

BADGER SPRINGS ALLOTMENT

5-28-92



JAMES WASH HMA
United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Ely District Office

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Ely, Nevada 89301-9408

IN REPLY REFER TO:

4400.3 (NV-047)

MAY 28 1992

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

Dear Participant:

We appreciate your interest in being involved in the allotment evaluation consultation process and enclosed for your information and review are the allotment monitoring evaluation(s), listed below. This is your opportunity again to provide allotment specific information and also provide comments to the evaluation which will be incorporated into Section VII, Management Action Selection Report. We would appreciate receiving your information and/or comments by June 19, 1992, to allow adequate time to review all input and to adhere to our deadlines. All of the information received will be evaluated and considered in the final portion of the evaluation which is the selection of a management action.

We appreciate your participation and solicit your continued involvement in the consultation process.

Sincerely,

Gene L. Drais

Gene L. Drais, Manager
Egan Resource Area

4 Enclosures

1. Badger Springs
2. Wells Station - White River
3. North Steptoe - Antelope
4. South Butte - Butte HMA

BADGER SPRING ALLOTMENT (0823) EVALUATION SUMMARY

I. INTRODUCTION

The Badger Spring Allotment (0823) is comprised of 24,125 total acres, all of which are public. The preference is 1412 AUMs of sheep use with no AUMs in suspension. Season of use is from April 15 to November 30. The allotment is categorized as an "I" or improve selective management category allotment. The current permittee is Gracian Uhalde.

II. INITIAL STOCKING LEVEL

A. Livestock Use

The preference for the allotment is 1412 AUMs of sheep use with a season-of-use from spring through early winter (4/15 to 11/30). The three year average use listed in the Egan Resource Management Plan (RMP) and Rangeland Program Summary (RPS) is 473 AUMs per year of sheep use (calculated for 1979-81). Sheep use is primarily made when trailing south in the fall to winter range and particularly in the spring when the sheep are trailed north to summer range. Sheep are sheared at this time within the allotment.

B. WILD HORSE USE

The Badger Spring allotment is located in the northeastern portion of the Jake's Wash Herd Management Area (HMA). Of the total wild horse use for the herd area, the RPS objective for this allotment is to provide yearlong forage for 4 horses or 46 AUM's. Existing wild horse use is estimated at 72 AUM's or 6 horses yearlong.

Wild horse use areas within the allotment are seasonally defined with summer use occurring primarily on the Egan Range and fall, winter, and spring use occurring on the benchlands on the east side of Jake's Valley.

Determination of Wild Horse Actual Use

Wild horse census was flown in the Jake's Wash HMA on the following dates: March 1988, July 1988, and March 1990. Table I gives the actual number of wild horses counted in the Badger Spring allotment during aerial census of the Jake's Wash HMA.

Table I. Aerial Census of Wild Horses in Badger Spring Allotment

<u>Dates</u>	3/88	7/88*	3/90
<u>Census</u>	11	10*	6

* Post removal census conducted immediately after an emergency removal of 41 wild horses from Waldy Pond located just west of the allotment. The emergency removal was in response to 19 horses having been found dead due to lack of water at Waldy Pond and in the north half of Jakes Wash HMA.

The number of horses in the allotment at the time of census multiplied by 12 months/year equals the total AUM's. This is the formula by which actual use is derived. The total AUM figures in Table II serve as the best information available to determine actual use.

Table II. Wild Horse AUMs In Badger Spring Allotment

<u>Dates</u>	3/88	7/88	3/90
<u>AUMs</u>	132	120	72

C. WILDLIFE USE

The RPS objective for this allotment is to provide forage and habitat for reasonable numbers of wildlife, i.e. 306 AUMs for deer. Existing wildlife use listed in the RPS is 172 AUMs for deer. Mule deer from two NDOW Management Areas (MA), MA 12 and MA 22, utilize the allotment. It is believed that the majority of winter use is made by deer from MA 12, while mule deer from both management areas use the allotment during the summer. Since perennial water is non-existent on the Badger Spring Allotment, deer move north across Highway 50 to the Thirty Mile Spring Allotment to water in the Gleason Creek area. Mule deer numbers in this area of Nevada have declined in recent years due to the persistent drought. Fawn production, survival and recruitment to the population has been at static levels to declining for at least the last two years. The Nevada Department of Wildlife (NDOW) has not surveyed the allotment and a comprehensive wildlife count is not available (NDOW letter dated 1/10/92). Estimates of current wildlife numbers for the allotment from the Egan Area Wildlife Biologist are: 150 deer from 11/1 to 3/31 (149 AUMs) and 50 deer from 4/1 to 10/31 (70 AUMs). Total annual deer use equals 219 AUMs on the allotment.

There are 15 documented Ferruginous hawk nest sites on the allotment.

D. RIPARIAN

The 1982 Water Resource Inventory indicated that the Badger Spring Allotment had no water resource sites and thus no riparian areas.

III. ALLOTMENT PROFILE

A. Description

The Badger Spring Allotment is located in Jake's Valley approximately 15 air miles west of Ely. The allotment encompasses 24,125 acres, all of which are public. Elevation ranges from 6400 feet in Jake's Valley to 9200 feet in the Egan Range. The allotment runs to the ridge line of the Egan Range on its eastern boundary. On the west, the allotment extends into Jake's Valley where it is bounded by the Indian Jake and the Tom Plain allotments. The allotment borders the 30-Mile Spring allotment to the north and the Indian Jake allotment to the south. Also included within the western boundary of the Badger Spring allotment is the Jake's Unit Sheep Trail. The trail is approximately one mile wide and eleven miles long within the allotment. Since there are no permanent water sources within the allotment, water hauling is required. Sheep troughs and tanks have been placed throughout the allotment to facilitate watering. There are no allotment boundary fences at this time.

B. Temperatures

Temperatures vary considerably in the area with extremes of 100 degrees in the summer to -30 degrees in the winter with wind chill making it even colder. Average temperatures in the summer are 68 degrees Fahrenheit and 24 degrees Fahrenheit in the winter. Temperatures may vary daily as much as 45 degrees.

C. Growing Season

The growing season is short with approximately 100 frost-free days annually. In the valley and on the adjacent benches, spring growth normally begins in mid-March and continues through late May/early June. In the mountains, at higher elevations, growth is on the average of 30-45 days later. Heavy snowfall may occur in December/January ending the grazing season until spring.

D. Allotment Specific Objectives

1. Land Use Plan Objectives

a. Rangeland Management- "All vegetation will be managed for those successional stages which would best meet the objective of this proposed plan." (Egan Resource Area Record of Decision (ROD), p.3).

b. Wild Horses and Burros- "Wild horses will be managed at a total of 20 animals in the Jake's Wash Herd Use Area." (Egan ROD, p.6). (Note: The 20 animals identified above, as well as the 46 AUM's identified in the RPS is no longer a valid AML. The Interior Board of Land Appeals June 7, 1989 decision (IBLA 88-591, 88-638, 88-648, 88-679) ruled in part, "an AML established purely for administrative reasons because it was the level of wild horse use at a particular point in time cannot be justified under the statute" (Dahl vs. Clark, Supra at 595). The IBLA further ruled that the AML must be established through monitoring "in terms of the optimum number which results in a thriving natural ecological balance and avoids a deterioration of the range.") Actual wild horse numbers will be determined by this evaluation in conjunction with monitoring data to maintain a thriving natural ecological balance and prevent deterioration of the rangeland.

c. Wildlife- "Habitat will be managed for "reasonable numbers" of wildlife species as determined by the Nevada Department of Wildlife." (Egan ROD, p.6).

- "Reintroductions of big game species will be accomplished in cooperation with the Nevada Department of Wildlife, where such reintroductions would not conflict with existing uses and if sufficient forage is available." (Egan ROD, p.6).

- "Forage will be provided for "reasonable numbers" of big game as determined by the Nevada Department of Wildlife." (Egan ROD, p. 8).

d. Watershed- "Establish utilization limits to maintain watershed cover, plant vigor and soil fertility in consideration of plant phenology, physiology, terrain, water availability, wildlife needs, grazing system and aesthetic values." (Egan ROD, p.44).

2. Rangeland Program Summary Objectives

Range

a. "Provide forage for up to 473 AUM's of livestock use. Maintain or enhance native vegetation with utilization not to

exceed NRMH levels on key species. Maintain or improve current ecological condition of native range." Maximum utilization on native key species is 50%.

Wild Horses

b. "Initially manage rangeland habitat to support Appropriate Management Level (AML) of 4 horses in the Badger Spring Allotment as part of the Jake's Wash HMA. Provide forage for up to 46 AUM's of wild horse use." Actual wild horse numbers will be determined by this evaluation in conjunction with monitoring data to maintain a thriving natural ecological balance and prevent deterioration of the rangeland. (See note under III.D.1.b.)

Wildlife/Riparian

c. "Manage rangeland habitat and forage condition to support reasonable numbers of wildlife as follows: mule deer 306 AUM's." Utilization of key species will not exceed the levels listed in 2 a. above.

d. "Maintain or improve mule deer yearlong habitat to good or better condition." This is also accomplished by limiting utilization to the levels listed in 2 a. above.

e. "Protect Ferruginous hawk nest sites. Utilization on white sage flats within two miles of ferruginous hawk nest sites will not exceed 55%."

3. Key Species Identification

The key forage species in Badger Spring for sheep is winterfat (Ceratoides lanata). The secondary species are shadscale (Atriplex confertifolia), black sagebrush (Artemisia nova) and budsage (Artemisia spinescens).

Native perennial grasses and winterfat are key species for wild horses. However, all users will utilize perennial grasses during spring greenup. Indian ricegrass (Oryzopsis hymenoides) is the most preferred with Sandberg bluegrass (Poa secunda), bottlebrush squirreltail (Sitanion hystrix) and needle-and-thread grass (Stipa comata) as important secondary species. Forbs are critical to the diet of wildlife and provide important late spring/early summer forage but no species is present in sufficient quantity to be considered key.

The primary key species for mule deer is bitterbrush (Purshia tridentata) with snowberry (Symphoricarpos spp.) and serviceberry (Amelanchier utahensis) being secondary. In areas where preferred species are limited, mule deer utilize mountain big sage (Artemisia tridentata vaseyana).

The hills are dominated by singleleaf pinyon pine (Pinus monophylla) and Utah juniper (Juniperus utahensis).

IV. MANAGEMENT EVALUATION

A. Purpose

The purpose of this evaluation is to assess whether current multiple use management practices are meeting the multiple use objectives for the allotment and to determine the appropriate stocking level and management system for domestic livestock and appropriate management level for wild horses.

B. Summary of Studies Data

Monitoring studies were conducted on the allotment in 1991. The following tables illustrate precipitation data, use pattern mapping, actual use, estimated carrying capacity and recalculated livestock preference and wild horse AUMs.

1. Precipitation

Data from the National Oceanic and Atmospheric Administration weather station located at Ely is being used for this evaluation. The normal crop year precipitation for Ely for the period 1951-1980 was 7.75". Crop yield is the effective precipitation for plant growth. It is the "crop year" precipitation that is measured to compute yield indices. The crop year precipitation is measured from September of the previous year through June of the growth year in the Intermountain Big Sagebrush Region (Sneva et. al. 1983). Table II illustrates the yield index for Ely in 1991.

Table II. - Yield Index For Ely

Year	Crop Yield	Precipitation Index	Yield Index
1991	7.75	100%	100%

Annual precipitation varies from 7-12 inches. The general precipitation pattern is one of limited moisture, yet moisture is normally available during the growing season. There is a slight increase in precipitation with a rise in elevation. Much of the total precipitation occurs during the winter months in the form of snow.

1. Use Pattern Mapping Summary - acres and percent of the allotment by use category.

Year	<u>Slight</u> (1-20%)	<u>Light</u> (21-40%)	<u>Moderate</u> (41-60%)	<u>Heavy</u> (61-80%)	<u>Severe</u> (81-100%)
1991	13284 (55%)	10011 (42%)	830 (3%)	0	0

2. Estimated Actual Use Summary (AUM's)

Year	<u>Sheep</u>	<u>Wild Horses*</u>	<u>Deer**</u>
1991	690	72	219

* Wild horse AUMs for Badger Spring allotment taken from latest census of the Jake's Wash HMA (March 1990).

** Deer AUMs are an approximation supplied by the Egan Area Wildlife Biologist since NDOW would not provide them.

3. Livestock, Wildlife and Wild Horse Estimated Carrying Capacity

Year	<u>Actual Use(AUMs)</u>	<u>Measured Util.(%)*</u>	<u>Yield Index</u>	<u>Adjusted Util.(%)</u>	<u>Desired Use(%)</u>	<u>Desired AUMs**</u>
1991	981	28%	1.00	28%	50%	1752

*The 28% measured utilization was the highest use recorded on a transect in a key area within the allotment using the Key Forage Plant Utilization Method.

**The "Desired AUMs" are calculated using the following formula:

$$\frac{\text{Actual Use (AUMs)}}{\text{Adjusted Util. (\%)}} = \frac{\text{Desired Use (AUMs)}}{\text{Desired Use (\%)}}$$

4. Recalculated Livestock Preference and Wild Horse AUMs

Supply: Desired Aums1752 Aums

Demand: Adjudicated Preference1412 Aums
 Wild Horses (last count: 3/90).....72 Aums
 Deer219 Aums
 Total.....1703 Aums

Surplus:49 Aums

Increase: 2.8%

At the present time, there are no trend studies established on the allotment and thus no information is available.

V. CONCLUSIONS

A. LAND USE PLAN OBJECTIVES

III.,D.,1.,(a) - Met

Rationale: Short term utilization is within the allowable use levels, therefore, the existing successional stages are being maintained.

III.,D.,1.,(b) - Met

Rationale: Proper utilization levels are being achieved in areas where wild horses are present and the thriving natural ecological balance of the range is being maintained.

III.,D.,1.,(c) - Met

Rationale: Allowable use levels are not being exceeded in areas used by mule deer.

III.,D.,1.,(d) - Met

Rationale: Allowable use levels are not being exceeded on key species within the allotment.

B. Rangeland Program Summary Objectives

Range

III.,D.,2.,(a) - Met

Rationale: Utilization on key species are within NRMH guidelines and the current ecological condition of the range is being maintained.

Wild Horses

III.,D.,2.,(b) - Met

Rationale: Monitoring studies indicate that the rangeland habitat is adequate to support Appropriate Management Levels (AML) of wild horses at existing numbers (6 horses or 72 AUMs).

Wildlife

III.,D.,2.,(c) - Met

Rationale: Deer habitat is in the appropriate condition and providing for at least "reasonable numbers" of deer.

III.,D.,2.,(d) - Met

Rationale: Allowable use levels are not being exceeded in areas used by mule deer.

III.,D.,2.,(e) - Met

Rationale: Utilization on white sage flats within two miles of ferruginous hawk nest sites do not exceed proper use.

VI. Technical Recommendations

A. Problem

There are no resource problems or conflicts on this allotment at this time. All resource objectives are being met.

B. Solutions

1. Short Term - Long Term Solutions/Options

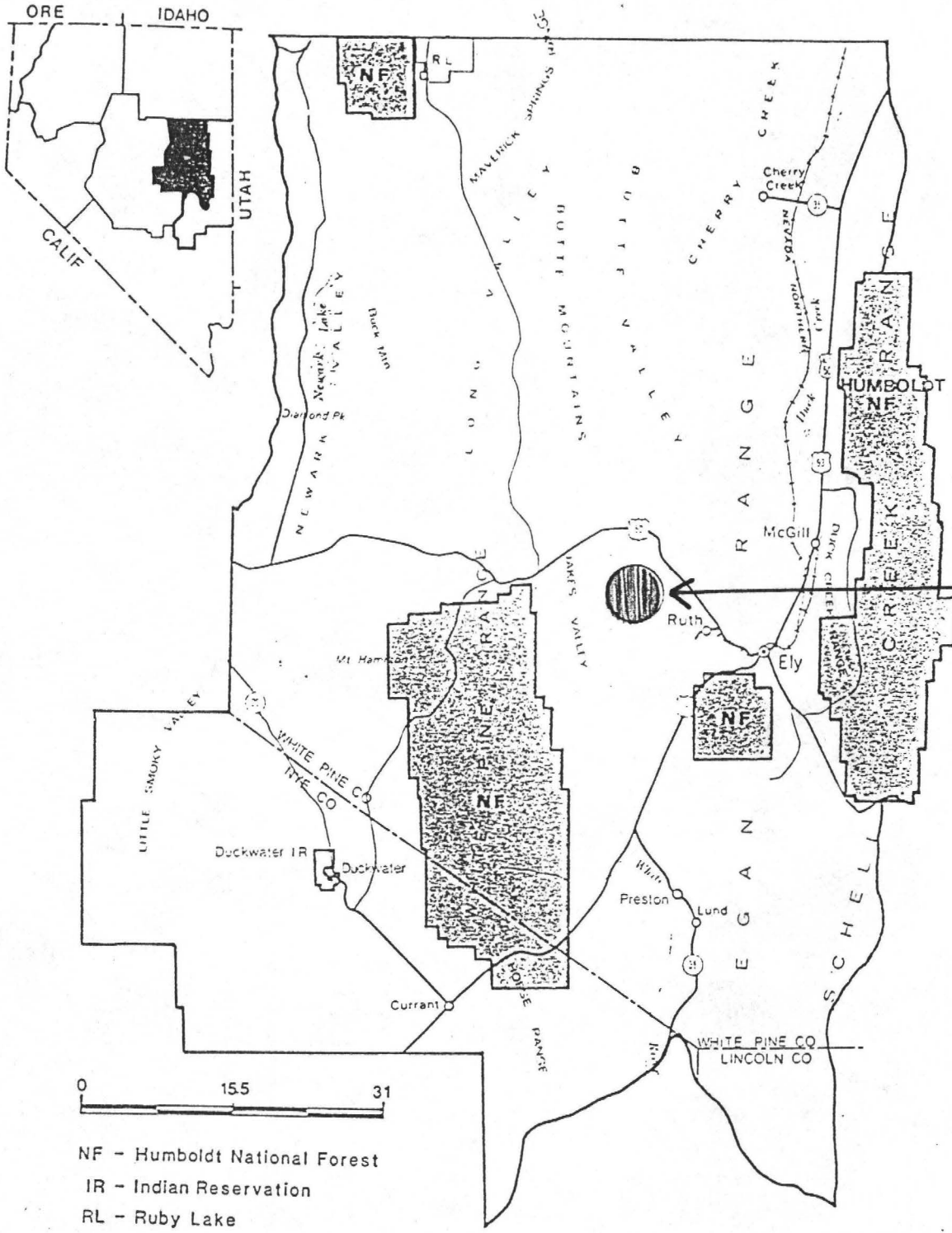
Total demand by livestock (1412 AUMs), wild horses (72 AUMs) and deer (219 AUMs) are within the desired limits for the allotment. A surplus of 49 AUMs is less than 3% of the total demand and is not considered sufficient to allow an increase in livestock preference or wild horse AML based on one year's utilization and use mapping. Additional monitoring data will be collected prior to the third and fifth year reevaluations to determine the final proper stocking rate for livestock and the wild horse AML. Therefore, the livestock preference will remain unchanged at 1412 AUMs and the wild horse AML is established at 72 AUMs for the allotment, or 6 horses yearlong

2. Additional Monitoring Data Required

Continue to conduct key forage plant utilization on key areas every 2-3 years to ensure correct stocking rates and utilization by wildlife and wild horses.

Continue to monitor sheep, wild horse and wildlife actual use.

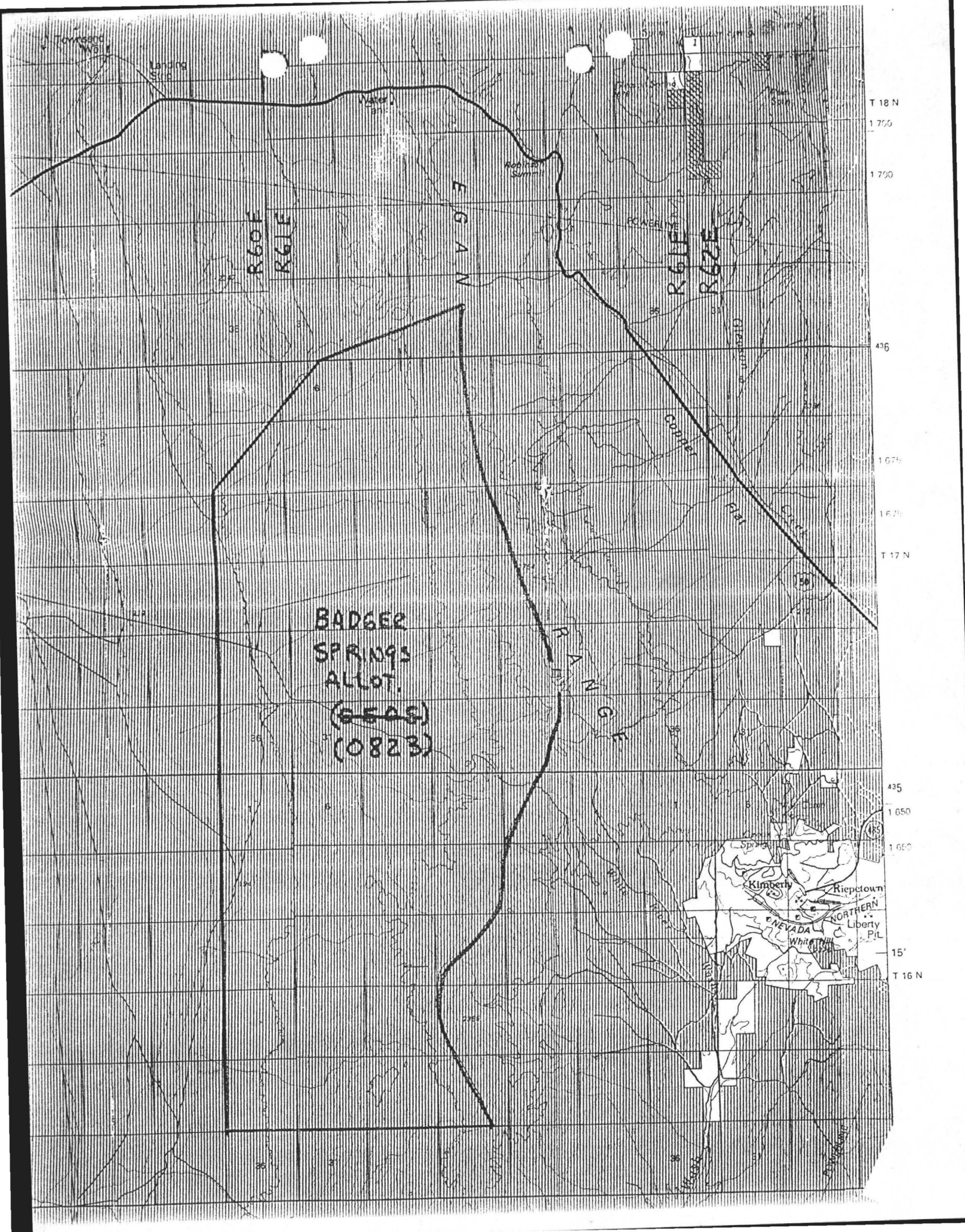
Establish frequency trend study(s) and ecological status on the native range as funding and manpower permits.



BADGER
SPRING
ALLOTMENT
(0823)

EGAN RESOURCE AREA LOCATION MAP

having been found near the 10 mile of water - in the hills of TARDIS WAMILL



BADGER
SPRINGS
ALLOT.
(6543)
(0823)

Kimberly
Riepetown
NEVADA
NORTHERN
Liberty
PIL
White Pine

T 18 N
1750
1700
436
1075
1675
T 17 N
435
1650
1600
15'
T 16 N