

MASSACRE LAKES  
HERD MANAGEMENT AREA PLAN

Surprise Resource Area  
Susanville District  
1985

## INTRODUCTION

### A. Location

The Massacre Lakes Herd Management Area (HMA) lies in northern Washoe County, Nevada, approximately 30 miles east of Cedarville, California (see Map #1). The HMA is within the boundaries of the Massacre Lakes and Sagehen Allotments and encompasses 40,730 acres of which 39,959 acres are BLM, 471 acres are private and 300 acres are Washoe County.

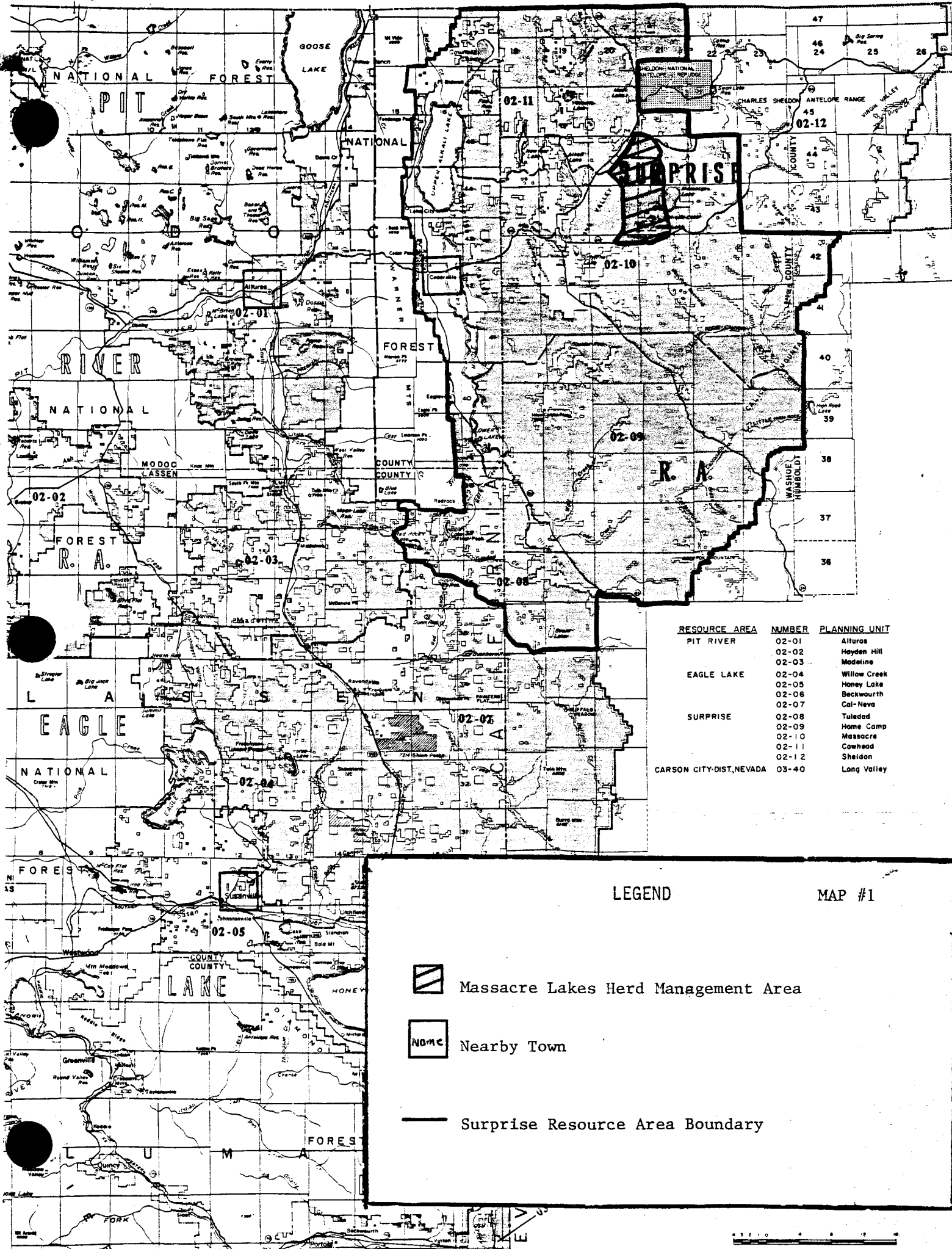
The northwestern boundary is a rim, the northern most boundary is the Sagehen-Board Corral Allotment fence, the eastern boundary is the Massacre Lakes-Nut Mountain Allotment fence, the western boundary is the Massacre Lakes-Little Basin Allotment fence and rim and the southern boundary is the pasture division fence in Massacre Lakes Allotment paralleling Nevada Highway 8A (see Map #2).

The area is situated in an interior basin without an outlet. The northern two-thirds of the area has a gentle slope with a south aspect, which is dissected by shallow, poorly defined drainage courses. The southern third of the area is comprised of two shallow alkali lakes with the surrounding uplands which have been seeded to crested wheatgrass. The elevation ranges from 5600 to 6800 feet.

### B. Wild Horse Use History

The original Massacre Lakes HMA encompassed the new Massacre Lakes HMA, and the Bitner HMAs. The two units are separated by an existing allotment boundary fence built in 1964 (see Map #3).




The Susanville District Wild Horse and Burro Plan provides a general history of wild horses in the District. Appendix A provides a brief summary of past and present wild horse numbers in the current Massacre Lakes HMA.



RESOURCE AREA	NUMBER	PLANNING UNIT
PIT RIVER	02-01	Alluros
	02-02	Hayden Hill
	02-03	Madeline
EAGLE LAKE	02-04	Willow Creek
	02-05	Honey Lake
	02-06	Beckwourth
	02-07	Cal-Neva
SURPRISE	02-08	Tulead
	02-09	Home Camp
	02-10	Massacre
	02-11	Cowhead
	02-12	Sheldon
CARSON CITY-DIST, NEVADA	03-40	Long Valley

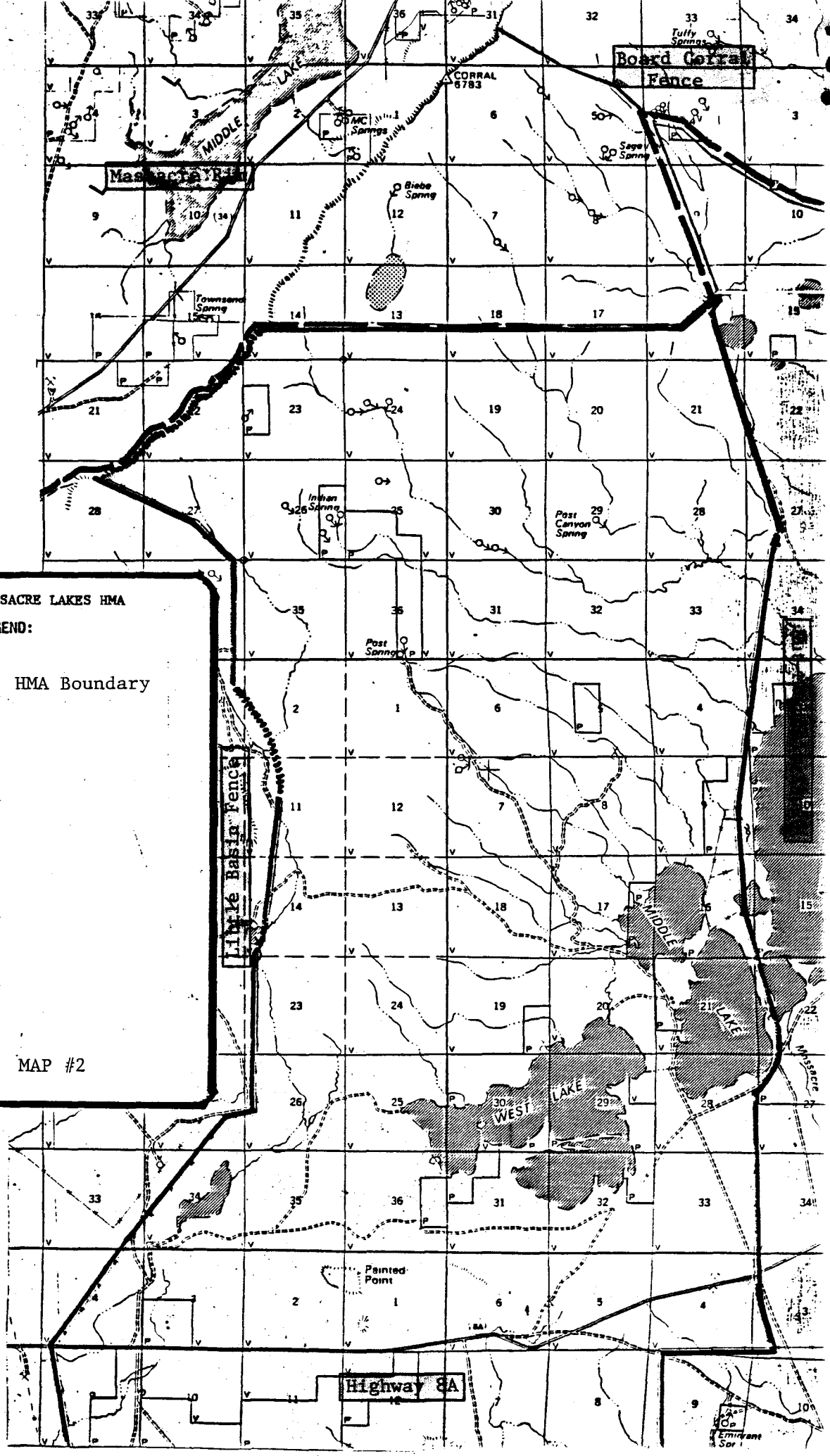
LEGEND

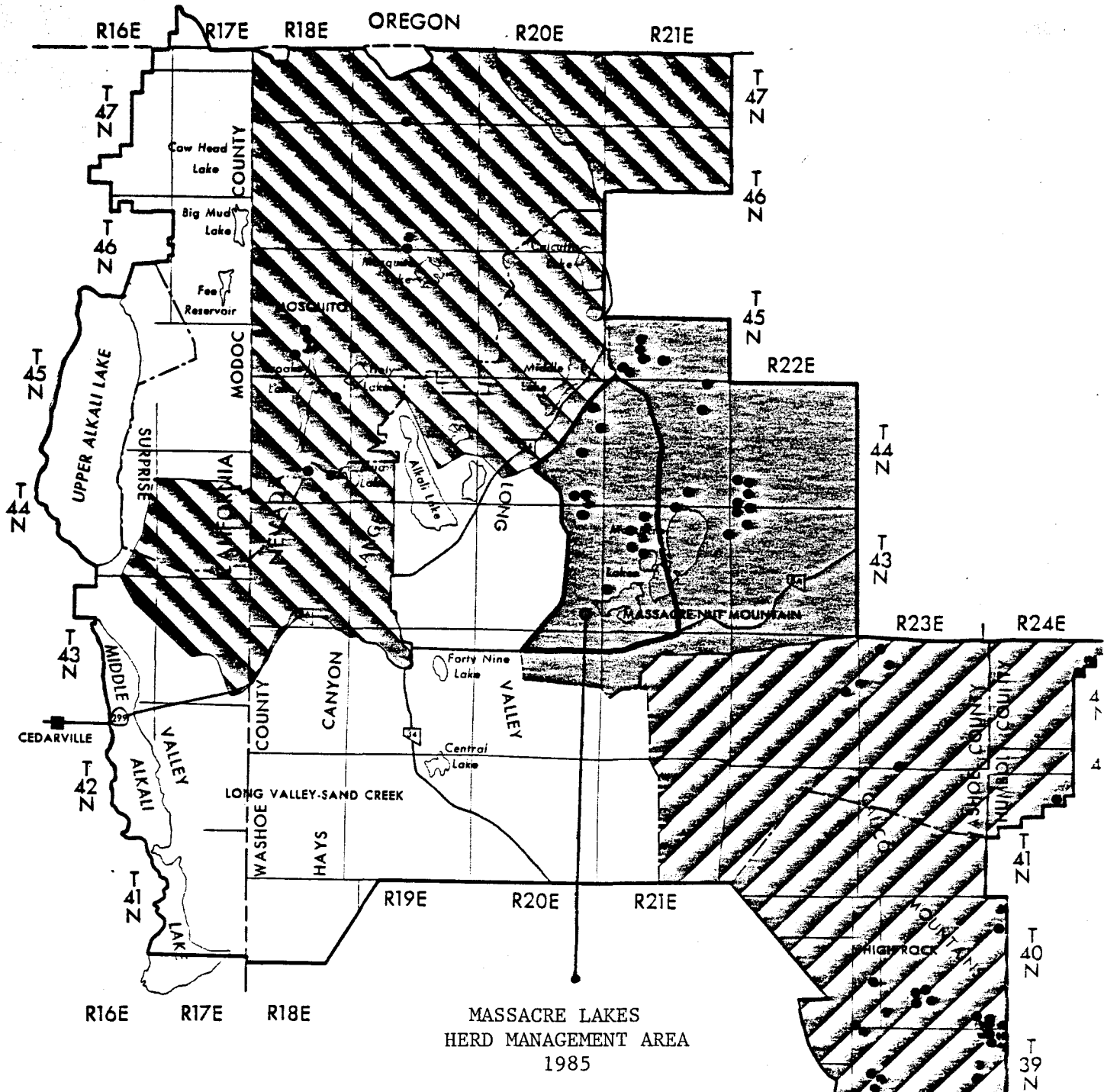
MAP #1

-  Massacre Lakes Herd Management Area
-  Nearby Town
-  Surprise Resource Area Boundary



MASSACRE LAKES HMA  
 LEGEND:  
 HMA Boundary  
 MAP #2





- LEGEND**
- Study Area Boundary
  - Sub Unit Boundaries
  - Herd Management Areas**
  - New Years Lake
  - Massacre Lakes
  - High Rock
  - Band Locations  
September 1977

COWHEAD/MASSACRE  
STUDY AREA  
GRAZING ENVIRONMENTAL STUDY  
WILD HORSES

## RESOURCE INFORMATION

### A. Land Use Plan

The Cowhead/Massacre Environmental Impact Statement was completed in 1980. Land use decisions were formed from this Environmental Statement through the Cowhead/Massacre Management Framework Plan (MFP) in April 1981. The MFP established a minimum herd number of 10 and a maximum of 20.

Due to the small size of this herd, any stocking rate reductions determined through monitoring in the Massacre Lakes area would be taken by livestock. Any increases in stocking rate would be given to livestock up to the total preference for livestock. Any increases above total preference would be shared proportionately between wild horses and livestock.

### B. Wild Horses

The Massacre Lakes HMA provides sufficient yearlong range for management levels specified in the MFP. Summer and winter range in this area has a considerable amount of overlap. Most of the summer use occurs on the higher elevation low sagebrush-juniper sites. The winter use occurs on the lower elevation low sagebrush sites and on the crested wheatgrass seedings surrounding West and Middle Lakes (see Map #4).

The interaction of wild horses between the Bitner HMA, Bitner Butte HMA (Sheldon) and Massacre Lakes is suspected. This is inspite of the existing fences throughout the three HMAs. Any interchange which is occurring is believed to take place during the winter. The natural tendency for wild horses is to move toward the lower elevations surrounding the Massacre Lakes. The degree of interchange should be minimal while herds are at the proper management levels.

### C. Other Resources

The Massacre Lakes HMA encompasses the entire Sagehen Allotment and a large portion of the Massacre Lakes Allotment. This area is part of the Massacre Bench Wilderness Study Area 1013 and the Massacre Bench Cultural Resource Management Area.





In addition to livestock, wilderness and cultural values the area also provides habitat for typical Great Basin wildlife species. The most notable game species is antelope, which occupy the area yearlong. Deer and sage grouse are also prominent in the area.

The vegetation in the area is typical for the Great Basin with the exception of the areas seeded to crested wheatgrass.

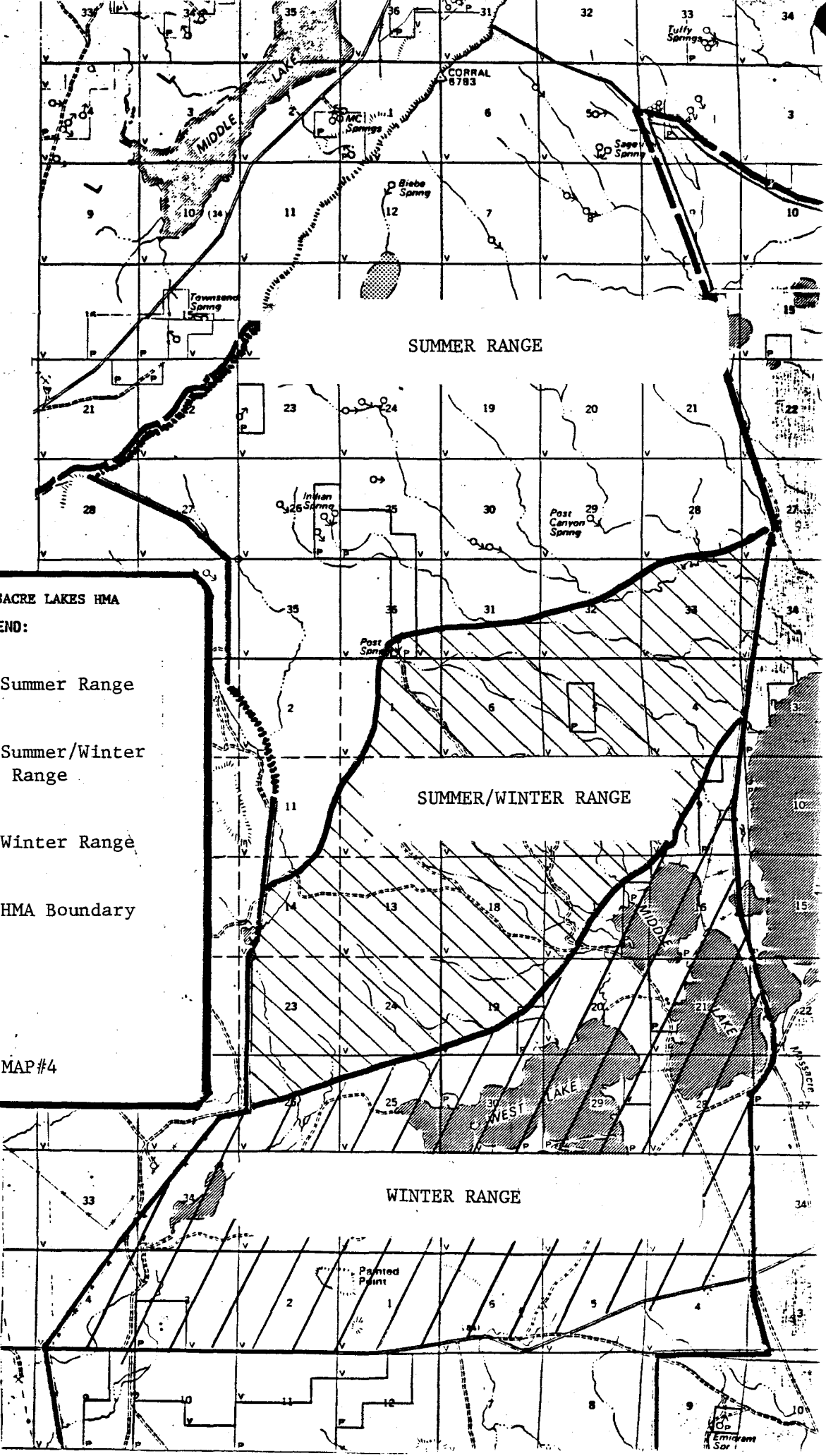
Additional resource information and maps are provided in Appendix B.

**MASSACRE LAKES HMA**

**LEGEND:**

-  Summer Range
-  Summer/Winter Range
-  Winter Range
-  HMA Boundary

MAP #4



## OBJECTIVES

1. Maintain a healthy and viable wild, free-roaming horse herd in the Massacre Lakes HMA.

Method: Control herd numbers while implementing the Massacre Lakes AMP so as to maintain the vegetative base in a healthy stable condition.

Monitor: Herd reproduction levels will be used as an indicator of health and viability. A rate of increase at or below 10% will be an indicator of low herd health and viability. In addition, vegetative trend will be monitored to evaluate vegetative condition.

2. Maintain a minimum of 10 head and a maximum of 20 head of wild horses.

Method: Periodic removal of horses through accepted gathering methods.

Monitor: Bi-annual inventory of the herd will be made to determine herd size.

3. Assess the amount of wild horse interchange between the Massacre Lakes and Bitner HMAs in the Surprise Resource Area and the Bitner Butte Herd of the Sheldon NWR.

Method: Mark a small percentage of the horses in all three HMAs with color coded plastic collars for observation.

Monitor: Bi-annual inventory of wild horses in each of the HMAs.

4. Develop a highly adoptable horse through the selection of desirable breeding animals.

Method: Gather all wild horses (when possible) when reducing the herd to the minimum number (10). Select from the captured horses for those characteristics which improve adoptability. Return these horses to the HMA.

Monitor: Adoptability will be based on number of attempts required to adopt a horse compared with other HMA horses.

5. Reduce the incidence of inbreeding in the Massacre Lakes herd.

Method: Introduce new horses into the herd from other wild, free-roaming horse herds on those years when the herd is gathered.

Monitor: Viability as determined by rate of increase will be the primary indicator. Visual observations of conformation may also indicate inbreeding problems.



## MANAGEMENT METHODS

### Removal

The Massacre Lakes herd will be gathered when adult horse numbers reach or exceed 20 head. The herd would be reduced to the minimum management level of 10 horses including foals selected for retention. (Foals do not count toward maximum numbers until January 1 following the spring in which they were born.) It is anticipated gathering will need to be completed once every three years.

Horses in addition to the excess will be gathered when possible to allow for the selection of animals based on size, color, sex, conformation and age.

Wild horses will be gathered during the summer or the fall once foals are old enough to keep up with the herd. Trap site locations can be seen on the trap site map (see Map #5).

### Selection

Wild horses in addition to the excess will be gathered to facilitate the selection process. This will allow the manager to upgrade the herd in an orderly manner. Those horses meeting the selection criteria will be returned to the breeding population.

### Criteria

#### 1. Quality

Quality will be based on the commonly accepted conformation standards for a light horse type, without regard to a particular breed.

#### 2. Color

All colors will be acceptable in this herd. Some paint horses will be selected for return into the herd.

Dark or black hooves will be preferred over light or white hooves.

#### 3. Size

A fifteen hand or taller horse is preferred.

Selection criteria will be applied in order to quality, color and size.

It is assumed, the use of specific conformation, color and size selection criteria will allow for the development of a more adoptable horse.

### Sex Ratio

The commonly accepted natural sex ratio of 50% male and 50% female will be managed for in the Massacre Lakes HMA herd. When gathering an equal number of males and females will be removed from the herd.

### Age Structure

An exact age structure will not be managed for in this HMA. However, when possible those horses which are less adoptable due to old age will be left on the HMA to live out their natural life.

### Interchange

In order to ascertain the degree of interchange between the Massacre Lakes, Bitner and Bitner Butte HMAs, horses will be marked with color coded plastic collars. Two horses per HMA will be collared to monitor herd movements in each of the HMAs. A small amount of interchange might be beneficial in terms of gene flow, however, a large amount of interchange could result in wild horse concentrations in a relatively small forage area.


### Inbreeding

The Massacre Lakes Herd is very small. Care must be taken to avoid severe inbreeding problems. Wild horses will be introduced on gather years to add new blood to the gene pool. New horses should be introduced on those years when the herd is gathered.

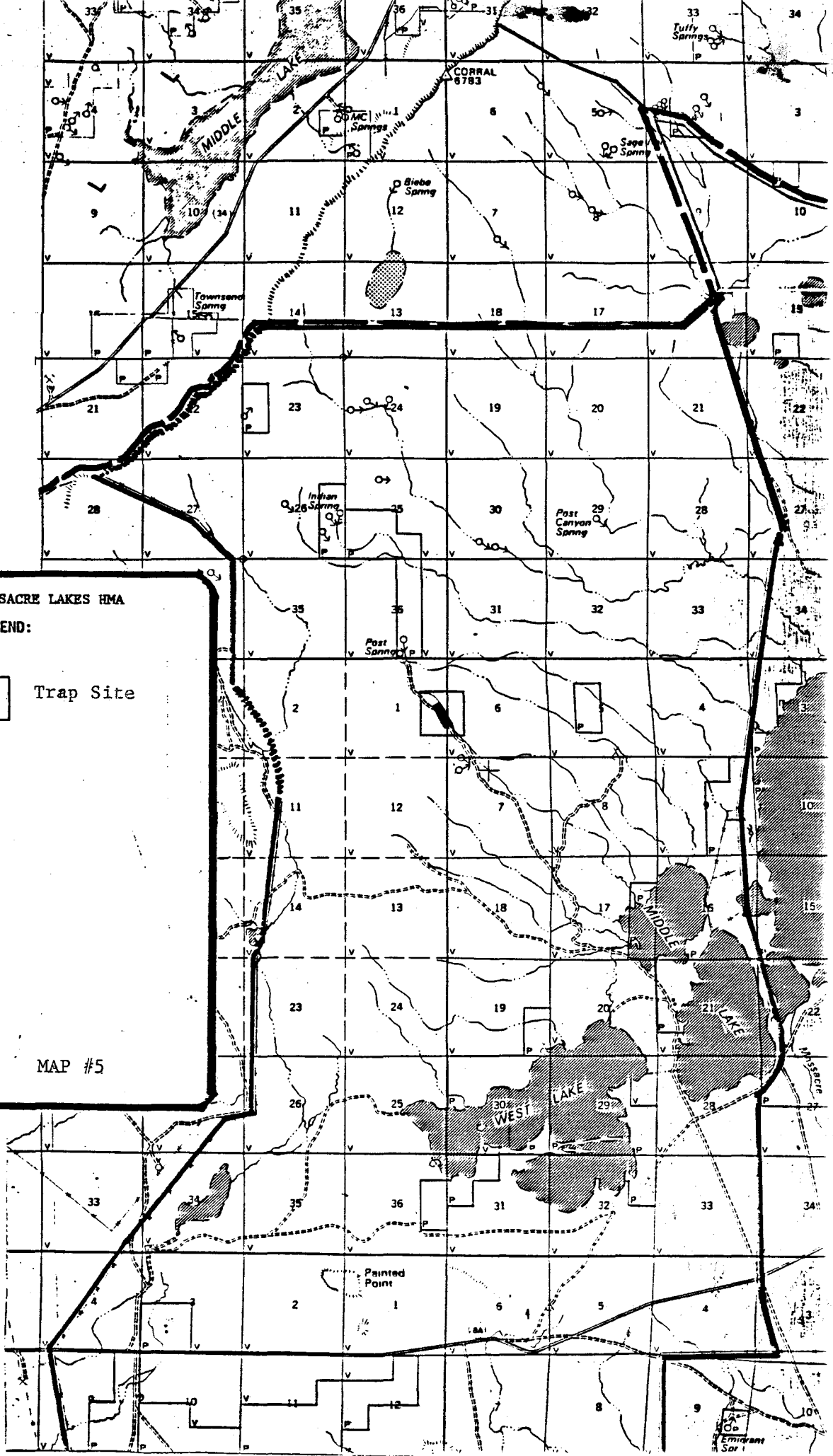
### Project Development

A need for specific projects has not been determined for wild horses in this HMA. During the summer months all of the livestock water developments are available to wild horses. During the winter months more than adequate water is available to wild horses from springs, reservoirs and lakes. Seven additional livestock reservoirs are planned for development in summer range of this HMA. These developments will benefit wild horses. Map #6 of this Section identifies existing and proposed water developments.

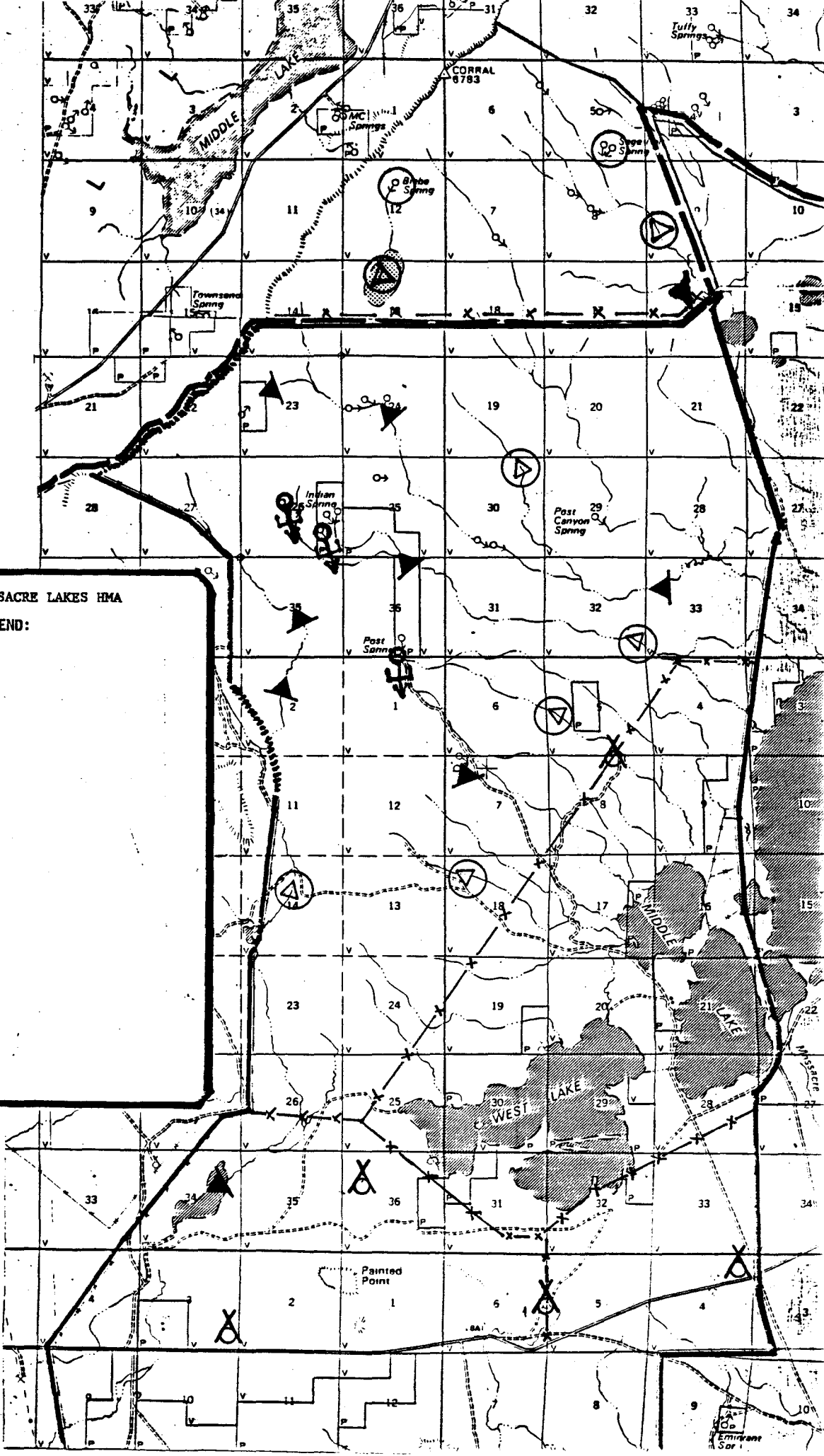
**MASSACRE LAKES HMA**  
**LEGEND:**

 Trap Site

MAP #5



**MASSACRE LAKES HMA**  
**LEGEND:**



## EVALUATION AND REVISION

### A. Evaluation

Management methods as they relate to achieving the HMA's objectives will be evaluated based on the following monitoring techniques.

1. Rate of increase will be measured on the gather years. Reproduction information can best be gathered at this time. Bi-annual aerial counts of herds will assist in achieving an accurate rate of increase for the herd.
2. Visual observations of horses in the field, trap site or the corrals. These observations will enable observers to evaluate whether selection criteria is achieving conformation, color and size objectives. In addition, these observations may indicate inbreeding problems.
3. The tracking of horses through the adoption program by HMA will allow for the evaluation of selection criteria for the improvement of adoptability.
4. Bi-annual aerial counts and observations will allow for the evaluation of wild horse interchange between HMA boundaries. An aerial count in the winter and in the summer will be necessary to evaluate this problem.

Information will be recorded in Appendix C of this document.

### B. Revisions

Upon completion of annual evaluations minor revisions may be made to simplify the Plan or correct specific problems. Major revisions will be necessary if the Plan is not working as written or if reasonable progress towards objectives is not being made.

## COOPERATION IN MANAGEMENT

Coordination with adjacent Herd Management Areas in the Surprise Resource Area and with the Sheldon National Wildlife Refuge (NWR) will be necessary. Presently, we believe there is some interchange of wild horses from and to the Massacre Lakes HMA. The bi-annual monitoring of this herd will enable the manager to determine the extent of this interchange. Should it be significant, control measures may have to be taken. These measures may be coordinated gathering and fence maintenance between the Susanville District and the Sheldon NWR.

Evaluation and revisions of all resource management plan (Wildlife Habitat, Cultural Resources, Allotment and Herd Management Plans) in this area will be coordinated to ascertain the effects on each resource. This coordination process must take place prior to finalizing revisions to any of the plans.

## IMPLEMENTATION COSTS

The following specific actions and costs will be required to implement the Massacre Lakes HMAP. Specific actions will be broken into three categories; project development, annual costs and every three year costs.

1.	<u>Project Development</u>	<u>\$ Cost</u>
	Offset Fence Panels (2 - @ \$147/each)	294.00
	TOTAL	294.00
2.	<u>Annual Monitoring</u>	
	2 Hours of flight time (@ \$150/hour)	300.00
	.15 WM to record data track adoptability	525.00
	TOTAL	\$ 825.00
3.	<u>Every Three Years</u> <sup>1/</sup>	
	Selection, Adoption	
	Capture 21 horses (@ \$250/each)	5,250.00
	Select 10 horses for return to HMA (@ \$50/each)	500.00
	Adoption of 11 horses	
	Processing (@ \$38/each)	418.00
	Adoption (@ \$180/each)	1,980.00
	Fixed & Overhead (@ \$145/each)	1,595.00
	TOTAL	\$9,743.00

1/ It is anticipated this herd will be gathered every three years based on the current rate of increase of wild horses in this area.

APPROVAL

I, the undersigned, have reviewed this Herd Management Area Plan and agree it meets the elements of the Land Use Plan Decisions for wild, free-roaming horses in the Surprise Resource Area. This Plan is consistent with and subject to all provisions of the Code of Federal Regulations (43 CFR 4700).

\_\_\_\_\_  
Area Manager

\_\_\_\_\_  
Date



APPENDIX A

The 1973 inventory depicted 116 wild horses in the old Massacre Lakes HMA. This inventory area covered the existing Massacre Lakes and Bitner HMA and the former Board Corral HMA.

Utilization and capacity data were used in establishing the following MFP management levels.

	<u>Minimum</u>	<u>Mid-point</u>	<u>Maximum</u>
Bitner	15	20	25
Massacre Lakes	10	15	20
Board Corral <sup>1/</sup>	<u>--</u>	<u>--</u>	<u>--</u>
	25	35	45

In August, 1984 138 wild horses were removed from the Board Corral and Massacre Lakes areas. Ten horses were left in the Massacre Lakes HMA. Seventy-three (73) wild horses were removed from the Bitner HMA. Thirteen (13) wild horses were left in the Bitner HMA.

10  
13

The following forms will describe wild horses removed from and returned to the HMA.

1/ Due to harsh conditions which contributed to high annual winter kill, the Board Corral HMA was determined to be a nonviable HMA under the existing situation.

## RESOURCE INFORMATION

### Physical Features

The Allotment is situated in an interior basin without an outlet. The north half of the Allotment has a long gentle slope with a south aspect and dissected by shallow, poorly defined drainage courses. The center of the Allotment is comprised of seasonal, alkali lake beds and very gently sloping to nearly flat upland with slight drainage toward the center of the Allotment. The elevation ranges from 5600 feet to over 6800 feet.

The precipitation falls primarily as winter snow, but spring and summer showers have a significant effect on forage production and plant reproduction. The average annual precipitation within the Allotment ranges from about eight inches at the south end to twelve inches at the north end with very significant variations from year to year.

Wind velocities are high during the spring of the year and temperatures range from several degrees below 0°F. in the winter to more than 100°F. in the summer.

### Land Status and Livestock Carrying Capacity

The area is surrounded by public domain with a small percentage of intermingled private lands.

The acreage and carrying capacities of the different ownerships are shown in Table 1.

TABLE 1

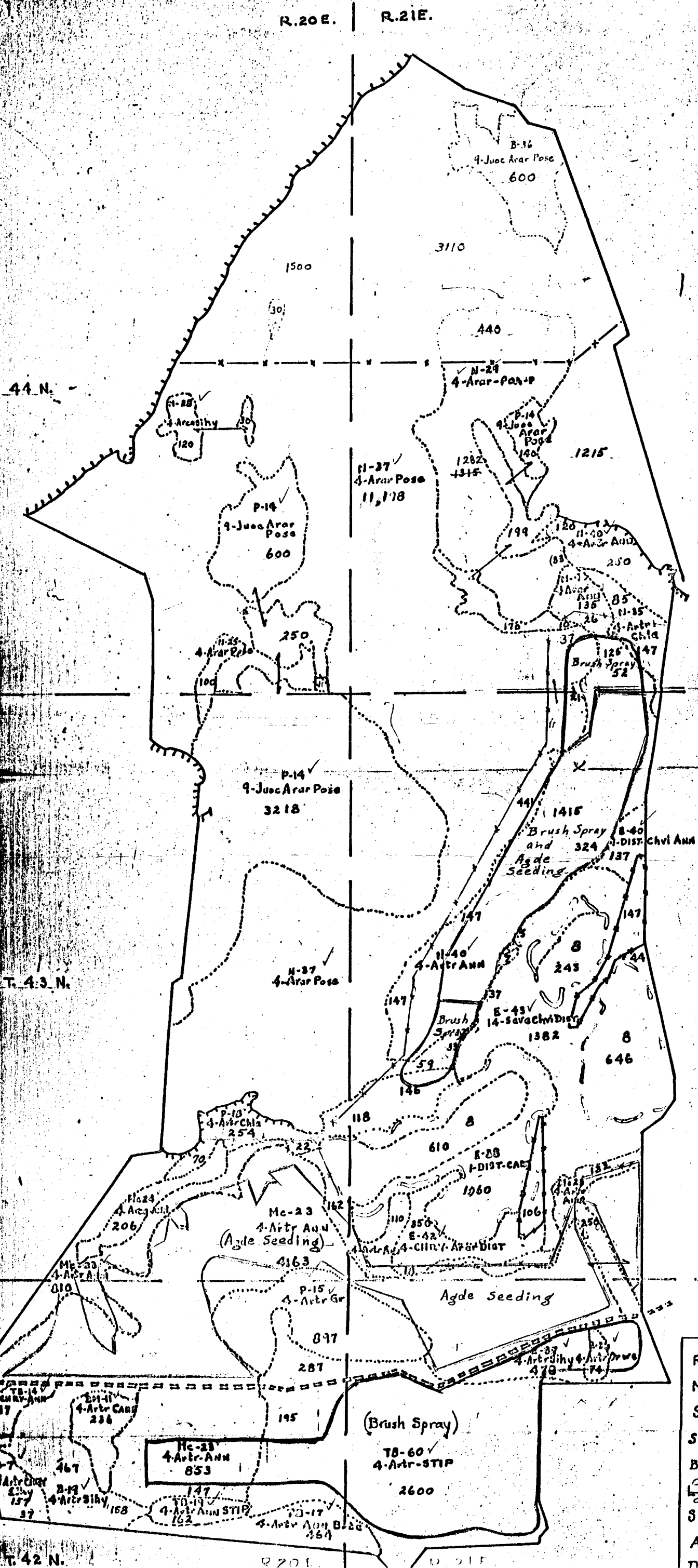
#### Ownership Status and Carrying Capacities

<u>Owner</u>	<u>Acres</u>	<u>Livestock AUMs</u>
Public Domain	45,054	3,422
Laxague, John	107	5
Washoe County	80	7
Other non-licensees	1,344	64
Lartirigoyen	20	1
State of Nevada	300	16
TOTALS	48,192	3,515

R.20 E.

R.21 E.

T.44 N.



ATTACHMENT #2

Range Type Map  
 Massacre Lake Allotment  
 Surprise R. M. A.  
 Susanville District  
 Bureau of Land Management  
 CAL-VISTA RANCHES  
 Les Hatchens - Operators  
 CHARLES MAX  
 Scale: 1 inch = 1 mile  
 Acres: 40,800 Approx  
 Date: October 1971

## Vegetation

The major vegetative types, acreage and carrying capacity are listed below:

<u>Vegetation Type</u>	<u>Acres</u>	<u>Livestock AUMs</u>
4-Artr-GR (Big sage-native grasses)	920	42
4-Artr-Orwe (Big sage-ricegrass)	76	3
4-Artr-Sihy (Big sage-squirreltail)	491	14
4-Artr-STIP (Big sage-needlegrass)	495	24
4-Artr-Sihy (Big sage-squirreltail)	480	13
4-Artr-CARE (Big sage-sedge)	242	15
4-Artr-CHRY-Sihy (Big sage-rabbitbrush-squirreltail)	161	4
4-CHRY-ANN (Rabbitbrush-annuals)	151	4
8-Seasonal Flooding (bare)	1,537	0
4-Arca-Sihy (Silver sage-squirreltail)	154	6
9-Juoc-Arar-Pose (Juniper-low sage-bluegrass)	5,293	413
4-Arar-POA (Low sage-bluegrass)	1,754	159
4-Arar-Pose (Low sage-Sandberg bluegrass)	17,334	821
4-Arar-Ann (Low sage-annual)	910	28
4-Arar-Pose (Low sage-Sandberg bluegrass)	102	8
4-Arar-Ch1a (Low sage-rabbitbrush)	476	17
1-DIST-Chvi-ANN (Saltgrass-rabbitbrush-annuals)	140	9
14-Save-Chvi-DIST (Greasewood-rabbitbrush-saltgrass)	1,410	62
1-DIST-CARE (Saltgrass-sedge)	1,088	53
4-CHRY-Arar-DIST (Rabbitbrush-low sage-saltgrass)	377	11
4-Artr-ANN (Big sage-annuals)	2,401	74
4-Arca-Ann (Silver sage-annuals)	211	8
1-STIP-Eltr-Orwe-Orhy (Spray area)	5,328	703
1-Agde-Eltr (Seedings)	4,919	492
TOTALS	48,192	3,515

The vegetative composition by broad classes for the Allotment is as follows:

Grass	50%
Forbs	11%
Shrubs	38%
Trees	1%

This composition varies considerably from pasture to pasture. The density of ground cover ranges from about 35% on the poorest native range to approximately 55% on the range seedings. The key species for the area are desert wheatgrass (Agropyron desertorum) on Pastures II, IV, & V (seedings) and Thurber's needlegrass (Stipa thurberiana) and squirreltail (Sitanion hystrix) in Pasture I.

Rubber rabbitbrush (Chrysothamnus nauseosus) is the principal invader and occurs primarily on disturbed areas in Pasture III. Rabbitbrush and sagebrush (Artemisia spp.) invasion is also occurring in the southwest portion of Pasture IV. Western juniper (Juniperus occidentalis) is an invader in the northwest portion of Pasture I.

A poisonous lupine (Lupinus argenteus) is found in Pasture IV. Approximately twenty (20) head of cattle died as a result of poisoning in late May and early June 1981.

## RESOURCE VALUES

### Livestock

Two cow/calf operations use the the Allotment in common from April 16 to September 15. The area is licensed for 643 animal units active and has a Class I potential for 803 animal units.

<u>Permittee</u>	<u>Active</u>	<u>Suspended</u>	<u>Total</u>
Laxague	1,588	397	1,985
Erquiaga	<u>1,626</u>	<u>406</u>	<u>2,032</u>
TOTAL	3,214	803	4,017

### Cultural Resources

Archaeological values are concentrated around the shoreline and dunes of the Massacre Lakes system, consisting of a complex of large, lowland village sites, several of which have apparently been occupied for ca. 8,000 years. Livestock trampling in their vicinity at present is extremely diffuse owing to the lack of feed, and does not significantly threaten the sites. Vandalism is a much more serious problem; this will be addressed in a Cultural Resource Management Plan (CRMP) to be developed for the Massacre Lake basin.

A segment of the Lassen-Applegate Emigrant Trail crosses the southern periphery of the Allotment. All of the upland springs in the Allotment's northwest corner host seasonal temporary camps, and one of them has an important petroglyph series.


### Wilderness


The northern half of the Massacre Lakes Allotment is part of Wilderness Study Area 1013 (see Maps).

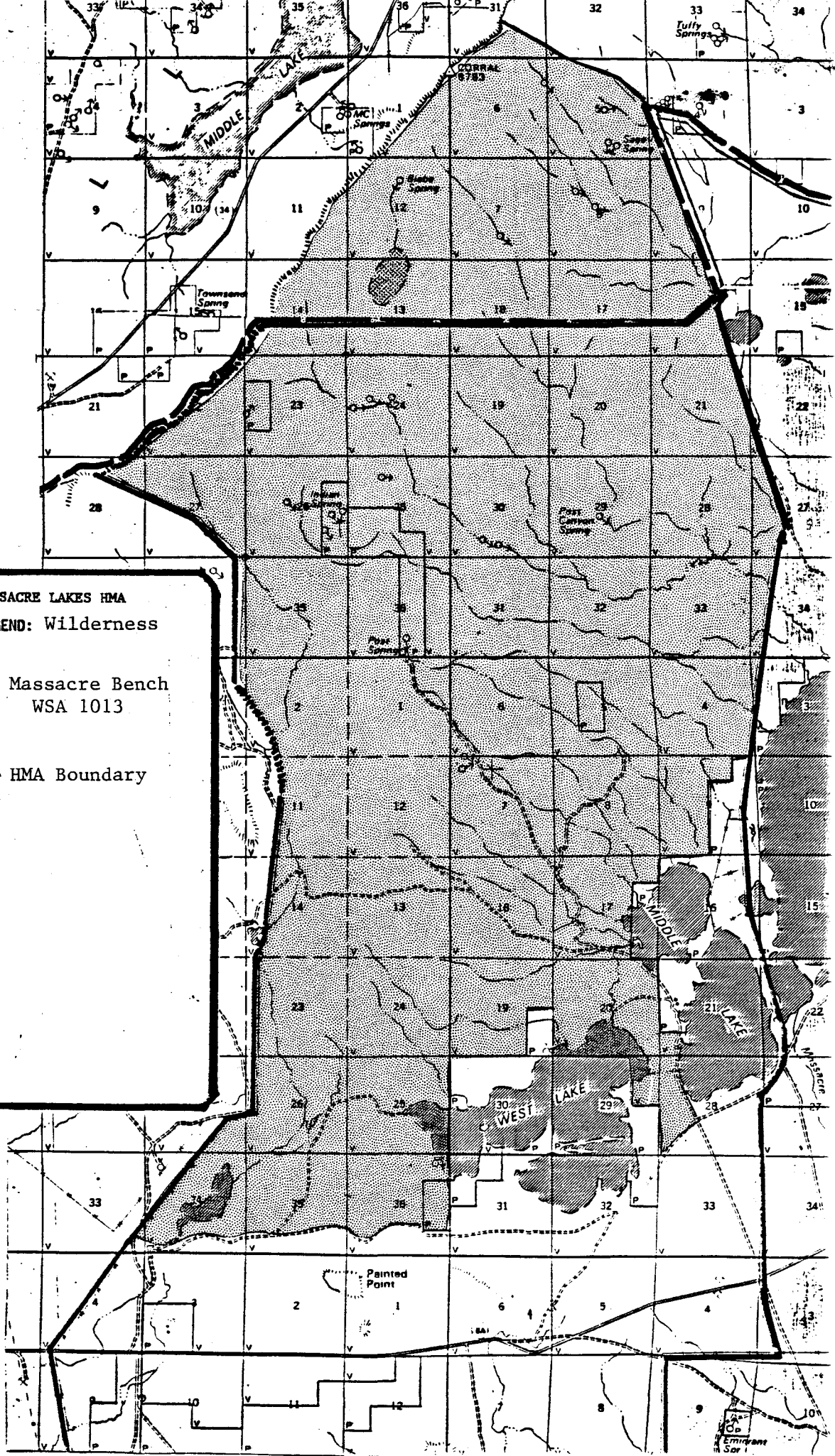
### Wildlife Values

The Massacre Lakes area contains significant wildlife values. These values are concentrated on the Massacre Bench encompassing the northern two-thirds of the area. Deer and antelope habitat and densities are relatively high in the area. Several sage grouse brooding complexes occur in this area. The southern half of the area while less important than the northern half does contain antelope values, a sage grouse strutting ground, portions of the prey base for several golden eagle territories and non-game values (see Maps).





MASSACRE LAKES HMA  
 LEGEND: Wilderness

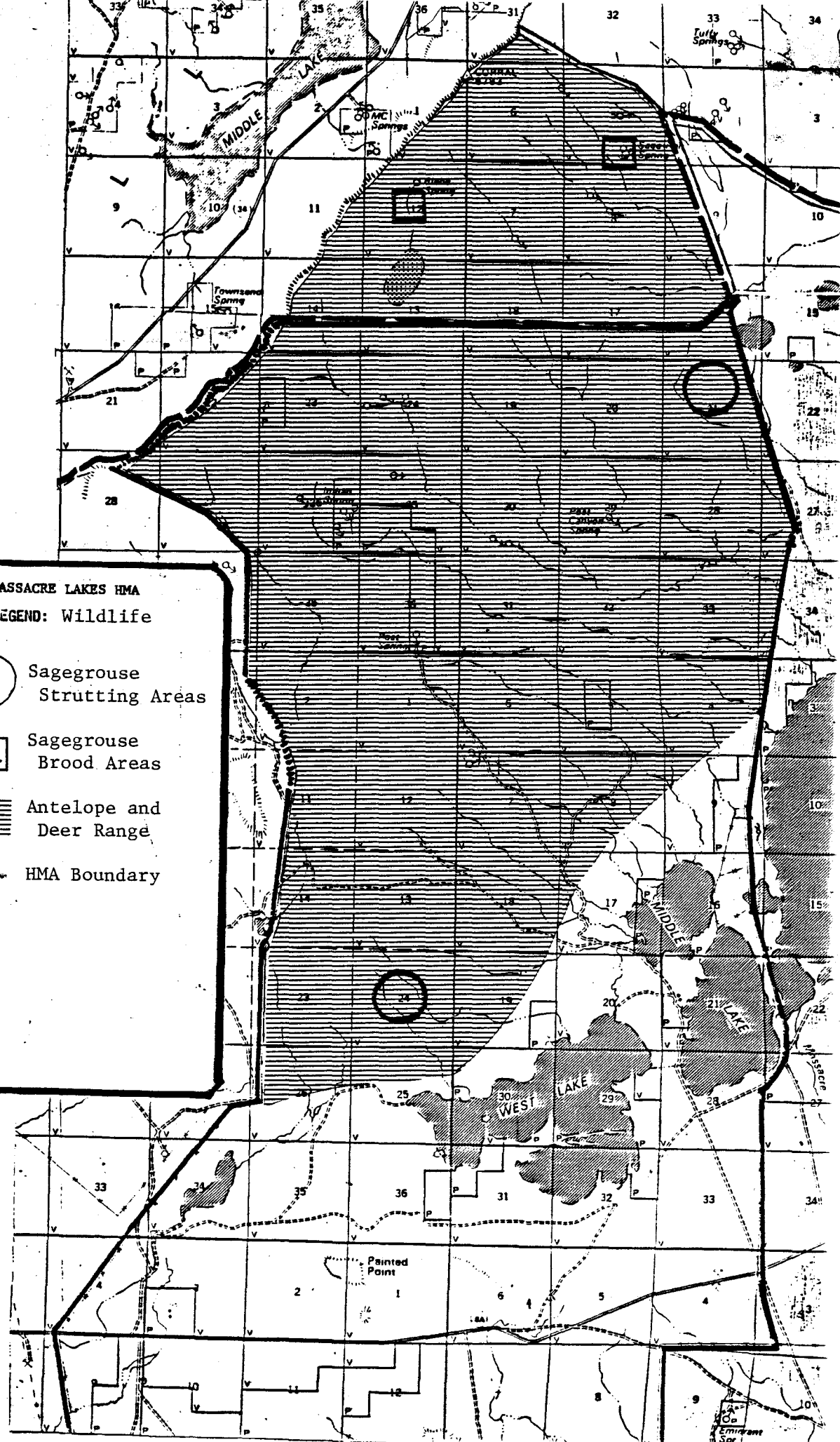
 Massacre Bench  
 WSA 1013

 HMA Boundary



**MASSACRE LAKES HMA**  
**LEGEND: Wildlife**

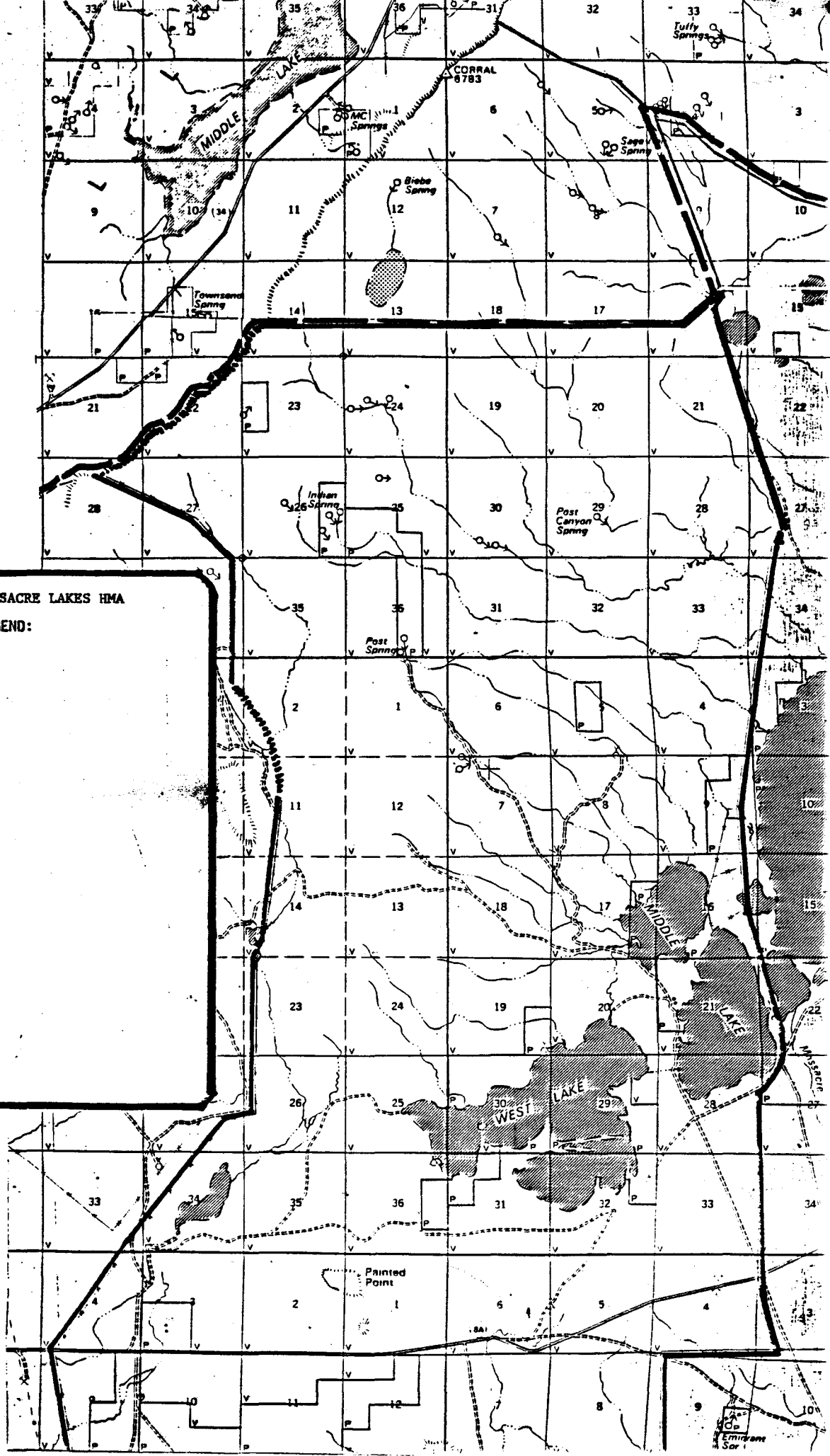
-  Sagegrouse Strutting Areas
-  Sagegrouse Brood Areas
-  Antelope and Deer Range
-  HMA Boundary

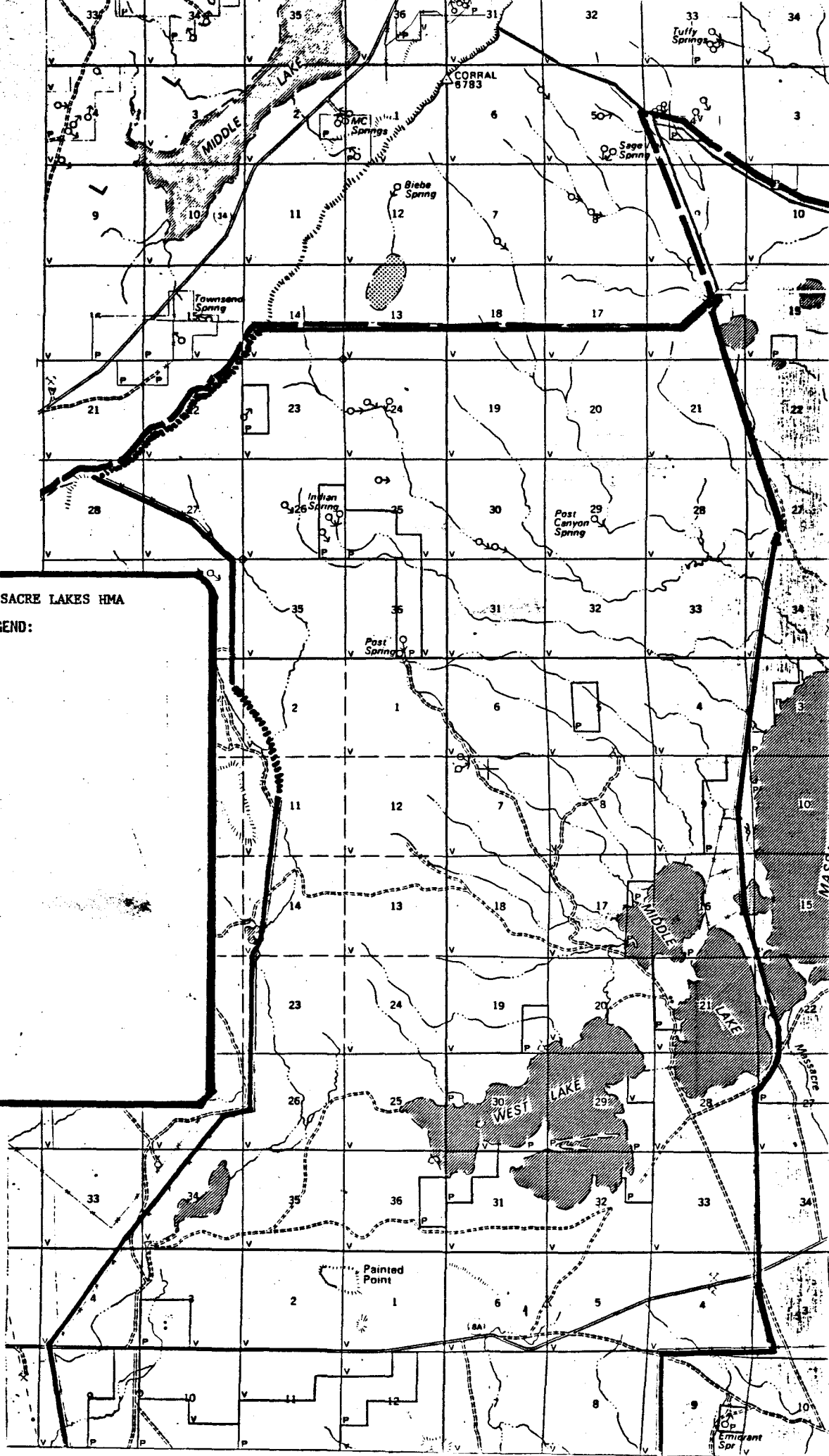




MASSACRE LAKES HMA

LEGEND:





**MASSACRE LAKES HMA**

**LEGEND:**

Emigrant Spr

MASSACRE LAKES HMA

LEGEND:

