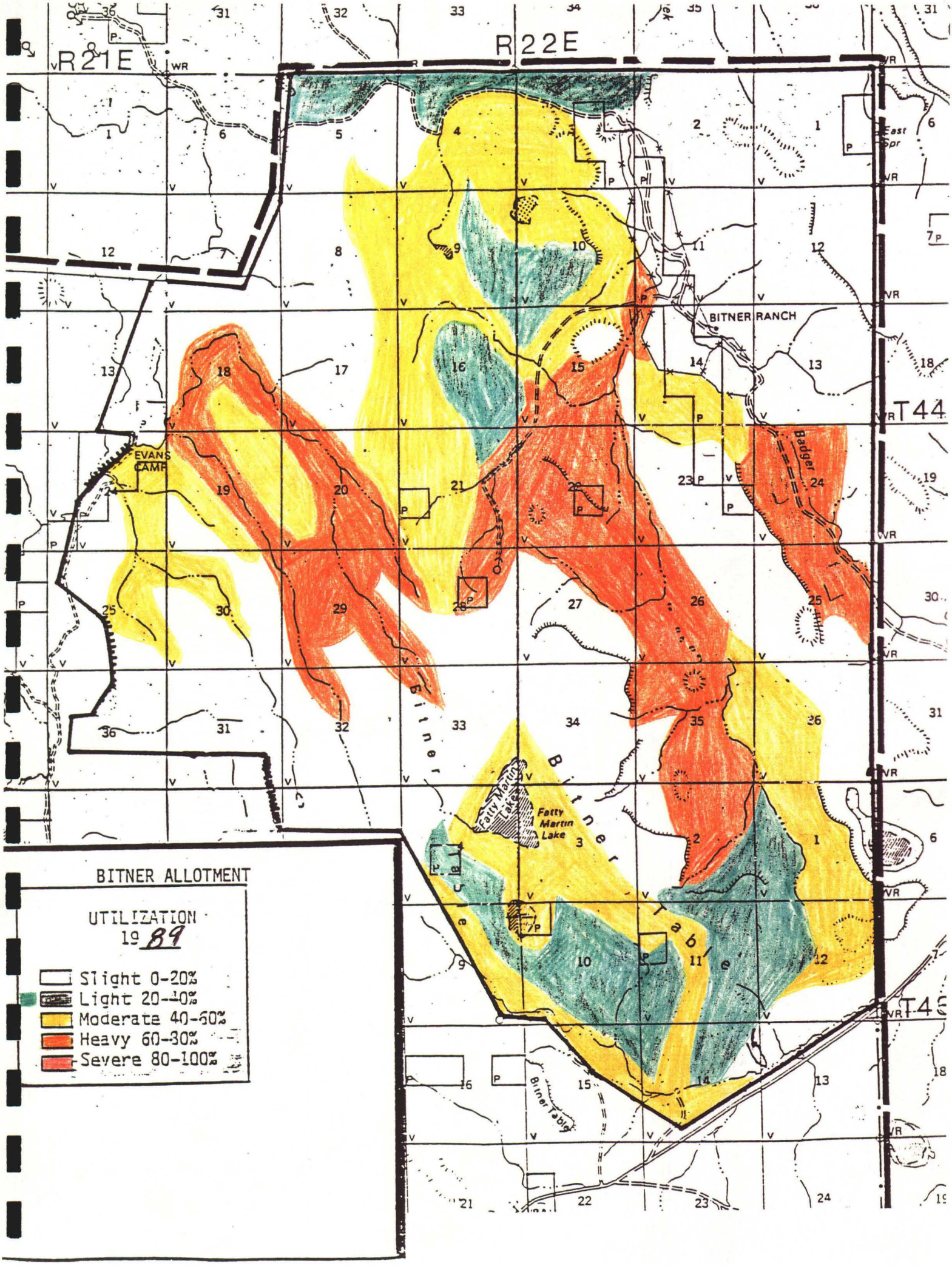
SPECIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
STTH2																	1	2												
SIHY										1	1		1	1	1									1						1
POSE	2														1		1									1	1			1
ORWE													2							1										
BRTE			1									1		1	1		1				1					1				
ASTER	1	1	1	2	1			1	1			1		1	1	1	1	1		1	1	1		1	1			1		
PHLO2		1	1	2	1	1	1	1	1	1	1	1	1	1	1	1		1		1	1		1	1	1	1		1	1	
ASTRA									1												1		1							
CRAC2				1			1								1										1			1	1	1
ERIOG			1			1																								
LUCA																												1		
AAFF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1
ARTRW	2						2				2		4				2					1				3				4
LTTR	2	1	1	3	1	1	1	1	1	1	1	1	2	1	3	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1
BG	2	1	3	2	2	2	2	3	2	3	2	2	2	2	2	3	4	3	1	1	3	4	4	3	3	3	1	1	3	2
ROCK	3	5	3	3	4	4	4	4	4	4	4	4	1	4	2	4	2	3	5	5	3	1	2	3	4	3	5	5	3	2

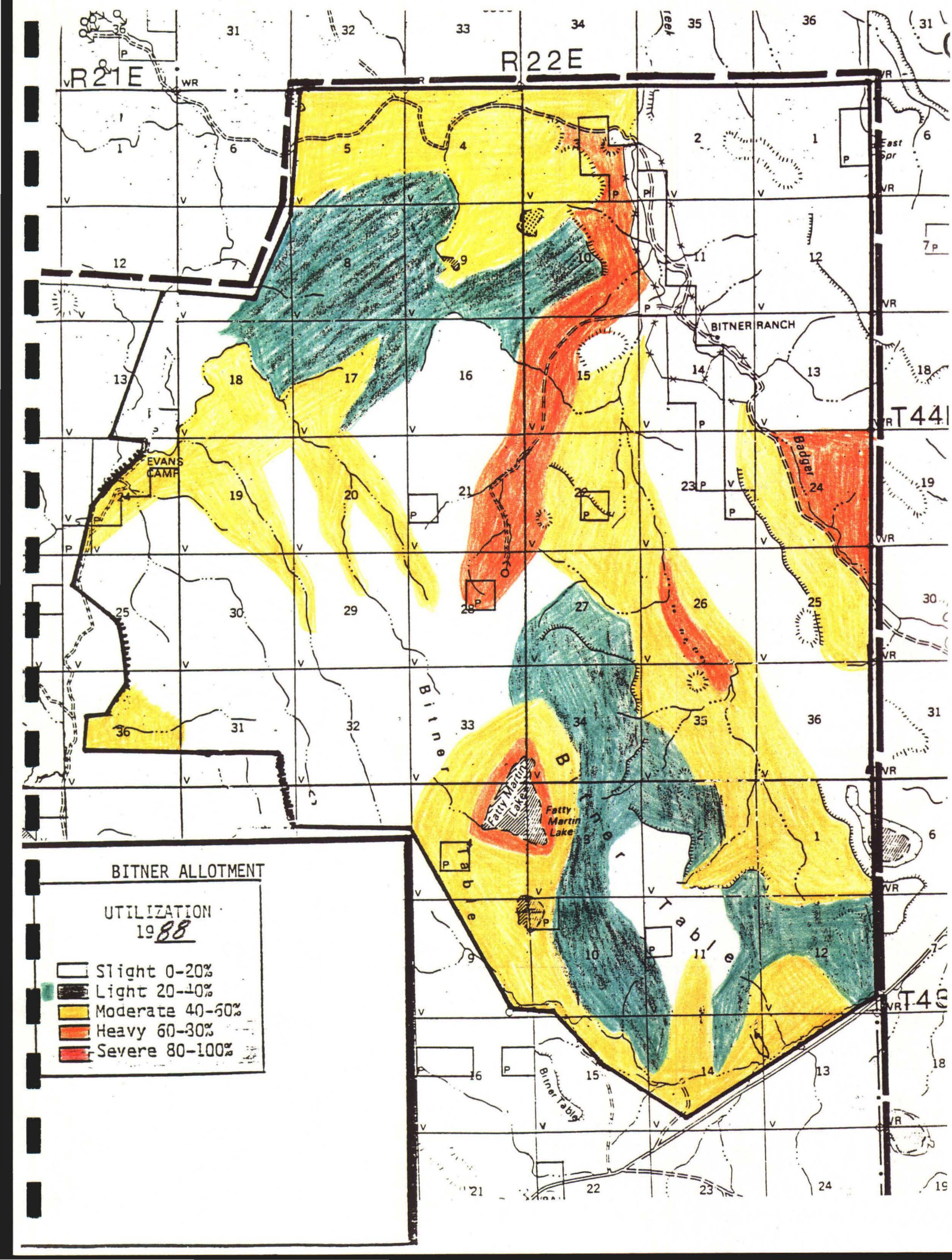
SPECIES	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	SUBT	% PCOV	% PCOM	# HITS	% FREQ	KEY
STTH2					1																										20.0	0.5	2.3	4	2	Y
SIHY							2	1																							35.0	0.9	4.1	46	23	N
POSE				1		1			1	1																					37.5	0.9	4.4	29	14.5	N
ORWE	1				1																										22.5	0.6	2.6	5	2.5	Y
BRTE																															17.5	0.4	2.0	87	43.5	N
ASTER								1	1																						65.0	1.6	7.6	126	63	N
PHLO2				1				1																							77.5	1.9	9.0	104	52	N
ASTRA					1																										10.0	0.3	1.2	16	8	N
CRAC2			1																												20.0	0.5	2.3	10	5	N
ERIOG																															5.0	0.1	0.6	0	0	N
LUCA																															2.5	0.1	0.3	5	2.5	N
AAFF	1	1	1	1	1	1	1	1	1	1																					97.5	2.4	11.3	200	100	N
ARTRW	1			4		4	3	2				2	3				3		2	3			1			3	5			1	675.0	11.3	52.3	28	14.0	N
LTTR	1	1	1	1	1	1	2	1	1	2																					245.0	6.1				N
BG	2	3	4	2	3	1	2	3	4	3																					1077.5	26.9				N
ROCK	4	3	2	2	3	1	2	3	2	2																					1730.0	43.3				N

TOTALS 4137.5 97.81 LIVE COVER TOTAL 21.5

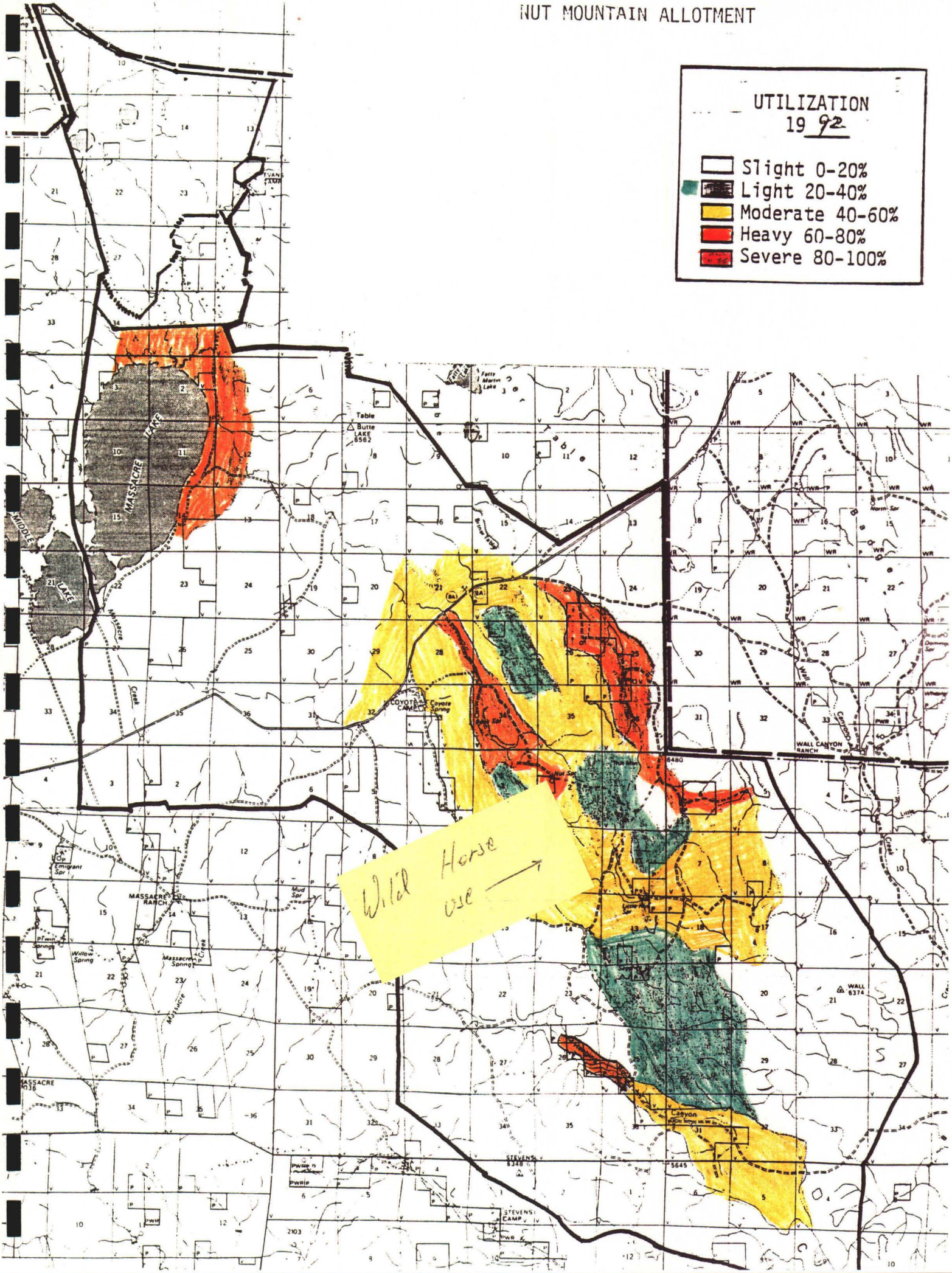

R21E
R22E
T44N
BITNER RANCH
EVANS CAMP
East Spr
Badger
Fatty Martin Lake
Fatty Martin Lake
Bitner Table
Bitner Table
Only Wild Horse use
BITNER ALLOTMENT
UTILIZATION
1992
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%

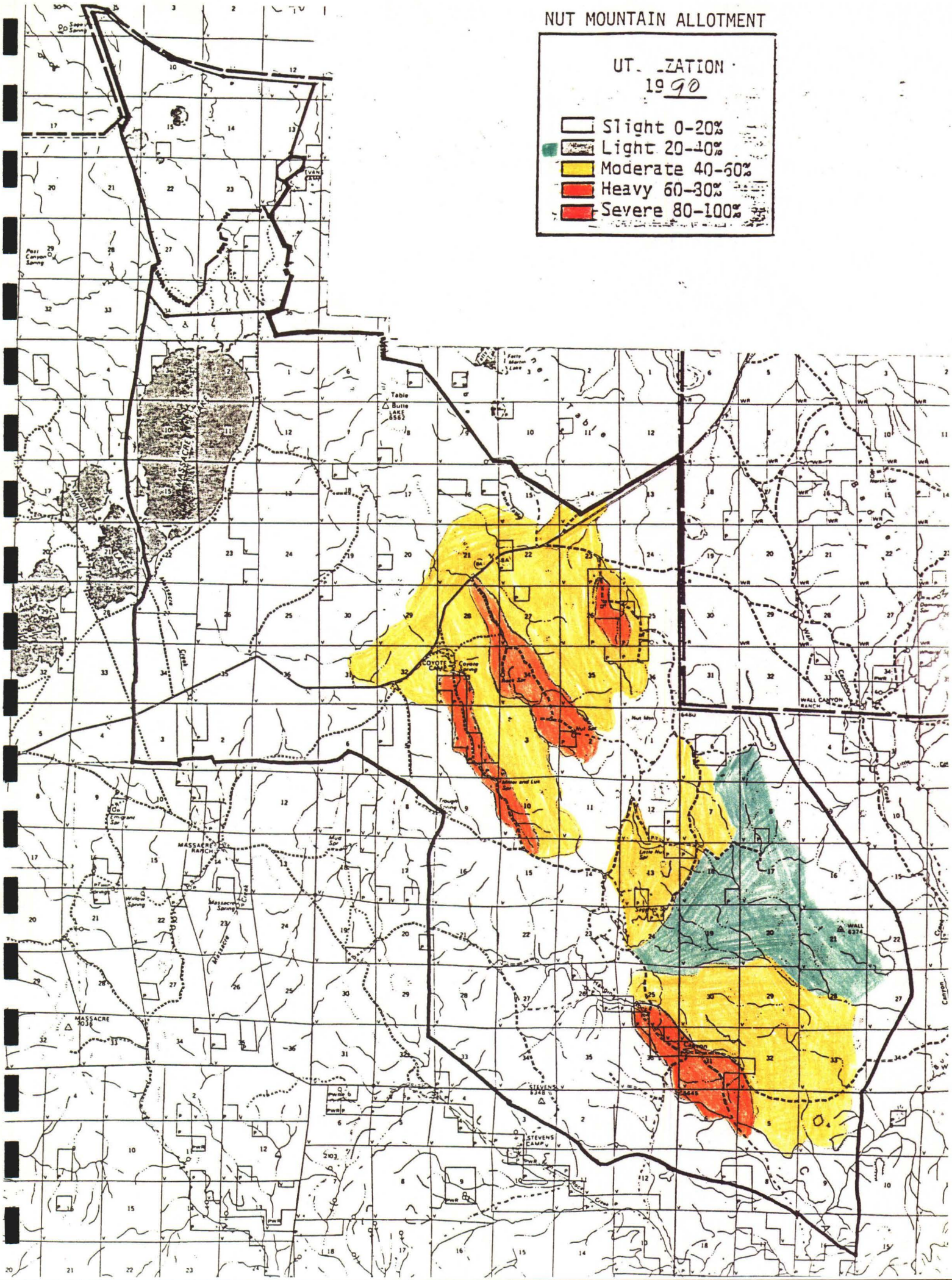

R21E
R22E
T44
T45
BITNER RANCH
EVANS CAMP
Badger
Bitner Table
Fatty Martin Lake
Fatty Martin Lake
BITNER ALLOTMENT
UTILIZATION
1990
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%
8/2/90

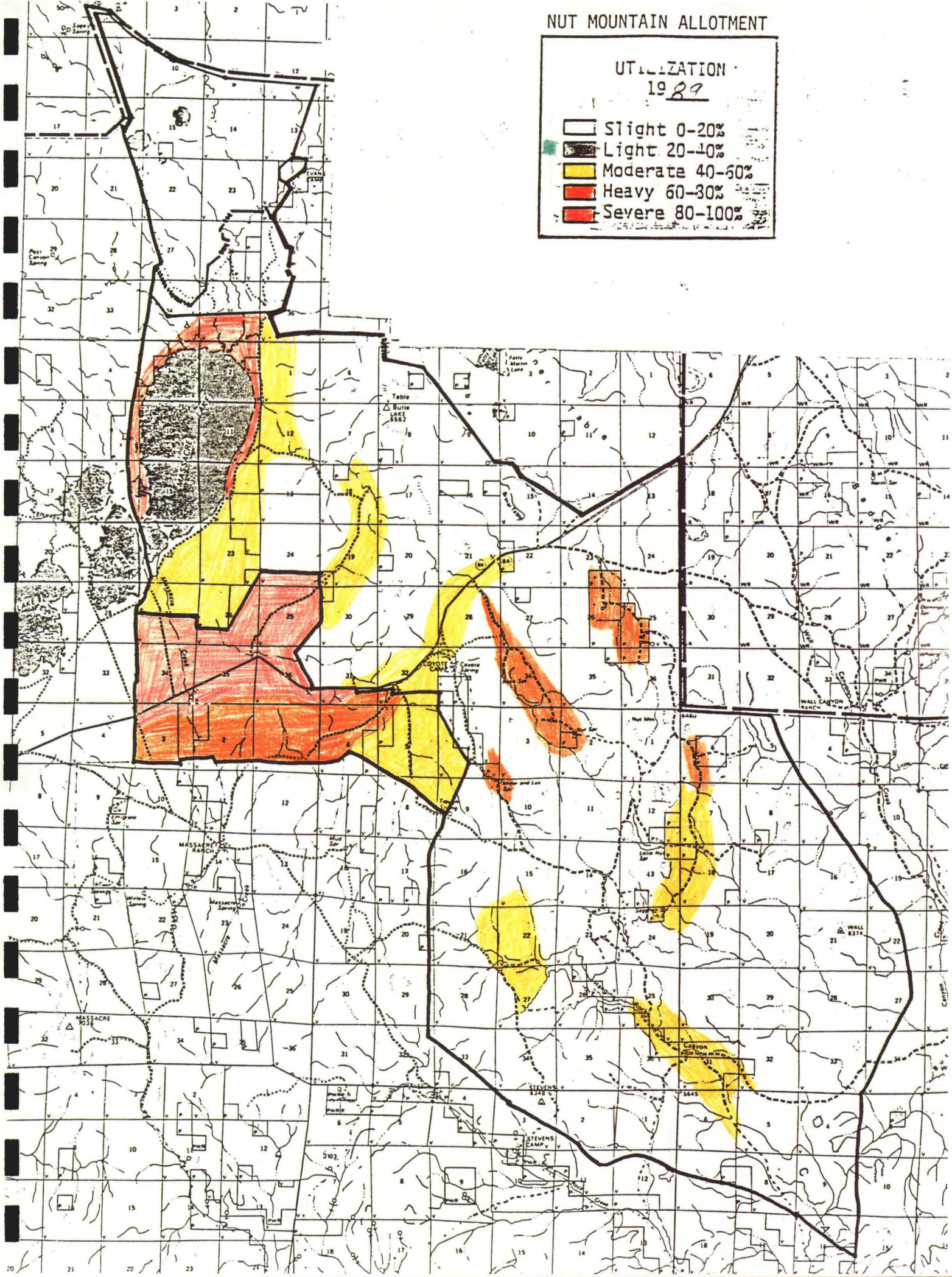

R21E
R22E
T44
BITNER RANCH
EVANS CAMP
Badger
Fatty Martin Lake
Fatty Martin Lake
Bitner Table
Bitner Table
BITNER ALLOTMENT
UTILIZATION
19 89
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%


R21E
R22E
T44
T45
BITNER RANCH
EVANS CAMP
Badger
Bitner Table
Fatty Martin Lake
Fatty Martin Lake
East Spr
BITNER ALLOTMENT
UTILIZATION
1988
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%

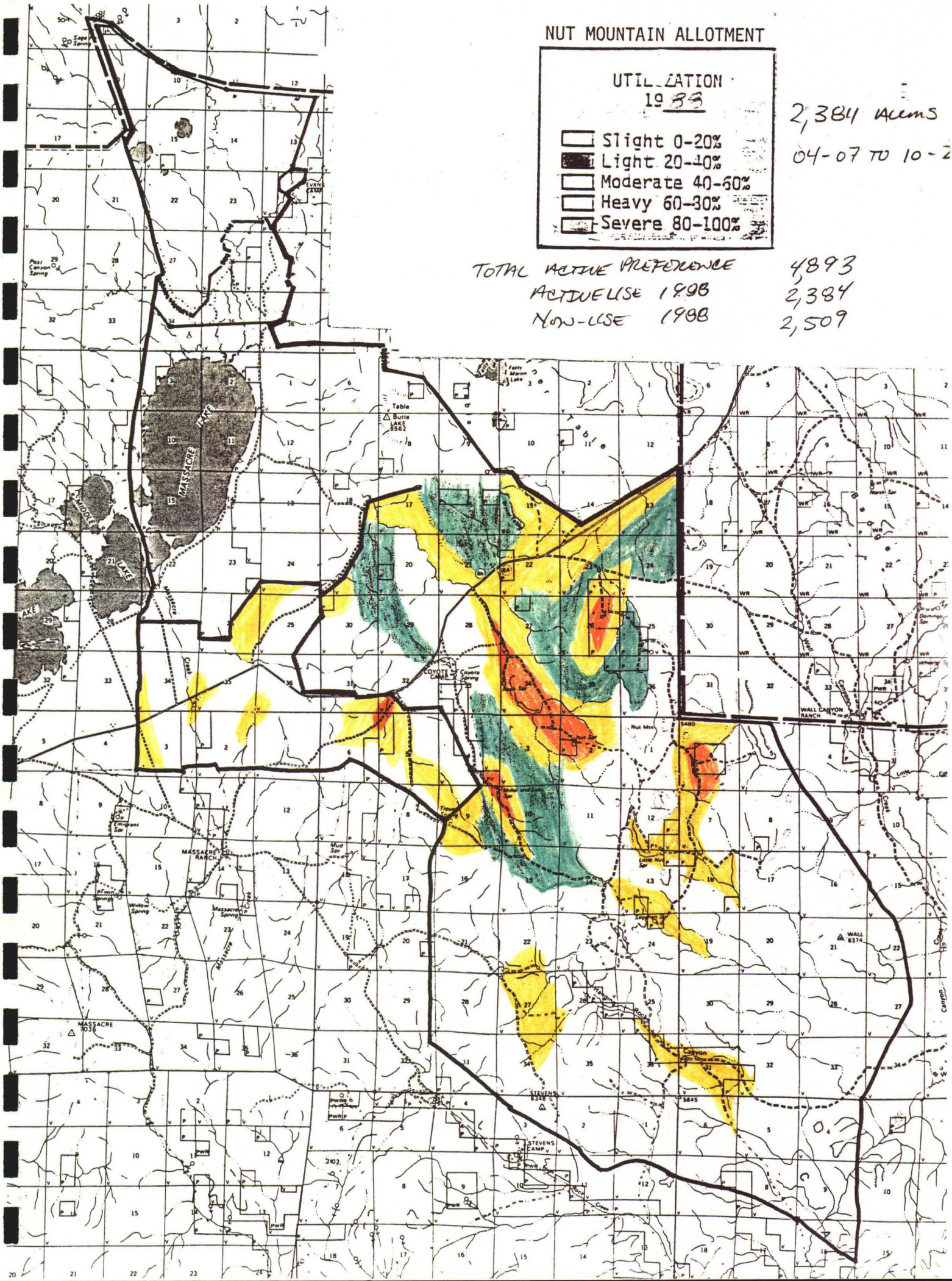
NUT MOUNTAIN ALLOTMENT




NUT MOUNTAIN ALLOTMENT
UT. ZATION
19 90
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%
Table Butte
LAKE 6562
COYOTE CAMP
Coyote Spring
Nut Spr
Nut Mtn
WALL CANYON RANCH
MASSACRE RANCH
Massacre Spring
Mud Spr
MASSACRE 7036
WALL 6274
STEVENS 6348
STEVENS CAMP
MIDDLE
Creek


NUT MOUNTAIN ALLOTMENT
UTILIZATION
1989
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%
Table Butte
LAKE 6562
COYOTE CAMP
Coyote Spring
WALL CANYON RANCH
MASSACRE RANCH
MASSACRE 5038
WALL 6374
STEVENS 6348
STEVENS CAMP
Canyon
5645

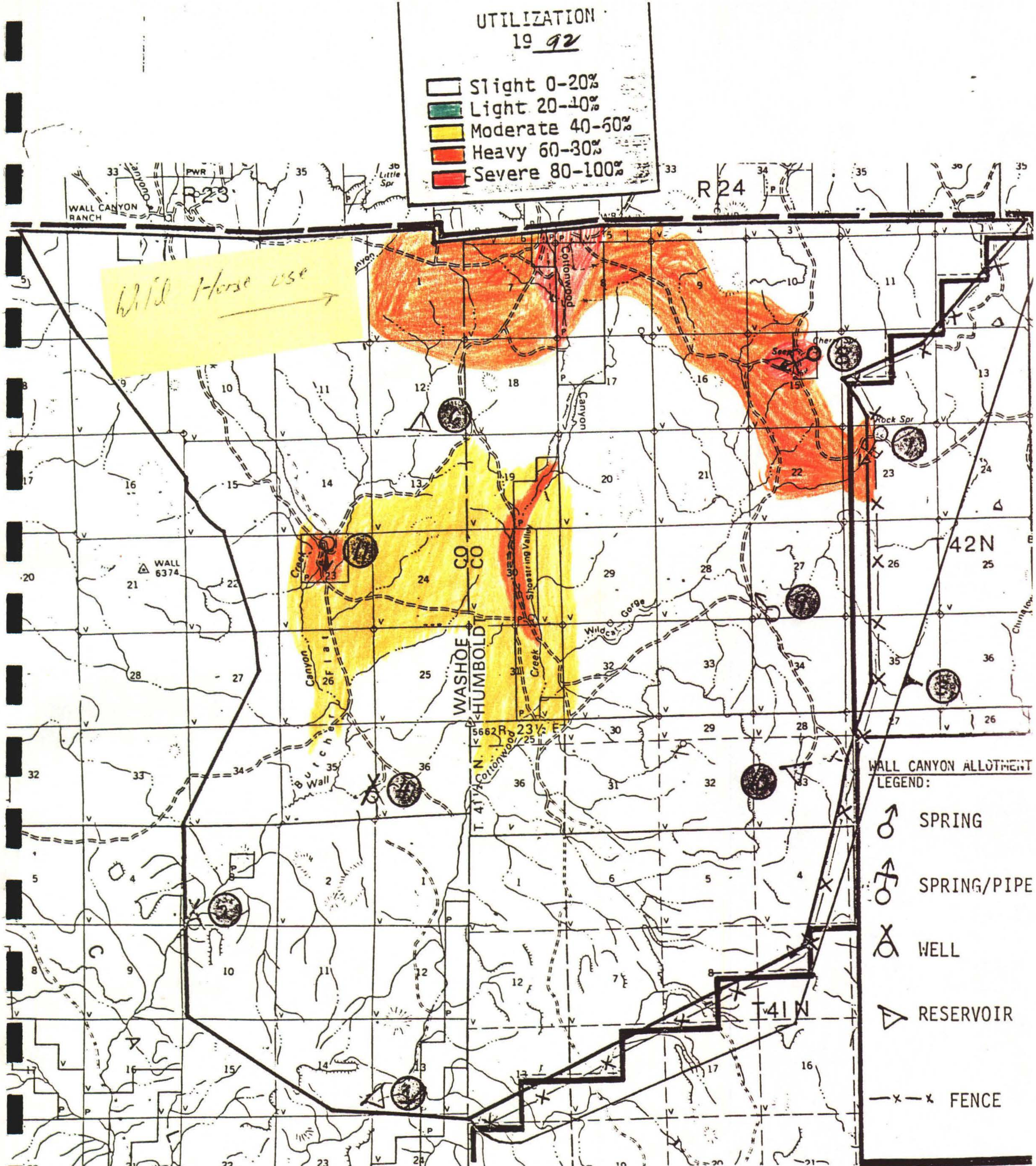
NUT MOUNTAIN ALLOTMENT



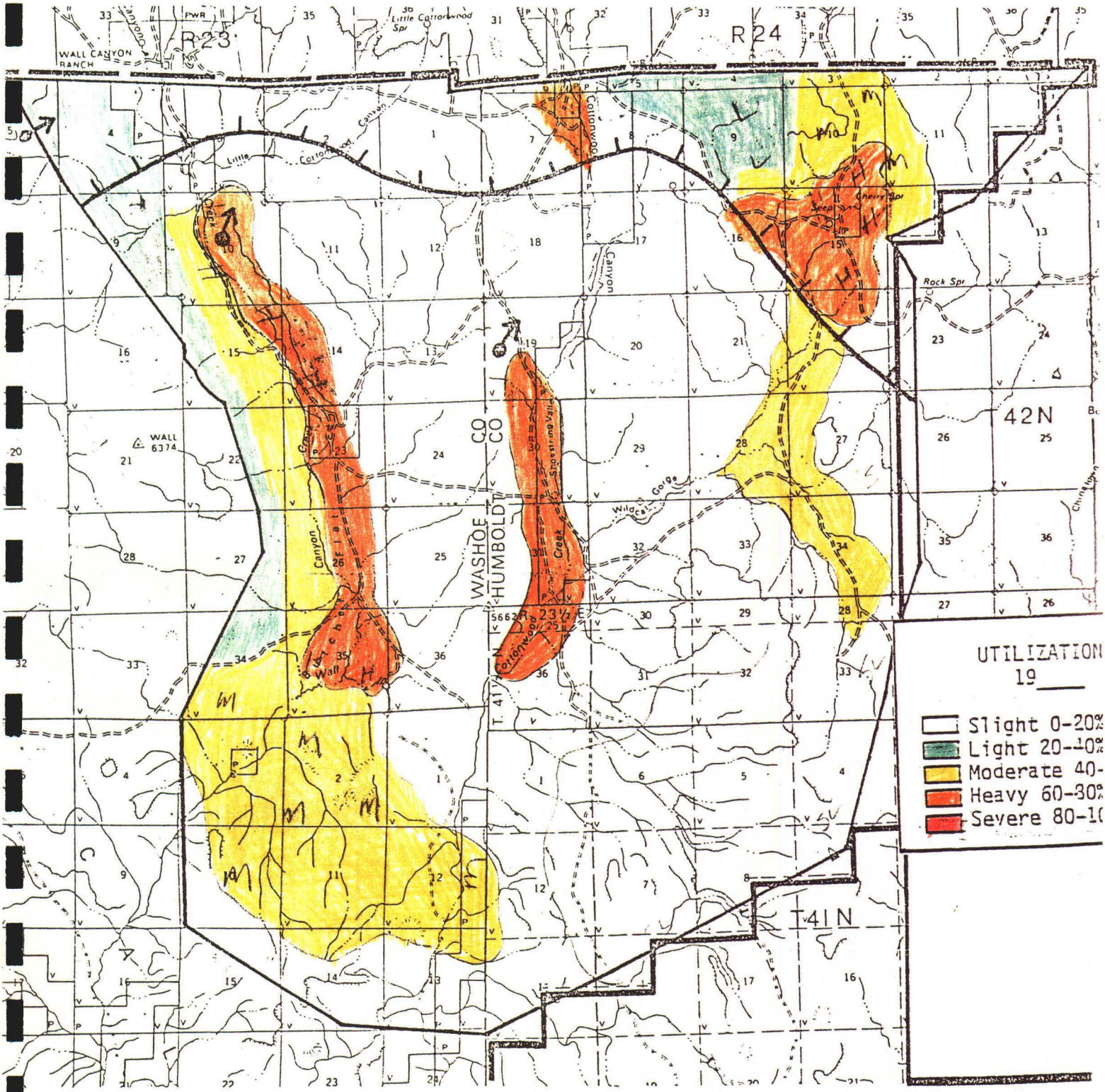
2,384 Acres

04-07 TO 10-2

TOTAL ACTIVE PREFERENCE	4893
ACTIVE USE 1988	2,384
NON-USE 1988	2,509


UTILIZATION
19 92
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%
Wild Horse use
WALL CANYON RANCH
R 23
R 24
42N
T41N
WASHOE CO
HUMBOLDT CO
WALL 6374
Cottonwood Canyon
Shoestring Valley
Wildcat Gorge
Rock Spr
Butcher Flat
Wall Canyon Creek
T. 41 ½ N.
R. 23 ½ E.
WALL CANYON ALLOTMENT
LEGEND:
SPRING
SPRING/PIPE
WELL
RESERVOIR
FENCE

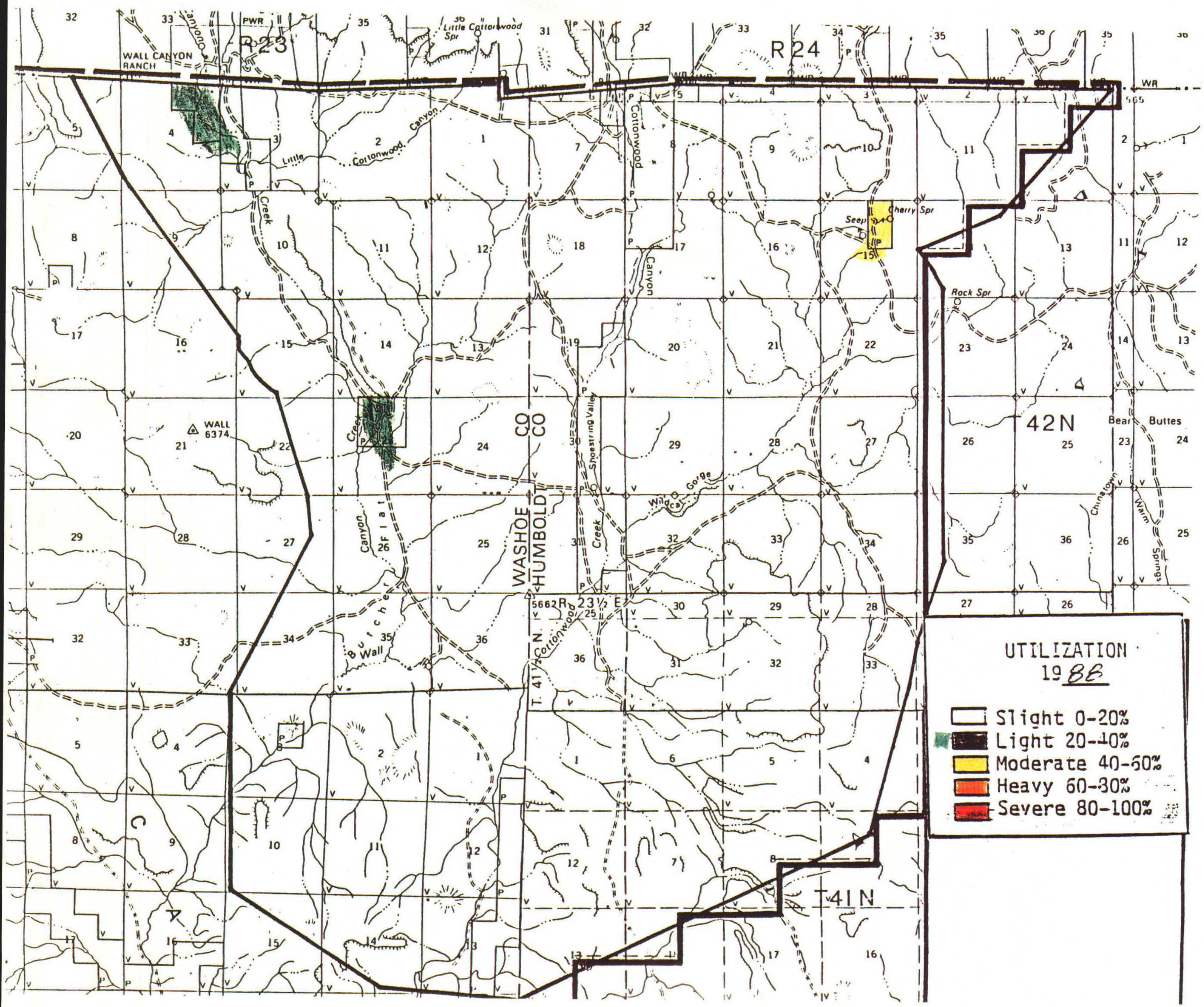
WILDLIFE AND WILDHORSE VALUES



Entire allotment is yearlong antelope range.

Entire allotment is Wall Canyon Wildhorse HMA.

9/28/90



UTILIZATION
19 86
Slight 0-20%
Light 20-40%
Moderate 40-60%
Heavy 60-80%
Severe 80-100%
R 23
R 24
T 42N
T 41 N
R 23½ E
T. 41½ N
WASHOE CO
HUMBOLDT CO
WALL CANYON RANCH
Little Cottonwood Spr
Little Cottonwood Canyon
Cottonwood Canyon
Cottonwood
Creek
Cherry Spr
Seep
Rock Spr
WALL 6374
Shoestring Valley
Shoestring Creek
Wildcat Gorge
Canyon Flat Creek
Butcher Wall
Bear Buttes
Chinatown
Warm Springs
5662

APPENDIX 6

1988-1992 ACTUAL USE REPORTS

BITNER, NUT MOUNTAIN, AND

WALL CANYON (EAST) ALLOTMENTS

IN THE

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

Form 4130-5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6-2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Bitner Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK — TURNED IN	TAKEN OUT	NO. AND KIND OF LIVESTOCK	GRAZING PERIOD — BEGIN	END	% PL USE	AUM'S
Bitner	15 Apr.	300		300	4/15	5/17	100%	325
	18 May		170	180	5/18	5/19	100%	12
	20 May		100	80	5/20	5/22	100%	8
	22 May		80					
Bitner	8/2	60		60	8/2	9/1	100%	61
	9/1		60		Actual Use			406
					Active Pref.			1702
				Actual Use = 23.9% of Preference				
							BD	9/16/92

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Don Coops

Date: 9/14/92

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 2
Bureau of Land Management

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

GR#042616
Sch 1

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Bitner #1006

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
In Bitner	4/15	138		138 C	04/15 (2)	04/16	100%	9
"	4/17	81		219 C	04/17 (1)	04/17	100%	7
"	4/18	33		252 C	04/18 (5)	04/22	100%	41
"	4/23	15		267 C	04/23 (7)	04/29	100%	61
"	4/30	9		276 C	04/30 (69)	07/07	100%	626
	Total	276		129 C	07/08 (1)	07/08	100%	4
out →	7/8		147	92 C	07/09 (1)	07/09	100%	3
	7/9		37	28 C	07/10 (6)	07/15	100%	6
	7/10		64	107 C	08/14 (51)	1/3	100%	179
	7/15		28	21 C	10/04 (5)	10/08	100%	3
In →				TOTAL ACTIVE PREFERENCE				1,70
	8/14	107		ACTIVE USE 1991				939
				NON-USE 1991				763
out →	10/3		86	45% NON USE				
	10/8		21					
10/24/91 awp								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Don Cooper Date: 10/22/91

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
JUL 31 1990
Bureau of Land Management
Cedarville, CA 96104

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir: GR#042616

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Bitner #1006

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	4/13	40		40 C	04/13	04/13	100%	1
	4/14	40		80 C	04/14	04/14	100%	3
	4/15	49		129 C	04/15	04/15	100%	4
	4/16	88		217 C	04/16	04/16	100%	7
	4/17	48		265 C	04/17	04/18	100%	26
	4/20	100		365 C	04/20	05/10	100%	252
	5/11	140		505 C	05/11	06/11	100%	531
		506		390 C	06/12	06/27	100%	205
	6/11		115	225 C	06/28	07/03	100%	44
	6/27		165	104 C	07/04	07/20	100%	58
	7/3		121					
	7/20		103	TOTAL ACTIVE PREFERENCE				1,702
			504	ACTIVE USE 1990			(67%)	1,131
				NON USE 1990			(33%)	571
				Away 07/31/90				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee Don Cooper Date 7/25/90

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Bitner #1006

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	4/13	185		185C	04/13	04/13	100%	6
	4-14	141		326C	04/14	04/14	100%	11
	4-15	93		419C	04/15	04/15	100%	14
	4-16	101		520C	04/16	04/18	100%	51
	4-19	86		606C	04/19	07/[illegible]	100%	1,534
	7-4	—	85	521C	07/[illegible]05	07/13	100%	154
	7-13	—	218	303C	07/14	[illegible]	100%	40
	7-17	—	185	118C	07/[illegible]6	07/23	100%	23
	7-23	—	90	28C	07/24	07/26	100%	3
	7-26	—	19					
				TOTAL ACTIVE PREFERENCE				1,702
				ACTIVE USE 1989				1,702
				TYR USE 1989				134

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: I Don Cooper Date: 9/1/89

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(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEPT. OF INTERIOR
RECEIVED
AUG 16 1988
BUREAU OF LAND MANAGEMENT
BARSTOW, CALIFORNIA

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: BITNER #1006

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Bitner	4/10	122		122C	04/10/88	04/11/88	100	8
"	4/11	79		201C	04/12/88	04/13/88	100	13
"	4/13	102		303C	04/14/88	04/15/88	100	20
"	4/15	161 16		464C	04/16/88	04/18/88	100	46
"	4/19	99		563C	04/19/88	07/07/88	100	1,483
"	7/7		92	471C	07/08/88	07/10/88	100	47
"	7/10		165 16	306C	07/11/88	07/12/88	100	20
"	7/12		125	181C	07/13/88	07/15/88	100	18
"	7/15		100	91C	7/16/88	07/23/88	100	35
"	7/28		80					
				TOTAL ACTIVE PREFERENCE				1,702
				ACTIVE USE 1988				1,690
				NON-USE	1988			12

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: Don Cooper Date: 8/15/88

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 1992
Bureau of Land Management
Ukiah, CA 96104

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated. School 2

Allotment: Nut Mountain

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Mountain	4/16	10B 248C		258	4/16	4/17	100	17
	4/18	5B 296C		559	4/18	7/15	100	1636
	7/16		2C dead 41C	516	7/16	8/5	100	356
	8/6		41C	475	8/6	8/10	100	78
	8/11		1B 7C	467	8/11	8/13	100	46
	8/14		63C	404	8/14	8/17	100	53
	8/18		39C 1B	364	8/18	8/20	100	36
	8/21		3 dead 5C	356	8/21	8/23	100	35
	8/24		45C 1B	310	8/24	8/31	100	82
	9/1		115C 2B	193	9/1	9/2	100	13
	9/3		99C 9B	85	9/3	9/7	100	14
	9/8		1B 44C	40	9/8	9/14	100	9
	9/15		39C	1	9/15	10/1	100	1
	10/1		1C					2,376
Lake	4/22	70C		70	4/22	9/9	100	324
	9/10		42C					
	9/24		24C	28	9/10	9/23	100	13
	10/1		4C	4	9/24	10/1	100	1/33
								2,714

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: John B. Lasagna

Date: 10/8/92

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(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

GR#042640

Sch 2

Dear Sir:

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Allotment: Nut Mountain #1010

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	4/24	406		225C	04/26	09/25	100%	1,132
	4/24	225		406C	04/24	10/17	100%	2,363
	9/25		225	39C	10/18	10/18	100%	10
	10/28		390	164C	10/19	10/21	100%	16
	11/7		12	71C	10/22	10/22	100%	2
				16C	10/23	11/7	100%	14
				87C	10/17	10/17	100%	3
				242C	10/18	10/20	100%	24
TOTAL ACTIVE PREFERENCE		4,893		335C	10/21	10/21	100%	11
ACTIVE USE 1991		3,665		390C	10/22	10/23	100%	90
NON-USE 1991		1,228						
25% NON-USE 1991				USE BY PASTURE				
				CALVADA/Crested Seeding				1,132
				MOUNTAIN PASTURE				2,405
				Sake Field				128
11/8/91 amy								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: John B. Lavagnino Ranch Inc By John B. Lavagnino — Date: Nov 13- 1991

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(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ACTUAL GRAZING USE REPORT

RECEIVED
OCT 29
Bureau of Land Management
Cedarville, CA 96104

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

GR# 042640
Sch 2

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
HANGING ROCK	04/14	412		412 C	04/14	04/18	100%	68
" "	04/19	239		651 C	04/19	05/15		578
" "	05/15		412	239 C	05/16	05/20		39
" "	05/20		239	65 C	04/26	06/30		141
UPPER FIELD	04/26	65		65 C	07/01	08/15		98
UPPER FIELD	06/30		65	214 C	08/16	10/17		443
MINESHAKE LAKES	07/01	65		412 C	05/16	05/20		68
MOUNTAIN	05/16	412		651 C	05/21	08/15		1,862
MOUNTAIN	05/21	239		502 C	08/16	09/16		528
MOUNTAIN	08/15		149	394 C	09/17	09/18		26
MINESHAKE LAKES	08/16	149		382 C	09/19	09/28		126
MOUNTAIN	09/16		108	366 C	09/29	10/05		84
" "	09/18		12	237 C	10/06	10/09		31
"	09/28		16	133 C	10/10	10/11		9
"	10/05		129	84 C	10/12	10/13		6
"	10/09		104	74 C	10/14	10/15		5
"	10/11		49	63 C	10/16	10/19	✓	8

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee | Date

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(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

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Allotment

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
MOUNTAIN	10/13		10	18 C	10/20	10/26	100%	4
"	10/15		11					4,124
MASSACRE LAKE	10/17		214					
MOUNTAIN	10/19		5					
"	10/20		45	TOTAL ACTIVE PREFERENCE				4,893
"	10/26		9	ACTIVE USE 1990				4,124
				NON-USE 1990 (16%)				769
				USE BY PASTURE 1990				
				HANGING ROCK				685
				UPPER FIELD				141
				MASSACRE LAKES				541
				MOUNTAIN				2,757
				11/01/90 amy				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee | Date

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(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ACTUAL GRAZING USE REPORT

RECEIVED
OCT 29
Bureau of Land Management
Cedarville, CA

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment
Nut Mountain #1010

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Nut Mountain	4-14-90	412		412C	04/14 (5)	04/18	100%	66
" "	4-19-90	239		651C	04/19 (7)	04/25		150
" "	4-26-90	65		716c	04/26 (144)	09/16		3,39
" "	9-16-90		108	608	09/17 (2)	09/18		40
" "	9-18-90		12	596	09/19 (10)	09/28		19
" "	9-28-90		16	580	09/29 (7)	10/05		132
" "	10-5-90		129	451	10/06 (4)	10/09		57
" "	10-9-90		104	347	10/10 (2)	10/11		2
" "	10-11-90		49	298	10/12 (2)	10/13		20
" "	10-13-90		10	288	10/14 (2)	10/15		1
" "	10-15-90		11	277	10/16 (2)	10/17		18
" "	10-17-90		214	63	10/18 (3)	10/19		
" "	10-19-90		5	58	10/20 (1)	10/20		
" "	10-20-90		45	13	10/21 (6)	10/26		3
" "	10-26-90		9					41

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: John B. Laxague — Date: 10-27-90

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(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 10 1989
Bureau of Land Management
Cedarville, CA 96104

2640

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment
Nut Mountain #1010

FOR BLM USE ONLY

ACTUAL GRAZING USE				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Calvary Camp	04/15	430		430C	04/15	04/16	100%	28
" "	04/17	114		544C	04/17	04/19	100%	54
" "	04/20	113		657C	04/20	04/24	100%	108
" "	04/25	54		711C	04/25	04/27	100%	70
" "	04/28	23		734C	04/28	04/30	100%	72
" "	05/01	25		759C	05/01	06/30	100%	1522
	06/30		759	259C	07/01	09/27	100%	758
MT Pasture	07/01	500		500C	07/01	09/27	100%	1413
Lake Field	07/01	259		389C	09/28	10/11	100%	179
Lake Field	09/27		259	219C	10/12	10/13	100%	14
MT. Pasture	09/27		111	79C	10/14	10/18	100%	13
" "	10/11		170	52C	10/19	10/19	100%	2
" "	10/13		140	43C	10/20	10/22	100%	4
" "	10/13		27					
" "	10/14		9	TOTAL METHOW PREFERENCE				4893
" "	10/27		34	TOTAL METHOW USE 1989				4,287
				NOW - USE 1989				606

12% NOW - USE

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: John B. Lafargue

Date

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete t[his] form and return to the Resource Area Office wit[hin] 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for ev[ery] day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accur[ate] information will be appreciated.

Allotment: NUT MOUNTAIN #1010

FOR BLM USE ONLY

ACTUAL GRAZING USE				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
SEEDING	APR 7	48 cows 1 Bull		49 C	4/7/88	4/8/88	100%	3
"	" 8	98 cows		147C	4/9/88	4/15/88	100%	34
"	" 16	21 cows 7 calves 1 Bull		176C	4/16/88	4/17/88	100%	12
"	" 17	55 cows 7 Bulls		238C	4/18/88	5/1/88	100%	111
"	MAY 2	41 cows 4 Bulls		283C	5/2/88	5/3/88	100%	19
"	" 3	50 cows 2 Bulls		335C	5/4/88	5/20/88	100%	190
JUNE 22, 23	" 21	62 cows 3 Bulls		400C	5/21/88	9/24/88	100%	1,653
moved from	Sept 25	—	18 cows 1 Bull	381 C	9/25/88	10/20/88	100%	33
Seeding to Mt. ~~Pasture~~	Oct 21	—	189 grown cattle	192 C	10/21/88	10/25/88	100%	3
	Oct 25	—	189 grown cattle					
	through grazing Period	—	5 dead	TOTAL ACTIVE PREFERENCE				489
				ACTIVE USE 1988				2,384
"				NON-USE 1988				2,50
			412	11-15-88 51% NON-USE 1988				
				CAVALRY CAMP SEEDING =				1,56
		373		MOUNTAIN PASTURE USE =				82
	AS of Oct 25	still out	10 head	467				

[redacted]
[redacted] 26 [redacted]
Bureau of Land Management
Cedarville, CA 96104

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: [signature] Date: 10/26/88

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the Unit[ed] States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

Bill No.
#04263505

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Wall Canyon

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Wall Canyon East	5/20/92	560		560	5/20	7/6	98	866
" " "	7/6/92		560		Active	Preference =		1838
				1992 Actual Use = 47.1% of Active Pr				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Lessee: R.C. Roberts by Darla Trella — Date: 11-24-92

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: October 31, 1991

ACTUAL GRAZING USE REPORT

RECEIVED
2 1991
Bureau of Land Management
CA 96104

GR#042635

Dear Sir: R.C. Roberts

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Surprise Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6–2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: Wall Canyon East #1014

ACTUAL GRAZING USE				FOR BLM USE ONLY — CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
	5/20/91	615		615 c	05/20	07/02	98%	872
	7/2/91	545	→	70 c	07/03	07/06	98%	9
	7/6/91	70	→					
				Total Active Preference				1,83[illegible]
				Active Use 1991				881
				Non-Use 1991				957
				1991	52%	Non-use		
				[illegible]				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: R.C. Roberts by [signature]

Date: 7-10-91

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130-5
(March 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0051
Expires: October 31, 1991

GR#042635
SCH 1

RECEIVED
OCT 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4130.6-2(d)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment
Wall Canyon (East) #1014

FOR BLM USE ONLY

ACTUAL GRAZING USE				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo. Day Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
1014	6/6/90	339		339C	06/06	08/22	98%	852
1014	8/22/90		86	253C	08/23	09/20	98%	236
1014	9/20/90		251					
				TOTAL ACTIVE PREFERENCE				1838
				ACTIVE USE 1990				1,088
				NON-USE 1990				750
				41% NON-USE 1990				
				[illegible] 10/15/90				

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: R.C. Roberts by [signature]

Date: 10-9-90

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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OCT 0 1989

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

GR# 042681
SCHEDULE 1

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete th form and return to the Resource Area Office with 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for ever day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurat information will be appreciated.

Allotment
Wall Canyon (East) #1014

FOR BLM USE ONLY

ACTUAL GRAZING USE				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVE-STOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
W/Wall Canyon 2AM	3-18-89	251		251 C	08/18	10/14	98%	469
" " "	10-14-89		251					
				TOTAL ACTIVE PREFERENCE				1,371
				ACTIVE USE 1989 ~				469
				NON-USE 1989 ~				908
				66% NON-USE 1989				
"								

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee [signature] Date Oct. 25, 1989

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete this form and return to the Resource Area Office within 15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for every day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurate information will be appreciated.

Allotment: WALL CANYON EAST # 1014

FOR BLM USE ONLY

ACTUAL GRAZING USE				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
(Non-use)								
				TOTAL	NON-USE		1988	
				Cmy	10/31/88			

RECEIVED
OCT 26 1988
Bureau of Land Management
Cedarville, CA 96104

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee: [signature] | Date: 10/26/88

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

Form 4130–5
(August 1983)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004–0051
Expires: January 31, 1986

ACTUAL GRAZING USE REPORT

Dear Sir:

In accordance with the terms and conditions of the permit or lease which authorizes your grazing use, please complete thi
form and return to the Resource Area Office with
15 days after completing your authorized grazing use (43 CFR 4120.2–2(d), 4120.2–3(e), and 4130.5–1(e)). This information, along with other studies data, is needed to evaluate the effectiveness of present management. Use a separate line for ever
day that you either turn livestock in or take livestock out of an allotment or pasture. Your cooperation in providing accurat
information will be appreciated.

Allotment: Indian Canyon BLM

ACTUAL GRAZING USE				FOR BLM USE ONLY				
				CALCULATION OF AUM'S GRAZING USE				
PASTURE	DATE (Mo., Day, Yr.)	NUMBER AND KIND OR CLASS OF LIVESTOCK		NO. AND KIND OF LIVESTOCK	GRAZING PERIOD		% PL USE	AUM'S
		TURNED IN	TAKEN OUT		BEGIN	END		
Indian Canyon BLM	4-16-88	99		99 C	04/16	04/22	98%	23
" " "	4-23-88	118		217 C	04/23	04/24	98%	14
" " "	4-25-88	110		327 C	04/25	04/27	98%	32
" " "	4-28-88	88		415 C	04/28	06/09	98%	583
TO Badger Mtn	6-9-88		172	243 C	06/10	06/10	98%	8
" " "	6-10-88		204	39 C	06/11	06/13	98%	4
" " "	6-12-88		2	37 C	06/14	06/14	98%	1
" " "	6-14-88		9	28 C	06/15	06/15	98%	1
" " "	6-15-88		15	13 C	06/16	06/23	98%	3
" " "	6-23-88		3	8 C	06/24	06/26	98%	1
				TOTAL ACTIVE PREFERENCE				820
"				ACTIVE USE 1988				670
				NON-USE 1988				150

DEPT. OF INTERIOR
RECEIVED
JUL 13 1988
BUREAU OF LAND MANAGEMENT
CEDARVILLE, CALIFORNIA

I CERTIFY That this is a complete and accurate report of my grazing use.

Signature of Permittee/Leassee [signature] Date July 10, 1988

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on reverse)

APPENDIX 7

ARCHEOLOGICAL SITE SURVEY FORMS

HIGH ROCK AREA

EAST OF CANYON HOME RANGE, HIGH ROCK HMA

IN THE

BITNER, NUT MOUNTAIN, AND WALL CANYON HMAs

ARCHAEOLOGICAL SITE SURVEY RECORD

1. Site _____ 2. Map High Rock Lake 7.5' 3. County Washoe

4. Twp. _____ Range _____; _____ of _____ 1/4 of Sec.

5. Location _____

_____

_____ 6. Contour elevation 5020'

7. Previous designations for site none

8. Owner USDI - BLM 9. Address Susanville, CA

10. Previous owners, dates --

11. Present tenant --

12. Attitude toward excavation Permit required

13. Description of site Large rockshelter at base of cliff above major seasonal drainage.

14. Area 50' x 20' 15. Depth Poss. 2' 16. Height --

17. Vegetation Greasewood, rabbitbrush, sage 18. Nearest water Seasonal, 500'

19. Soil of site Rocky, brown organics 20. Surrounding soil Talus slope

21. Previous excavation none

22. Cultivation none 23. Erosion none

24. Buildings, roads, etc. High Rock jeeptrail 1500' E

25. Possibility of destruction slight

26. House pits ---

27. Other features ---

28. Burials --

29. Artifacts Very sparse chippage of cherts and basalt (basalt occurs in talus down slope).

30. Remarks Shelter is used by wild horses, who have left a thick organic layer which obscures deposit. Chippage visible only outside of shelter, beyond dripline.

31. Published references none

_____. 33. Sketch map USGS map plot

34. Date June 17, 1977 35. Recorded by C. Corson 36. Photos X

CMSS No. _____

mapped

COWHEAD-MASSACRE SPRING SURVEY

Spring name (if any) none

County Washoe BLM Planning Unit Massacre

Legal description _____

Map reference U.S.G.S. 7.5' High Rock Lake Elevation 5940'

Location (approach) _____

See map for more specific access.

Sites recorded (attach Site Survey Records) _____

Site types Large base camp (?) at spring above drainage.

Present vegetation type Big sage, Great Basin Wild Rye, low sage, Sitanion hystri Bromus tectorum, Poa, meadow at spring.

Water output (volume est.) Less than 1/4 gallon per minute at present.

Remarks An extensive meadow (850' x 20') indicates a much more reliable output i past years. There is evidence of heavy wild horse use of this water source as wel The spring supported an impressive and diverse site with dense concentrations of various lithics, and butchering tools. No millingstones were recovered, but this may be due to the limited time allowed for survey rather than their actual absence

Map (attach USGS 7.5' Xerox or 15' Xerox and field sketch map) _____

U.S.G.S. 7.5' High Rock Lake xerox attached

Photos Yes Date 7/15/77

Total area surveyed (est.) ca. 33 acres of slope where lithic concentrations lie.

Recorded by Melinda Leach

No Habitat Type information is available

BLM Site No. _____ mapped

ARCHAEOLOGICAL SITE SURVEY RECORD

Site _____ Map USGS Yellow Hills East 7.5' Quad County Washoe

Legal Desc. _____ UTM _____

Location _____

_____

_____

_____ Status public

Description lithic scatter on rim-edge above gorge - - (hunting/chipping station)

_____

Size 40m x40m Depth ----- Elevation 6240

Slope 8% Aspect south Soil gravelly, sandy silt

Vegetation: Type sage grassland

Shrubs big sage, rabbitbrush

Grasses squirreltail

Trees none Forbs ---

Water: Type seasonal stream Dist. and Direction 100m sout and 200m west

Modern Cultural Intrusions none

Associated Features none

_____

_____ Erosion severe

Artifacts ~~secondary trimming flakes of obsidian, rare chert and basalt chippage.~~ 15/m^2

_____

_____

_____

Remarks ~~prolific sign of wild horse activity~~

_____

_____

Chief Impacting Factors *wild horses and erosion*

Date 8-24-82 Recorder Melinda Leach Map sketch Photos no

BLM Site No. mapped

ARCHAEOLOGICAL SITE SURVEY RECORD

Site ____ Map Yellow Hills East 7.5' County Washoe

Legal Desc. ____ UTM ____

Location ____

Status public

Description small chipping station overlooking a substantial drainage

Size 15m n/s x 10m e/w Depth surface Elevation 6200

Slope 0-5% Aspect east Soil rocky grey silt

Vegetation: Type sagebrush grassland

Shrubs low sage

Grasses Stipa

Trees --- Forbs ---

Water: Type intermittent wash Dist. and Direction 400' to west (permanent water within 1.5 miles)

Modern Cultural Intrusions none

Associated Features --

Erosion sheetwash

Artifacts Large primary and thinning flakes of a black glossy obsidian (predominant) and a grey sugary obsidian. No cores present. Density ranges from 1-6 flakes per square meter.

Remarks High Rock Tablelands Survey Unit 2.21.
Isolated flakes occur throughout section 12.

Chief Impacting Factors erosion and wild horse activity

Date 8-24-82 Recorder Garth Portillo Map usgs Photos no

BLM Site No.

ARCHAEOLOGICAL SITE SURVEY RECORD

Site _____ Map Yellow Hills East 7.5' County Washoe

Legal Desc. _____ UTM _____

Location _____

Status public

Description light lithic catter on upland flats

Size 20m x 20m Depth -------- Elevation 6380'

Slope 1% Aspect north Soil Tight brown silt

Vegetation: Type big sage-grassland

Shrubs big sage, rabbitbrush, sparse ribes (?)

Grasses cheat, squirreltail

Trees none Forbs -----

Water: Type seasonal stream Dist. and Direction .9 miles north

Modern cultural intrusions jeep trail 40m north

Erosion slight

Associated Features none

Artifacts basalt knife fragment, rare chert and obsidian secondary chippage, (less than 50); the possible Elko Corner-notched (see illustration)

Remarks _____

Chief Impacting Factors wild horses (much trampling and large stud piles noted)

Date 8/24/82 Recorder M. Leach Map over Photos no

ARCHAEOLOGICAL SITE SURVEY RECORD

Site _____ Map YellowHills East 7.5' County Washoe

Legal Desc. _____ UTM _____

Location _____

Status public

Description Very small chipping station on upland slopes

Size 2m x 2m Depth ----- Elevation 6360'

Slope 1% Aspect west Soil gravelly silt

Vegetation: Type low sage-grassland

Shrubs low sage

Grasses bunch, cheat

Trees none Forbs -----

Water: Type seasonal stream Dist. and Direction 3/4 mile north

Modern cultural intrusions none

Erosion slight

Associated Features none

Artifacts 10-15 secondary flakes of obsidian

Remarks _____

Chief Impacting Factors wild horse

Date 8/24/82 Recorder M. Leach Map xerox topo Photos no

APPENDIX 8

WILDERNESS STUDY AREA,

INTERMIM MANAGEMENT PLAN

COMPLIANCE

EAST FORK HIGH ROCK CANYON WSA

AND MASSACRE RIM WSA

WILDERNESS STUDY AREA, INTERIM MANAGEMENT PLAN COMPLIANCE

MASSACRE RIM WSA AND EAST FORK HIGH ROCK CANYON WSA

PROPOSED ACTION AND ALTERNATIVE 2

Bitner, Nut Mountain, and Wall Canyon HMAs

PROPOSED ACTION

Criteria 1. Is the action temporary? Yes.

Two to four days of activity would take place in the Massacre Rim WSA gathering horses on the Bitner HMA. Two to three days of activity would take place in the East Fork High Rock Canyon WSA on the Nut Mountain and Wall Canyon HMAs. In combination with gathering activities on the High Rock HMA, East of Canyon Home Range there could be up to seven days of gathering activities in the East Fork High Rock Canyon WSA.

Criteria 2. Are the temporary impacts caused by the proposed action capable of being reclaimed to a condition of being substantially unnoticeable in the WSAs as a whole? Yes.

The temporary action will disturb the feeling of solitude. The disturbance will result from the noise from the helicopter and commotion of the wild horses being driven toward the trap sites. No reclamation is required. When the gather is completed the disturbance ends.

Criteria 3. Does the activity significantly constrain the Secretary of Interior's recommendations with respect to the area's suitability or nonsuitability for preservation as wilderness? No.

The wilderness value affected is solitude. The affect will end at the end of the gather.

ALTERNATIVE 2

Criteria 1. Is the action temporary? Yes.

No wild horse gathering will take place at this time.

Criteria 2. Are the temporary impacts caused by the proposed action capable of being reclaimed to a condition of being substantially unnoticeable in the WSAs as a whole? Yes.

There will be no impacts to reclaim.

Criteria 3. Does the activity significantly constrain the Secretary of Interior's recommendations with respect to the area's suitability or nonsuitability for preservation as wilderness? No.

EAST FORK HIGH ROCK CANYON WSA

PROPOSED ACTION AND ALTERNATIVE 2

High Rock HMA, East of Canyon Home Range

PROPOSED ACTION

Criteria 1. Is the action temporary? Yes.

Two to four days of activity would take place in the East Fork High Rock WSA. In combination with gathering activities on the Nut Mountain and Wall Canyon HMAs, there could be up to seven days of gathering activities in this WSA.

Criteria 2. Are the temporary impacts caused by the proposed action capable of being reclaimed to a condition of being substantially unnoticeable in the WSA as a whole? Yes.

The temporary action will disturb the feeling of solitude. The disturbance will result from the noise from the helicopter and commotion of the wild horses being driven toward the trap sites. No reclamation is required. When the gather is completed this disturbance ends.

The proposed action will affect naturalness at the trap site during the gather. The trucks and trailers used for transporting the trap and the captured horses will be turned around at the trap site. There will be trampling by the horses immediately in front of and in the trap.

Reclamation of the disturbance is done as part of removing the trap. Crushed shrubs are scattered. The area is raked to obliterate the tire tracks and signs of trampling. Then the site is swept with brush to remove the rake marks. When the trap is gone the site is completely reclaimed.

Criteria 3. Does the activity significantly constrain the Secretary of Interior's recommendations with respect to the area's suitability or nonsuitability for preservation as wilderness? No.

The wilderness values affected are solitude and naturalness at the trap site. Neither affect persists past the end of the gather. Naturalness is completely restored by the reclamation procedures.

ALTERNATIVE 2

Criteria 1. Is the action temporary? Yes.

No wild horse gathering will take place at this time.

Criteria 2. Are the temporary impacts caused by the proposed action capable of being reclaimed to a condition of being substantially unnoticeable in the WSAs as a whole? Yes.

There will be no impacts to reclaim.

Criteria 3. Does the activity significantly constrain the Secretary of Interior's recommendations with respect to the area's suitability or nonsuitability for preservation as wilderness? No.