



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
STATELINE RESOURCE AREA
4765 VEGAS DRIVE
P.O. BOX 26569
LAS VEGAS, NEVADA 89126



IN REPLY REFER TO:

4100
(NV-054)

OCT 04 1989

Wild Horse Organized Assistance, Inc.
P.O. Box 555
Reno, Nevada 89504

Gentlemen:

Enclosed are copies of the Gold Butte, Crescent Peak and Jean Lake Allotment Interpretation Evaluations. As an affected interest, please review these evaluations and return them within thirty days of receipt.

If you have any questions, please contact Roger Alexander or myself at 1-(702)-646-8800.

Sincerely,

Runore Wycoff
Area Manager

3 Enclosures

1. Gold Butte Evaluation
2. Crescent Peak Evaluation
3. Jean Lake Evaluation

**GOLD BUTTE ALLOTMENT
EVALUATION DOCUMENTATION
SUMMARY**

August 1989

Bureau of Land Management
Las Vegas District
Stateline Resource Area
Las Vegas, Nevada

DRAFT

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Section VI

Evaluation Summary for Gold Butte Allotment

Allotment Name: Gold Butte No. 02010
Las Vegas District Office
Stateline Resource Area

Acres: Public 172,549 Acres
NPS 92,264 Acres
264,813 Total

I. Grazing Practices

There is no grazing system for this allotment. Grazing has been year-round since the time priority was established. The allotment is classified as ephemeral range. Grazing is authorized on a year-round basis when forage is available as determined by range inspection.

II. Evaluation in Relation to Management Objectives

	<u>Met</u>	<u>Not Met</u>
Allotment Objectives		
AO-1		X
AO-2		X
AO-3		X
AO-4		X
AO-5	X	
AO-6		X
AO-7		X
AO-8	X	
AO-9	X	
AO-10	X	
AO-11		X
Key/Crucial Management Area Objectives		
Specific Key Area Objectives		
KA-1L	X	
KA-1	X	
Watershed Objective		
W-1		X
Riparian Area Objective		
RA-I		X

Wildlife Objectives

WL-1	X	
WL-2	X	
WL-3	X	
WL-4	X	
WL-5		X
WL-15		X

Use Pattern Mapping Objective

UP-1		X
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Wild Burro Objective

WB-1		X
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II. Technical Recommendations Summary

A. The following recommendations are based on analysis and evaluation of the allotment and specific resource objectives (Section V).

1. Continue to issue livestock grazing permits as applied for when livestock forage is available. Continue to issue permits on a quarterly basis. Implementing this objective will aid in meeting objective AO-10.

2. Adjust wild burro populations to achieve a thriving natural ecological balance by removing excess animals and leaving a thriving population of 62 animals. Monitoring data evaluated in accordance with the Tassi-Gold Butte HMAP supports this recommendation. Remove approximately 350 burros from the Gold Butte HMA by the end of FY1990 in coordination with the National Park Service and the Arizona Strip and Phoenix Districts. (See Section IV of the AIE folder.) WB-1, AO-8 and AO-9 will be met through this recommendation.

3. Implement the following grazing scheme for Gold Butte Allotment (See Appendix, Map 2):

Allow approximately two-thirds of the licensed livestock to utilize the western and southern edges of the allotment including elevations about the 2500 feet level or below from October 15 through March 15 (winter/spring). The remainder of the year, March 16 through October 14 (summer/fall), the majority of the livestock will utilize the central and northern sections of the allotment with elevations 2400 feet or higher. Movement will be based on availability of forage, phenology and climatic conditions. Therefore, dates are only approximate.

The area of Gold Butte allotment which is considered crucial desert tortoise habitat will not be utilized from March 15 to October 15 unless 150 pounds of ephemeral forage is available. If 150 pounds of forage is available and livestock are allowed to graze crucial desert tortoise habitat, utilization on current year's growth will not exceed 40%. Two water developments in this area, Mud Springs, Horse Spring pipeline are dependable waters primarily in the summer when other waters are dry. Garden Spring pipeline troughs are also in the tortoise area, but have not been used recently due to the drift of livestock into Arizona. A limited amount of use by livestock on these waters is necessary for this grazing scheme to work. This grazing scheme will aid in meeting objectives: AO-1 through 4, AO-7, KA-1 and KA-1L, RA-1, W-1, WL-2, and UP-1.

a. Range Improvement Projects

The following range improvements are recommended to facilitate in implementing the proposed grazing scheme, therefore the same objectives listed above will be met.

1. Through a cooperative agreement with the Bureau and the livestock operator, construct the proposed Mineral Butte Drift Fence. The fence would run from Mockingbird Spring to Willow Spring pipeline trough and corral. The proposed fence will aid in keeping livestock on the waters which are close to Lake Mead during the winter and spring months and discourage drift into these areas during the remainder of the year. To meet objective UP-1.

2. Construct the proposed Azure Ridge Fence. This fence will prevent drift of livestock from Arizona into Gold Butte. The fence would prohibit livestock drift into the crucial desert tortoise area and would allow for a more accurate determination of the numbers of livestock at Horse Springs and Garden Springs pipeline troughs. The fence would also prevent cattle from drifting off Gold Butte allotment to the Grand Wash area on the Tassi Allotment in Arizona. Garden Springs troughs are currently not in use due to the problem of drift into Arizona. To meet objective UP-1.

3. Fence the Summit Spring source with a wildlife specification fence. Leaving water available at the source, run a pipeline down the canyon to the reservoir or a trough. This will provide sufficient water to maintain or improve the riparian habitat and provide water for wildlife and livestock. (Gold Butte Spring Source Evaluation, BLM) To meet objectives A)-1, A)-2, A)-4. RA-1, W-1.

4. Fence the source of Connelly Spring with wildlife specification fence. Pipe the water from the source to troughs below the source. Provide a water trough both inside and outside the corral. When the livestock operator is gathering and moving cattle, water inside the corral provides an effective means of trapping livestock for loading and transport. During this time, water will only be provided inside the corral for livestock and available at the spring source for wildlife. When livestock are not being moved or trapped, water will be available outside the corral. This will aid in meeting objectives AO-1, & 2, AO-4 & 5, W-1, UP-1, WL-2 and RA-1.

5. Using the existing gap fence in Twin Springs Wash as a wing fence, construct a corral which would aid in the gathering and moving of livestock. This will help meet objectives AO-4 and UP-1.

6. Develop a well on the northern end of Perkins Canyon (off the old Gold Butte Road) which will provide water during the spring and summer months when grazing on the desert tortoise habitat is limited. This will help meet objective AO-4 and UP-1.

7. Extend the existing pipeline from Gold Butte about five miles to service more area. This will aid in meeting AO-1, AO-2, and AO-4.

8. Develop a drift fence near Bitter Spring (aka Red Bluff Spring) limiting use of the area to the winter/spring at allowable use levels of 55%. Develop a pipeline to divert some water from the riparian area in the canyon. Leave water at the source for wildlife.

Diverting water from the riparian area will discourage heavy traffic and use by livestock. Fencing the riparian area is not recommended. The spring is in an active wash and a fence would be washed out during heavy runoff periods. This will aid in meeting AO-1, 2, 3, 4, 6, 7, 8, 9, KA-1L, KA-1, W-1, RA-1, WL-3 and 4, WL-1S, UP-1, and WB-1.

9. Develop two waters in wild burro habitat to take some pressure off the Lake Mead area. These waters would maintain the habitat by spreading out the use throughout the wild burro habitat. AO-7 & 9, UP-1, WB-1.

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4. Graze Red Bluff Spring (Bitter Spring) primarily in the winter and spring to obtain allowable use levels of 55%. Develop a drift fence near Bitter Spring to discourage continuous use of the area. Develop a pipeline to divert some water from the riparian area in the canyon. Leave water at the source for wildlife. Diverting water from the riparian area will discourage heavy traffic and use by livestock. Fencing the riparian area is not recommended as the spring is in a active wash and a fence would probably be washed out. Bitter Spring This will aid in meeting AO-1, AO-2, AO-4, RA-1, and W-1.

5. Continue to make existing waters available to wild burros and insure that all new waters are available to wild burros and wildlife. This meets objective AO-9, AO-5, WL-1, and WL-2.

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Gold Butte Allotment Evaluation Summary

I. Introduction

- A. Allotment Name: Gold Butte Allotment
Allotment Number: 02010
- B. Permittee: G & F Ranches
Authorized representative: Kelton Frei
- C. Evaluation Period: 1982-1987
- D. Selective Management Category: I (Intensive Management)

II. Livestock Use, Burro Use, and Wildlife Use

A. Livestock use

1. Classification and Preference

In November 1969, Gold Butte Allotment was classified as ephemeral range. "Preference for ephemeral forage is expressed in terms of the allotment or area used and not in terms of AUM's" (BLM Manual 4110-1.22). Under the ephemeral range rule, livestock use is "adjusted to the annual capacity available from year to year"

Because the Gold Butte Allotment is designated as ephemeral rangeland, the 10-year permit specifies only the area of use "since grazing use is authorized only upon the periodic availability of forage"(BLM Manual 4110-1). Preference is expressed in terms of the allotment or area used rather than in Animal Unit Months (AUM's) as there are no set numbers of livestock.

Grazing on National Park Service lands permitted as per Interagency Agreement (CA-8360-70-01), grazing agreement.

2. Grazing System

There is no established intensive grazing system for the Gold Butte Allotment. Livestock have been grazed year-round since priority was established in 1943. Since 1985, when G & F Ranches took over the permit on Gold Butte, an effort has been made to encourage livestock grazing on the lower elevations during the winter and spring while utilizing the higher elevation portions of the allotment during the summer and fall months. However, the lack of drift fences and available waters make such a system considerably difficult due to the rugged terrain and immense size of the allotment.

B. Wild Burro Use

Gold Butte Allotment encompasses one Herd Management Area for wild burros (HMA-1). Over 90 percent of the herd management area is in the allotment. The critical area for wild burros is approximately 122,546 acres and lies primarily along the southern and south-western perimeter of the allotment along Lake Mead. A September, 1987 aerial census of the herd management area indicated a population of 398 burros, 331 adults and 67 young. According to the Land Use Plan decision 1.1 for Wild Horses and Burros, "the initial management numbers will match the FY1983 population levels." Based upon field inspection, overlap in use between livestock and wild burros is very low within most of the burro critical use area. There was little to no cattle sign and the livestock operator avoids using the area due to lack of forage.

C. Wildlife Use

1. Desert Bighorn Sheep

Gold Butte Allotment includes Big Game Area BY-14 for bighorn sheep crucial habitat. The reasonable numbers established for the area are 305 AUM's or 127 desert bighorn sheep (LUP decision Range Management 1.1).

2. Mule Deer

Big Game Area DY-3 for mule deer habitat comprises only a small section of the allotment. Reasonable numbers as established in the LUP are 50 deer or 150 AUM's.

3. Desert Tortoise

Gold Butte Allotment includes the Gold Butte Crucial Desert Tortoise Habitat Area as designated in the Land Use Plan. The area of critical desert tortoise habitat has relative densities of 50 to 150 tortoises per square mile or moderate to high density.

III. Allotment Profile

A. Description

Gold Butte Allotment is located on the extreme east side of Clark County, Nevada. In general, it lies 55 miles east of Las Vegas, Nevada and 24 miles south of Mesquite, Nevada. The allotment is bordered on the east by Arizona and on the south and west by Lake Mead. (See Allotment Map, Appendix A)

Gold Butte is characterized by several mountain ridges and corresponding valleys. Areas which border Lake Mead consist of large bajadas dissected by numerous drainages and washes. Several steep mountain ranges such as the Hiller Mountains and Indian Hills are in the south and east. The highest elevation is Jumbo Peak at 5,763 feet (1,757 meters) and the lowest elevations lie around the shores of Lake Mead at 1,400 feet (427 meters) or less.

Vegetation types are predominately those typical of the upper Mohave Desert. Dominant vegetation types are a) creosote (Larrea divaricata) and white bursage (Ambrosia dumosa) b) creosote and blackbrush (Coleogyne ramosissima) c) white bursage and range ratany (Kramaria parvifolia). The vegetation types at the higher elevations are pinyon (Pinus monophylla) and juniper (Juniperous utahensis) type with desert bitterbrush (Purshia glandulosa), green ephedra (Ephedra viridis) and shrub live oak (Quercus turbinella). Annual grasses and forbs are prevalent during the late winter and spring months depending on precipitation, temperatures and elevation. The annuals which are common are filaree (Erodiam cicutarium) desert trumpet (Eriogonum inflatum), Indian wheat (Plantago insularis), red brome (Bromus rubens), and cheatgrass (Bromus tectorum).

B. Acreage

171,209 acres Bureau of Land Management Land
1,340 acres private (mining claims that
have been patented)
92,264 acres National Park Service
264,813 total

C. Allotment Specific Objectives

The following allotment objectives have been tiered from the Land Use Plan/MFP/III objectives or decisions. If the respective allotment objective or objectives are met, the LUP/MFP objective/decision(s) have been met. The key management area objectives are tiered from the allotment objectives. The allotment objective that each key management area objective originates from is noted in parenthesis after each one. Whether or not an allotment objective is met is determined by the results of the respective key, riparian or wildlife area evaluation conclusions.

1. (AO-1) Maintain existing ground cover, as defined by the revised Universal Soil Loss Equation. (Watershed Obj. 3.0 and 4.0)
2. (AO-2) Maintain or improve riparian vegetative communities for Connelly, Summit and Bitter Springs. (Wildlife 1.35, 1.1, Range Management 1.2(4))
3. (AO-3) Maintain static or upward trend on key perennial forage species on key areas. (Range Management 1.0, 1.1, 1.2(2), 1.2(4), 1.2(5), 1.2(6), 1.10, 2.0, Livestock Grazing 1.0, Wild Horse & Burro 1.0, 2.0, and Wildlife 2.0)
4. (AO-4) Maintain utilization levels at the allowable use levels identified on key/crucial management areas and recorded through use pattern mapping. (Range Management 1.0, 1.1, 1.2(2), 1.2(4), 1.2(5), 1.2(6), 1.10, 2.0; Livestock Grazing 1.0; Wild Horse & Burro 1.0, 2.0; Wildlife 2.0)
5. (AO-5) Maintain or improve habitat conditions for a reasonable number of 127 bighorn sheep (305 AUM's) and 50 (150 AUM's) mule deer. (Range Management 1.10, Wildlife 1.0, 2.0)
6. (AO-6) Maintain or improve desert tortoise habitat in order to protect or increase existing populations. (Wildlife 3.0, Range Management 1.2(1))
7. (AO-7) Maintain or improve wild burro habitat by providing 3586 aum's of forage to initially manage for 498 wild burros year long in the Tassi-Gold Butte HMA, if such use is consistent with the attainment of the vegetative objectives and maintain the burros in a thriving ecological balance. (Range Management 1.1; Wild Horse & Burro 1.1) (HMAP-A)

8. (AO-8) Protect or improve wild burro free roaming behavior by preserving or enhancing home ranges (ie. no new fences that may restrict movement or removal of existing fences that may increase movement). (Range Management 1.1, 1.2(6), &2.0; Wild Horse & Burro 1.0, 1.1, & 2.0) (HMAP-A)

9. (AO-9) Maintain or improve wild burro habitat by providing waters where possible (excluding rainwater catchments for wildlife). (Wild Horse and Burro Objective 2.0)

10. (AO-10) Prior to issuing an ephemeral grazing permit, a field inspection will be made to determine if sufficient forage is available. (Range Management 1.0, 1.9, 2.0 and Livestock Grazing 2.0)

11. (AO-11) Maintain or improve habitat conditions for Gamble's Quail (RM 1.2(7), WL 1.0 & WL 1.35).

D. Key/Crucial Management Area Objectives

1. Specific Key Area

a. Long Term (KA-1L)

1. Maintain or increase the frequency of occurrence of the following key species for each key area at the 10% level of significance. (AO 1, 3, and 4)

Key Area L-1 galleta grass
globemallow

Key Area L-2 desert bitterbrush
desert almond

Key Area L-3 globemallow
Mormon tea
range ratany

b. Short Term (KA-1)

1. Maintain the utilization levels below for the key species in each key area.

Key Area L-1 <55% galleta grass
<45% globemallow

Key Area L-2 <55% desert bitterbrush
<55% desert almond

Key Area L-3 ≤45% globemallow
 ≤45% Mormon tea
 ≤45% range ratany

2. Watershed

a. Short term and long term (W-1)

1. Maintain or sustain any increase for the combined perennial vegetative canopy and litter components as measured at key areas 1, 2, & 3. All live annual species, persistent and non-persistent litter are considered as litter.
(AD 1)

3. Riparian Areas

a. Short term and long term (RA-1)

1. Utilization by foraging animals on the following riparian areas will not exceed 55% utilization of the current years vegetative growth:

Connelly Spring, Summit Spring, and Bitter Spring.
(AD 1,2 & 4)

4. Wildlife

a. Long term

1. (WL-1) Maintain 6,000 acres of existing bighorn habitat at a weighted average of 162 points . Improve 12,500 acres of bighorn habitat to a weighted average of 180 points. Maintain approximately 25,500 acres of cool season bighorn habitat at a weighted average of 137 points (based on the bighorn sheep habitat rating system; see the Virgin Mountain/Gold Butte HMP).
(AD 5)

2. (WL-2) Maintain the existing mule deer habitat condition based upon habitat rating criteria established in BLM Manual 6630 and NSO Manual Supplement.
(AD 5)

3. (WL-3) Maintain or improve the range condition of crucial desert tortoise habitat to minimum of late seral stage. (AD 6)

4. (WL-4) Maintain or improve the range condition in non-crucial desert tortoise habitat at a minimum of mid seral stage. (AO 6)

5. (WL-5) Maintain or improve the habitat condition for Gambel's quail by keeping utilization at or below the allowable-use levels throughout the allotment, especially within a 1.5 mile radius of all waters used by the Gambel's quail (AO-2 & 6).

b. Short Term

1. (WL-1S) In crucial desert tortoise habitat allow grazing between October 15 and March 15 of each year and at use levels not to exceed 55% of the previous year's growth on key forage species. (AO-4,6 & UP-1)

5. Use Pattern Mapping

a. Short and long term

1. (UP-1) Maintain utilization levels on key species by all ungulates at or below the following levels for the periods and locations identified. (Consistent with other utilization objectives.)

Key Species	<u>Maximum Utilization Level Allowed</u>		
	Crucial Desert Tortoise Habitat	Remainder of Year	Remaining Allotment
	10/15-3/15	of Year	Year Long
Perennial Herbaceous	≤55%	≤55%	≤55%
Shrubs	≤45%	≤45%	≤45%

6. Wild Burros

a. (WB-1) Short term and long term

1. Maintain the utilization levels below for the key species in each wild burro key area on an annual basis. (AO 3, 4, 7, & 8)

Key Species	WB-1	WB-2	WB-3	WB-4
White Bursage (FRDU)	≤05%	≤05%	≤05%	≤05%
Range Ratany (KRPA)	≤05%	≤05%	≤05%	≤05%
Catclaw (ACGR)	≤05%			
Globemallow (SPAM2)	≤20%			

These utilization levels were recommended levels from the Tassi-Gold Butte Herd Management Plan. These key species were selected because of the deteriorated condition within the wild burro use area. Perennial grasses are no longer a major component of the vegetative community.

E. Key Species Identification

Specific key area objective 1 (short term) identifies key species for the key areas. Wild burro objective 1 (short term/long term) identifies the key species for the wild burro key areas.

IV. Management Evaluation

A. The purpose of this evaluation is to determine if present management is meeting LUP objectives and allotment objectives and to recommend any changes in allotment management or grazing practices necessary to meet those objectives.

B. Summaries of Studies Data

1. Actual Use

Because incomplete actual use data exists for 1983 through 1985, licensed use will be referred to throughout this evaluation. Licensed use has ranged between 3890 AUM's in grazing year 1978 to 2562 AUM's in 1986.

Year Long	<u>Licensed Use Summary</u>						
	1980	1981	1982	1983	1984	1985	1986
Total AUM's	3000	2619	3915	3900	3900	3450	2562

2. Precipitation

Precipitation data from the Valley of Fire State Park is best-suited for this evaluation. The elevation of the Valley of Fire Precipitation gauge is 2,000 feet. Elevations on the Gold Butte Allotment range from about 1,200 feet to above 4,000 with the majority between 2,000 and 3,500 feet. Compared to the Bunkerville and Logandale precipitation stations, Valley of Fire was the most suited in terms of elevation. It is also closer to the center of the allotment than the other weather stations. Yearly precipitation average about 7.4 inches (14-year average). Seasonal precipitation for winter-spring and summer growing seasons was tabulated and graphed (See Appendix, Graphs 1, 2, and 3.)

Since 1984 winter-spring precipitation has been below average. Moisture is usually in the form of rain. Most winter storms are uniformly distributed and of low intensity. However, short-duration, high intensity scattered storms are typical in late summer.

4. Utilization

Utilization is an estimation of the total annual growth removed by foraging animals. Using the key forage species method, utilization estimates on key species for each key area were conducted along a transect walked in approximately the same compass heading each year. See Appendix, Map 1 for location of key areas.

Utilization on key species in key area 1 was estimated on galleta grass, winterfat, bush muhly, and desert globemallow. Use on desert globemallow increased from slight to light, however field notes indicate this increase was due to rodent use. Rodent use is easily distinguished from livestock use by the sharp angle at which the stem is cut to remove forage. An overall increase or decrease in utilization was not apparent on this key area.

Utilization for key area 2 was measured on desert bitterbrush and desert almond. Utilization has been moderate or light since 1983. However, field notes indicate use on other species in the area was heavy and that the shrubs had growth forms indicative of past heavy use.

Utilization on key area 3 was estimated on range ratany, Mormon tea, and globemallow. Overall use has been light since 1982. Again, field notes indicate over half the use on globemallow was by rodents.

Due to the rough terrain, large size, and distance to water a significant portion of the allotment is either inaccessible or unusable by domestic livestock. The undesirable distribution of the livestock on the allotment in areas adjacent to water results in areas which are grazed heavily year-round while other areas receive only slight to light use.

The areas near Lake Mead now receive heavy to severe use by wild burros. Livestock do not use these areas (reference WB-1).

John and Kelton Frei of G & F Ranches have commented that there is considerable drift of livestock to and from Arizona near the areas serviced by Horse and Garden Springs pipelines. Often, the troughs on Garden Spring pipeline are not utilized because the rancher wants to avoid cattle drift to and from the waters in the "Tassi" area of the Arizona Strip District.

A substantial concentration of livestock on springs such as Mockingbird, is primarily due to lack of drift fences which would discourage cattle from returning to sections of the allotment once they have been moved to areas serviced by other waters like Connolly and Summit Springs. These springs have water available outside the corral year-round and do not have protected spring sources. Few waters have turnoff or float valves. The lack of water developments or water hauls in areas which could be utilized by livestock and other animals, causes over utilization problems.

There have been fewer sightings of wild burros in the vicinity of key area B-3 near Quail Bay than B 1, 2 & 4. Utilization was slight to moderate in this area. This is also the only burro key area which receives use from cattle.

Utilization was also measured on key forage species at the four burro study areas in 1981 and 1989. (See map 1, Appendix A for location of burro study areas). Use in 1981 on white bursage on key area 1 was heavy (79%), heavy (78%) on key area 2 light (33%) on key area 3 and moderate (56%) on key area 4. Use on all other key species range ratany, eriogonum inflatum, and Mormon tea did not exceed moderate. Utilization on key species increased significantly from 1981 to 1989. On all key areas except 3, utilization on the key species was severe (at 100+%). Utilization on bursage, Mormon tea, and other species present was consistently on several year's previous growth. In key areas 1, 2 and 4, use on white bursage was so severe that large stems were eaten. In some areas the white bursage was no longer a part of the plant community as the plants died from severe use. Unpalatable species such as Cheesebush and catclaw received severe use. Catclaw branches were being stripped and eaten and some cactus, especially barrel cactus plants, had been dug up with the roots and pulp eaten. The absence of palatable grass species accounted for the heavy to severe use on the selected key species.

There have been fewer sightings of wild burros in the vicinity of key area 3 near Quail Bay than the other key areas. Utilization was slight to moderate in this area. This is also the only key area which receives a significant portion of its use from cattle rather than burros. As indicated by the utilization on the key areas, the majority of the sightings of burros have been around the southern edge of the allotment near key areas 1, 2 and 4.

Use pattern mapping was completed on Gold Butte Allotment in 1985 and 1986 (See section 4 of the six-way evaluation folder for use pattern maps). Moderate to heavy use is consistently in areas around available waters and in washes. Areas of moderate to heavy use in 1985 and 1986 include Mockingbird and Agua Chiquita Springs, the Gann and Walker Springs areas, and Summit and Connelly Springs.

The southern edges and washes of the allotment around Lake Mead also have moderate to severe use. It is evident from photographs taken during the 1988 wild burro census that a majority of the burros utilize the southern edges of the allotment along the shores of Lake Mead during the critical summer period. Photos taken during the 1988 census and 1989 monitoring depict widespread dusting areas and extensive trailing by the wild burros. Field notes and data indicate the total lack of herbaceous understory vegetation severe (100+%) use on even unpalatable shrubs. Plant species use mapped with heavy use were white bursage and Mormon tea in 1988.

5. Trend

Frequency/trend data were recorded on all key areas, except the wild burro studies, for 1982 and 1986 utilizing a 30-inch frame for perennial species. In key area 1, globemallow was the only key species with a frequency of occurrence high enough to be statistically or otherwise evaluated. There was no significant change in the frequency of occurrence of that species. Key areas 2 and 3 had no species with frequencies that were high enough (over 10%) to be evaluated.

Utilization levels at WB-1, 2, & 4 were moderate to heavy with all three key areas exceeding allowable use levels. Use pattern maps indicate severe use near the lake. Repeated severe to heavy use has deteriorated the range in the wild burro key areas. Therefore, trend for these key areas is downward. Key areas L-1-3 and WB-3 all fall within proper use levels.

Therefore, trend is interpreted as static.

6. Cover

Cover data was recorded on the three areas for 1982 and 1986. It is my judgement that the changes in cover are primarily due to differences in the time of year that cover was recorded and due to the judgement of the individual recorders in classifying cover. Analysis was also made on cover by combining vegetation with litter and bareground with rock (to evaluate AD 1) and there was no significant changes in cover. The trend photographs of the area do not indicate any significant changes in cover other than yearly variation in annuals.

7. Wildlife

Approximately 30,200 acres of the northeast corner of Gold Butte Allotment is crucial desert tortoise habitat. Populations of desert tortoise in the area range from 50 to 150 tortoise per square mile. A sixty-day square mile study plot was established on the allotment near Thomas Gap road in 1986. Though results of the study are not available, preliminary population estimates were 83-113 adult tortoises per square mile and 92-122 tortoises of all class sizes (HMP).

Two big game wildlife species inhabit the Gold Butte Allotment, bighorn sheep and mule deer. Bighorn sheep is a BLM-identified sensitive species. There are approximately 50 bighorn sheep in the Gold Butte area. On the National Park Service Lands around Devil's Cove, twenty sheep were released in 1983 and fourteen in 1987, totalling thirty-four sheep. Bighorn sheep that were released into areas north of Gold Butte Allotment migrate from Bitter Ridge into the Lime Ridge area during the winter months. In the Virgin Peak/Gold Butte HMP (Draft) "habitat quality" was estimated utilizing a weighted average of water availability, topography, vegetation, animal use, and human use. According to those factors, the bighorn sheep areas in Gold Butte rate as "Fair to Good" quality habitat. The primary limiting factor in bighorn sheep habitat or potential bighorn sheep habitat is available water.

Gold Butte is part of Hunt Management Area 27 for mule deer. However, mule deer populations in the area are insignificant (less than 50 deer) and the habitat is marginal (HMP).

There is a stable population of quail in the allotment (HMP). The numerous springs and 30 quail guzzlers provide water for quail on a yearlong basis.

8. Burro Habitat

Most of the Gold Butte HMA for wild burros is in the Gold Butte Allotment. The crucial habitat, which is approximately 78,730 acres for burros, primarily follows that portion of the allotment which borders Lake Mead. The 1983 management level for burros, according to the LUP, is 498 Burros. The 1988 census was 398 burros. Photographs, utilization studies and documentation from the aerial census in 1982 and 1988, and 1989 clearly indicate this habitat is being degraded and that the burro numbers are in excess of what the habitat can support and a thriving ecological balance does not exist.

9. Riparian Habitat

Only three areas in Gold Butte are considered riparian areas. Summit Springs has an associated riparian area of approximately 2 acres. The condition of the riparian is poor basically due to heavy cattle grazing pressure. Connelly Spring has a small associated riparian area of nearly 400 square feet. The riparian area is in poor condition. (Information on Connelly and Summit Springs found in Gold Butte Spring Source Evaluation, 1987, BLM). Red Bluff Spring (Bitter Spring) has less than 1 acre of associated riparian area (Virgin Mountain/ Gold Butte HMP). A significant portion of the riparian area is located in Mud Wash, therefore it is susceptible to frequent flooding. Vegetation in the area is primarily that of desert willow and other shrubs common to desert washes. Substantial utilization, by cattle, occurs because it is one of the few dependable water sources in the area.

10. Soils Information

There has been a "reconnaissance" survey of the area but the information is broad and grouped several vegetation types together.

V. Conclusions

A. Allotment Specific Objectives

1. (AO-1) Maintain existing ground cover, as defined by the revised Universal Soil Loss Equation.

This objective has not been met. Refer to conclusions for Watershed Objective-1 (W-1).

2. (AO-2) Maintain or improve riparian vegetative communities for Connelly, Summit and Bitter Springs.

This objective has not been met. Refer to Riparian Objective-1 (RA-1). Connelly and Summit Springs are both degraded and no riparian management has been initiated. Past use on these riparian areas has exceeded allowable use according to use pattern mapping. Bitter Springs receives a lot of use because it is a dependable water source and access to the spring is only from one direction in Mud Wash.

3. (AO-3) Maintain static or upward trend on key perennial forage species on key areas.

This objective has not been met. Refer to Key Area Objective-1 (KA-1L).

4. (AO-4) Maintain utilization levels at the allowable use levels identified on key/crucial management areas and recorded through use pattern mapping.

This objective has not been met. Refer to Key Area Objective -1 (KA-1). The key areas established for frequency and trend have not exceeded moderate use, however, there is heavy to severe use at the wild burro key areas 1, 2, and 4 (Burro Bay, the Haystacks and Walker Wash). The utilization studies conducted in 1989 at the key areas indicate heavy to severe utilization on species which are typically unpalatable. Field inspections have identified wild burros to be the cause rather than cattle.

5. (AO-5) Maintain or improve habitat conditions for a reasonable number of 127 bighorn sheep (305 AUM's) and 50 (150 AUM's) mule deer.

This objective has been met. Refer to Wildlife Objective-1 (WL-1).

6. (AO-6) Maintain or improve desert tortoise habitat in order to protect or increase existing populations.

This objective has not been met. Refer to Wildlife Objective-3 (WL-3).

7. (AO-7) Maintain or improve wild burro habitat by providing 3586 aum's of forage to initially manage for 498 wild burros year long in the Tassi-Gold Butte HMA, if such use is consistent with the attainment of the vegetative objectives and maintain the burros in a thriving ecological balance.

This objective has not been met. According to the utilization studies, use pattern mapping and the 1987 aerial census, over utilization is evident in the wild burro critical area bordering Lake Mead. In many areas palatable forage species no longer exist in the vegetative community. Burrobush no longer exists in some communities because of over-utilization.

8. (AO-8) Protect or improve wild burro free roaming behavior by preserving or enhancing home ranges (ie. no new fences that may restrict movement or removal of existing fences that may increase movement).

This objective has been met. Fences which could restrict the movement of wild burros on Gold Butte Allotment have not been authorized or constructed. Existing fences do not adversely effect the free-roaming behavior of wild burros on the allotment.

9. (AO-9) Maintain or improve wild burro habitat by providing waters where possible (excluding rainwater catchments for wildlife).

This objective has been met. Water is available for wild burros at springs and other water developments within the HMA. Burros have unlimited access to Lake Mead.

10. (AO-10) Prior to issuing an ephemeral grazing permit, a field inspection will be made to determine if sufficient forage is available.

This objective has been met. A range inspection is conducted to assure adequate forage is available prior to issuing grazing permits. This is standard operating procedures for issuing grazing authorizations on ephemeral rangeland.

11. (AO-11). Maintain or improve habitat conditions for Gambel's Quail (RM 1.2(7), WL 1.0 & WL 1.35).

This objective has not been met. Heavy use around springs and seeps has lead to a deterioration of the quails habitat. Also, use pattern maps show of heavy utilization which has lead to poor habitat for quail.

B. Specific Key Area Objectives

1. Long Term Objective (KA-1L)

Maintain or increase the frequency of occurrence of the following key species for each key area at the 10% level of significance.

Key Area L-1 galleta grass
globemallow

Key Area L-2 desert bitterbrush
desert almond

Key Area L-3 globemallow
Mormon tea
range ratany

This objective has been met. Globemallow was the only key species in Key Area 1 with a frequency of occurrence high enough to be statistically evaluated (.90 confidence level) and there was no significant change in frequency between 1982 and 1987. The key species on Key Area 2 and 3 do not have frequencies high enough to be evaluated statistically. Overall, trend is static to non-apparent based on cover and frequency data. The frequency method of measuring trend is not an adequate technique for the sparse vegetation types in this area.

2. Short Term Objective (KA-1)

Maintain the utilization levels below for the key species in each key area.

Key Area L-1 ≤55% galleta grass
≤45% globemallow

Key Area L-2 ≤55% desert bitterbrush
≤55% desert almond

Key Area L-3 ≤45% globemallow
≤45% Mormon tea
≤45% range ratany

DRAFT

This objective has been met. Since 1983 grazing use has not exceeded moderate. Refer to objective WB-1 (Wild Burros) for a discussion of wild burro use.

C. Watershed

1. Objective 1-Short Term and Long Term (W-1)

Maintain or sustain any increase for the combined perennial vegetative canopy and litter components as measured at key areas 1, 2, & 3. All live annual species, persistent and non-persistent litter are considered as litter.

This objective has not been met. There has been no significant change in cover during the monitoring period from 1982 through 1987 at the livestock key areas. However, at the wild burro key areas, severe utilization has reduced the vegetative cover. Cover transects have not been completed to date. However, photographic evidence clearly shows reduced cover.

D. Riparian Area

1. Objective 1-Short Term and Long Term

Utilization by foraging animals on the following riparian areas will not exceed 55% utilization of the current years vegetative growth:

Connelly Spring, Summit Spring, and Bitter Spring.

This objective has not been met. Since use pattern mapping began in 1985, Connelly Spring and Summit Spring have received heavy use by cattle. Red Bluff Spring (Bitter Spring) does not show heavy use, by cattle. However, it is located in Mud Wash and there are relatively few forage species here as compared to Summit and Connelly Springs.

E. Long Term Wildlife Objectives

1. Objective 1 (WL-1)

Maintain 6,000 acres of existing bighorn habitat at a weighted average of 162 points. Improve 12,500 acres of bighorn habitat to a weighted average of 180 points. Maintain approximately 25,500 acres of cool season bighorn habitat at a weighted average of 137 points (based on the bighorn sheep habitat rating system; see the Virgin Mountain/Gold Butte HMP).

This objective has been met. Use pattern maps show slight to light use throughout the bighorn habitat. This use will maintain the crucial bighorn habitat.

2. Objective 2 (WL-2)

Maintain the existing mule deer habitat condition based upon habitat rating criteria established in BLM Manual 6630 and NSO Manual Supplement.

This objective has been met. The utilization objectives for this allotment have been met, therefore, this objective is met in the deer habitat area.

3. Objective 3 (WL-3)

Maintain or improve the range condition of crucial desert tortoise habitat to minimum of late seral stage. (AO 6)

This objective has been met. Utilization has been \leq 40 percent on most of the habitat and trend is static. Professional opinion indicates ecological condition has been maintained at late seral.

4. Objective 4 (WL-4)

Maintain or improve the range condition in non-crucial desert tortoise habitat at a minimum of mid seral stage. (AO 6)

This objective has been met. Refer to Objective WL-3 above. Also, these are shrub dominate communities. After field examination, they are estimated to be in mid or late seral stage.

5. Objective 5 (WL-5)

Maintain or improve the habitat condition for Gambel's quail by keeping utilization at or below the allowable-use levels throughout the allotment, especially within a 1.5 mile radius of all waters used by the Gambel's quail (AO-2 & 6).

This objective has not been met. Heavy use around springs and seeps has lead to a deterioration of the quails habitat. Also, use pattern maps show of heavy utilization which has lead to poor habitat for quail.

F. Short Term Wildlife Objective

1. Objective-1 (WL-1S)

In crucial desert tortoise habitat allow grazing between October 15 and March 15 of each year and at use levels not to exceed 55% of the previous year's growth on key forage species.

This objective has not been met. Grazing has taken place year-long on this allotment within the tortoise habitat for at least the last forty years. There were small areas of heavy use near Horse Spring Pipeline Troughs and Greasewood Basin Reservoir identified on the use pattern one of the two years measured. This use has not affected the overall seral status of the area to date.

G. Use Pattern Mapping

1. Objective 1-Short Term and Long Term (UF-1)

Maintain utilization levels on key species by all ungulates at or below the following levels for the periods and locations identified. (Consistent with other utilization objectives.)

<u>Key Species</u>	<u>Maximum Utilization Level Allowed</u>		
	10/15-3/15	Crucial Desert Tortoise Habitat	Remaining Allotment
		Remainder of Year	Year Long
Perennial Herbaceous	≤55%	≤55%	≤55%
Shrubs	≤45%	≤45%	≤45%

This objective has not been met. Use in the critical desert tortoise habitat as identified in the URA has not exceeded light (21-40%) use as determined by use pattern mapping. The crucial desert tortoise habitat that is identified as in the Gold Butte HMP, has a small area of heavy use near Greasewood Basin and Horse Spring Pipeline. As per the 1985 CRMP recommendations, no more than twenty-five cattle have use Mud Spring from March 1 through May 31. The livestock operator has attempted to keep cattle away from that area during those three months. There have been no specific utilization studies other than use pattern mapping in the crucial desert tortoise habitat from 3/15 to 6/30 of any year to date. On the remainder of the allotment there are several areas of heavy (61-80%) use, especially near waters and in washes and within the wild burro critical area.

H. Wild Burro

1. Objective 1- Short Term and Long Term (WB-1)
Maintain the utilization levels below for the key species in each wild burro key area on an annual basis. (AO 3, 4, 7, & 8)

Key Species	WB-1	WB-2	WB-3	WB-4
White Bursage (FRDU)	<05%	<05%	<05%	<05%
Range Ratany (KRPA)	<05%	<05%	<05%	<05%
Catclaw (ACGR)	<05%			
Globemallow (SPAM2)	<20%			

This objective has not been met. Utilization has exceeded the allowable use levels on the burro key areas in 1981 and utilization was severe on key species in 1989, except at the Quail Wash key area. Use mapping of the area indicates heavy use.

Monitoring data indicates that the wild burro crucial habitat area can support a range from 11 to 62 wild burros. Future monitoring data would be used to identify whether this level is in balance with the environment.

VI. Technical Recommendations

A. The following recommendations are based on analysis and evaluation of the allotment and specific resource objectives (Section V).

1. Continue to issue livestock grazing permits as applied for when livestock forage is available. Continue to issue permits on a quarterly basis. Implementing this objective will aid in meeting objective AO-10.

2. Adjust wild burro populations to achieve a thriving natural ecological balance by removing excess animals and leaving a thriving population of 62 animals. Monitoring data evaluated in accordance with the Tassi-Gold Butte HMAP supports this recommendation. Remove approximately 350 burros from the Gold Butte HMA by the end of FY1990 in coordination with the National Park Service and the Arizona Strip and Phoenix Districts. (See Section IV of the AIE folder.) WB-1, AO-8 and AO-9 will be met through this recommendation.

3. Implement the following grazing scheme for Gold Butte Allotment (See Appendix, Map 2):

Allow approximately two-thirds of the licensed livestock to utilize the western and southern edges of the allotment including elevations about the 2500 feet level or below from October 15 through March 15 (winter/spring). The remainder of the year, March 16 through October 14 (summer/fall), the majority of the livestock will utilize the central and northern sections of the allotment with elevations 2400 feet or higher. Movement will be based on availability of forage, phenology and climatic conditions.

The area of Gold Butte allotment which is considered crucial desert tortoise habitat will not be utilized from March 15 to October 15. Two water developments in this area, Mud Springs, Horse Spring pipeline are dependable waters primarily in the summer when other waters are dry. Garden Spring pipeline troughs are also in the tortoise area, but have not been used recently due to the drift of livestock into Arizona. This grazing scheme will aid in meeting objectives: AO-1 through 4, AO-7, KA-1 and KA-1L, RA-1, W-1, WL-2, and UP-1.

a. Range Improvement Projects

The following range improvements are recommended to facilitate in implementing the proposed grazing scheme, therefore the same objectives listed above will be met.

1. Through a cooperative agreement with the Bureau and the livestock operator, construct the proposed Mineral Butte Drift Fence. The fence would run from Mockingbird Spring to Willow Spring pipeline trough and corral. The proposed fence will aid in keeping livestock in the vicinity of the waters which are close to Lake Mead during the winter and spring months and discourage drift into tortoise habitat the remainder of the year. To meet objectives UP-1 & RA-1.

2. Construct the proposed Azure Ridge Fence. This fence will prevent drift of livestock from Arizona into Gold Butte. The fence would prohibit livestock drift into the crucial desert tortoise area and would allow for a more accurate determination of the numbers of livestock at Horse Springs and Garden Springs pipeline troughs. The fence would also prevent cattle from drifting off Gold Butte allotment to the Grand Wash area on the Tassi Allotment in Arizona. Garden Springs troughs are currently not in use due to the problem of drift into Arizona. To meet objective UP-1.

3. Fence the Summit Spring source with a wildlife specification fence. Leaving water available at the source, run a pipeline down the canyon to the reservoir or a trough. This will provide sufficient water to maintain or improve the riparian habitat and provide water for wildlife and livestock. (Gold Butte Spring Source Evaluation, BLM) To meet objectives AD-1, AD-2, AD-4, RA-1, W-1.

4. Fence the source of Connelly Spring with wildlife specification fence. Pipe the water from the source to troughs below the source. Provide a water trough both inside and outside the existing corral. When the livestock operator is gathering and moving cattle, water inside the corral provides an effective means of trapping livestock for loading and transport. During this time, water will only be provided inside the corral for livestock and available at the spring source for wildlife. When livestock are not being moved or trapped, water will be available outside the corral. This will aid in meeting objectives AD-1, & 2, AD-4 & 5, W-1, UP-1, WL-2 and RA-1.

5. Using the existing gap fence in Twin Springs Wash as a wing fence, construct a corral which would aid in the gathering and moving of livestock. This will help meet objectives AD-4 and UP-1.

6. Develop a well on the northern end of Perkins Canyon (off the old Gold Butte Road) which will provide water during the spring and summer months when grazing on the desert tortoise habitat is limited. This will help meet objective AO-4 and UP-1.

7. Extend the existing pipeline from Gold Butte about five miles to service more area. This will aid in meeting AO-1, AO-2, and AO-4.

8. Develop a drift fence near Bitter Spring (aka Red Bluff Spring) limiting use of the area to the winter/spring at allowable use levels of 55%. Develop a pipeline to divert some water from the riparian area in the canyon. Leave water at the source for wildlife.

Diverting water from the riparian area will discourage heavy traffic and use by livestock. Fencing the riparian area is not recommended. The spring is in an active wash and a fence would be washed out during heavy runoff periods. This will aid in meeting AO-1, 2, 3, 4, 6, 7, 8, 9, KA-1L, KA-1, W-1, RA-1, WL-3 and 4, WL-1S, UP-1, and WB-1.

9. Develop two waters in wild burro habitat to take some pressure off the Lake Mead area. These waters would maintain the habitat by spreading out the use throughout the wild burro habitat. AO-7 & 9, UP-1, WB-1.

4. Graze Red Bluff Spring (Bitter Spring) primarily in the winter and spring to obtain allowable use levels of 55%. Develop a drift fence near Bitter Spring to discourage continuous use of the area. Develop a pipeline to divert some water from the riparian area in the canyon. Leave water at the source for wildlife. Diverting water from the riparian area will discourage heavy traffic and use by livestock. Fencing the riparian area is not recommended as the spring is in a active wash and a fence would probably be washed out. This will aid in meeting AO-1, AO-2, AO-4, RA-1, and W-1.

5. Continue to make existing waters available to wild burros and insure that all new waters are available to wild burros and wildlife. This meets objective AO-9, AO-5, WL-1, and WL-2.

VII. Consultations

The following specialists provided technical input for this evaluation.

Mark Maley, Jeanie Cole, Sid Sloan, Wildlife Biologists
Bureau of Land Management

Bob Turner, Ross Haley, Wildlife Biologists
Nevada Department of Wildlife

Bob Stager, Range Conservationist
Bureau of Land Management

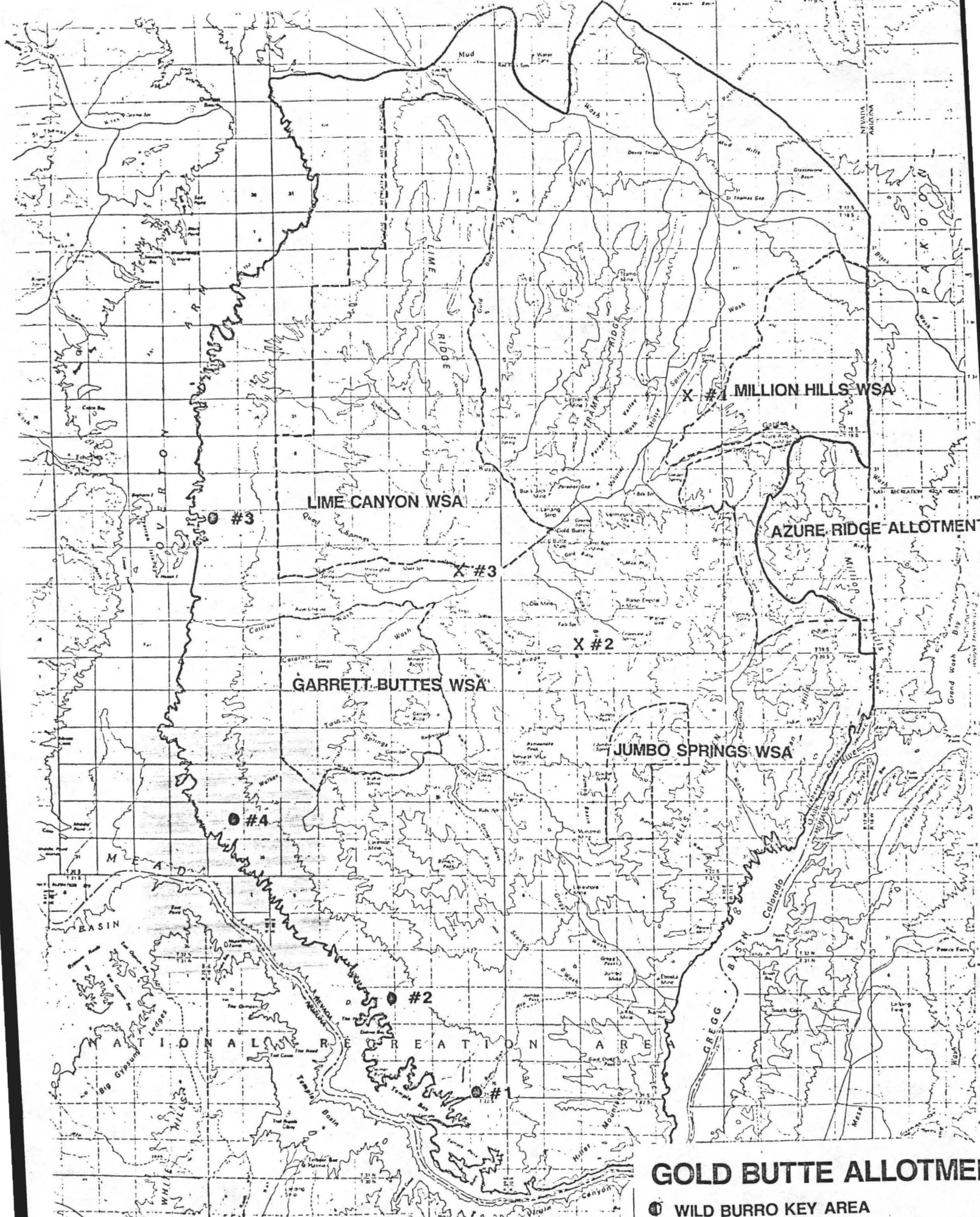
Terry Driver, Range Conservationist, Stateline Wild Horse
and Burro Specialist
Bureau of Land Management

John Frei and Kelton Frei of G & F Ranches
Livestock Operator

Dave Schafersman, Hydrologist
Bureau of Land Management

Janaye Byergo, Wilderness Specialist
Bureau of Land Management

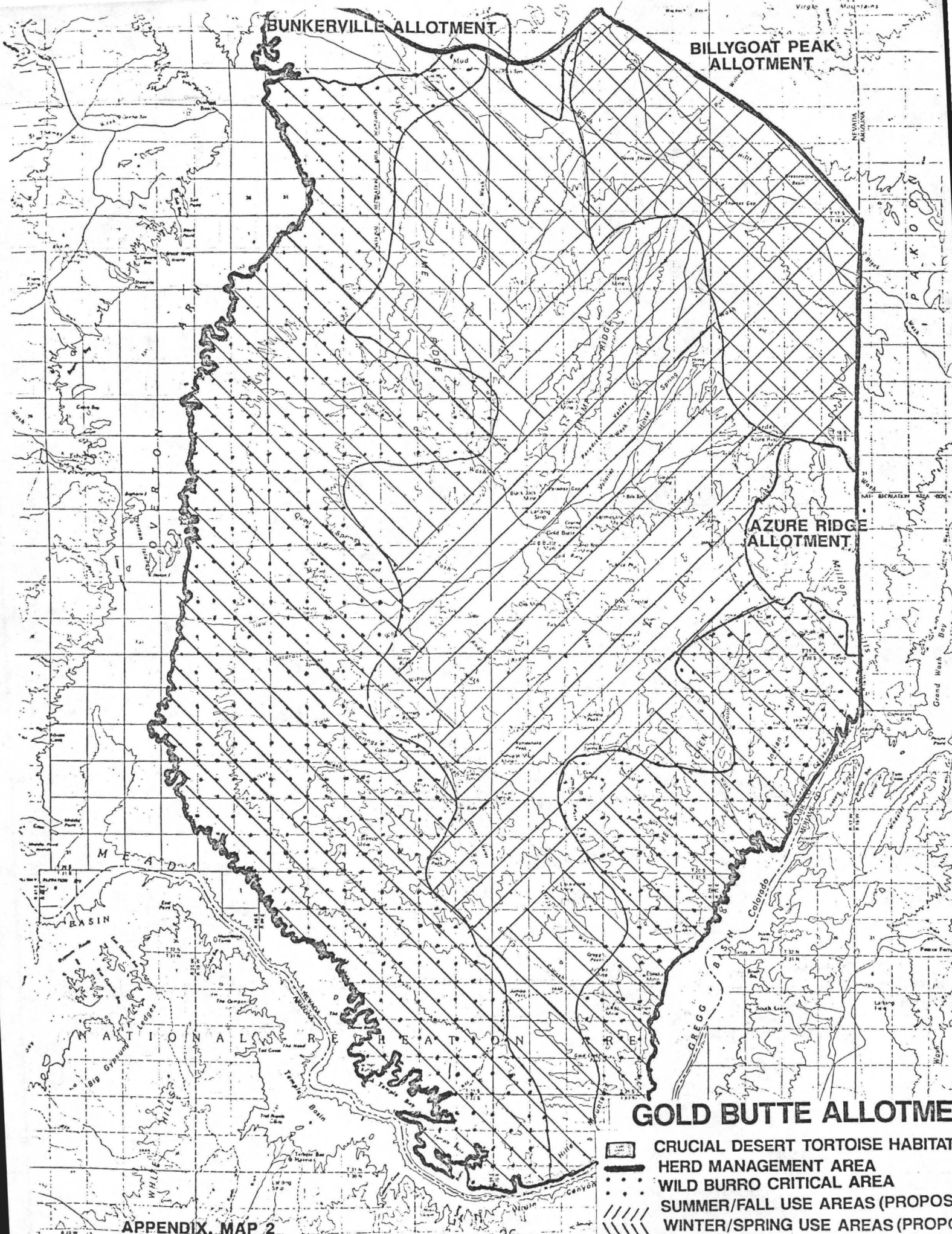
Randall Wilson, Soil Scientist
Soil Conservation Service



(SCALE 1:200,000)
APPENDIX, MAP 1

GOLD BUTTE ALLOTMENT

- WILD BURRO KEY AREA
- X FREQ/TREND KEY AREA
- WILDERNESS STUDY AREA








BUNKERVILLE ALLOTMENT

BILLYGOAT PEAK ALLOTMENT

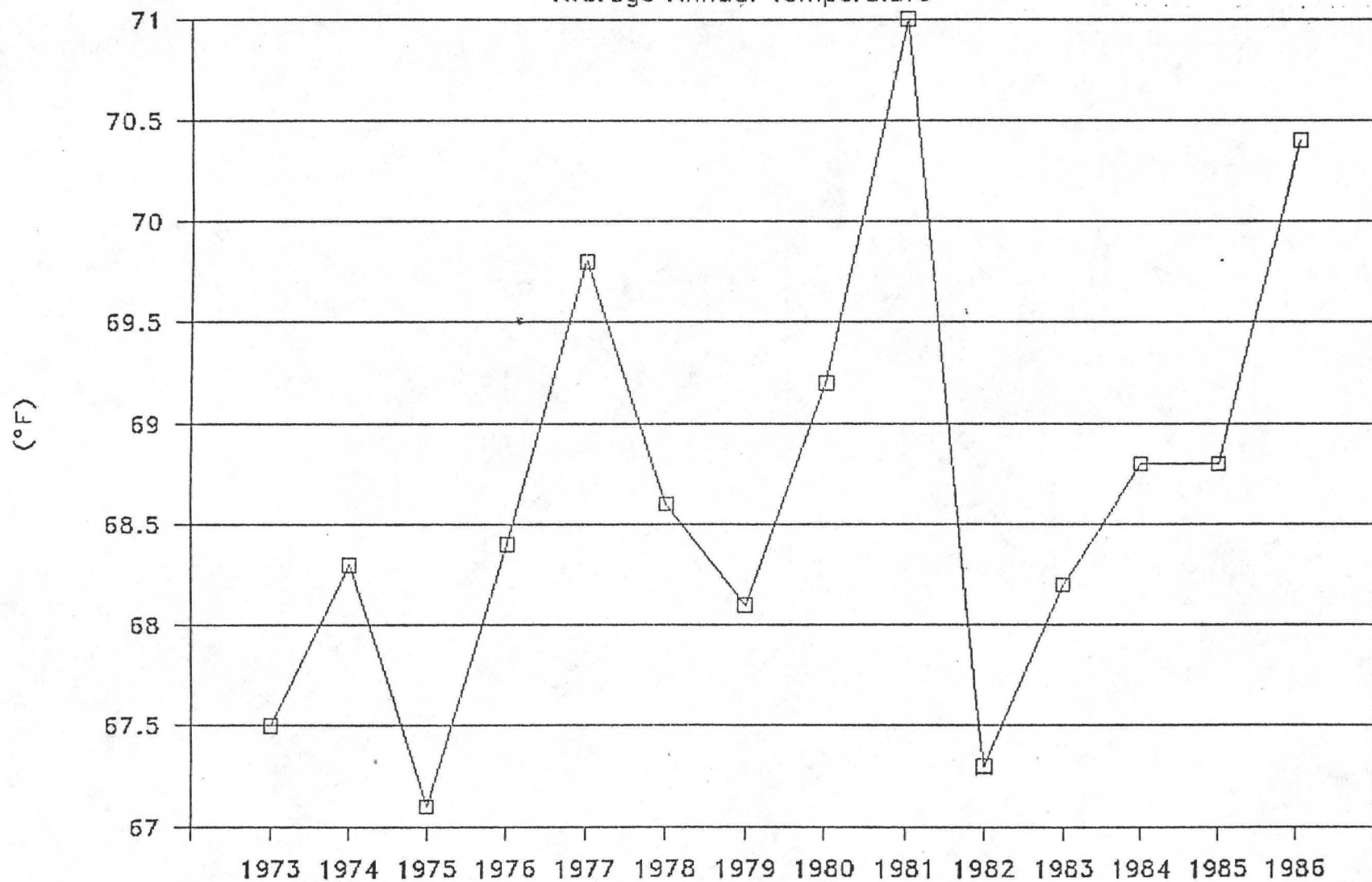
AZURE RIDGE ALLOTMENT

GOLD BUTTE ALLOTMENT

-  CRUCIAL DESERT TORTOISE HABITAT
-  HERD MANAGEMENT AREA
-  WILD BURRO CRITICAL AREA
-  SUMMER/FALL USE AREAS (PROPOSED)
-  WINTER/SPRING USE AREAS (PROPOSED)

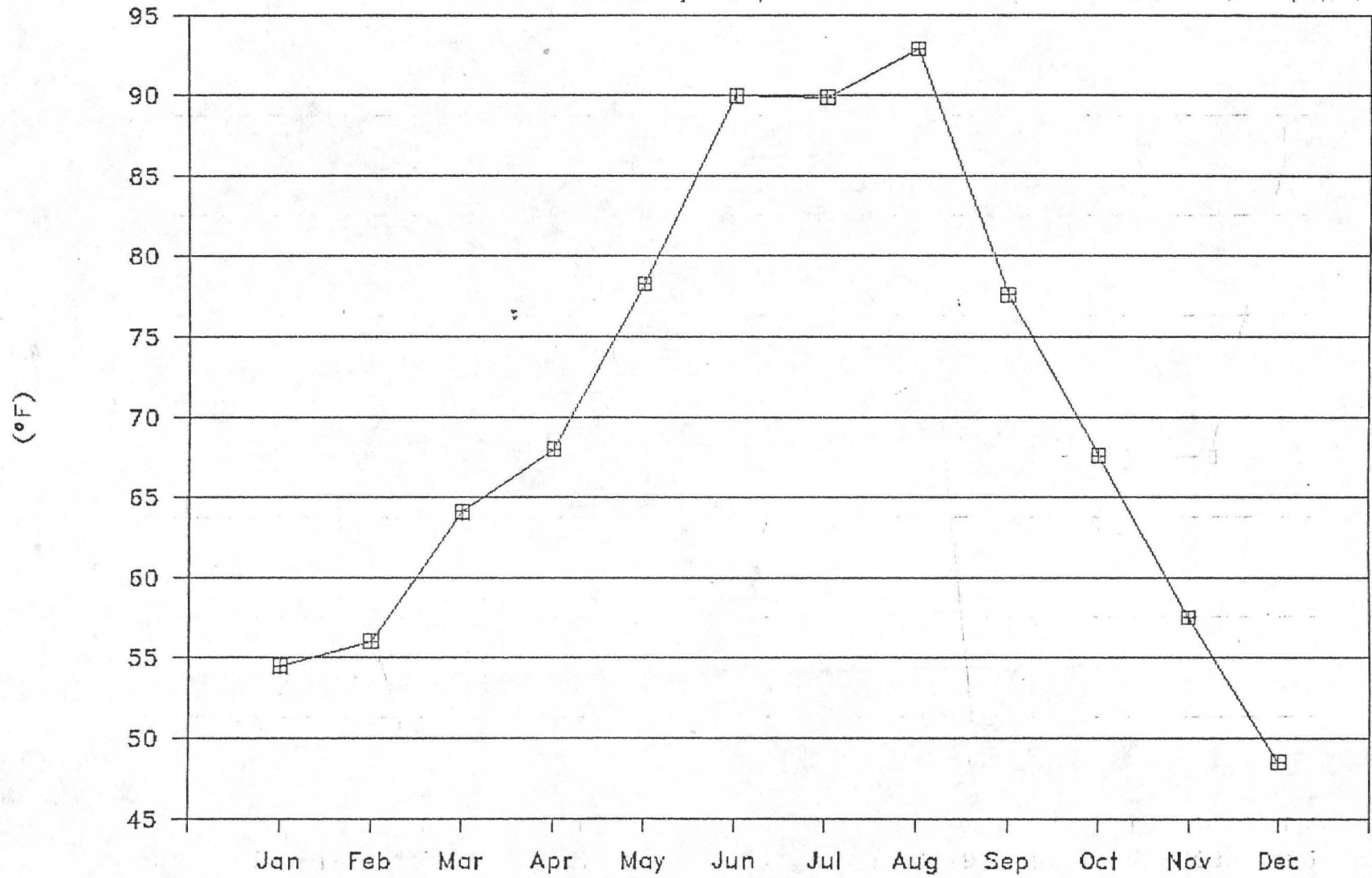
Gold Butte Allotment

Average Annual Temperature



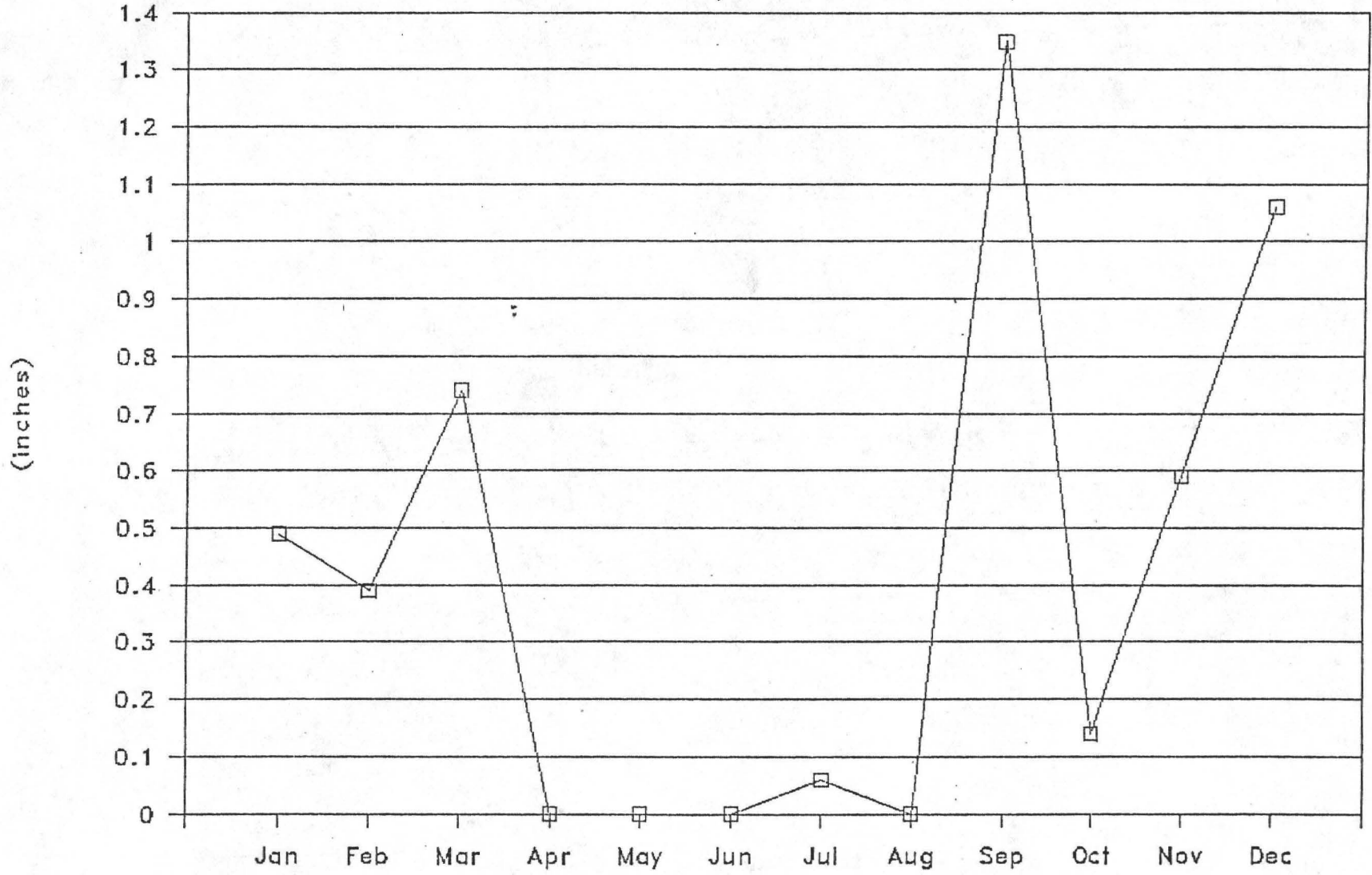
Gold Butte Allotment

Monthly Temperatures



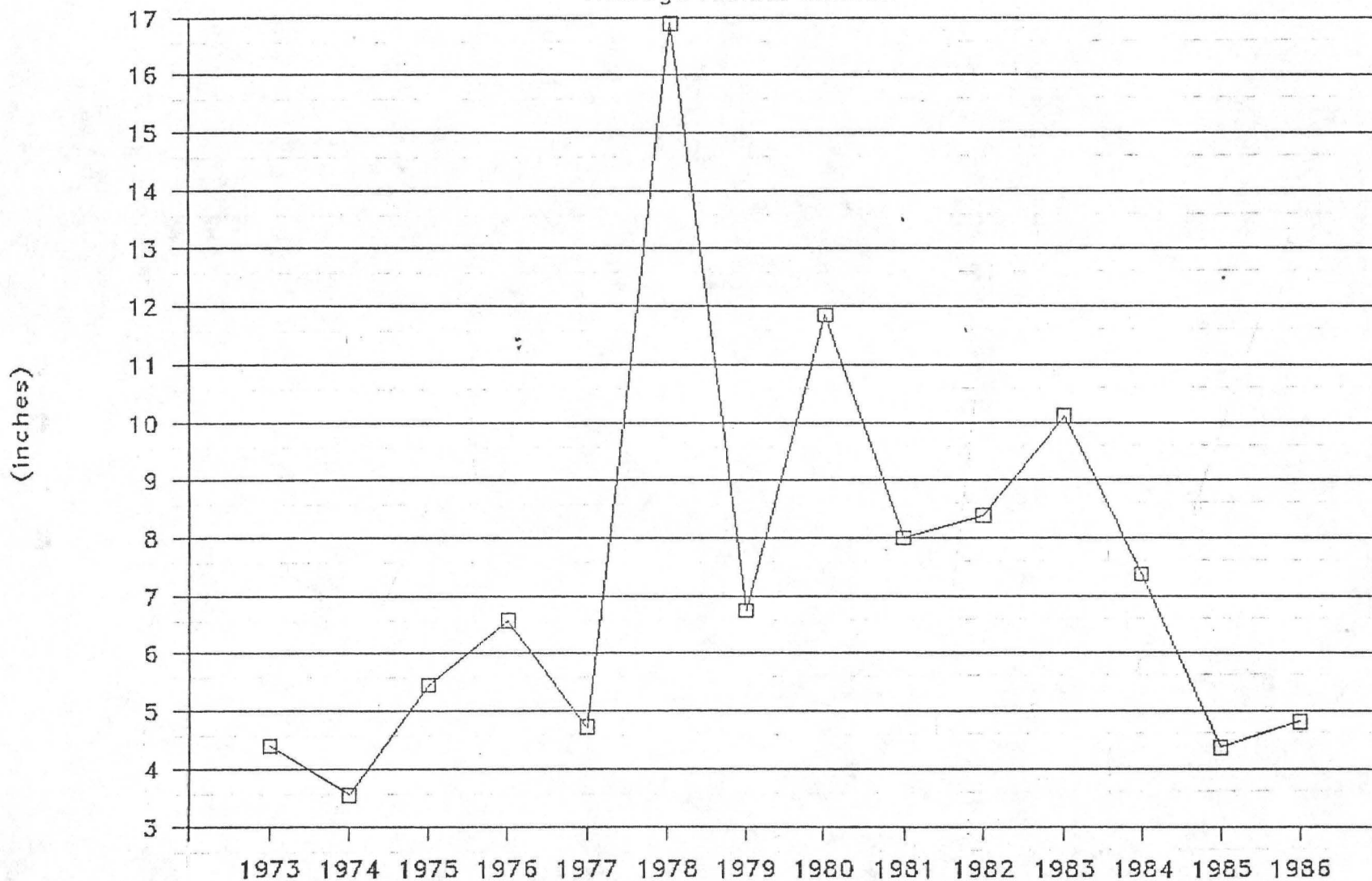
Gold Butte Allotment

Monthly Rainfall



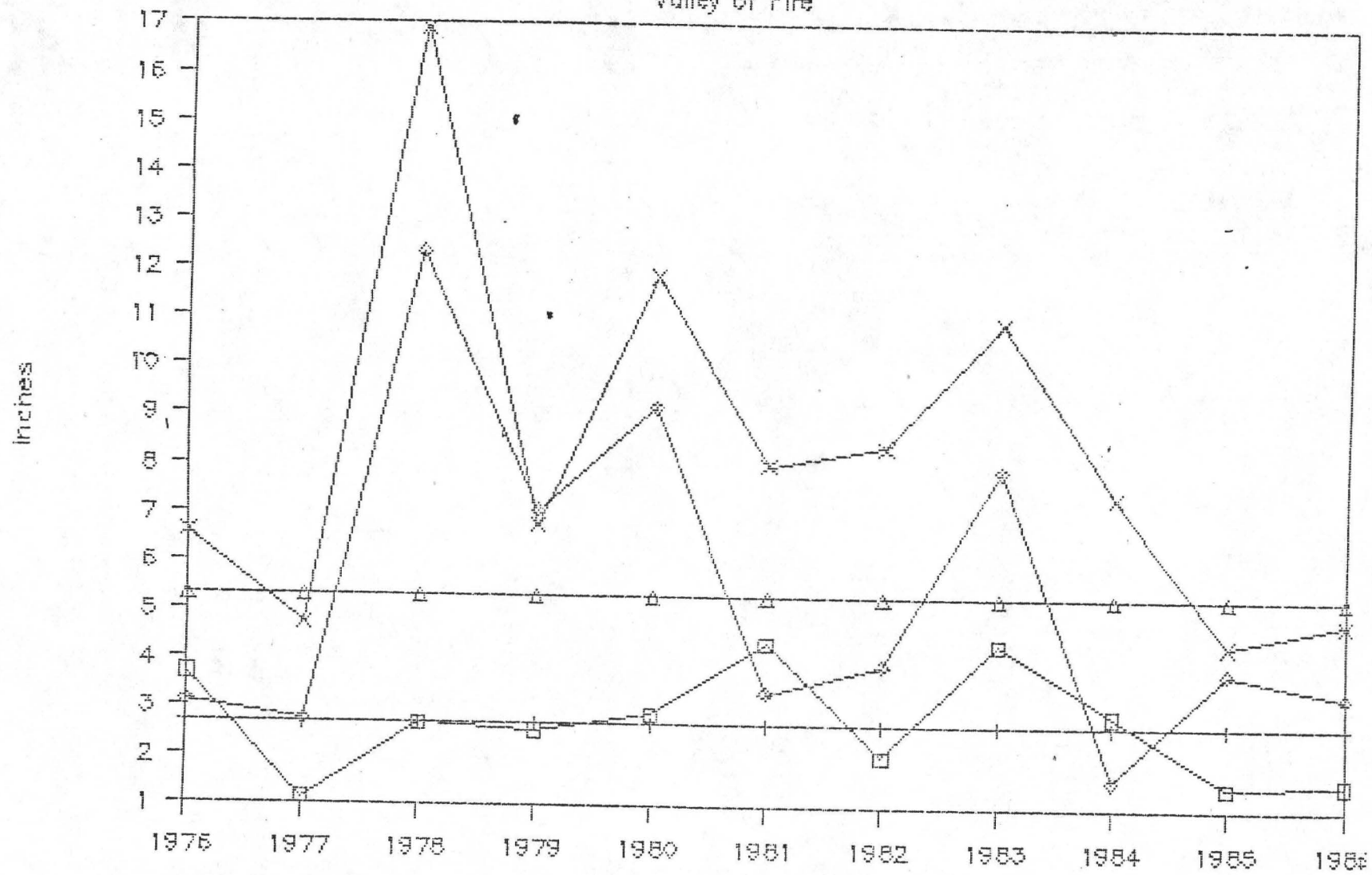
Gold Butte Allotment

Average Annual Rainfall



Seasonal Precipitation

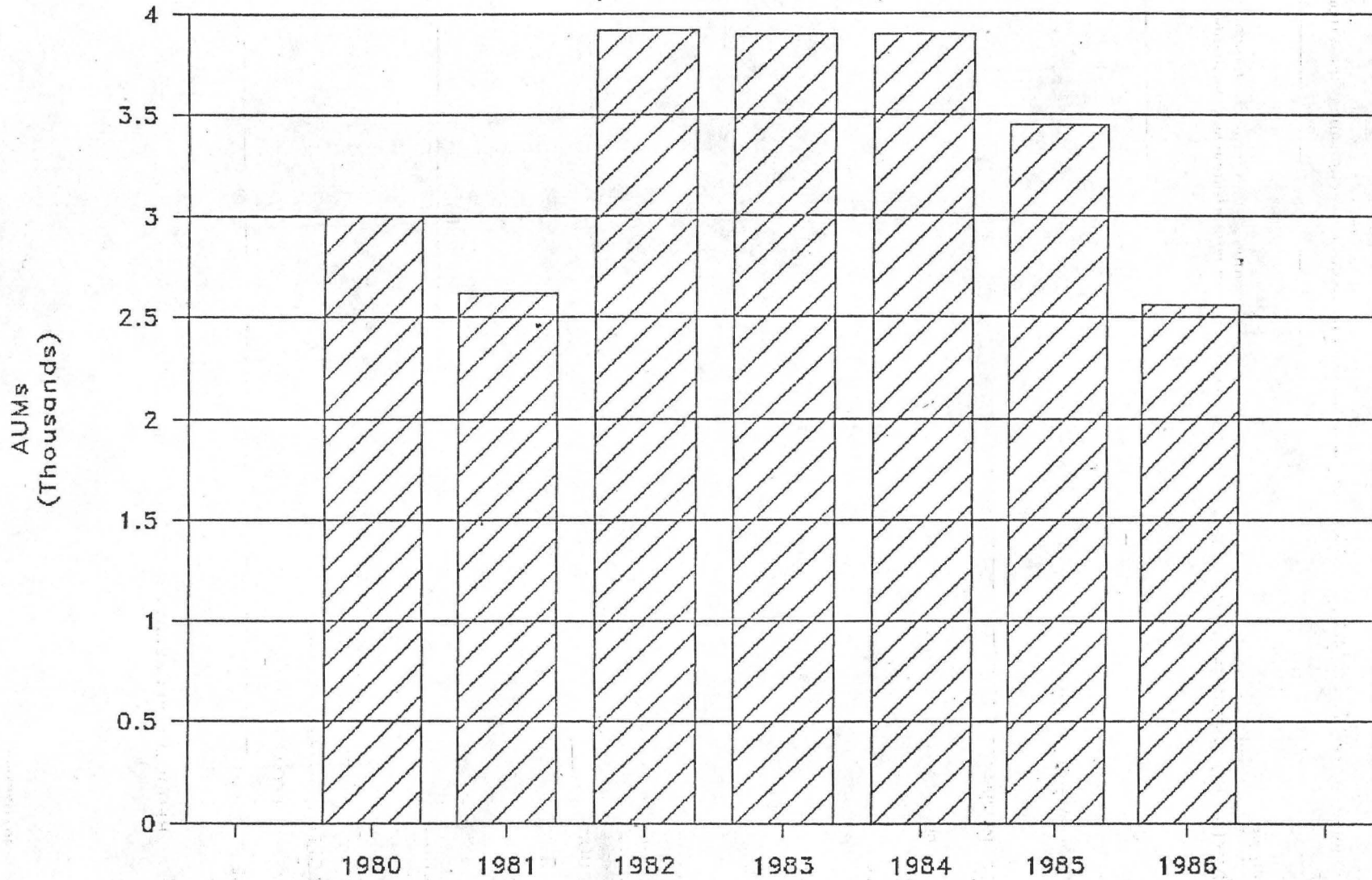
Valley of Fire



Sum
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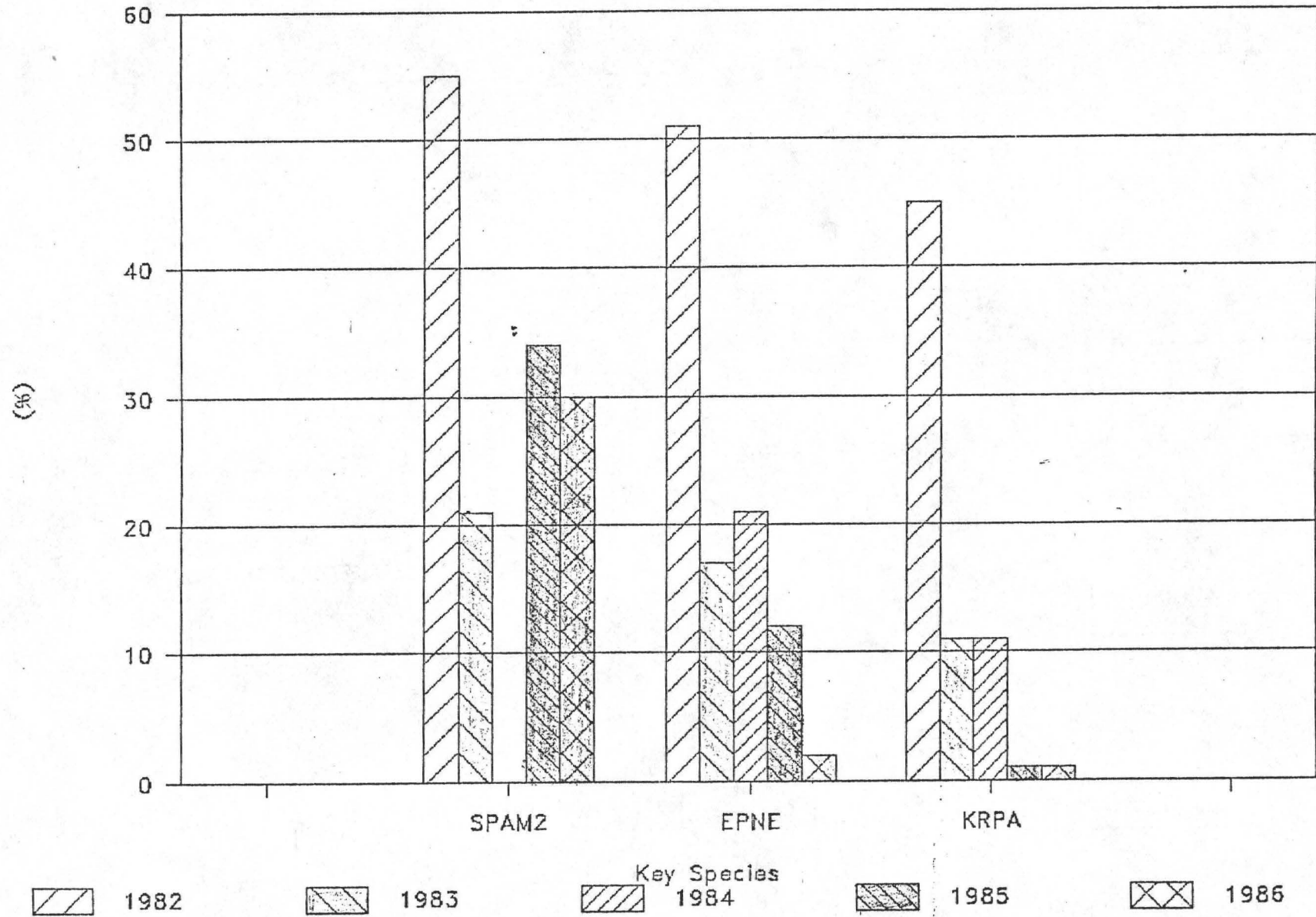
Gold Butte Allotment Licenced Use

(In lieu of Actual Use)



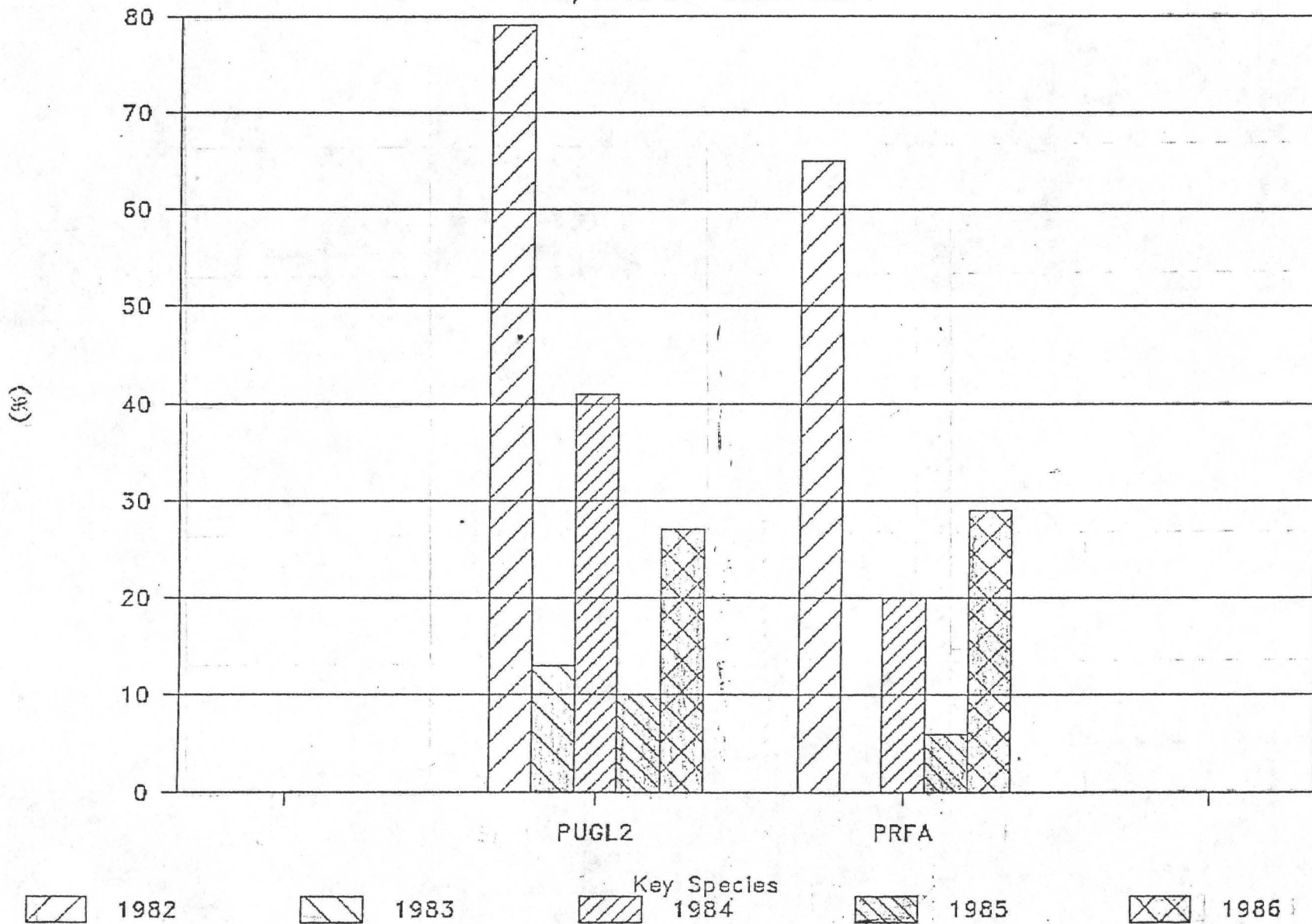
Gold Butte Allotment Utilization

Key Area 3 - Quail Springs Wash



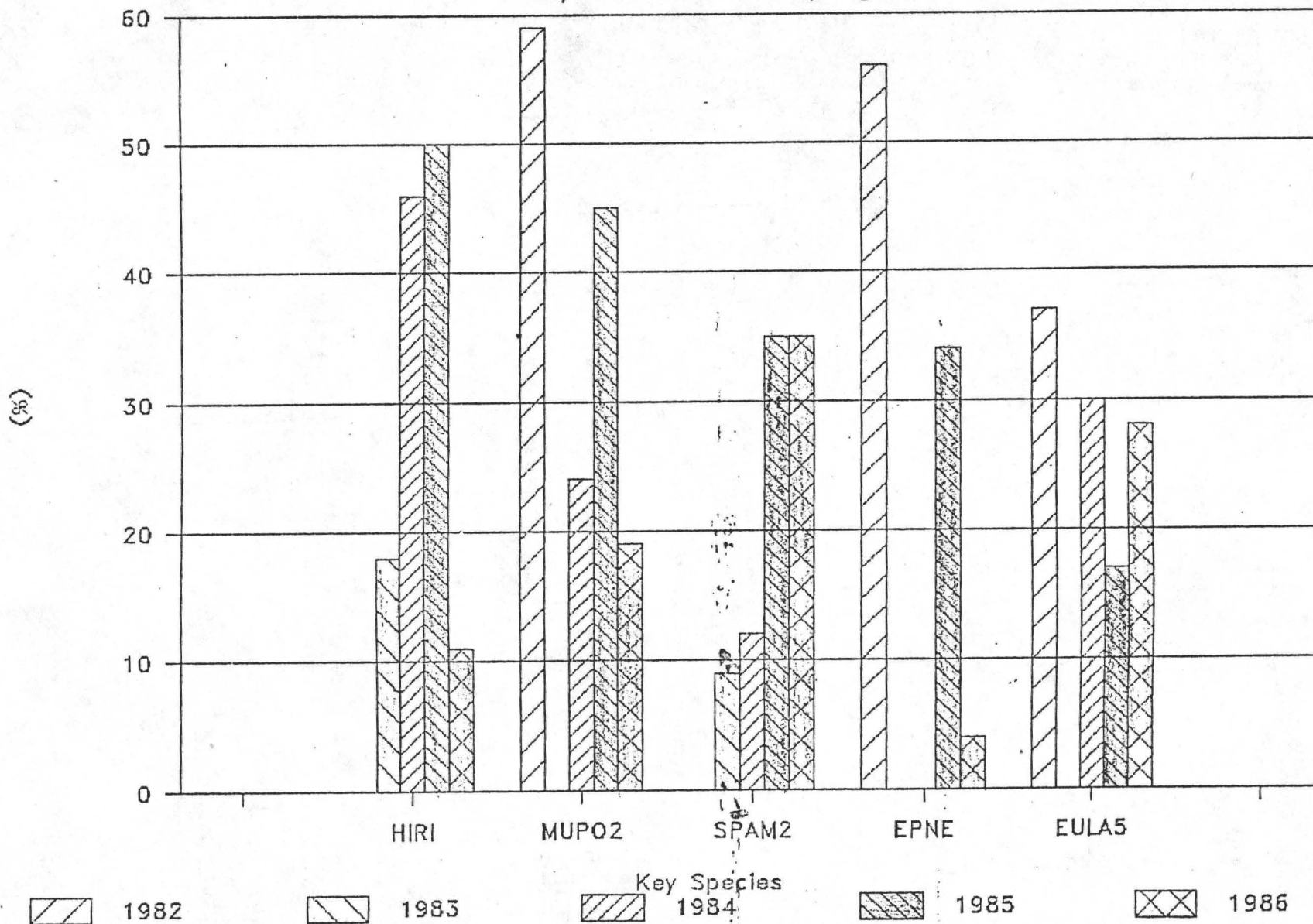
Gold Butte Allotment Utilization

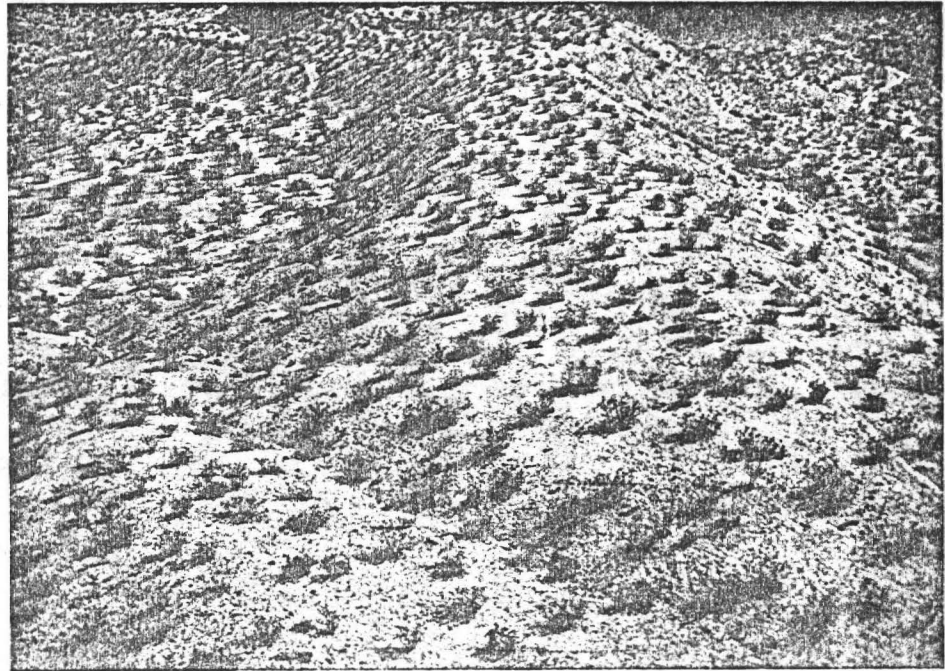
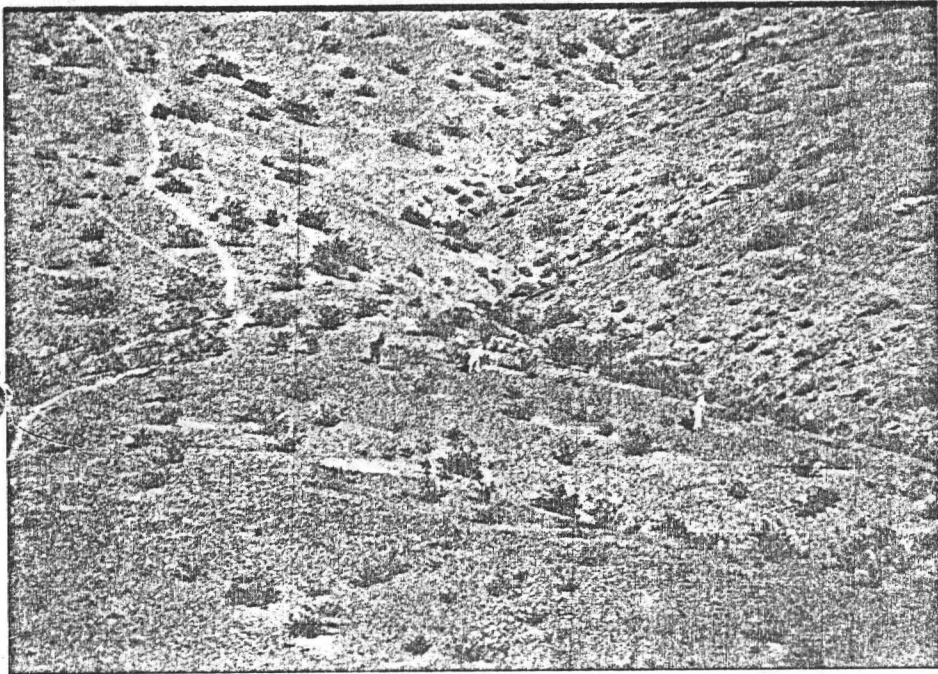
Key Area 2 - Cedar Basin



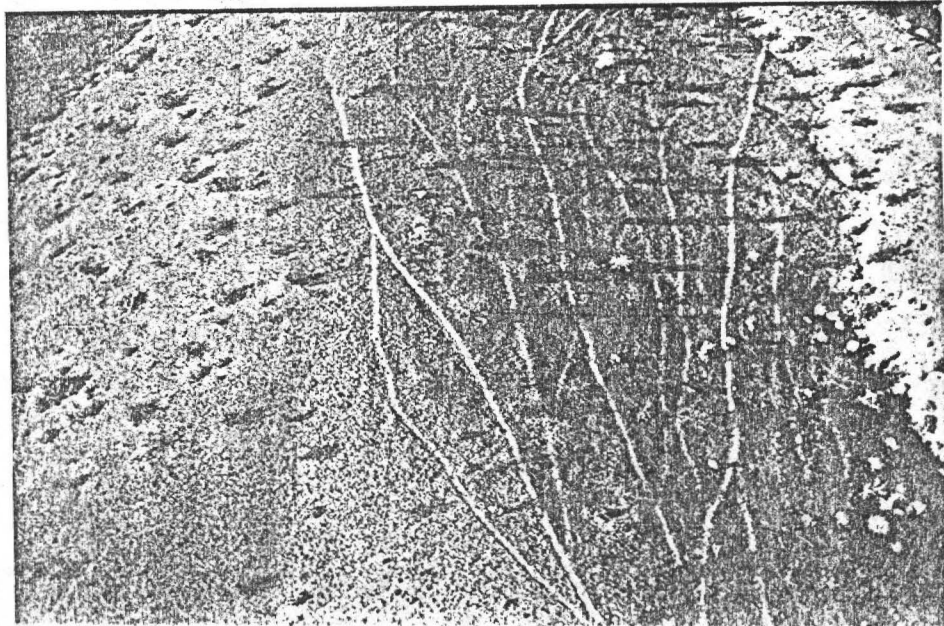
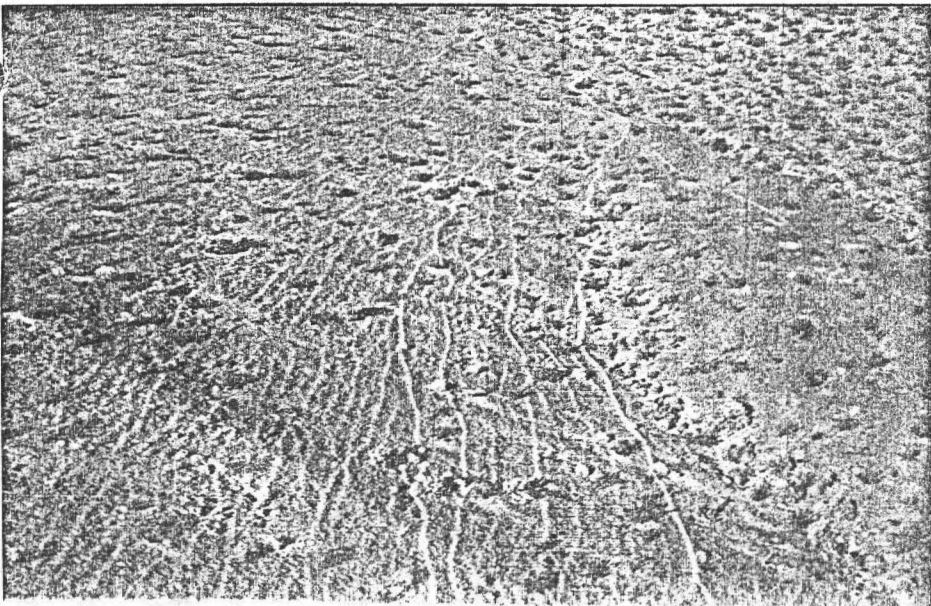
Gold Butte Allotment Utilization

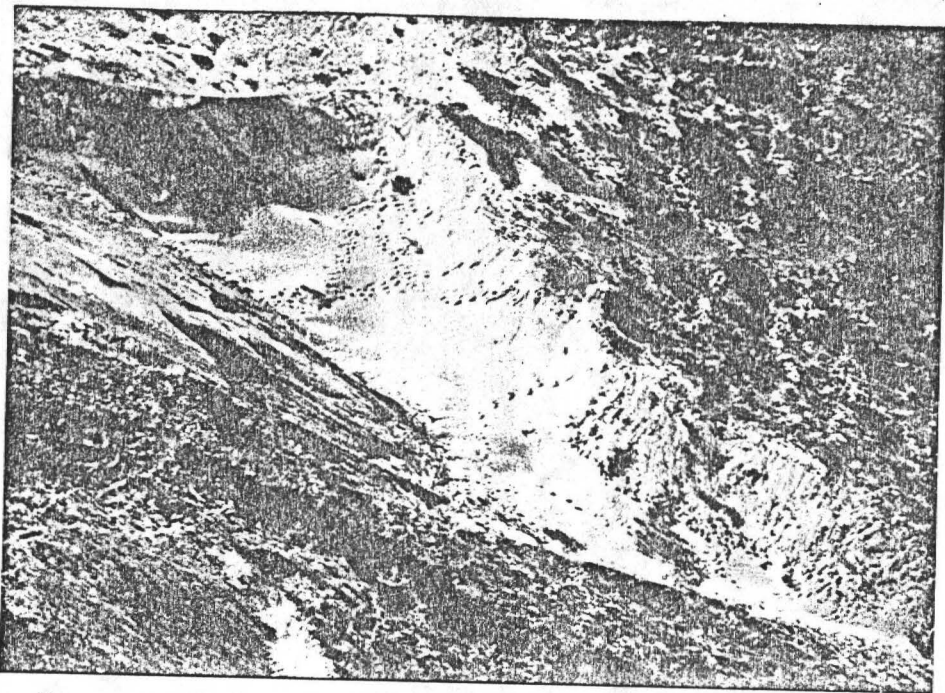
Key Area 1 - Horse Springs





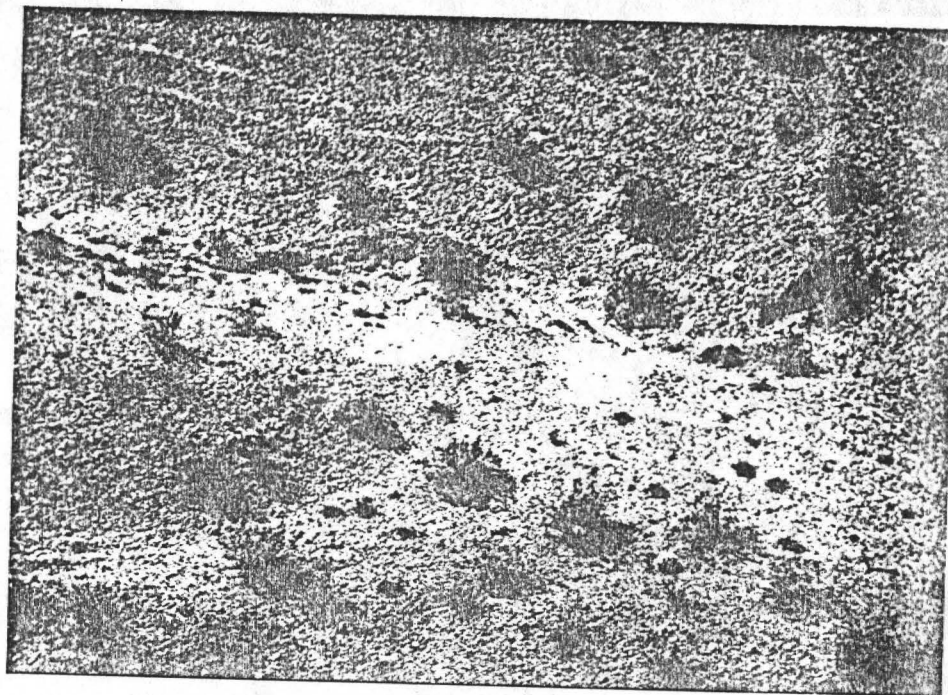
These photographs depict the heavy trampling by wild burros on Gold Butte Allotment. The highest concentrations of burros are on the southern edges of the allotment bordered by Lake Mead. The 1987 aerial census found most of the burro population in Gold Butte in these areas.



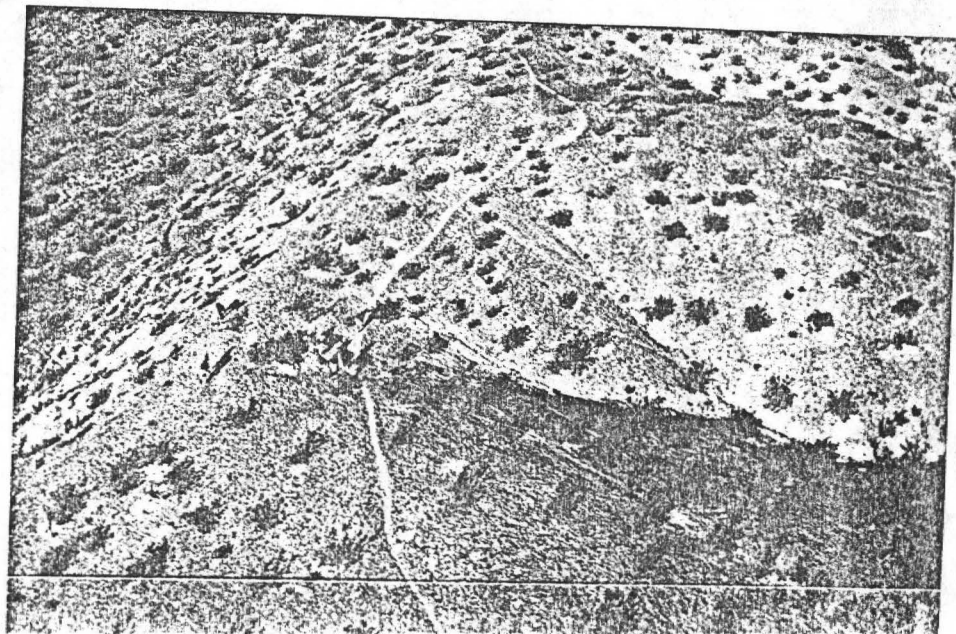
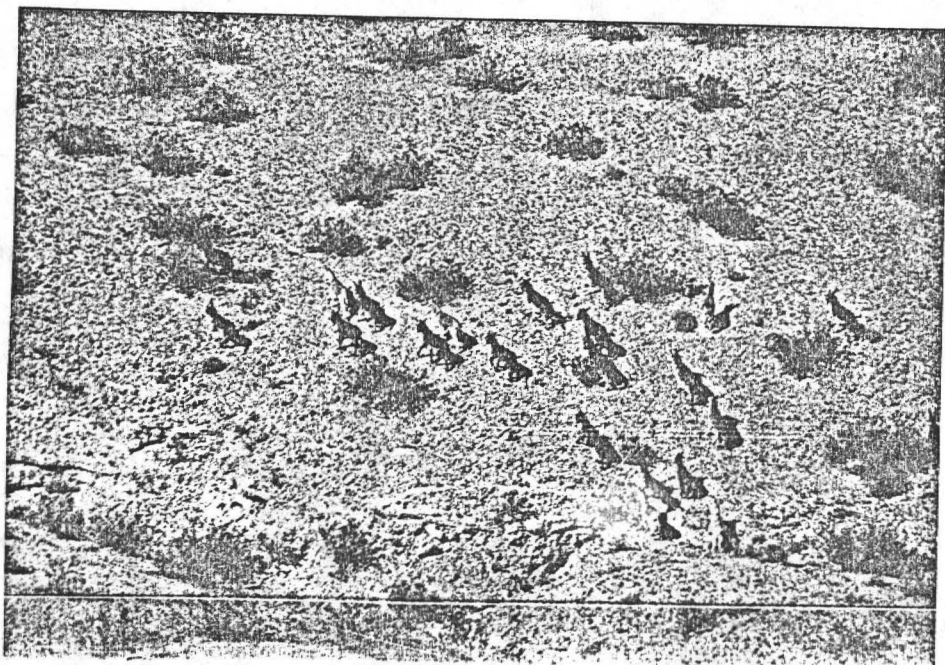


Burro tracks in this sand dune indicate very recent use by several burros. Tracks more than a few days old would not be visible in the sand.

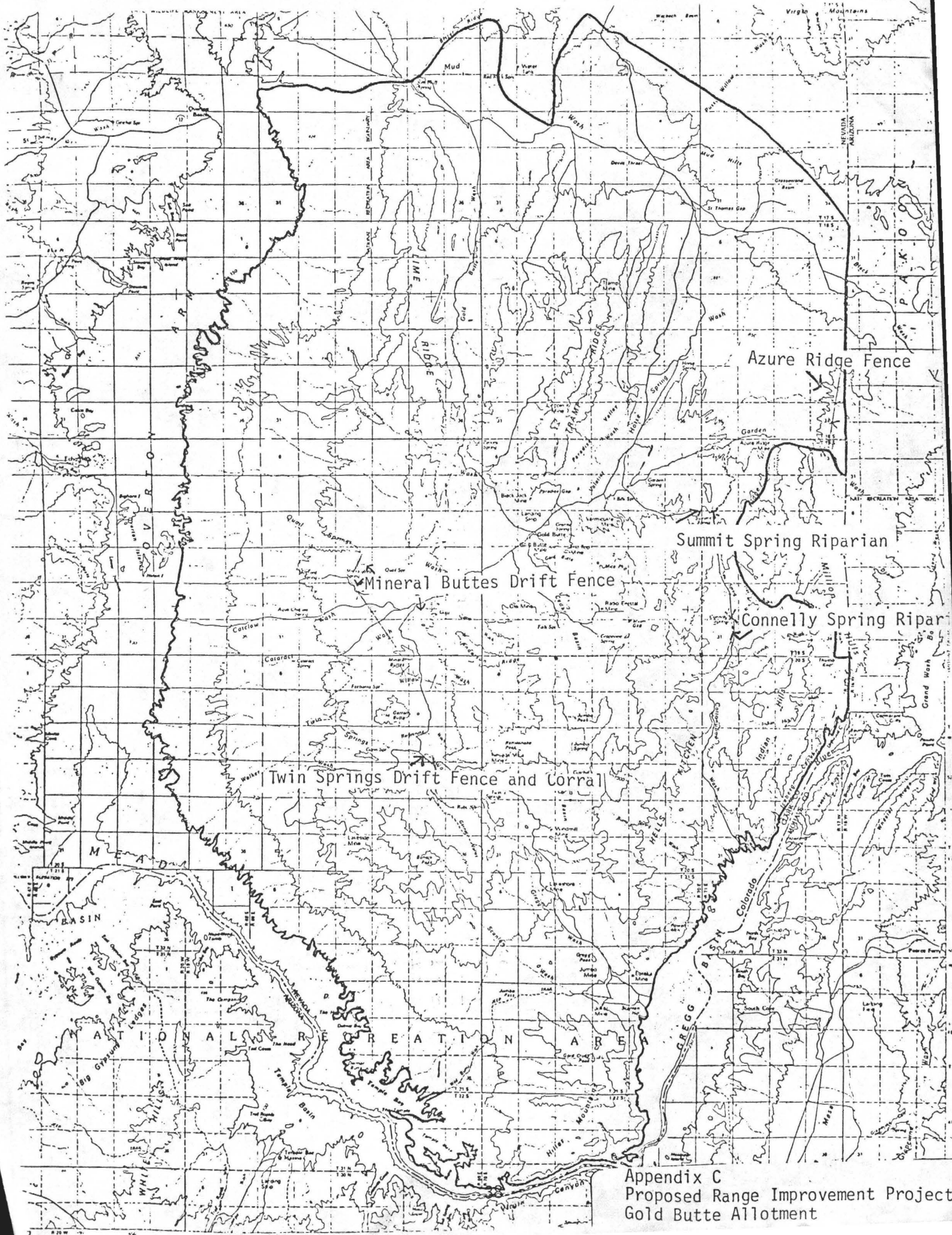
A group of burros near the shore of Lake Mead in Gold Butte Allotment.



Burro "dusting areas" are common to areas of heavy use by wild burros.



Another example of wild burro trailing typical of the areas of high burro populations in Gold Butte.



Appendix C
 Proposed Range Improvement Project
 Gold Butte Allotment