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BLUE WING-SEVEN TROUGHS

WILD HORSE AND BURRO

HERD MANAGEMENT AREA PLAN

BLUE WING-SEVEN TROUGHS

WILD HORSE AND BURRO HERD MANAGEMENT AREA PLAN

SONOMA-GERLACH RESOURCE AREA

BLUE WING PLANNING UNIT

WINNEMUCCA DISTRICT

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I. Introduction-Background Information

A. Introduction

The land use plan for the Sonoma-Gerlach Resource Area of the Winnemucca District of the Bureau of Land Management received State Director concurrence on July 9, 1982. The Management Framework Plan Step III (District Manager's decisions) Wild Horse/Burro #1.1 provided for the retention and management of wild horses and burros on noncheckerboard lands in the resource area.

The Blue Wing-Seven Troughs Wild Horse and Burro Herd Management Area Plan (HMAP) was developed in response to the approval of the land use plan and in conjunction with the Coordinated Resource Management and Planning (CRMP) Plan approved July 24, 1984. A coordinated resource Monitoring Plan, Allotment Management Plan, and Habitat Management Plan are also being developed which will address specific and related habitat management objectives for wild horses and burros, wildlife, and livestock.

B. Background Information

1. Location and Setting

The southern end of the Herd Management Area (HMA) is located approximately 43 air miles northeast of Reno, Nevada. The HMA is approximately 71 miles long and 35 miles wide (see Map 1). The area is comprised of approximately 751,955 acres of public land and approximately 320 acres of private land, and is located in the Blue Wing and Seven Troughs Allotments of the Blue Wing Planning Unit (see Map 2).

There are six mountain ranges within the boundary of the HMA: (1) Lava Beds, (2) Kamma, (3) Seven Troughs, (4) Blue Wing, (5) Nightingale, and (6) Shawave. The mountain ranges are typically separated by valley floors ranging from quite small (2-3 miles across) to extremely large (10-15 miles across).

The area is bordered on the north by the Western Pacific Railroad tracks, on the west by the eastern side of the Selenite Range and Winnemucca Lake, and on the southern and eastern sides by the western boundary of the checkerboard Railroad Land Grant area. Lovelock, Nevada, is approximately 29 miles southeast of the northwest corner of the HMA, Gerlach is seven miles west, and Winnemucca is approximately 39 miles to the northeast.

2. Resource Information

a. Reference to the Land Use Plan (LUP)

The preparation of current LUP began in 1977 with the development of the Unit Resource Analysis and culminated with the issuance of the District Manager's decisions on June 30, 1982. One of the first steps in the planning process for the wild horse and burro program was to identify and separate

individual populations into Herd Areas (HAs), and to assimilate the data concerning population dynamics and characteristics of the animals. Information regarding animal quality and condition, sex ratios, age structure, reproductive and mortality rates (rate of increase), and the extent of immigration and emigration is relatively unknown for the HMA.

For the purpose of analysis in the LUP, the Blue Wing-Seven Troughs planning area was divided into all or part of nine HAs (see Map 3): (1) Kamma Mountains, (2) Antelope Range, (3) Lava Beds, (4) Seven Troughs, (5) Selenite Range, (6) Blue Wing Mountains, (7) Nightingale Mountains, (8) Shawave Mountains, and (9) Truckee Range. Both the Antelope and Truckee Range HAs are in a checkerboard land pattern.

The MFP III District Manager's decision states that we will remove wild horses and burros from checkerboard HAs unless a cooperative agreement providing for the retention and protection of wild horses and burros is consummated with the affected private land owners(s). The Bureau has not received any requests for nor consummated any cooperative agreements to maintain wild horses or burros on private lands.

Following finalization of the MFP III District Manager's decision establishing Appropriate Management Levels (AML) for wild horses/burros in each of the HAs identified above, a decision was made to combine those HAs where wild horse/burro populations will be retained into one HMA for the purpose of developing one HMAP. As a result, the HAs identified in the LUP are now collectively referred to as the Blue Wing-Seven Troughs HMA.

#4 Since the preparation of the LUP, more information has been gathered on horse and burro movements within the HMA. To better manage the HMA and more accurately reflect true horse and burro use areas, the HMA has been divided into two subunits: (1) Lava Beds-Seven Troughs and (2) Nightingale-Shawave (see Map 2).

Changes in rangeland policy eliminated allocating forage to the different types of large herbivores based on one-time range surveys. The current emphasis is to establish monitoring studies and adjust numbers of grazing animals based on the results of these studies.

#6 The initial management level of wild horses and burros to be monitored for the Blue Wing-Seven Troughs planning area has been recommended by the Lovelock CRMP group at 877 horses and 143 burros, which roughly corresponds to the 1974 levels. This negotiated number is approximately 486 animals (410 horses and 76 burros) less than the July 1982 population. The recommended numbers have been accepted by the Winnemucca District Manager and therefore become the AML for the purpose of this HMAP.

The AML of animals that will be maintained and managed in each subunit is as follows:

Subunit	Horses	Burros	Total
Lava Beds-Seven Troughs	640	104	744
Nightingale-Shawave	237	39	276
TOTAL	877	143	1,020

b. Wild Horse and Burro Use

(1) Population Data

The first complete aerial census was conducted on the HMA in the fall of 1974 which revealed a total of 991 horses and 29 burros on the noncheckerboard lands and 135 horses on the checkerboard lands. The next census was flown in the spring of 1977 and 1,482 horses and 84 burros were observed on noncheckerboard lands and 248 horses were on checkerboard lands. An additional aerial census was conducted in the summer of 1980. This showed 2,094 horses, one mule, and 178 burros on noncheckerboard lands and 389 horses, five burros, and 12 mules on checkerboard lands.

In the summer and fall of 1981 a total of 1,145 horses and 19 burros were removed from the noncheckerboard lands in the HMA and 150 horses were removed from the checkerboard areas.

Another census was conducted in the fall of 1984, and 2,885 horses, two mules, and 460 burros were observed on noncheckerboard lands and 508 horses and six mules were counted on checkerboard lands. Refer to Appendix 3 for a detailed breakdown of the censuses.

Between January 16 and February 26, 1985, a total of 1,707 horses and 237 burros were removed from the noncheckerboard lands in the area and 200 horses, 11 mules, and nine burros were removed from the checkerboard lands.

The area was censused again from June 3-7, 1985, and 584 horses and 3 burros were observed on checkerboard lands, 1,422 horses, 190 burros, and 1 mule on the Lava Beds/Seven Troughs subunit, 406 horses and 49 burros on the Nightingale/Shawave subunit, and 24 horses and 1 burro on the Selenite HUA.

#6 Aerial surveys give at best a rough estimate of the actual population size and consistently underestimate densities (Golley and Buechner 1968; Bergeund 1963; LeResch and Raush 1974; Gilbert and Grieb 1957; Frei, Peterson, and Hall 1979). The accuracy of aerial censuses in estimating absolute density of wildlife populations varies from 29 to 88% (Caughley 1977).

Preliminary research conducted by Siniff et. al. (1981) suggests that in conducting an aerial census only a percentage of the total number of animals are ever counted. This percentage could range from 45% to 73% or higher depending on the type of vegetative cover and terrain. Therefore, there is a need to determine the accuracy of future census.

Between July 15 and July 26, 1985, an additional 400 horses were removed from the checkerboard lands and 64 burros were removed from the Lava Beds/Seven Troughs subunit. Funding restraints prohibited gathering enough animals to attain the AML for each area.

There is a unique population of spotted and pinto burros that inhabit the HMA. The percentage of animals possessing such color markings appears to be quite high compared to the entire population.

#10 As mentioned in the previous section, information regarding factors affecting the demographic characteristics of the population are relatively unknown for the HMA. Data obtained from the 1,164 animals captured in 1981 and the 2,998 animals captured in 1985 does provide some information on age structure, general health, and color of those animals that were removed (see Appendices 4 through 20). Appendices 21 through 25, a summary of the statistics of all the animals gathered in the HMA, makes it possible to form some generalizations on the gender, age structure, and the dominant color types found in the HMA.

(2) Movement Patterns-Water Availability

Observations of the wild horses and burros in the HMA indicate that their movement and distribution is directly related to water availability. During the winter months, the animals use the majority of the HMA when cold temperatures reduce the need for watering on a daily basis, and water collects from rain and melting snow in small depressions and ditches along the roadways for short periods of time. The wild horses and burros also use waters that are pumped by the livestock operators in the allotments (see Map 4).

During the summer months, the animals are generally restricted to the mid and higher elevations of the mountain ranges in the HMA where the majority of the perennial water sources occur. There are two areas in the northern portion of the HMA where wild horses have been observed to travel 10-12 miles from the feeding areas to water. During periods of high temperatures

and/or drought, this abnormal trailing distance to and from the watering sources may place a large amount of stress on the animals and might lower the health and viability of the population.

The western boundary and a portion of the eastern boundary of the HMA is fenced (see Map 4). A fenceline on the southern boundary is scheduled for construction during FY 85, and a portion of the northern and eastern boundaries is scheduled to be constructed during FY 86 (see Map 5). Currently, there are no interior fences and none are planned within the HMA. Any additional fences other than those already planned could result in disruption of the herd's normal movement patterns.

(3) Habitat

The vegetation in the HMA is characterized by shadscale-budsage and greasewood types in the valley bottoms, big sage-grass types at the moderate elevations, and big sage-low sage and juniper-sagebrush types at the higher elevations. The grasses found in the HMA include cheatgrass, Indian ricegrass, squirreltail, needlegrass, wheatgrass, fescue, and blue grass.

The HMA is located within the boundaries of the Blue Wing and Seven Troughs Allotments. Ecological status and trend has been estimated (1979) for the allotments as follows:

	Ecological Status (% of Allotment)				Trend Direction (% of Allotment)	
Allotment	Early Seral	Mid-Seral	Late Seral	PNC 1/	Stable	Downward
Blue Wing	40	38	20	2	78	22
Seven Troughs	45	35	15	5	5	95

1/ PNC = Potential Natural Community

A limited number of rangeland monitoring studies were established in the HMA before 1984. Consequently, there is very little data available to form valid conclusions on plant composition, utilization levels of forage, and trend of the ecological sites in the area. With the approval of the CRMP Plan in 1984, an intensive monitoring program was initiated. The monitoring plan which outlines the management objectives, type of studies to be utilized, and the schedule for conducting and evaluating the studies is an appendix to this plan (see Appendix 11).

Documented direct observations of forage consumption by wild horses and burros are nonexistent in the HMA.

Studies conducted in the southwest vegetation type indicate that under ordinary range conditions 80 to 85 percent of the diet (on a dry weight basis) of wild horses consists of grasses and grasslike plants and that they consume more browse than they do forbs (Zarn 1977). Hall (1972) determined that the major forage items utilized on the Pryor Mountain Wild Horse Range in Montana during the spring, summer, and fall periods were grass species, whereas during the winter period the major forage items were browse species with grass species being utilized where available. The preferred grasses were bluebunch wheatgrass (Agropyron spicatum) and Sandberg bluegrass (Poa secunda) and the preferred browse species were saltbush (Atriplex spp.), gray rabbitbrush (Chrysothamnus nauseosus), and big sagebrush (Artemisia tridentata). The forage items present in the Pryor Mountains are somewhat similar to those found in the HMA and may be indicative of the preferred forage species of this area.

In general, grass species in the Pryor Mountains were the staple of wildhorse diets throughout the spring, summer, and fall, and forb and browse species were of secondary importance. During the winter this order of preference was generally reversed. Forbs were utilized more heavily in the Salmon, Idaho and Winnemucca Districts whereas shrubs were more heavily utilized in the Ely District (USDI, BLM, Winnemucca District Office, Blue Wing URA).

Browning (1960) examined 20 burro stomachs to determine their forage preferences in Cottonwood Canyon of Death Valley National Monument. He reported that forbs comprised almost 65 percent of their spring diet and browse made up over 75 percent of their fall diet. Grass occurred in about half of the stomachs and amounted to 10 percent in both spring and fall diets.

McMichael (1964) examined the stomach contents of nine burros collected in February, April, May, and July. Laboratory analysis revealed that the stomach contents consisted of one percent grass, 11 percent shrubs, and 88 percent forbs.

Tables 1 and 2 list the stomach contents of two other burro studies conducted by the California Department of Fish and Game. Both studies confirm Browning's results in that forbs comprise a large percentage of their spring diet while browse made up a large percentage of their fall diet.

Data on the food habits for wild horses and burros in the HMA is notably lacking.

Table 1

Food Items Eaten By 19 Feral Burros
Collected From The Death Valley National Monument, 1959.
(Information From California Department of Fish and Game).

Item	Fall		Spring	
	Vol. %	Freq.	Vol. %	Freq.
Bur sage (Franseria dumosa)	52.5	9	13.1	6
Unidentified forbs (stems)	13.5	11	49.4	9
Grass stems (leaf stems)	10.0	7	7.8	4
Aster (Aster abatus)	4.5	6	1.1	1
Atriplex (Atriplex polycarpa)	4.5	3	tr	1
Atriplex (A. confertifolia)	4.0	4	--	--
Cottonwood (Populus fremontii)	4.0	6	--	--
Desert thorn (Lycium sp.)	3.5	3	--	--
Burrobrush (Hymenoclea salsola)	1.5	1	1.7	2
Spiny hopsage (Grayia spinosa)	1.5	2	tr	1
Unidentified browse	0.5	2	--	--
Mormon tea (Ephedra viridis)	--	--	3.3	1
Wishbone bush (Morabilis bigelovii)	--	--	0.6	1
Buckwheat (Eriogonum fasciculatum)	--	--	4.4	6
Sedge (Cyperaceae)	--	--	2.2	1
Buckthorn weed (Amsinckia tessellata)	--	--	15.0	3
Rush bebbia (Bebbia juncea)	--	--	0.6	2
Atriplex (Atriplex sp.)	tr	2	0.6	3
Chorizanthe (C. brevicornu)	tr	4	tr	3
Phacella (Phacella sp.)	tr	1	--	--
Cryptantha (Cryptantha sp.)	tr	1	tr	2
Rabbitbrush (Chrysothamnus sp.)	tr	1	--	--
Matchweed (Gutierrezia sarothrae)	tr	1	--	--
Penstemon (Penstemon sp.)	tr	2	tr	1
Wild barley (Hordeum sp.)	--	--	tr	1
Filaree (Erodium cicutarium)	--	--	tr	2
Black brush (Coleogyne ramosissima)	--	--	tr	1
Mint (Labiatae)	--	--	tr	1
Brickellia (B. watsonii)	--	--	tr	1
Chaenactis (C. stevioides)	--	--	tr	1
Dalea (Dalea mollis)	--	--	tr	1
Ground-cherry (Physalis sp.)	--	--	tr	1
Pepper-grass (Lepidium sp.)	--	--	tr	1
Mint (Salvia sp.)	--	--	tr	1
Evening primrose (Oenothera sp.)	--	--	tr	1
Borage (Boraginaceae)	--	--	tr	1
Mustard (Cruciferae)	--	--	tr	1

TABLE 2
Food Items Eaten by 20 (Burros) China Lake - April, 1966. (Information from California Department of Fish and Game).

Item	Vol. %	Freq. 20
BROWSE:		
Spiny hop-sage sd. (Grayia spinosa)	trace	3
Fourwing saltbush sd. (Atriplex canescens)		1
Creosote bush lf. (Larrea divaricata)		1
Nevada ephedra st. (Ephedra nevadensis)		2
Unid. browse st.		4
Wishbone bush (Mirabilis bigelovii)	1.0	11
Burrobush (Hymencolea salsola)	trace	8
Browse subtotal	1.0	
FORBS:		
Unid. forbs (st, lf)	86.0	20
Buckthorn weed lf, hd, sd (Amsinckia tessellata)	11.0	19
Unid. compositae (hds)	1.0	10
Phacella pods & sd. (Phacella sp.)	trace	6
Gilia sd & st (Gilia sp.)		16
Fremont's chaenactis (Chaenactis fremontii)		15
Red-stem filaree (Erodium cicutarium)		15
Stickleaf pods & sds (Mentzelia sp.)		11
Pepper-grass pods (Lepidium nitidum)		5
Poppy sd. (Eschscholtzia sp.)		5
California mustard (Thelypodium laslophyllum)		3
Fringe-pod pods (Thysanocarpus sp.)		4
Buckwheat lf (Eriogonum sp.)		3
Snake's head bracts & sd (Malacothrix coulteri)		2
Wing-nut cryptantha sd (Cryptantha pterocarya)		2
Coreopsis sd (Coreopsis sp.)		1
California coreopsis sd (Coreopsis californica)		1
Loco weed pod & sd (Astragalus sp.)		1
Hog-fennel sd (Lomatium sp.)		1
Forb subtotal	98.0	
GRASS:		
Grass lf & st. (Gramineae)	1.0	13
Cheatgrass sd. (Bromus tectorum)	trace	2
Bentgrass spike (Agrostis sp.)		1
Grass subtotal	1.0	

In addition, the exact percentage of use by each group of ungulate is not currently known. As a result it will be extremely difficult to separate the effects of livestock and wild horse and burro use.

c. Other Resources

(1) Livestock

Six range users operate within the boundaries of the HMA, utilizing the area as both a cow-calf and sheep operation. The allotments are licensed for seasonal and yearlong cattle use and sheep use from December through March. The maximum amount of active preference and actual licensed use by allotment is as follows:

Allotment	Kind of Livestock	Active Preference (AUMs)	Licensed Actual Use (AUMs)	Nonuse or Difference
Blue Wing	Cattle	21,460	16,992	4,468
	Sheep	2,869	2,357	512
	Total	24,329	19,349	4,980
Seven Troughs	Cattle	6,046*	5,837*	209
	Sheep	4,373	2,086	2,287
	Total	10,419	7,923	2,496

*896 of these AUMs are Exchange-of-Use privileges only.

A grazing management plan was developed for the Blue Wing-Seven Troughs allotments in the CRMP Plan. As the allotments comprise approximately 1,500,000 acres adjudicated for yearlong use and are void of interior fencing, it was not economically feasible or practicable to implement an intensive multiple pasture rest-rotation grazing system. The CRMP plan outlines specific seasons and areas-of-use for C-Punch Crop. as outlined below (see Map 6):

(a) Graze 350-400 head of livestock on the Seven Troughs Range from 4/1-10/31. These cattle will be moved north into the Kamma Mountains and Antelope Range and held from 11/1-3/31.

(b) Graze 150-200 head of livestock on the west side of the Selenite Range from 4/1-10/31. These cattle will be moved south and held in the Slough House area above Nixon from 11/1--3/31.

(c) Graze 550-600 head of livestock in the Nightingale and Shawave Mountains from 4/1-10/31. These cattle will be moved east to the Granite Springs Valley and held from 11/1-3/31.

(d) **Graze 250-300 head of livestock on the east side of the Selenite Range from 4/1-10/31. These cattle will be held on the flats between the Selenites and the Lava Beds from 11/1-3/31.**

(e) **Graze 350-400 head of livestock in the Lava Beds, Blue Wing Mountains, and western slopes of the Seven Troughs Range on a rotating basis throughout the year depending on weather and forage conditions.**

The sheep operations will be managed as they have in the past in accordance with their adjudicated areas and seasons-of-use.

This grazing plan will not be fully implemented until all of the proposed water developments and boundary fences are constructed (see Map 5). In the interim, the livestock operators will comply with the grazing plan to the extent possible and will be licensed below their active preference levels.

Management and distribution of cattle will be through riding, the manipulation of water, salting practices, and natural seasonal movement of the animals. Sheep will be managed through the use of herders and the flexibility of being able to follow the localized snowstorms within their areas-of-use (see Map 7). Occasionally water is hauled to better facilitate the use of the rangeland.

Forage preferences of wild horses and cattle (Bos taurus) were determined to be 59 to 75 percent identical in the Piceance Basin area of Colorado (Hubbard and Hansen 1976). Olsen and Hansen (1976) found that wild horse food items were 45 percent identical to cattle, and 27 percent identical to domestic sheep (Ovis ovis) in the Red Desert area of Wyoming. There did not appear to be any serious dietary overlap between wild horses and mule deer (Odocoileus hemionus) in Colorado or with pronghorns (Antilocapra americana) in Wyoming.

In the Granite Range near Elko, Nevada, Nawa (1978) found there was a 77 percent dietary overlap between cattle and wild horses, and only a three percent overlap between mule deer and wild horses. In the Paradise-Denio Resource Area, Winnemucca, Nevada, Smith (1978) found there was a 50 percent dietary overlap between cattle and wild horses, and a two percent overlap between antelope and wild horses.

A study of feral burros was conducted from November 1974 to August 1975 in the Saline Valley Region of Inyo

County in southeastern California. The major plant communities found in the Saline Valley, with the exception of the creosote bush, are also found in the HMA. A list of the plants occurring on vegetation transects and the preference for use of these plants by livestock and burros is shown in Table 3. All of the preferred and staple plants found in the Saline Valley are found in the areas where burros occur on the planning area with the exception of spiny menodora (Menodora spinescens), desert bitterbrush (Purshia glandulosa), and desert holly (Atriplex hymenelytra) (Kimsey and MacCarter 1976).

No full-scale studies have been done in Nevada of burro feeding habits. Information on dietary preference and plant composition is needed to fully understand the degree of competition that other ungulates are providing to wild horses/burros in the HMA.

(2) Wildlife

Wildlife species currently found on the Blue Wing-Seven Troughs HMA include mountain lion, bobcat, mule deer, antelope, coyote, sage grouse, California valley quail, chukar, and a variety of nongame species. Those which principally compete with domestic livestock and wild horses and burros are mule deer, rodents, rabbits, and insects.

No estimates are currently available for numbers of rodents, rabbits, and insects using this area. The Nevada Department of Wildlife has estimated the following reasonable numbers of wildlife and the corresponding AUM demand in the HMA:

Species	Reasonable Numbers		AUM Demand
Antelope	32		77
Mule deer	399		1,197
Bighorn sheep *	44		106
		TOTAL	1,380

* At the present time there are no bighorn sheep inhabiting the HMA.

No definitive studies have been done on the HMA regarding forage utilization by rodents, rabbits, and insects. However, estimates by authorities in the states of Washington and Arizona of forage utilized by these classes of primary herbivores shows consumption could approach in excess of 13,000 AUMs per year in an area as large as this HMA (Hoem 1974).

Utilization of the vegetation by domestic livestock and wild horses and burros in riparian and other crucial wildlife habitat areas is estimated to be moderate to heavy (Winnemucca District Office Files).

TABLE 3. Plants occurring on vegetation transects, preference for use of plants by livestock and burros, and available pound per acre forage value: Saline Valley, California. July 1975.

Scientific	Common	Symbol	Livestock		Burro
			Value 1/	Lbs/Ac	Preference 2/
Allenrolfea occidentalis	pickleweed	ALOC	U	0	U
Hymenoclea salsola	burrobush	HUSA	L	2	LV
Larrea tridentata	creosotebush	LATR	L	0	LV
Atriplex confertifolia	shadscale	ATCO	P	5	PR
Grayia spinosa	hopsage	GRSP	P	5	PR
Mendora spinescens	spiny mendora	MESP	P	5	PR
Tetradymia sp.	horsebrush	TET	L	0	LV
Dalea polyadenia	nevada dalea	DAPO	L	0	LV
Ephedra nevadensis	nevada tea	EPNE	L	5	LV
Mallow parviflora	cheeseweed	MAPR	L	0	LV
Haplopappus spp.	goldenbush	HAP	L	0	LV
Eurotia lanata	winterfat	EULA	P	10	PR
Artemisia tridentata	big sage	ARTR	L	2	LV
Chrysothamnus spp.	rabbitbrush	CHR	L	0	LV
Eriogonum umbellatum	sulfur flower	ERUM	L	2	LV
Elymus cinereus g.	basin wild rye	ELCI	S	10	ST
Stipa speciosa	desert needlegrass	STSP	P	20	PR
Lupinus spp.	lupine	LUP	S	5	ST
Astragalus spp.	locoweed	AST2	L	2	LV
Purshia glandulosa	desert bitterbrush	PUGL	P	5	PR
Aster spp.	desert milk aster	AST	U	2	U
Juniperus osteosperma	juniper	JUOS	U	0	U
Distichlis spicata	saltgrass	DIS	-	10	LV
Atriplex hymenelytra	desert holly	ATHY	S	5	ST

1/ U = Unknown; P = Primary; S = Secondary; L - low in decreasing order of value to livestock

2/ U = Unknown; PR = Preferred; ST = staple; LV = low value, in decreasing order of preferred consumption by burros

d. Problem-Issue Summary

The following is a summary of present and potential issue and problems associated with the well being of the wild horse/burro population and their habitat:

(1) There are no physical barriers separating the Lava Beds-Seven Troughs subunit from the northeastern checkerboard HUA. Once Appropriate Management Levels (AML) are reached (i.e, zero animals in the checkerboard area), horses will naturally drift back into the checkerboard area which would require yearly removals, to maintain the AML.

(2) In the attempt to reach the AML of burros, there is a possibility that the genetic pool of spotted and/or pinto animals will be reduced to a level that will not ensure the perpetuation of the marked population.

(3) There is little information available regarding factors affecting the demographic characteristics of the population of wild horses/burros.

(4) The lack of reliable water sources in certain areas of the HMA is causing the animals to travel long distances from the feeding areas in the summer months, which results in undue stress being placed on the population and is affecting their health and viability.

(5) Interior fencing, if proposed within the boundaries of the HMA, would disrupt the wild and free-roaming characteristics of the animals.

late seral - Close to climax

(6) Approximately 41 percent of the public lands in the planning area is estimated to be in an early seral ecological status and approximately 37 percent of the area is in a mid-seral status (1979 estimate). Approximately 39 percent of the public lands are estimated to be in a downward trend (1979 estimate). See Appendix 27.

(7) A need exists to determine the accuracy of future wild horse/burro census.

(8) Site specific data on food habits for wild horses/burros in the HMA is notably lacking. It is difficult to separate livestock and wild horse/burro use as the exact percentage of use by each group of ungulate is not known.

(i) No studies have been done regarding forage utilization by rodents, rabbits, and insects.

(ii) Utilization of the vegetation in crucial wildlife habitat areas is estimated to be moderate to heavy.

(9) Livestock operators in the Blue Wing and Seven Troughs Allotments are currently licensed below their active preference because wild horses/burros are currently consuming forage which would otherwise be available for domestic livestock.

II. Management Objectives

A. Habitat Objectives

1. Maintain or improve the ecological status of the ecological sites in the key wild horse/burro use areas.

2. Provide water for wild horses/burros throughout the HMA, where possible.

B. Animal Objectives

1. Within the AML of 877 horses and 143 burros, maintain a healthy herd of animals allowing a variation of ± 30-35 percent in population numbers.

2. Establish proper stocking levels for the wild horse/burro population (i.e., refine the AML) through monitoring of the wild horse/burro habitat.

3. Maintain the wild free-roaming characteristics of the animals in the HMA.

conflict

4. Preserve and perpetuate the unique spotted and pinto burro population.

5. Acquire data on the demographic characteristics of the wild horse/burro population to include information on sex ratios, age structures, mortality and natality (rate of increase), and actual use.

6. Determine the dietary preferences of wild horses/burros within the HMA.

7. Determine distribution and movement patterns for the wild horse/burro population in the HMA.

III. Management Methods to Achieve Objectives

A. Habitat Planning Objective # II.A.1.: Maintain or improve the ecological status of the ecological sites in the key wild horse/burro use areas.

Management Methods:

1. An intensive program to monitor the vegetative resource in the HMA was initiated in 1984 as part of the CRMP process (Blue Wing-Seven Troughs Monitoring Plan 1985). See Appendix 11.

   The monitoring plan outlines the type of studies to be utilized, the allotment objectives and schedule for the interim (first five years), short term (first 10 years) and long term (35 years) time periods, and the schedule for conducting the allotment evaluation. Those components relating to wild horses/burros include vegetation utilization, frequency, trend, and ecological status.

2. Analysis of the monitoring plan will be based on the attainment of HMAP objectives, key area objectives, identifying which objectives were not met (if applicable), and identifying why the objectives were not met (if applicable).

3. Subsequent analysis and changes to the AML of wild horses and burros, livestock and wildlife numbers, the grazing system or monitoring plan will be made on a case by case basis in consultation with the permittees and other affected interests. Table IV of the monitoring plan shows how evaluation of monitoring results may be used to effect management. Changes will be in the form of adjustments in numbers on a proportionate share basis, changes in distribution patterns, and adjustments of periods-of-use.

4. If monitoring data shows a lack of available forage, treat approximately 10,000 acres of sagebrush in the eastern half of T. 32 N., R. 28 E., and approximately 10,000 acres in the northern half of T. 26 N., R. 25 E., by burning or chemical control (whichever is the most cost effective and/or least detrimental). Construct an electric fence around the treated areas and allow them to receive two years rest.

B. Habitat Planning Objective #II.A.2.: Provide water for wild horses/burros throughout the HMA, where possible.

Management/Methods:

1. Develop a series of springs, pipelines, and wells recommended by the CRMP committee throughout the HMA as outlined below:

   a. Judges Place Spring and Pipeline - Develop the spring at Judges Place (T. 32 N., R. 29 E., Sec. 20) and construct approximately 5 (five) miles of pipeline in order to provide water on the flats at the north end of the Seven Troughs Range and south end of the Kamma Mountains, while maintaining the meadow in its present condition.

   b. Cow Creek Exclosure Spring - Develop the spring located outside the western wildlife exclosure in T. 31 N., R. 28 E., Sec. 12.

c. Trail Canyon Well - Conduct a well site investigation in the middle of T. 31 N., R. 26 E., and construct a well if feasible, in order to provide water in the vicinity of Middle Mountain.

d. Rocky Canyon Well - Conduct a well site investigation in the northern half of T. 31 N., R. 30 E., and construct a well if feasible.

e. Twin Buttes Mine Spring and Pipeline - Develop the spring at Twin Buttes Mine (T. 30 N., R. 26 E., Sec. 1) and construct approximately three miles of pipeline in order to provide water on the flats south of Middle Mountain.

f. Antelope Siding Well - Conduct a well site investigation in southern half of T. 35 N., R. 30 E., and construct a well if feasible.

2. Inventory all water resources in the HMA and identify all water quality, quantity, and wetland problems. Plan and implement protection or enhancement practices such as fencing for identified problem areas.

C. Animal Planning Objective #II.B.1.: Within the AML of 877 horses and 143 burros, maintain a healthy herd of animals allowing a variation of ± 30-35 percent in population numbers.

Management Methods

1. The wild horse and burro population will be adjusted to an appropriate management level of 640 horses and 104 burros in the Lava Beds/Seven Troughs subunit and 237 horses and 39 burros in the Nightingale/Shawave subunit in accordance with the Sonoma/Gerlach MFP decision and the Lovelock CRMP group recommendation.

   A total count inventory will be conducted on the HMA immediately prior to the gathering operation to determine the exact number of animals to be removed to attain a level 35% below the AML.

2. During gathering operations, the wild horse/burro populations will be reduced to 35% below the AML. The populations with then be allowed to increase to 35% above the AML before another gathering operation is conducted. This will eliminate the need for yearly gatherings which is costly and time consuming.

3. The BLMs management objective directed by PL 92-195 as amended by PL 94-579 and PL 95-514 is to "protect and manage wild free-roaming horses and burros as components of the public land" and to "achieve and maintain a thriving natural ecological balance on the public lands." It also states that "all management activities shall be at the minimal feasible level." With this in mind, management will not consider introducing specific blood lines to establish certain lineage patterns that

were not indigenous to the population in the HMA. Introduction of new genetic lines will be left to the natural selection process and/or wandering nature of the horses and burros themselves.

D. Animal Planning Objective #II.B.2.: Establish proper stocking levels for the wild horse/burro population (i.e., refine the AML) through monitoring the wild horse/burro habitat.

Management Methods

1. Analysis will be based on the attainment of HMAP objectives, key area objectives, identifying which objectives were not met (if applicable), and identifying why the objectives were not met (if applicable).

2. If the key area objectives are not met, then changes will be made to the grazing system, and/or to the AML on a proportionate share basis with domestic livestock after consultation with the permittees, CRMP group, and other affected interests.

E. Animal Planning Objective #II.B.3: Maintain the wild free-roaming characteristics of the animals in the HMA.

Management Methods

1. All range improvement projects proposed for the HMA will be analyzed in depth to determine if construction of the projects will impact the wild free-roaming characteristics of the horses and burros. Wild horse and burro distribution, seasonal movements, daily movements, and home ranges will also be preserved.

   The integration of this objective with other resource programs will best be facilitated through the interdisciplinary coordinated resource team approach when developing and implementing projects. During the analysis the immediate impacts as well as the cummulative impacts must be realized. Interior fencing projects should be discouraged whenever possible, unless they can be designed to preserve the normal distribution and movement patterns for the majority of the animals inhabiting the area in accordance with NSO Manual Supplement 4730 (Management Considerations).

2. Construct approximately 24 miles of fenceline starting at the southeast corner of T. 34 N., R. 31 E., continuing west for six miles to the southwest corner of this township, then continue south for 18 miles along the adjudicated allotment boundary line between Seven Troughs and Majuba Allotments to the existing Coal Canyon-Poker Allotment boundary fence. This will separate the

HMA from the majority of the checkerboard lands and reduce the drift and necessity of yearly removals from private property. This project is in addition to the fencelines proposed by the Lovelock CRMP committee.

F. Animal Planning Objective #II.B.4.: Preserve and perpetuate the unique spotted and pinto burro population.

Management Methods:

1. The current population of burros in the HMA is primarily composed of spotted or pinto burros. Every effort will be made during the gathering operation to cut back the marked animals and try to capture only the solid colored burros. This will be a specification in the gathering contract. Controlled selection during gathering should insure a substantial representation of the marked animals.

G. Animal Planning Objective #II.B.5.: Acquire data on the demographic characteristics of the wild horse/burro population to include information on sex ratios, age structures, mortality and natality (rate of increase), and actual use.

Management Methods

1. Studies to collect information relative to sex ratios, age structures, rates of increase, distribution and movement patterns, actual use and food habits, and the validity of total population counts will be established for the wild horse and burro population in the Blue Wing/Seven Troughs HMA.

   For more details on types, frequency and intensity of study methods refer to Section IV, Evaluation and Revision of this plan.

H. Animal Planning Objective #II.B.6.: Determine the dietary preferences of wild horses/burros within the HMA.

Management Methods

1. A study will be established in the HMA which will be used to quantify the seasonal dietary composition of the wild horse/burro population. The study site locations will correspond with the key area locations identified in the Blue Wing/Seven Troughs Monitoring Plan (refer to Appendix 27).

I. Animal Planning Objective #II.B.7.: Determine distribution and movement patterns for the wild horse/burro population in the HMA.

Management Methods

1. A comprehensive study will be conducted to secure an understanding of the seasonal movements and distribution of the wild horse/burro population in the HMA. This data should provide

the information to accurately delineate the home ranges of the bands within the two management subunits.

This will be accomplished by collaring horses with both radio and colored collars. The animals will be collared either during removal roundups or special gatherings conducted after the AML has been attained. The populations will then be monitored by aerial and ground observations at a minimum of four times each year (i.e., spring, summer, fall, winter) for at least two years.

IV. Evaluation and Revision

Data necessary to effectively manage the wild horse and burro population is virtually unavailable for the HMA. Until this data becomes available through the studies outlined below, the best available information must be utilized in developing interim management actions. As more information become available, this HMAP will be updated. The following studies have been initiated or will be established to evaluate the effectiveness of the management methods identified in this plan to meet the objectives. Refer to the Blue Wing/Seven Troughs Monitoring Plan (Appendix 27) to find the time of year and frequency that the following studies will be read as well as the key area locations.

A. Habitat Study Methods

1. Climatological

Climatological data will be obtained from a current hydrological study being carried out in the Cow Creek drainage area (BLM 1979a). This data can be supplemented by data published by the National Oceanic and Atmospheric Administration. Substations that might provide useful information include Lovelock, Rye Patch Dam, and Jungo-Meyer Ranch.

2. Frequency and Trend

One of the parameters to show changes in plant composition (trend) is frequency. Frequency data will be collected using the quadrant-frequency method as described in the Nevada Range Monitoring Procedures Handbook. Data will be stored and analyzed using standard statistical analysis procedures as a part of the Bureau ADP computer program. When a statistically significant change in frequency data is noted, the double-sampling transect will be read.

3. Ecological Status

Ecological status (formerly referred to as "ecological range condition") was determined on all of the key management areas discussed in the monitoring plan. The double-sampling methods as described in the the BLM Manual Handbook H-4410-1 supplement to the National Range Handbook (SCS 1976) will be used to determine changes in ecological status. Frequency data will be used in combination with the ecological status data to determine trend.

4. Utilization

Vegetation utilization data, which includes utilization made by livestock, wildlife and wild horses/burros will be collected using the key forage plant method, which is also described in the Range Monitoring Handbook. Utilization cages will be placed on all key areas for calibration purposes.

In order to determine the livestock/wild horse/burro overlap areas, utilization data will be collected twice a year, once just prior to livestock turnout and once just after livestock are removed to determine if overlap is more significant than now believed, which could relate to future adjustments in both livestock and wild horses/burros.

B. Wild Horse and Burro Population Study Methods

1. Home Range and Seasonal Movements

A comprehensive study will be conducted to secure an understanding of home ranges and seasonal movements of wild horse/burros. This will be accomplished by collaring horses and burros with radio tracking or with brightly colored marked collars. Once accomplished the animals will be observed in the field from vehicles and from the air, and their locations and habits will be recorded. Observations will be conducted a minimum of four times each year, for a period of at least two years (i.e., spring, summer, fall, and winter). Collaring horses may be accomplished either during removal roundups or special capture operations.

2. Productivity and Survival

General productivity indices can be estimated from the relative age composition (percent foals) of the HMA population as per NSO Manual 4730. Aerial censuses will also secure the desired data, as well as field observations. Therefore, aerial censuses designated to obtain wild horse home range and seasonal movement patterns can also supply relative age composition.

First year survivial rates can be approximated through shrinkage of foal incidence between post-parturition composition surveys and parturition surveys (Wolfe 1980). Such surveys will be conducted with a helicopter in July and January in conjunction with seasonal movement and home range inventories.

3. Population Estimates-Actual Use

Population estimates must be conducted at least once every 5 years in accordance with NSO Manual 4730. However, it is anticipated that population estimates will be kept current on a yearly basis. These estimates will be derived from data

collected in the manner as outlined in NSO Manual 4730. These estimates will be analyzed in conjunction with other wild horse studies to obtain a more reliable estimate.

4. Aerial Censuses-Total Count Accuracy Rate

A total count aerial census will be conducted yearly for a minimum of three years or until such time as the AML appears to be consistent with the habitat. Each census will be conducted in such a manner to assure the highest degree of consistency with previous inventories. The majority of past censuses have utilized a Bell 47G3B-1 helicopter to count the animals with one observer and the pilot.

The census will place the animals in adult, foal, and if possible, yearling categories. Locations of the horses and burros, weather conditions, and flight patterns will be recorded.

Since there are no interior fences separating individual populations of animals in the HMA, the mark-resight estimation method (Lincoln-Petterson Index) will be utilized only on an experimental basis in conjunction with gatherings to determine its validity on non-closed populations. The estimated total herd size and sighting rate will be calculated as outlined in the NSO Manual 4730.

An attempt will also be made to estimate the true number of animals in the HMA by calibrating an index from removal data utilizing a direct count pre-capture census, capture of horses and burros, and a post-capture census as described in NSO Manual 4730. It is anticipated that this method will provide the most accurate estimate of the population size in the HMA.

5. Sex Ratio-Age Structure Determination

Both the sex ratio and age structure of the population of wild horses/burros in the HMA will be estimated from an analysis of capture data obtained whenever excess animals are removed. This information will be further supplemented as described in NSO Manual 4730.

6. Animal Condition

Since the general condition of the animals is also an indicator of the population health and habitat conditions, during any on-the-ground observations or aerial censuses, all negative animal conditions will be recorded.

7. Dietary Composition

There are three accepted techniques which can be used for quantifying diet composition: 1. fecal analysis, 2. analysis of stomach contents and 3. daily observation of actively foraging

animals. Fecal analysis has been widely used because the other two techniques are often expensive, time consuming, or unpractical for use on free-ranging animals. It is a generally accepted fact that data obtained from fecal analysis is not highly accurate, but it will suffice for such purposes as ranking the dietary importance of various plant species and comparing the diets of various herbivores. The fecal samples will be collected a minimum of four times per year by district personnel to yield a seasonal diet, and sent to a contracted university for the microhistological analysis of the dietary materials.

C. Evaluation

Censuses and habitat studies will contain the primary data used to determine the management level of the wild horse/burro population. This information can be entered into the Proper Stocking Rate Formula to calculate the proper number of wild horses/burros which should be managed within the habitat. Utilization studies also will be used to identify any wild horse/burro distribution problems. Comparison of censuses will be utilized to indicate the population trends. Results of the frequency trend plots will estimate changes in plant composition, which in turn affects the ecological status of the vegetation in the habitat. This information may indicate a need for adjustments in the number of herbivores utilizing the HMA including the AML of wild horses/burros.

The Lovelock CRMP group will meet yearly in January to review the progress of this plan and the other activity and monitoring plans. Data collected from the various studies will be incorporated into the HMAP as soon as it is available.

D. Revision

Revision of this plan may be necessary when adequate studies data is gathered which indicates that changes to the grazing system, Monitoring Plan, and/or the AML of animals are warranted because key area and/or resource objectives are not being met. This will be determined by the Area Manager, Supervisory Range Conservationist, and District Wild Horse/Burro Specialist in consultation with the CRMP group.

If the habitat studies data indicates that additional forage is available, proportionate increases will be given to wild horses/burros, wildlife, and livestock.

V. Coordination

Coordination within the Winnemucca District Office is essential for the success of this HMAP. All planned activities, management objectives and actions, must complement and be in harmony with the other resources presently and potentially utilizing the planning area. Time and manpower of district personnel must be judiciously planned and coordinated to eliminate any duplication of efforts in conducting and evaluating

multi-purpose studies whenever possible. The objectives of the Allotment Management Plan and Habitat Management Plan should be written to complement the objectives outlined in this plan.

A. Cooperative Agreements

1. Individuals or Organizations

The majority of the unfenced private lands located within the boundaries of the planning area are owned by Southern Pacific Land Company. A small percentage of unfenced private land limited mostly to stringers of 40 acre parcels along stream courses or around springs is owned by C-Punch Corporation. Both have requested the BLM to remove animals from their private holdings and will not enter into a cooperative agreement for maintenance of animals on their land.

B. Funding

All actions undertaken pursuant to this plan are contingent upon available funding. Funding for range improvement projects will be secured from various bureau programs, the District Advisory Board, and contributed monies from livestock permittees. The possibility also exists that some funding may be provided by the Nevada Governor's Wild Horse Committee appointed to administer the Heil Fund bequest. These monies could be used for animal and habitat studies.

VI. Appendices

1. Literature Cited
2. List of Maps
3. Synopsis of Census Data
4-25. Age Structure and Color Types
26. Glossary of Terms
27. Monitoring Plan

Appendix 1. Literature Cited

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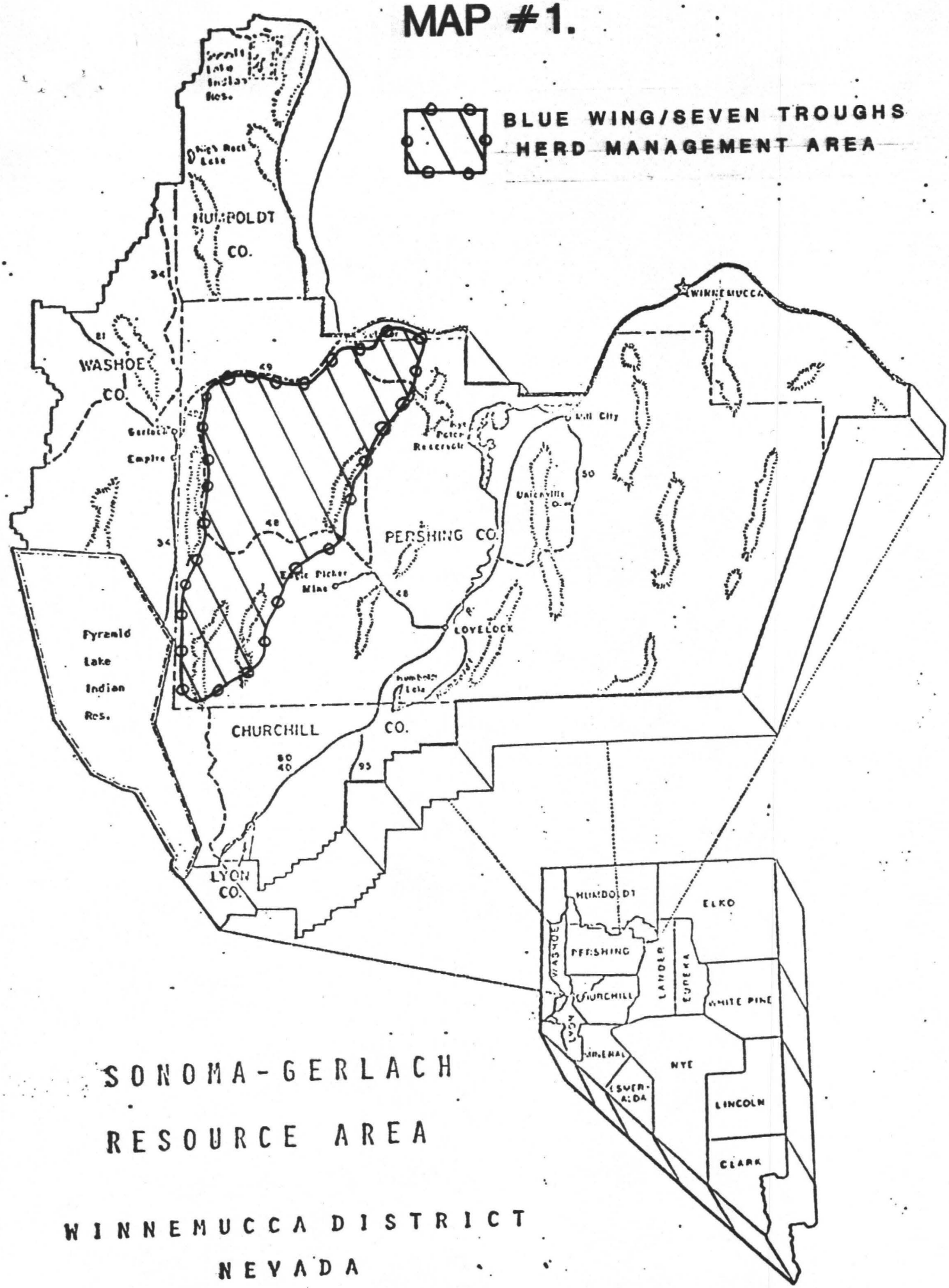
Appendix 2. List of Maps

1. Blue Wing/Seven Troughs Herd Management Area - General location
2. HMAP - Specific location, showing grazing allotments and land status
3. Original Unit Resource Analysis Herd Use Area Boundaries
4. Existing Range Improvements
5. Proposed Range Improvements
6. Cattle Grazing Plan
7. Sheep Operators Area-of-Use

MAP #1.



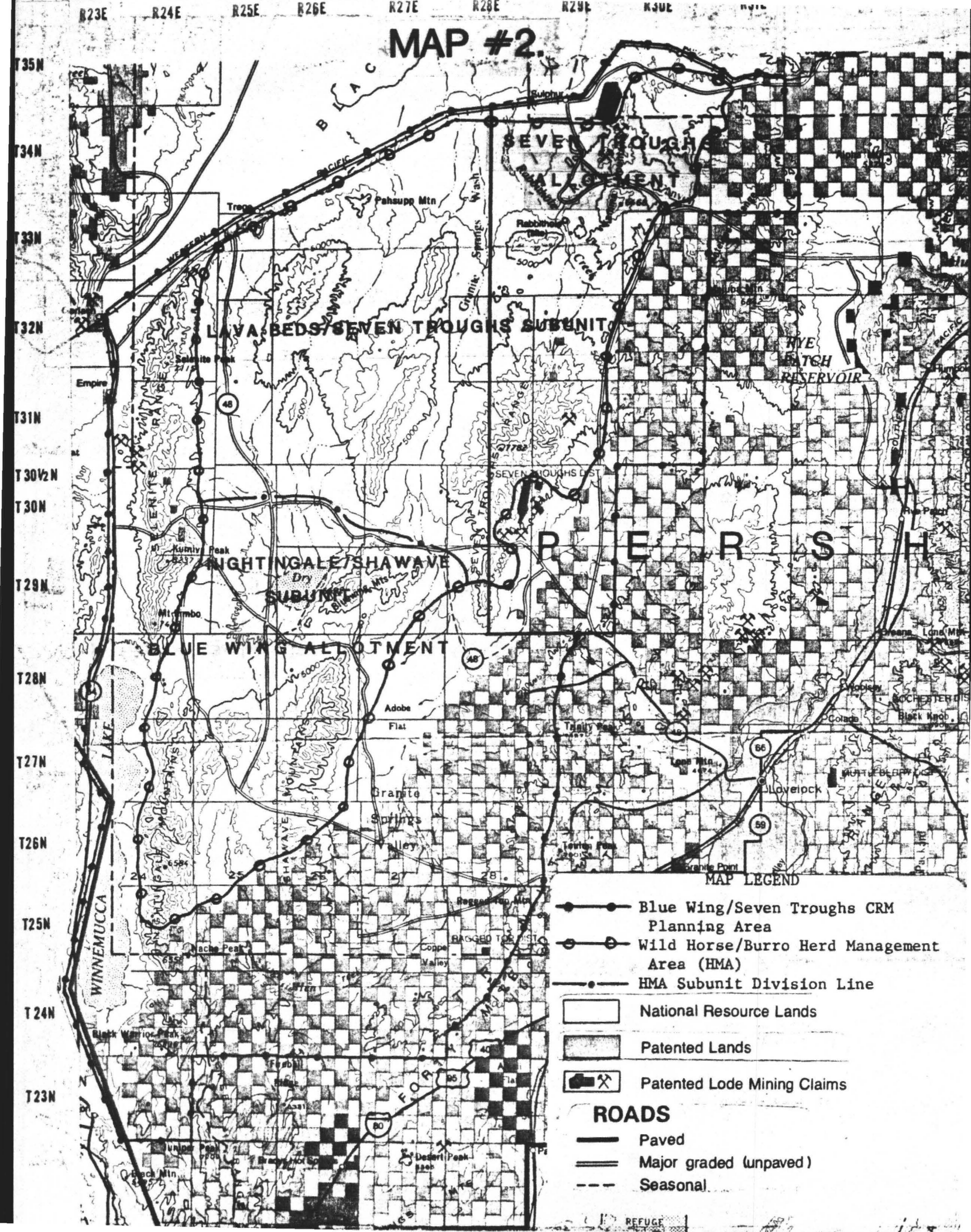
SONOMA-GERLACH

RESOURCE AREA

WINNEMUCCA DISTRICT

NEVADA

MAP #2.


R23E
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R25E
R26E
R27E
R28E
T35N
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T32N
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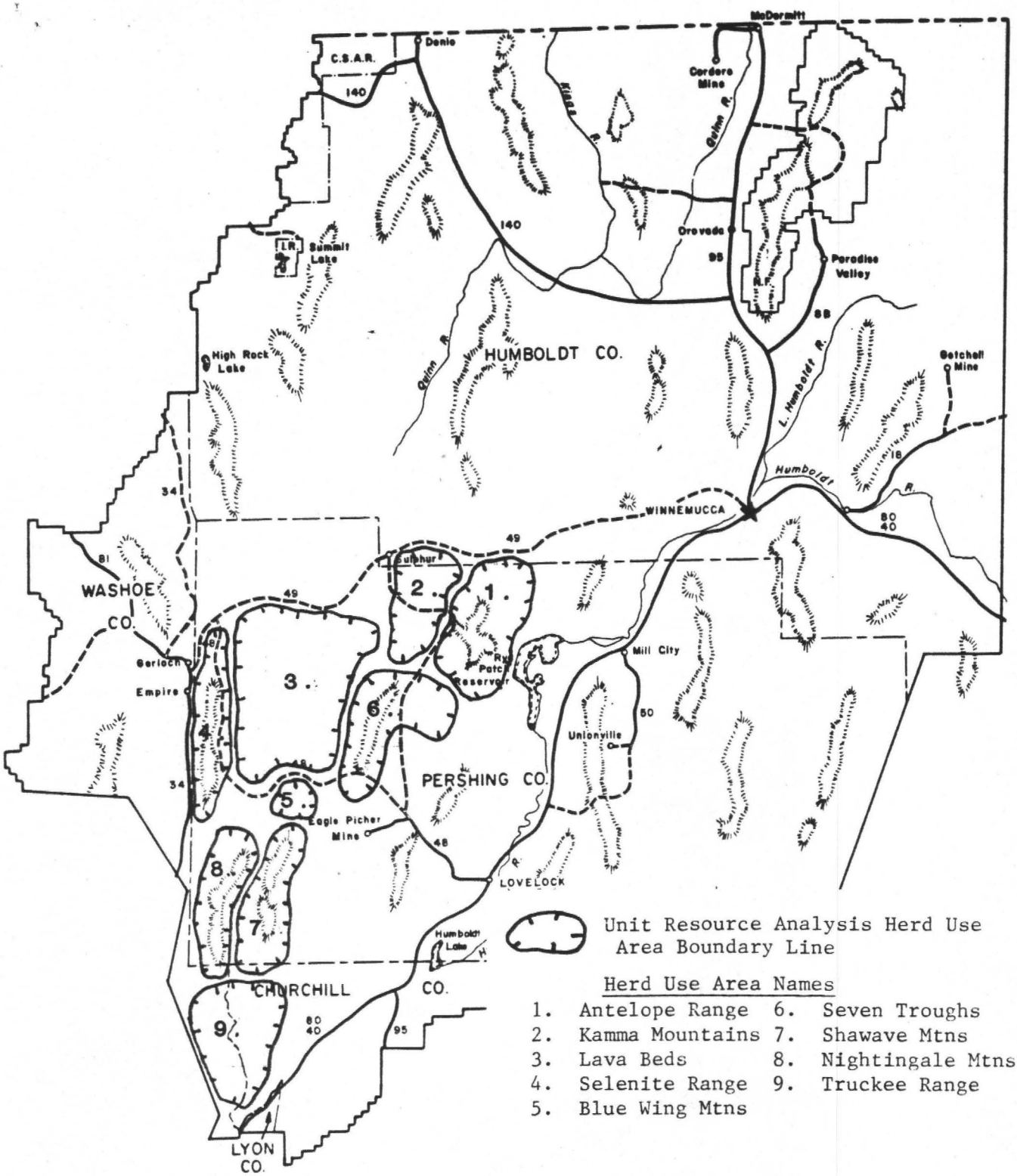
T30½N
T30N
T29N
T28N
T27N
T26N
T25N
T24N
T23N
SEVEN TROUGHS ALLOTMENT
LAVA BEDS/SEVEN TROUGHS SUBUNIT
NIGHTINGALE/SHAWAVE SUBUNIT
BLUE WING ALLOTMENT
RYE PATCH RESERVOIR
Pahsupp Mtn
Granite Springs
Empire
Adobe Flat
Granite Springs Valley
Lovelock
WINNEMUCCA LAKE
MAP LEGEND
Blue Wing/Seven Troughs CRM Planning Area
Wild Horse/Burro Herd Management Area (HMA)
HMA Subunit Division Line
National Resource Lands
Patented Lands
Patented Lode Mining Claims
ROADS
Paved
Major graded (unpaved)
Seasonal
REFUGE

MAP #3.

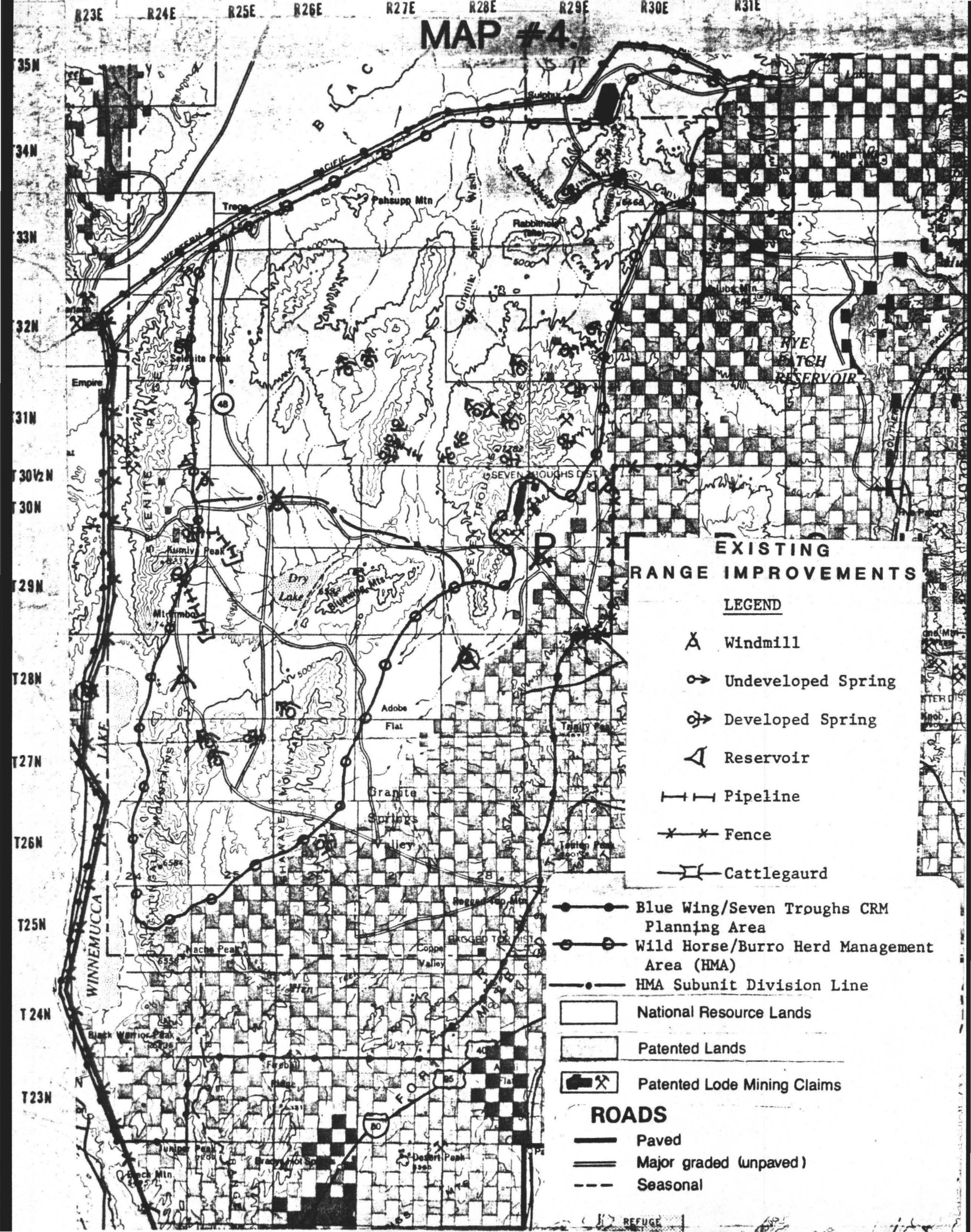


Unit Resource Analysis Herd Use Area Boundary Line

Herd Use Area Names

1. Antelope Range
2. Kamma Mountains
3. Lava Beds
4. Selenite Range
5. Blue Wing Mtns
6. Seven Troughs
7. Shawave Mtns
8. Nightingale Mtns
9. Truckee Range

WINNEMUCCA DISTRICT


MAP #4.
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R24E
R25E
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R31E
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T32N
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T30N
T29N
T28N
T27N
T26N
T25N
T24N
T23N
EXISTING
RANGE IMPROVEMENTS
LEGEND
Windmill
Undeveloped Spring
Developed Spring
Reservoir
Pipeline
Fence
Cattlegaurd
Blue Wing/Seven Troughs CRM
Planning Area
Wild Horse/Burro Herd Management
Area (HMA)
HMA Subunit Division Line
National Resource Lands
Patented Lands
Patented Lode Mining Claims
ROADS
Paved
Major graded (unpaved)
Seasonal
Pahsupp Mtn
Sulphur
Trego
Rabbithole
Selenite Peak
Empire
Kumiva Peak
Dry Lake
Bluewing Mts
Adobe Flat
Granite Springs Valley
RYE PATCH RESERVOIR
SEVEN TROUGHS DIST
Trinity Peak
Ragged Top Mtn
RAGGED TOP DIST
Nache Peak
Copper Valley
Black Warrior Peak
Juniper Peak
Desert Peak
Black Mtn
WINNEMUCCA LAKE
REFUGE
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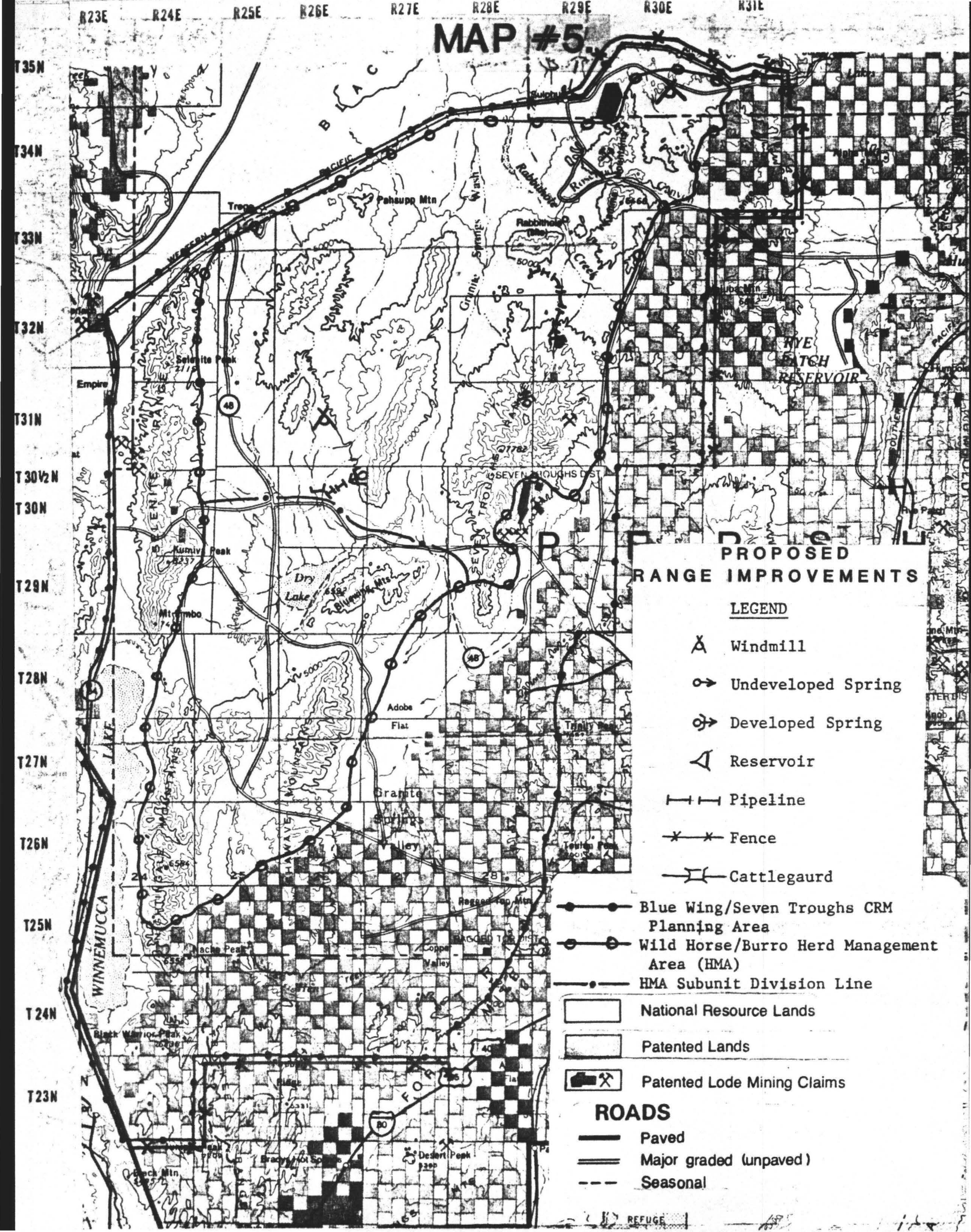
40
95
80


MAP #5
PROPOSED
RANGE IMPROVEMENTS
LEGEND
Windmill
Undeveloped Spring
Developed Spring
Reservoir
Pipeline
Fence
Cattlegaurd
Blue Wing/Seven Troughs CRM Planning Area
Wild Horse/Burro Herd Management Area (HMA)
HMA Subunit Division Line
National Resource Lands
Patented Lands
Patented Lode Mining Claims
ROADS
Paved
Major graded (unpaved)
Seasonal
R23E
R24E
R25E
R26E
R27E
R28E
R29E
R30E
R31E
T35N
T34N
T33N
T32N
T31N
T30½N
T30N
T29N
T28N
T27N
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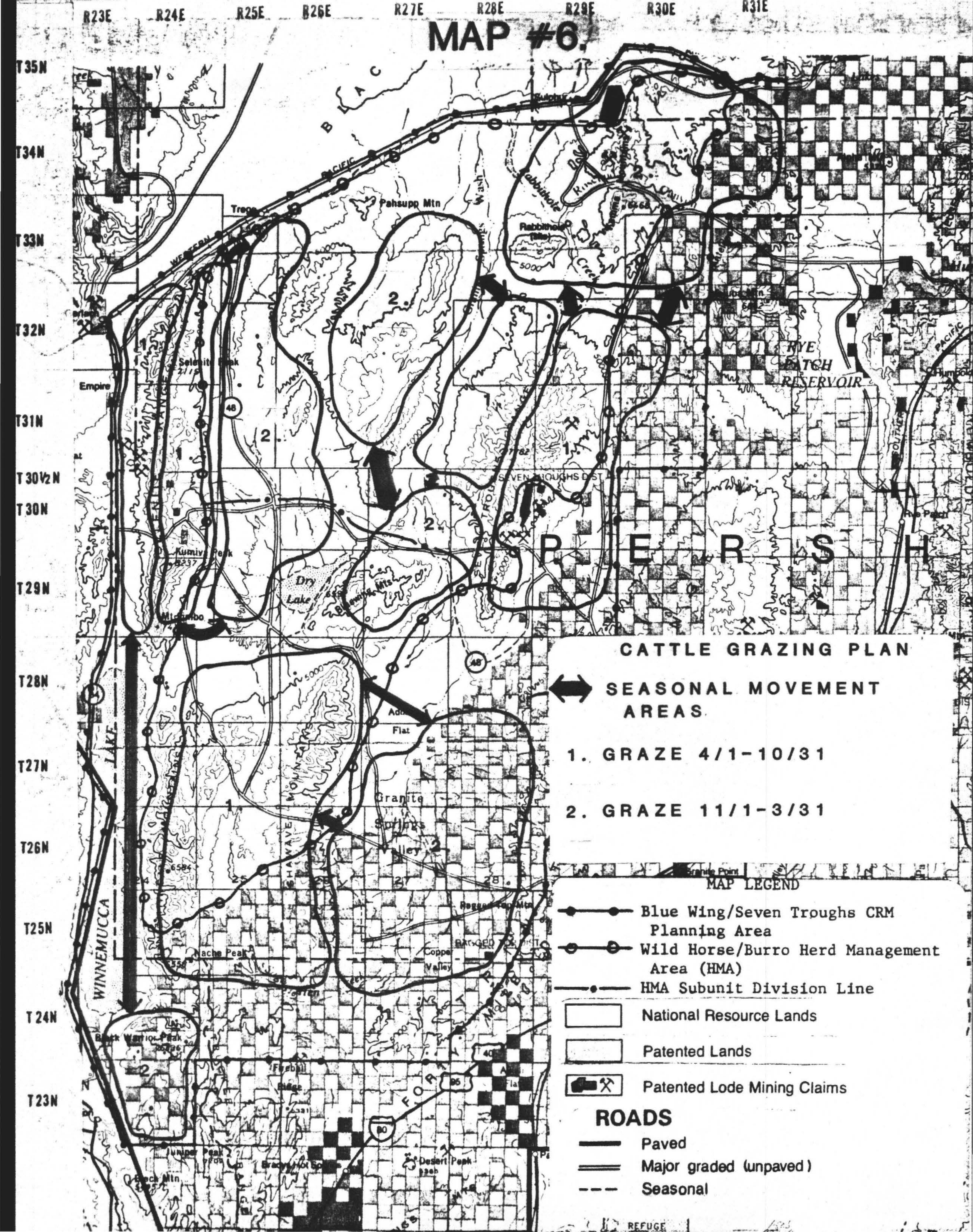
T25N
T24N
T23N
Pahsupp Mtn
Selenite Peak
Empire
Kumiva Peak
Dry Lake
Blue Wing Mts
Adobe Flat
Granite Springs Valley
Trinity Peak
Ragged Top Mtn
Nache Peak
Copper Valley
Black Warrior Peak
Desert Peak
RYE PATCH RESERVOIR
SEVEN TROUGHS DIST
WINNEMUCCA LAKE
Rabbithole
Granite Springs Wash
REFUGE


MAP #6.
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R28E
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R31E
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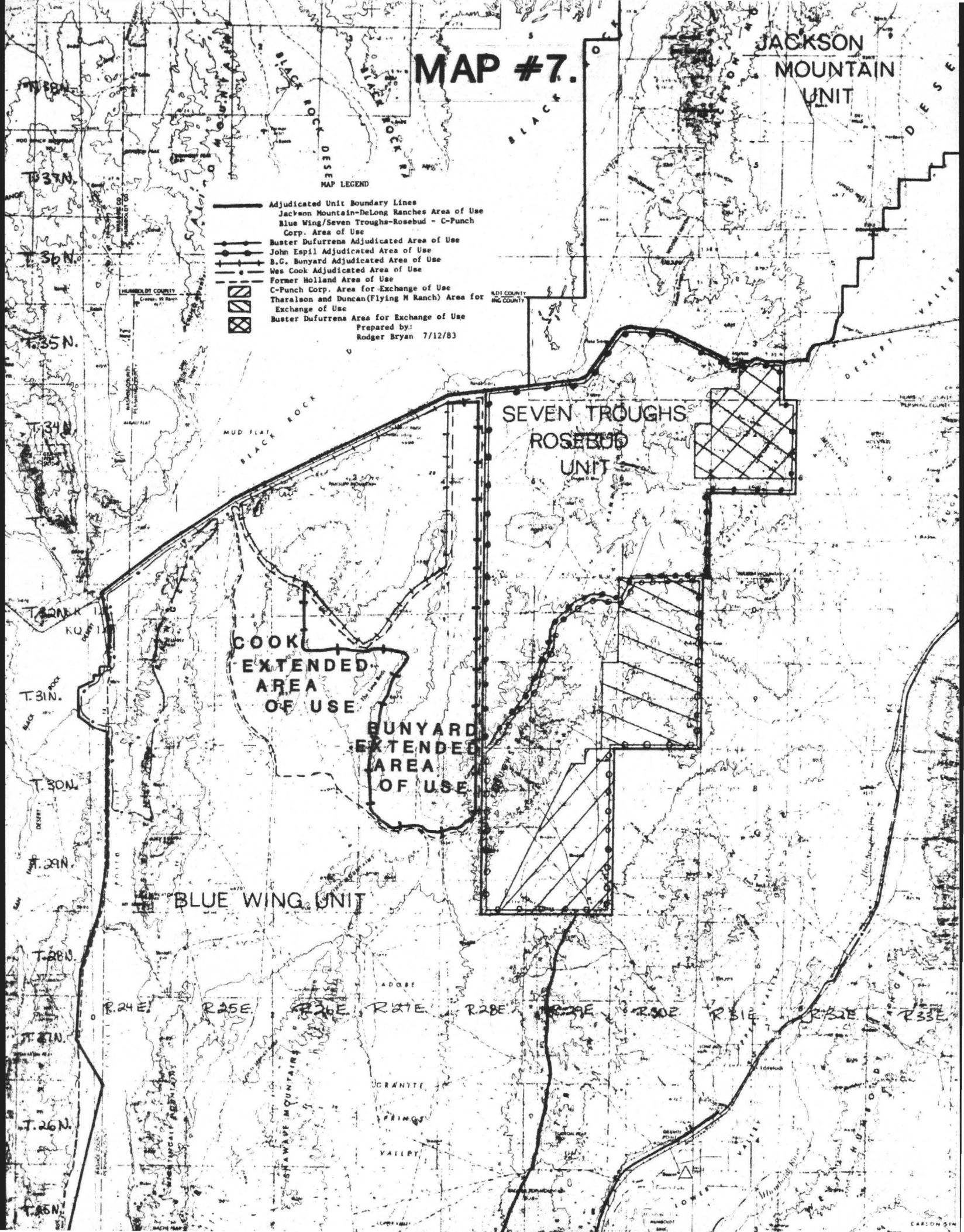
T23N
Pahsupp Mtn
Rabbithole
Selenite Peak
Empire
Kumiva Peak
Dry Lake
Mt Limbo
RYE PATCH RESERVOIR
SEVEN TROUGHS DIST
Granite Springs Valley
Nache Peak
Black Warrior Peak
Juniper Peak
Desert Peak
WINNEMUCCA LAKE
CATTLE GRAZING PLAN
SEASONAL MOVEMENT AREAS
1. GRAZE 4/1-10/31
2. GRAZE 11/1-3/31
MAP LEGEND
Blue Wing/Seven Troughs CRM Planning Area
Wild Horse/Burro Herd Management Area (HMA)
HMA Subunit Division Line
National Resource Lands
Patented Lands
Patented Lode Mining Claims
ROADS
Paved
Major graded (unpaved)
Seasonal


MAP #7.
JACKSON MOUNTAIN UNIT
MAP LEGEND
Adjudicated Unit Boundary Lines
Jackson Mountain-DeLong Ranches Area of Use
Blue Wing/Seven Troughs-Rosebud - C-Punch Corp. Area of Use
Buster Dufurrena Adjudicated Area of Use
John Espil Adjudicated Area of Use
B.G. Bunyard Adjudicated Area of Use
Wes Cook Adjudicated Area of Use
Former Holland Area of Use
C-Punch Corp. Area for Exchange of Use
Tharalson and Duncan(Flying M Ranch) Area for Exchange of Use
Buster Dufurrena Area for Exchange of Use
Prepared by:
Rodger Bryan 7/12/83
SEVEN TROUGHS ROSEBUD UNIT
COOK EXTENDED AREA OF USE
BUNYARD EXTENDED AREA OF USE
BLUE WING UNIT
T.38N.
T.37N.
T.36N.
T.35N.
T.34N.
T.32N.
T.31N.
T.30N.
T.29N.
T.28N.
T.27N.
T.26N.
T.25N.
R.24E.
R.25E.
R.26E.
R.27E.
R.28E.
R.29E.
R.30E.
R.31E.
R.32E.
R.33E.
BLACK ROCK DESERT
MUD FLAT
BLACK ROCK
SAWTOOTH MOUNTAINS
GRANITE SPRINGS VALLEY
ADOBE

Appendix 3. Synopsis of Census Data

Herd Use Area	Fall 1974 Horses A*	Fall 1974 Horses Foals(%)	Fall 1974 Burros A*	Fall 1974 Burros Foals(%)	Spring 1977 Horses A*	Spring 1977 Horses Foals(%)	Spring 1977 Burros A*	Spring 1977 Burros Foals(%)	Summer 1980 Horses A*	Summer 1980 Horses Foals(%)	Summer 1980 Burros A*	Summer 1980 Burros Foals(%)	Summer 1980 Mules A*	Summer 1980 Mules Foals(%)	Fall 1984 Horses A*	Fall 1984 Horses Foals(%)	Fall 1984 Burros A*	Fall 1984 Burros Foals(%)	Fall 1984 Mules A*	Fall 1984 Mules Foals(%)	Spring 1985 Horses A*	Spring 1985 Horses Foals(%)	Spring 1985 Burros A*	Spring 1985 Burros Foals(%)	Spring 1985 Mules A*	Spring 1985 Mules Foals(%)
Antelope Range	55	16(23)			171	25(13)			260	68(21)	3	2(40)	10	2(17)	343	103(23)			6		402	100(20)	2	1(33)		
Total	71				196				328		5		12		446				6		502		3			
Kamma Mountains	10	1(9)			42	9(18)	1		25	6(19)					78	27(26)			2		45	7(13.5)	1		1	
Total	11				51		1		31						105				2		52		1		1	
Lava Beds	396	119(23)	14	6(30)	553	79(13)	19		510	103(17)	36	8(18)			819	263(24)	90	24(21)			884	173(16)	36	4(10)		
Total	515		20		632		19		613		44				1082		114				1057		40			
Seven Troughs	18	17(49)	9		150	29(16)	30	2(6)	549	115(17)	65	20(24)	1		580	183(24)	186	61(25)			262	51(16)	134	15(10)		
Total	35		9		179		32		664		85		1		763		247				313		149			
Selenite Range	4				4		6		7	3(30)	1				38	13(26)	11	2(15)			20	4(17)	1			
Total	4				4		6		10		1				51		13				24		1			
Blue Wing Mtns	122	38(24)			39	4(9)	24	2(8)	61	11(15)	32	7(18)			69	21(23)	57	20(26)			40	12(23)	40	9(18)		
Total	160				43		26		72		39				90		77				52		49			
Shawave Mtns	153	41(21)			290	72(20)			312	60(16)					306	68(18)	8	1(11)			144	36(20)				
Total	194				362				372						374		9				180					
Nightingale Mtns	54	18(25)			172	39(18)			291	41(12)	8	1(11)			324	96(23)					137	37(21)				
Total	72				221				332		9				420						174					
Truckee Range	52	12(19)			46	6(12)			53	8(13)					47	15(24)					72	10(12)				
Total	64				52				61						62						82					
HMA Total	1126		29		1730		84		2483		183		13		3393		460		8		2436		243		1	

*Adults

Appendix 4. Age Structure

Nightingale/Shawave Subunit-Age Structure

1981 Capture Data (Horses)

Year Class	Male	Female	Total	% of Total Population
0	96	92	188	34.0
1	17	30	47	8.5
2	25	30	55	10.0
3	26	29	55	10.0
4	2	3	5	0.9
5	3	7	10	1.8
6	6	15	21	3.8
7	24	29	53	9.6
8	13	29	42	7.6
9	4	20	24	4.3
10	1	11	12	2.2
11	0	4	4	0.7
12	0	9	9	1.6
13+	1	3	4	0.7
Not* Aged	19	5	24	4.3
Total	237	316	553	100.0
%	42.9	57.1	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 5. Age Structure

Lava Beds/Seven Troughs Subunit-Age Structure

1981 Capture Data (Horses)

Year Class	Male	Female	Total	% of Total Population
0	91	89	180	30.4
1	39	51	90	15.2
2	18	21	39	6.6
3	9	27	36	6.1
4	15	34	49	8.3
5	9	40	49	8.3
6	8	26	34	5.7
7	8	25	33	5.6
8	6	10	16	2.7
9	0	0	0	0.0
10	1	5	6	1.0
11	0	0	0	0.0
12	1	1	2	0.3
13+	10	20	30	5.1
Not* Aged	18	10	28	4.7
Total	233	359	592	100.0
%	39	61	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Burros

Year Class	Male	Female	Total	% of Total Population
0	1	1	2	10.5
1	2	1	3	15.8
2	0	0	0	0.0
3	1	1	2	10.5
4	3	1	4	21.1
5	1	2	3	15.8
6	3	1	4	21.1
7	0	0	0	0.0
8	1	0	1	5.2
Total	12	7	19	100.0
%	63	37	100	100.0

Appendix 6. Color Types

Nightingale/Shawave Subunit - Color Types

1981 Capture Data (Horses)

Color Types	Male	Female	Total	% of Total Population
Bay	75	103	178	32.2
Gray	9	10	19	3.4
Pinto	0	4	4	0.7
Red Roan	23	17	40	7.2
Strawberry Roan	13	16	29	5.2
Brown	25	34	59	10.7
Sorrel	27	42	69	12.5
Black	6	14	20	3.6
Albino	1	1	2	0.4
Sevina	2	4	6	1.1
Buckskin	9	18	27	4.9
Quemella Roan	3	5	8	1.5
Grulla	6	10	16	2.9
Red Dun	4	7	11	2.0
Palomino	0	1	1	0.2
Blue Roan	3	0	3	0.5
Chestnut	1	2	3	0.5
Dun	0	1	1	0.2
Not Classified*	30	27	57	10.3
Total	237	316	553	100.0
%	42.9	57.1	100	100 0

*These animals died of natural causes or were destroyed because of injuries before they were classified.

Appendix 7. Color Types

Lava Beds/Seven Troughs Subunit - Color Types

1981 Capture Data-Horses

Color Types	Male	Female	Total	% of Total Population
Bay	36	65	101	17.0
Gray	1	5	6	1.0
Pinto	11	12	23	3.9
Red Roan	2	1	3	0.5
Strawberry Roan	2	2	4	0.7
Brown	27	40	67	11.3
Sorrel	41	68	109	18.4
Black	27	44	71	12.0
Albino	4	1	5	0.8
Sevina	3	1	4	0.7
Buckskin	24	29	53	9.0
Quemella Roan	1	3	4	0.7
Grulla	18	37	55	9.3
Red Dun	6	12	18	3.0
Blue Roan	3	10	13	2.2
Chestnut	5	7	12	2.0
Dun	5	6	11	1.9
Piebald	0	1	1	0.2
Not Classified*	17	15	32	5.4
Total	233	359	592	100.0
%	39	61	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were classified.

Appendix 8. Color Types

Lava Beds/Seven Troughs Subunit - Color Types

1981 Capture Data - Burros

Color Types	Male	Female	Total	% of Total Population
Brown	1	0	1	5.3
Gray	11	7	18	94.7
Total	12	7	19	100.0
%	63	37	100	100.0

Appendix 9. Age Structure

Blue Wing/Seven Troughs Herd Management Area

January - February 1985 Capture Data (Horses)

Year Class	Male	Female	Total	% of Total Population
0	14	9	23	1.1
1	250	251	501	23.0
2	160	188	348	16.0
3	81	88	169	7.8
4	71	102	173	7.9
5	49	71	120	5.5
6	93	112	205	9.4
7	69	80	149	6.8
8	49	49	98	4.5
9	28	32	60	2.8
10	27	20	47	2.2
11	21	13	34	1.6
12	18	10	28	1.3
13+	54	28	82	3.8
Not Aged*	45	98	143	6.6
Total	1029	1151	2180	100.0
%	47.2	52.8	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 10. Age Structure

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Horses)

Year Class	Male	Female	Total	% of Total Population
0	42	33	75	16.0
1	41	35	76	16.2
2	33	34	67	14.3
3	12	26	38	8.1
4	9	14	23	4.9
5	8	23	31	6.6
6	16	15	31	6.6
7	16	15	31	6.6
8	7	11	18	3.8
9	5	2	7	1.5
10	4	2	6	1.3
11				
12	5	4	9	1.9
13+	26	12	38	8.1
Not Aged*	7	13	20	4.3
Total	231	239	470	100.0
%	49.1	50.9	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 11. Age Structure

Blue Wing/Seven Troughs Herd Management Area

January-February 1985 Capture Data (Burros)

Year Class	Male	Female	Total	% of Total Population
0	23	16	39	15.9
1	5	10	15	6.1
2	27	24	51	20.7
3	6	11	17	6.9
4	8	13	21	8.5
5	8	19	27	11.0
6	21	16	37	15.0
7	7	7	14	5.7
8	2	2	4	1.6
9	3		3	1.2
10	1	1	2	.8
11	2		2	.8
12	3	2	5	2.0
13+	2	2	4	1.6
Not Aged*	3	2	5	2.0
Total	121	125	246	100.0
%	49.2	50.8	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 12. Age Structure

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Burros)

Year Class	Male	Female	Total	% of Total Population
0	5	2	7	11.1
1	3	2	5	7.9
2	11	7	18	28.6
3	1	1	2	3.2
4	2	2	4	6.3
5	6	6	12	19.0
6	2	1	3	4.8
7				
8				
9	1		1	1.6
10	1		1	1.6
11				
12		2	2	3.2
13+	1	1	2	3.2
Not Aged*	1	5	6	9.5
Total	34	29	63	100.0
%	54	46	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 13. Age Structure

Blue Wing/Seven Troughs Herd Management Area

January-February 1985 Capture Data (Mules)

Year Class	Male	Female	Total	% of Total Population
0				
1				
2				
3				
4				
5	3	6	9	90.0
6				
7				
8				
9				
10				
11				
12				
13+	1		1	10.0
Not Aged*				
Total	4	6	10	100.0
%	40	60	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 14. Age Structure

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Mules)

Year Class	Male	Female	Total	% of Total Population
0				
1				
2				
3				
4	1		1	100.00
5				
6				
7				
8				
9				
10				
11				
12				
13+				
Not Aged*				
Total	1		1	100.0
%	100		100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 15. Color Types

Blue Wing/Seven Troughs Herd Management Area

January-February 1985 Capture Data (Horses)

Color Types	Male	Female	Total	% of Total Population
Bay	194	243	437	18.5
Gray	47	47	94	4.0
Pinto	68	85	153	6.5
Red Roan	30	23	53	2.2
Strawberry Roan	28	28	56	2.4
Brown	188	215	403	17.1
Sorrel	220	245	465	19.7
Black	95	83	178	7.5
Albino	4	3	7	.3
Sevina	10	11	21	.9
Buckskin	79	81	160	6.8
Quemella Roan	9	2	11	.5
Palomino	3	0	3	.1
Grulla	49	39	88	3.7
White	6	1	7	.3
Red Dun	14	33	47	2.0
Chestnut	7	1	8	.3
Dun	3	0	3	.1
Piebald				
Blue Roan	11	13	24	1.0
Not Classified*	45	98	143	6.1
Total**	1,110	1,251	2,361	100.0
%	47.0	53.0	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

**The total include 181 animals born at PVC.

Appendix 16. Color Types

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Horses)

Color Types	Male	Female	Total	% of Total Population
Bay	70	80	150	31.9
Gray	1	2	3	.6
Pinto	5	12	17	3.6
Red Roan	3	1	4	.9
Strawberry Roan	5	1	6	1.3
Brown	30	31	61	13.0
Sorrel	74	66	140	29.8
Black	21	21	42	8.9
Albino				
Sevina		2	2	.4
Buckskin	4	3	7	1.5
Quemella Roan				
Palomino	1	1	2	.4
Grulla	2	0	2	.4
White				
Red Dun	2	1	3	.6
Chestnut	6	5	11	2.4
Dun				
Piebald				
Blue Roan				
Not Classified*	7	13	20	4.3
Total	231	239	470	100.0
%	49.1	50.9	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 17. Color Types

Blue Wing/Seven Troughs Herd Management Area

January-February 1985 Capture Data (Burros)

Color Types	Male	Female	Total	% of Total Population
Bay				
Gray	79	83	162	65.6
Pinto	13	14	27	10.9
Red Roan				
Strawberry Roan				
Brown	19	14	33	13.4
Sorrel				
Black				
Albino				
Sevina				
Buckskin				
Quemella Roan				
Palomino				
Grulla	7	13	20	8.1
White				
Red Dun				
Chestnut				
Dun				
Piebald				
Blue Roan				
Not Classified*	3	2	5	2.0
Total**	121	126	247	100.0
%	49.0	51.0	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

**The total includes 1 jenny born at PVC.

Appendix 18. Color Types

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Burros)

Color Types	Male	Female	Total	% of Total Population
Bay				
Gray	20	13	33	52.4
Pinto	4	9	13	20.6
Red Roan				
Strawberry Roan				
Brown	5	2	7	11.1
Sorrel				
Black				
Albino				
Sevina				
Buckskin				
Quemella Roan				
Palomino				
Grulla	4	0	4	6.4
White				
Red Dun				
Chestnut				
Dun				
Piebald				
Blue Roan				
Not Classified*	1	5	6	9.5
Total	34	29	63	100.0
%	54	46	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 19. Color Types

Blue Wing/Seven Troughs Herd Management Area

January-February 1985 Capture Data (Mules)

Color Types	Male	Female	Total	% of Total Population
Bay				
Gray				
Pinto				
Red Roan				
Strawberry Roan				
Brown	1	1	2	20.0
Sorrel				
Black				
Albino				
Sevina				
Buckskin	3	5	8	80.0
Quemella Roan				
Palomino				
Grulla				
White				
Red Dun				
Chestnut				
Dun				
Piebald				
Blue Roan				
Not Classified*				
Total	4	6	10	100.0
%	40	60	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 20. Color Types

Lava Beds/Seven Troughs Subunit

1985 (July) Capture Data (Mules)

Color Types	Male	Female	Total	% of Total Population
Bay	1		1	100
Gray				
Pinto				
Red Roan				
Strawberry Roan				
Brown				
Sorrel				
Black				
Albino				
Sevina				
Buckskin				
Quemella Roan				
Palomino				
Grulla				
White				
Red Dun				
Chestnut				
Dun				
Piebald				
Blue Roan				
Not Classified*				
Total	1		1	100.0
%	100			100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 21. Age Structure (Horses)

Summary of Gatherings through

July 1985 for Blue Wing/Seven Troughs HMA

Year Class	Male	Female	Total	% of Total
0	243	233	466	12
1	347	367	714	18.8
2	236	273	509	13.4
3	128	170	298	7.8
4	97	153	250	6.6
5	69	141	210	5.5
6	123	168	291	7.7
7	117	149	266	7.0
8	75	99	174	4.6
9	37	54	91	2.4
10	33	38	71	1.9
11	21	17	38	1.0
12	24	24	48	1.2
13+	91	63	154	4.1
Not Aged*	89	126	215	5.7
Total	1730	2065	3795	100.0
%	45.6	54.4	100	100.0

mortality?

Appendix 22. Age Structure (Burros)

Summary of Gatherings through

July 1985 for Blue Wing/Seven Troughs HMA

Year Class	Male	Female	Total	% of Total Population
0	29	19	48	14.6
1	10	13	23	7.0
2	38	31	69	21.1
3	8	13	21	6.4
4	13	16	29	8.9
5	15	27	42	12.8
6	26	18	44	13.4
7	7	7	14	4.3
8	3	2	5	1.5
9	4		4	1.2
10	2	1	3	.9
11	2		2	.6
12	3	4	7	2.1
13+	3	3	6	1.8
Not Aged*	4	7	11	3.4
Total	167	161	328	100.0
%	50.9	49.1	100	100.0

Appendix 23. Age Structure (Mules)

Summary of Gatherings through

July 1985 for Blue Wing/Seven Troughs HMA

Year Class	Male	Female	Total	% of Total Population
0				
1				
2				
3				
4	1		1	9.1
5	3	6	9	81.8
6				
7				
8				
9				
10				
11				
12				
13+	1		1	9.1
Not Aged*				
Total	5	6	11	100.0
%	45.5	54.5	100	100.0

Appendix 24. Color Types (Horses)

Summary of Gatherings through

July 1985 for Blue Wing/Seven Troughs HMA

Color Types	Male	Female	Total	% of Total Population
Bay	375	491	866	21.8
Gray	58	64	122	3.1
Pinto	84	113	197	5.0
Red Roan	58	42	100	2.5
Strawberry Roan	48	47	95	2.4
Brown	270	320	590	14.9
Sorrel	362	421	783	19.7
Black	149	162	311	7.8
Albino	9	5	14	.3
Sevina	15	18	33	.8
Buckskin	116	131	247	6.2
Quemella Roan	13	10	23	.6
Palomino	4	2	6	.2
Grulla	75	86	161	4.1
White	6	1	7	.2
Red Dun	26	53	79	2.0
Chestnut	19	15	34	.9
Dun	8	7	15	.4
Piebald		1	1	.0
Blue Roan	17	14	31	.8
Not Classified*	99	153	252	6.3
Total**	1811	2156	3967	100.0
%	45.7	54.3	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

**The total includes 181 animals born at PVC.

Appendix 25. Color Types (Burros)

Summary of Gatherings through

July 1985 for Blue Wing/Seven Troughs HMA

Color Types	Male	Female	Total	% of Total Population
Bay				
Gray	110	103	213	64.7
Pinto	17	23	40	12.2
Red Roan				
Strawberry Roan				
Brown	25	16	41	12.5
Sorrel				
Black				
Albino				
Sevina				
Buckskin				
Quemella Roan				
Palomino				
Grulla	11	13	24	7.3
White				
Red Dun				
Chestnut				
Dun				
Piebald				
Blue Roan				
Not Classified*	4	7	11	3.3
Total	167	162	329	100.0
%	50.8	49.2	100	100.0

*These animals died of natural causes or were destroyed because of injuries before they were processed.

Appendix 26.

Glossary of Terms

Active Preference - the allowable grazing use made by domestic livestock during the grazing year, and generally expressed in AUMs.

Adjudication (or range adjudication) - the allocation of grazing areas or use of allotments, season of grazing use, numbers and class of livestock and numbers of AUMs to qualified livestock operators (Nevada Report). The "Nevada Report" is a document prepared by Bureau personnel in 1974. The Nevada Report was about the effects of livestock grazing on wildlife, watershed, recreation, and other resource values in Nevada.

Adult Horse - Any wild horse two years or older (NSO - Instruction Memorandum NV 83-289).

Allotment - an area of land where one or more individuals graze their livestock. It generally consists of public lands but may include parcels of private or state owned lands. The number of livestock and period-of-use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture (Nevada Report).

Allotment Management Plan (AMP) - means a documented program which applies to livestock operations on the public lands, prepared in consultation and cooperation with the permittee(s), lessee(s) or other involved affected interests (43 CFR 4100.0-5).

Animal Unit Month (AUM) - means the amount of forage necessary for the sustenance of one cow or its equivalent for a period of one month (43 CFR 4100.0-5).

Appropriate Management Levels (AMLs) - the median number of wild horses or burros to be maintained by herd management area. (NSO Instruction Memorandum No. 83-289).

Carrying or grazing capacity - as used in this document, the words are synonymous. The phrase means the maximum stocking rate possible without inducing damage to vegetation or related resources.

Coordinated Resource Management Planning (CRMP) - public involvement program in which interest groups, other agencies, users and affected individuals develop multiple-use plans as part of the BLM's planning process (Winnemucca Preliminary Final Environmental Impact Statement).

Endangered Species - any species in danger of extinction throughout all or a significant portion of its range (WPFEIS).

Grazing system - systematic sequence of grazing use and nonuse of an area, which is designed to achieve established objective (Nevada Report).

Herd - means one or more stallions and their mares or jacks and their jennies (43 CFR 4700.0-5).

Herd Area - The geographic area identified as having been used by a herd as its yearlong habitat in 1971.

Herd Management Area Plan (HMAP) - an activity plan which addresses the management of wild horses or burros and the habitat on one or more herd management areas (NSO Instruction Memorandum No. 83-289).

Herd Management Area (HMA) - a herd area identified in an approved land use plan where wild horses or burros will be maintained and managed.

Management Framework Plan (MFP) - A land-use plan for the public lands which provides a set of goals, objectives and constraints for a specific planning area to guide the development of detailed plans for the management of each resource (WPFEIS).

MFP II - a BLM Area Manager's recommendation to the District Manager for the Management Framework Plan based on conflict resolution (WPFEIS).

MFP III - the District Manager's land use decision for management of the public lands and their resources (WPFEIS).

Management Plan - means a written program of action designed to protect, manage, and control wild free-roaming horses and burros and maintain a natural ecological balance on the public lands (43 CFR 4700.0-5).

Multiple Use - the management of public lands and their various resource values so that they are utilized in a combination that will best meet the present and future needs of the public (WPFEIS).

Public lands - means any lands administered by the Secretary of the Interior through the Bureau of Land Management (43 CFR 4700.0-5).

Range Survey (Vegetation Inventory) - a method for the measuring or inventory of vegetation to provide base data for use in management decisions and establishment of the grazing capacity.

Riparian - a biological zone influenced by the presence of water. Also used to refer to vegetation that grows along streams or around springs (WPFEIS).

Threatened species - any species likely to become endangered within the foreseeable future throughout all or a significant part of its range (WPFEIS).

Unit Resource Analysis (URA) - a description of the basic physical characteristics of an area.

Wilderness Study Area (WSA) - an area determined to have wilderness characteristics. Study areas will be subject to interdisciplinary analysis and public comment to determine wilderness suitability. Suitable areas will be recommended to the President and Congress for wilderness designation (WPFEIS).

Wild Free-Roaming Horse and Burro - All unbranded and unclaimed horses and burros that use public lands as all or part of their habitat or that have been removed from these lands by the authorized officer but have not lost their status under section 3 of the act. (NSO Instruction Memorandum No. 83-289).

APPENDIX 27.

Blue Wing/Seven Troughs

Monitoring Plan

(DRAFT)

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(February 12, 1985)

Note to Reviewers:

1. A glossary defining many of the technical terms used in this plan is included as Appendix 1.

2. The reader may note that certain blanks are found where dates should be entered. These blanks will be filled in at the time this plan is approved.

Table of Contents

I. Introduction

The purpose of this plan is to describe the monitoring program that will be implemented in the Blue Wing/Seven Troughs Allotments. It is written as a part of Blue Wing/Seven Troughs Coordinated Resource Management Plan. The geographical area addressed in this plan includes approximately 1.3 million acres of public land located in Pershing, Humboldt, Churchill, and Washoe Counties.

Monitoring in the Blue Wing/Seven Troughs Allotments began as early as 1977 with the establishment of trend plots. Between 1978 and 1982, numerous trend and utilization studies were placed throughout the allotments. Additional key management areas were selected in 1983 during a field tour by the Lovelock CRMP group. All studies are currently in compliance with State and District guidelines.1/

The local CRMP group to which this plan will be submitted was organized at a public meeting held on September 16, 1981, in Lovelock, Nevada (Lovelock CRMP 1981). The issues and objectives discussed in the following sections are derived from the Blue Wing/Seven Troughs Coordinated Resource Management Plan, which was approved on July 24, 1984, by the Lovelock CRMP group.

II. Public Involvement and Interdisciplinary Approach

The multidisciplinary approach that will be used in this plan is based on guidelines established in the Winnemucca District Coordinated Monitoring Plan (BLM 1984a, Sect. V). This strategy includes the

1/ These guidelines are discussed in greater detail in Section V B of this plan.

formation of an interdisciplinary group comprised of parties concerned with wildlife, wild horses and burros, watershed, and livestock grazing, as well as other interests. The group decided on the placement of key management areas and studies, and reviews current studies to determine if they are meeting monitoring objectives.

Participation of public land users and other interests shall be solicited during the planning, initiating, and carrying out of monitoring activities.

III. Allotment Issues

Major issues concerning the Blue Wing/Seven Troughs Allotments are listed below (BLM 1984b, p. 3).

The issues shown in this section are limited to resource problems that can be effected by grazing management and that can be evaluated through a monitoring system.

1. Approximately 41% of the public lands in the planning area is estimated to be in poor ecological range condition and approximately 37% of the area is in fair ecological range condition (1979 estimate).

2. Approximately 39% of the public lands in the planning area is estimated to be in a downward trend (1979 estimate).

3. The level of intensity of present grazing management is not satisfactory (i.e., area-of-use, season-of-use, distribution, salting, etc.).

4. All but one of the licensed livestock permittees are operating under their active preference.

5. Sheep operators would like to expand their present areas-of-use.

6. Existing rangeland improvements are inadequate.

7. The population of wild horses/burros is currently in excess of management numbers on checkerboard and noncheckerboard lands, and its contributing to the deterioration of the rangeland/habitat.

8. Crucial wildlife habitat above the 5,000 foot elevation is in less desirable condtion.

9. Sage grouse populations are being reduced by meadow deterioration and by access of off-road vehicles to ridge tops and brooding areas during crucial periods.

10. The Nevada Department of Wildlife (NDOW) has identified the southern Selenites as a possible site for the reintroduction of bighorn sheep.

11. The wetland condition is deteriorating around springs and seeps in the planning area.

12. A program to monitor and evaluate changes in rangeland/habitat condition in relation to management practices is not available for the planning area.

IV. List of Allotment Objectives

Allotment objectives for the Blue Wing/Seven Troughs Allotments are listed below (BLM 1984b, p. 4).

These are objectives which monitoring can be used to evaluate their status and are limited to resource concerns to which land management will be applied. The pertinent issues (listed above) are shown in parenthesis.

1. Manage domestic livestock grazing to increase 136,318 acres from poor and fair to good, and 3,505 acres from good to excellent ecological condition; improve range condition and forage availability, to reach and sustain 33,852 AUMs of active preference for livestock grazing as follows (issue nos. 1-6):

	Blue Wing Allotment	Seven Troughs Allotment
C-Punch Corp.	21,460 AUMs	4,404 AUMs
B. G. Bunyard	1,505 AUMs	
Wesley Cook	1,364 AUMs	
Dufurrena Sheep Co.		1,492 AUMs
John Espil		3,627 AUMs
TOTAL	24, 329 AUMs	9,523 AUMs

2. Maintain a viable population of wild horses/burros in the planning area.

3 Maintain and improve the condition of wildlife habitat to accommodate the needs of all species of wildlife presently or potentially using the planning area (issue nos. 8-10).

4. Protect and enhance water quality, quantity, and wetland characteristics of selected springs in the area (issue no. 11).

5. Monitor the resources for the attainment of management goals (issue no. 12).

V. Intensity and Type of Studies, and Key Management Area Objectives

A. Allotment Catagorization

The Selective Management categorization process in the Sonoma-Gerlach Resource Area has identified Blue Wing/Seven Troughs as "I" allotments. Guidelines that apply to monitoring in allotments of this category are listed below (BLM 1981b). Monitoring prioritization is discussed in Section VIII of this plan.

1. Actual use data is required annually from the livestock operator. Actual use field checks as needed.

2. Utilization studies on key/critical areas should be conducted every year and geared to the grazing schedule. Competitive concurrent or sequential use conditions may require more intensive utlization study efforts.

3. Determine use patterns initially. This data should be used to develop management objectives and ID key area, etc. Any change in livestock operation may require an update.

4. Determine the initial seral state on the key/critical area. Depending upon the resource conflicts and values, vary the intensity of the method employed from ocular estimate of percent composition to a 10-20 plot weight estimate transect. When trend studies indicate a significant change up or down, the seral stage should be rechecked.

5. Establish trend studies on the key/critical area. Take a general view photograph directed down the baseline. The time constraints imposed due to resource issues, management objectives, EISs, decisions, etc., will usually dictate the frequency of rereading the transects; however, they should generally be reread every three to five years.

6. Determine the need for other resource studies, i.e., wildlife, wild horse, watershed, recreation, etc. Identify the procedure and establish the studies.

B. Types of Studies

All study methods discussed in this plan will be done to standards set forth in the District Coordinated Monitoring plan and the Nevada Range Studies Task Group Procedures (BLM 1981a). Specific types of data and the study methods used for collection are described below.

1. Climatological

Climatological data can be obtained from a current hydrological study being carried out in the Cow Creek drainage area (BLM 1979a). This information can be supplemented by data published by the National Oceanic and Atmospheric Administration. Substations that may provide useful information include Lovelock, Rye Patch Dam, and Jungo-Meyer Ranch.

2. Actual Use

Actual use records will be submitted by the permittees at the end of each grazing season. Information that will be recorded into the Actual Use Booklet (Form N2-4412-8) includes all placement, removal, and movement of livestock. Other information that may be pertinent to the permittee's livestock operation or to grazing management can also be included in this booklet.

In order to facilitate the mapping of distribution patterns and also to separate livestock use from wild horse/burro use, it will be important to show the placement, removal, or movement of livestock.

3. Frequency and Trend

One of the parameters to show changes in plant composition (trend) is frequency. Frequency data will be collected using the quadrat-frequency method as described in the Task Group Procedures. Data will be stored and analyzed using standard statistical analysis procedures as a part of a Bureau computer program. When a statistically significant change in frequency data is noted, then the double-sampling transect will be read.

4. Ecological Status

Ecological status (formerly referred to as "ecological range condition") was determined initially on all key areas discussed in this plan. The double-sampling method as described in the National Range Handbook (SCS 1976) will be used to determine ecological status. Frequency data will be used with ecological status data to determine trend.

5. Utilization

Livestock and wild horse/burro utilization will be collected using the key forage plant method, which is also described in

the Task Group Procedures. Where key browse species exists (i.e., bitterbrush), the extensive utilization method will be used in accordance to the District Wildlife Study Procedures (BLM 1983b). Utilization cages will be placed on key areas for calibration purposes.

6. Livestock Distribution

Distribution patterns will be plotted on a map using actual use and utilization data as well as through consultation with permittees. Maps should be updated prior to evaluation dates (Section VII). Light, moderate, and heavy utilization classes will be used in mapping livestock use.

7. Wild Horse and Burro Distribution

Range shared by wild horses/burros can effectively be monitored by the same studies initiated to monitor livestock use. In order to separate livestock and wild horse/burro use, it will be necessary to plot wild horse/burro distribution during the mapping process discussed above. Wild horse and burro inventory data will also be used in plotting distribution patterns.

8. Wildlife Habitat

Since the establishement of key management areas was done using an interdisciplinary approach, trend and condition of wildlife

habitat can effectively be evaluated using the methods as described in numbers 3 and 4 (above). In order to facilitate the evaluation of wildlife habitat, it will be necessary to record all identifiable plant species during the reading of frequency and condition studies. Wildlife population data will be obtained by the Nevada Department of Wildlife.

C. Monitoring Objectives

Table I shows the location of key management areas as well as base data, including ecological site, initial ecological range condition, and types of studies to be implemented. Table II shows the specific monitoring objectives established for each study.

VI. Schedule for Conducting Studies

Scheduling of studies will be done in accordance with monitoring priorities established in the Resource Area (refer to Section VIII). Dates of interim, short-term, and long-term time periods are as follows:

Interim (first 5 years): _____ to _____

Short term (first 10 years): _____ to _____

Long term (35 years): _____ to _____

Table III shows the dates when utilization studies should be read in the interim time period and when the frequency studies should be read in the short term time period. During the evaluation at the end of the time periods, a new utilization and frequency schedule will be drawn up.

Ecological status transects will be read when a statistically significant change is noted in frequency data. On key areas where frequency is not read, a transect should be run every ten years. Actual use and climatological data will be compiled annually. Distribution information, including pattern maps, will be compiled prior to evaluation dates (Section VII of this plan).

VII. Schedule for Conducting Allotment Evaluation

A. Evaluation Schedule

Evaluation schedules of monitoring data will be based on Resource Area priorities. A basic schedule is shown below, specific dates are to be filled in on the approval of this plan.

1. Interim. Evaluate on the third year and at the end of the first five years (utilization, actual use, and climatological data only).

_____(year 3)

_____(year 5)

2. Short term: Evaluate in the eighth and at end of first ten years (utilization, actual use, climatological, and trend data).

_____(year 8)

_____(year 10)

3. Long term. After interim and short-term, evaluate every six years (utilization, actual use, climatological, and trend data).

_____(year 16)

_____(year 22)

_____(year 28)

_____(year 34)

_____(year 40)

B. Evaluation Process

Monitoring data will be summarized when completed by person(s) gathering the data and included into the appropriate section of the Allotment study file. The summarized data will be analyzed and interpreted by the monitoring specialist or by those persons

selected by the Area Supervisory Range Conservationist, the District Monitoring Coordinator, and affected staff specialists. The Supervisory Range Conservationist will submit a recommendation for further action (if needed) to the Area Manager.

Analysis will be based on the attainment of key area objectives, identifying which objectives were not met (if applicable), and identifying why the objectives were not met (if applicable).

Subsequent analysis and changes to the grazing system or Monitoring Plan will be made on a case by case basis, as directed by the Area Manager and Supervisory Range Conservationist in consultation with the permittees and other affected interests.

Table ~~III~~ IV shows how evaluation of monitoring results may be used to effect management.

VIII. Coordination of Manpower and Authority to Initiate Plan

The Resource Area monitoring specialist and/or those persons appointed by the Area Manager and Supervisory Range Conservationist shall be responsible for the coordination and the carrying out of this plan. This person(s) shall also have the responsibility for the updating of this plan.

Time and manpower shall be coordinated to meet Resource Area priorities. Since Blue Wing/Seven Troughs are "I" category allotments,

they shall have priority over "M" and "C" category allotments. Emphasis on monitoring in these allotments is reflected in the District Coordinated Monitoring Plan (BLM 1984a, Table IV).

Costs as far as manpower and supplies needed for monitoring, processing of data, and evaluation of monitoring results should be projected at the beginning of each fiscal year. Actual cost of monitoring should then be computed at the end of the fiscal year. The information should be presented in a format similar to Table V to aid in planning monitoring activities for the allotments.

Table I. Monitoring Studies Location and Base Data

Key Area Number	Key Area Name	Location	Ecological Site 1/	Ecological Status & Seral Stage 2/
134-0001	Mauds Well	T. 34 N., R. 31 E., Sec. 31, SENE	29-013N(Loamy 4-8"p.z.)	65% (Late Seral)
134-0002	Scossa	T. 33 N., R. 30 E., Sec. 16, NWNW	27-013N(Loamy 4-8"p.z.)	43% (Mid Seral)
134-0003	Juniper Canyon	T. 31 N., R. 28 E., Sec. 2, NWNE	27-032N(Shallow calcareous Loam 8-10"p.z.)	70% (Late Seral)
134-0004	Seven Troughs Exclosure No. 1	T. 31 N., R. 29 E., Sec. 3, SENW	27-007N(Loamy slope 8-10"p.z.)	36% (Mid Seral)
134-0005	Seven Troughs Exclosure No. 2	T. 32 N., R. 29 E., Sec. 35, NENE	27-013N(Loamy 4-8"p.z.)	62% (Late Seral)
134-0006	Cow Creek			
135-0001	Shawave	T. 26 N., R. 25 E., Sec. 13 NWNE	27-054N(Loamy slope 10-12"p.z.)	64% (Late Seral)
135-0002	Lava Beds No. 2	T. 31 N., R. 27 E., Sec. 4, SENW	27-054N(Loamy slope 10-12"p.z.)	58% (Late Seral
135-0003	Lava Beds No. 3	T. 31 N., R. 26 E., Sec. 36, SESW	27-054N(Loamy slope 10-12"p.z.)	42% (Mid Seral)
135-0004	Bob Spring	T. 27 N., R. 26 E., Sec. 1, SESE	27-018N(Gravelly loam 4-6"p.z.)	43% (Mid Seral)
135-0005	Stonehouse	T. 27 N., R. 25 E., Sec. 21, SESE	27-020N(Claypan 8-10" p.z.)	44% (Mid Seral)
135-0007	Selenites No. 2	T. 30 N., R. 24 E.	Need representative site	
135-0008	Selenites No. 1	This key area was burned off in 1984, another site will be selected by an interdisciplinary team in FY-85.		
135-0010	Shawave Exclosure No. 1	T. 24 N., R. 25 E., Sec. 2, NESW	27-018N(Gravelly loam 4-6"p.z.)	66% (Late Seral)
135-0011	Shawave Exclosure No. 2	T. 24 N., R. 26 E., Sec. 10, NESE	27-018N(Gravelly loam 4-6"p.z.)	57% (Late Seral)
135-0012	Lava Beds No. 3	T. 31 N., R. 26 E., Sec. 36, SESE	27-008N(Loamy 8-10" p.z.)	39% (Mid Seral)

1/ Ecological sites listed here can be reference to SCS Ecological Site Descriptions (SCS 1983).

2/ Ecological Status is referred to here in terms of the percent potential natural plant community (PNC) present on the study site during site survey in 1984.

Table II. Key Management Area Objectives

Key Area Number	Key 1/ Species	Allowable Use 2/ Levels	Desired Ecological 3/ Status	Interim (5 years) Frequency 4/ Trend	Short Term (10 years) Frequency Trend	Short Term (10 years) Ecological Status 4/ Objectives	Long Term (35 years) Frequency Trend	Long Term (35 years) Ecological Status Objectives
134-0001	SIHY STTH2 EULA5	40 40 50	Late Seral to PNC	Static (if ORHY or EULA5 appear in frequency study, reevaluate objectives).	Same as interim	Maintain current composition of SIHY and STTH2; if ORHY ever appears on site (should be present) or when EULA5 increases to 1% of plant composition, reevaluate objectives	Same as interim	Same as short term
134-0002	ORHY SIHY	50 40	Late Seral to PNC	Upward (show increase in ORHY)	Same as interim	Maintain current composition of SIHY; increase ORHY to at least 5%	Same as interim	Maintain current composition of SIHY; increase ORHY to at least 10%
134-0003	STTH2 SIHY POA++	40 40 50	Late Seral	Static (show no decrease in key species)	Same as interim	Maintain current composition of key species & at least 10% total perennial forb composition	Same as interim	Same as short term
134-0004	SIHY STTH2 POA++ BAHO	40 40 50 5	Late Seral	Upward (show increase of SIHY, STTH2, POA++, and native forbs)	Same as interim	Increase SIHY & STTH2 to 5% each; increase POA++ to 8%	Same as interim	Maintain SIHY at 5%; increase STTH2 to 10% & POA++ to 15%
134-0005	SIHY ORHY SPHAER	40 50 15	Late Seral	Upward (show increase in SIHY)	Same as interim	Increase SIHY to 40%; if ORHY increases to 1%, reevaluate objectives	Static (show no decrease in key species)	Maintain SIHY at 10%; if ORHY increases to 1%, reevaluate objectives
134-0006								

Table II. Key Management Area Objectives
(Continued)

Key Area Number	Key 1/ Species	Allowable Use 2/ Levels	Desired Ecological 3/ Status	Interim (5 years) Frequency 4/ Trend	Short Term (10 years) Frequency Trend	Short Term (10 years) Ecological Status 4/ Objectives	Long Term (35 years) Frequency Trend	Long Term (35 years) Ecological Status Objectives
135-0007	AGSP	50						
	STTH2	40						
	PUTR2	50						
	BASA	30						
135-0008								
135-0010	ORHY	50	Late Seral	Static (show no decreases in key species)	Same as interim	Maintain current ecological status	Same as interim	Same as short term
	SIHY	40						
	ELLA5	50						
	SPHAER	15						
135-0011	ORHY	50	Late Seral	Static (show no decrease in key species)	Same as interim	Maintain current ecological status; if more perennial forage species appears, reevaluate objectives	Same as interim	Same as short term
	ELLA5	50						
135-0012	SIHY	40		Utilization Study Only				
	STTH2	40						

1/ Plant codes are used here base on SCS 1982. These codes are identified in the Plant List (Appendix 2).

2/ Allowable use levels are the objectives established for utilization. They are derived from the Sonoma-Gerlach Grazing Environmental Impact Statement, pp. 1-7.

3/ This is the Seral stage that would have the greatest value for all resources (livestock, wild horses/burros, game species of wildlife).

4/ Frequency identified as static or upward. If an important forage plant species appears on a study that previously was not recorded, then all monitoring objectives for that key area should be reevaluated.

Table II. Key Management Area Objectives
(Continued)

Key Area Number	Key 1/ Species	Allowable Use 2/ Levels	Desired Ecological 3/ Status	Interim (5 years) Frequency 4/ Trend	Short Term (10 years) Frequency Trend	Short Term (10 years) Ecological Status 4/ Objectives	Long Term (35 years) Frequency Trend	Long Term (35 years) Ecological Status Objectives
135-0001	SIHY STTH2 POA++ FEID	40 40 50 40	Late Seral	Upward (show increase in STTH2; show no decrease in SIHY & POA++)	Same as interim	Increase STTH2 to at least 5%; if FEID increases to 1%, reevaluate objectives; maintain current % of SIHY and POA++	Same as interim	Increase STTH2 to at least 10%; maintain current % of SIHY and POA++; increase total perennial forbs to 10%
135-0002	SIHY STTH2 POA++ BASA3 CRAC2	40 40 50 30 50	Late Seral	Upward (show increase in STTH2; show no decrease in SIHY & POA++)	Same as interim	Increase STTH2 to at least 9%; maintain current level of SIHY and POA++; increase total perennial forbs to 10%	Same as interim	Increase STTH2 to at least 15%; maintain short term levels of forbs, SIHY, and POA++
135-0003	SIHY STTH2 POA++ ORHY BASA	40 40 50 50 30	Late Seral	Upward (show increase in STTH2; show no decreases in other key species)	Same as interim	Increase STTH2 to at least 6%; maintain levels of other key species	Same as interim	Increase STTH2 to at least 10%; maintain levels of other key species; increase total perennial forbs to at least 10%
135-0004	ORHY	50	Late Seral	Upward (show increase in ORHY)	Same as interim	Increase ORHY to at least 3%; if other perennial forage grasses appear, reevaluate objectives	Same as interim	Increase ORHY to at least 8%
135-0005	POA++ SIHY	50 40	Late Seral	Upward (show an increase in SIHY and POA++; show an increase of perennial forbs)	Same as interim	Increase SIHY to at least 5% and POA++ to 8%; if STTH2 appears, reevaluate objectives	Upward (show an increase in POA++ and perennial forbs; show no decrease in SIHY)	Increase POA++ to at least 14% and perennial forbs to at least 10%; maintain SIHY at no less than 5%

Table III. Frequency and Utilization Schedule 1/

Frequency	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
134-0001	X	X			X			X		
134-0002	X	X			X			X		
134-0003	X	X			X			X		
134-0004			X			X			X	
134-0005			X			X			X	
134-0006	X	X	X		X			X		
135-0001			X			X			X	
135-0002			X			X			X	
135-0003			X			X			X	
135-0004	X	X			X			X		
135-0005	X	X			X			X		
135-0007	X	X			X			X		
135-0008	X	X	X			X			X	
135-0010			X			X			X	
135-0011			X			X			X	
UTILIZATION 2/	mid-May	mid-May	mid-May	mid-May	mid-May	(reschedule after five year evaluation)				

1/ A check (X) shows what year frequency studies are to be read. Based on phenological stages of ORHY, SIHY, STTH2, and BASA3, studies should be read from early to mid-May (BLM 1979b).

2/ Utilization should be read at least once a year at the end of the growing season, then, based on time and manpower, during late fall or winter.

TABLE 4. POSSIBLE MANAGEMENT ACTIONS THROUGH MONITORING EVALUATION

Evaluation Period 1/	Livestock Distribution 2/	Climate 3/	Utilization Objectives 4/	Frequency Objectives 1/	Ecological Status Objectives 1/	Management Actions 5/
Interim	Good	Favorable	< AUL	N/A	N/A	May indicate understocking. Adjust livestock numbers or periods-of-use.
	Poor	Favorable	< AUL	N/A	N/A	Indicates poor distribution. Change distribution patterns through range improvements, salting, etc.
	Good	Unfavorable	> AUL	N/A	N/A	Indicates unfavorable climatic conditions. If conditions exist for more than 2 years, adjust livestock numbers or periods-of-use until climatic conditions, range condition, & utilization are favorable.
	Good	Favorable	> AUL	N/A	N/A	May indicate overstocking. Adjust livestock numbers or periods-of-use.
Short-term and Long-term	Good	Favorable	< AUL	Met	Met	Indicates understocking. Adjust livestock numbers or periods-of-use.
	Poor	Favorable	> AUL	Met	Met	Indicates poor distribution. Change distribution patterns through range improvements, salting, etc.
	Poor	Favorable	< AUL	Met	Met	Indicates poor distribution. Change distribution patterns.
	Good	Unfavorable	> AUL	Not Met	Not Met	Indicates unfavorable climatic conditions. If conditions exist for more than two years, adjust livestock numbers or periods-of-use until monitoring indicates conditions are more favorable.
	Good	Favorable	> AUL	Not Met	Not Met	May indicate overstocking. Adjust livestock numbers or periods-of-use.
	Good	Favorable	< AUL	Not Met	Not Met	Trend and condition objectives not being met, for unknown reasons. Reevaluate monitoring procedures and/or intensify monitoring.

1/ Specific time frames and objectives are outlined in Section VI of this plan.
2/ Distribution is identified as "good" (livestock well distributed throughout pasture) and as "poor" (livestock concentrated near riparian, watering sites, on flats, etc.).
3/ Climate is identified as "favorable" or "unfavorable." Favorable and unfavorable conditions can be derived from deviations in normal temperature and precipitation patterns.
4/ < AUL - less than the allowable use levels on any key species as shown in the monitoring plan.
> AUL - greater than the allowable use levels on any key species as shown in the monitoring plan.
5/ This column shows the conclusions that can be derived from the combination of monitoring results from the other columns, as well as what management actions could be used to help the range meet monitoring objectives.

Table V. Projected and Actual Manpower/Costs of Monitoring

	FY ____	FY ____	FY ____	FY ____
1. Workmonths (cost) used for monitoring:				
a. Projected				
b. Actual				
2. Supplies (cost) used for monitoring:				
a. Projected				
b. Actual				
3. Workmonths (cost) used for processing and evaluation:				
a. Projected				
b. Actual				
4. Other costs				
5. Total cost of monitoring				
a. Projected				
b. Actual				

APPENDIX 1. Glossary of Terms 1/

Allowable use level (AUL): Percent of above-ground plant material that may be removed by grazing animals established to achieve management ovjectives. Also referred to as "proper use factor (PUF)." See also "usable forage."

Climax: See "potential natural community."

Double sampling method: Study method used for determining the plant composition of a vegetative community. It involves a transect where several plots are estimated as to the weight per species of current year's forage production, then representative plots are clipped and weighed to determine actual weight of material being produced (SCS 1976).

Ecological site: A land designation identifying a specific potential natural plant community and specific physical site characteristics, differing from other kinds of land in its ability to produce vegetation and respond to management (SRM 1983). Also referred to as "range site" and "ecological range site."

Ecological Status: The present state of a vegetation and soil surface protection of an ecological site related to the potential natural plant community for that site (SRM 1983). Ecological status may be expressed in terms of a seral stage or as a percentage of species found in the potential natural community. This term is also referred to as "ecological range condition."

Frequency: A numerical expression of the presence or absence of individuals of a species in a population (BLM 1983). Frequency is shown as a percentage of a species occurrence within a series of samples (see quadrat-frequency method).

Key forage plant method: Study method used to determine utilization of key plant species. The method involves a transect where several plots are estimated as to the use being made on plants within each plot. In order to eliminate small variations in figures between different observers viewing the same plot, utilization classes are used instead of specific percentages (BLM 1981).

Key management area or key area: An area used as a monitoring point of grazing use because of its location, use, and grazing value (BLM 1983). It is assumed that the key area will reflect the impacts of management over the rangeland.

Key species: (1) a forage plant species whose use serves as an indicator to the degree of use on other species or (2) a plant species that because of its importance, be considered in a management program (BLM 1983a).

Phenological stage: Refers to the growth stage of individual plants.

Plant code: An abbreviated method of identifying plant species. The method takes the first two letters of the genus (e.g., SI from Sitanion) and the first two letters of the species (e.g., HY from hystrix) to form the plant code (e.g., SIHY = Sitanion hystrix or bottlebrush squirreltail). When more than one plant species has the same code, numbers are used to distinguish between them. The first five letters of a genus may be used if the

species is not known (e.g., ARTEM = Artemisia sp. or sagebrush). The SCS has published a standardized list of plant codes and names (SCS 1982).

Plant community: An assemblage of several species of plants in a common arrangement. Communities are usually expressed in terms of their most visually dominant plant species (e.g., Wyoming big sagebrush-bottlebrush squirreltail community, shadscale-bud sagebrush community).

Potential natural communigy (PNC): The plant community that would eventually become established under current environmental conditions without human interference (SRM 1983). PNC differs from "climax" in that climax is composed entirely of native plant species while PNC also takes into effect certain introduced plant species.

Quadrat-frequency method: Study method used to determine frequency. It uses a series of transects ran off a center line (baseline), each transect being composed of plots (quadrats) placed one after another in a line (BLM 1981). Frequency is expressed as the number of plots where a species is represented (number of plants of a species within each plot is not used) compared to the total number of plots in the study (e.g., if 50 out of 200 plots contained squirreltail, the frequency of squirreltail is (50 divided by 200) X 100 or 25%).

Resource Value Rating (RVR): The value of the vegetation present on a particular ecological site for a specific use or benefit (SRM 1983). A particular plant community may have different RVRs for different resources.

Seral stage or seral community: A plant community that represents a stage in an ecological site development as it approaches the potential natural community. Four seral stages are commonly used, each stage determined by the percent of the potential natural community represented in a particular plant community:

early seral	= 0-25% PNC
mid-seral	= 26-50%
late seral	= 51-75%
potential natural community	= 76-100%

Trend: The direction of change in ecological status or resource value observed over time (SRM 1983).

Usable forage: That portion of forage that can be grazed without damage to the basic resources (SRM 1983). Allowable use levels are generally based on usable forage.

Utilization: The amount of plant material grazed off by animals. Generally referred to in terms of % utilization or by utilization classes:

Class	% Utilization
Slight	0-20
Light	21-40
Moderate	41-60
Heavy	61-80
Severe	81-100%

Utilization cage: A wire cage used to protect a plot from being grazed. Cages are placed on key areas so observers doing utilization studies will have ungrazed plants for calibration.

APPENDIX 2. Plant List 1/

Plant Code	Scientific Name	Common Name(s)
AGSP	Agropyron spicatum	bluebunch wheatgrass
BAHO	Balsamorhiza hookeri	Hooker balsamroot
BASA3	Balsamorhiza sagittata	arrowleaf balsamroot
CRAC2	Crepis acuminata	tapertip hawksbeard
EULA5	Eurotia lanata	winterfat, white sage
FEID	Festuca idahoensis	Idaho fescue
ORHY	Oryzopsis hymenoides	Indian ricegrass, sandgrass
POA++	Poa sp.	blue grass (including one or more of the following four species)
POCA	Poa canbyi	Canby bluegrass
PONE3	Poa nevadensis	Nevada bluegrass
POSC	Poa scabrella	pine bluegrass
POSE	Poa secunda	Sandberg bluegrass
PUTR2	Purshia tridentata	antelope bitterbrush
SIHY	Sitanion hystrix	bottlebrush squirreltail
SPHAE	Sphaeralcea sp.	globemallow (including one of the following two species)
SPCO	Sphaeralcea coccinea	scarlet globemallow
SPGR2	Sphaeralcea grossulariae folia	gooseberryleaf globemallow
STTH2	Stipa thurberiana	Thurber needlegrass

1/ Codes and scientific names based on SCS (1982).

APPENDIX 3. Literature Cited

Lovelock CRMP. Minutes of meeting on September 16, 1981.

Society for Range Management, Range Inventory Standardization Committee. 1983. Guidelines and terminology for range inventory and monitoring.

USDA Soil Conservation Service. 1976. National range handbook.

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_____. 1983. Draft ecological site descriptions-MLR 27. Technical Guide, Section IIE.

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_____. 1984b. Blue Wing/Seven Troughs Coordinated Management Plan. Approved on July 24, 1984.

4/15/86

WHOA!

WILD HORSE ORGANIZED ASSISTANCE
INC.
A Foundation for the Welfare of
Wild Free-Roaming Horses and Burros

P. O. Box 555
Reno, Nevada 89504

APR 3 0 86

April 15, 1986

Bureau of Land Management
Winnemucca District
705 East 4th Street
Winnemucca, Nevada 89445

Re: Blue Wing/Seven Troughs Draft Herd Area Management Plan

Dear Mr. Brandvold:

Thank you very much for the opportunity to comment on the Draft Blue Wing/Seven Troughs Herd Area Management Plan for the Winnemucca District.

I. Introduction-Background Information (1B2a)
"Information regarding animal quality and condition, sex ratios, age structures, reproduction and mortality (rate of increases), immigration and emigration is relatively unknown for the HMA." Emphasis my own. In a letter dated May 10, 1985 (a copy attached) you stated "During our planning process, it was evident that management needs required us to establish the rates of increases for each of our herd use areas. As a result, 11% was selected as being representative for the Sonoma-Gerlach Resource Area. The same procedure was followed for the Paradise-Denio Resource Area, but a 14% rate of increase resulted in the most accurate figures." "We have not used the present manual procedures because they require flying each herd use area four times a year to gather data required. A lack of funding has precluded us from doing this."

Comment:

Page 26 in the Appendix gives maps, land statis, herd use areas, range improvements, grazing systems, census data, age structure, and color types. NSO Manual 4730 Management Considerations, gives specific instructions on how to analize that information in your Appendix to compile a base of which you state is "relatively unknown." The May 10, 1985 letter also stated "it was evident that management needs required establishment of a rate of increase for each herd use area; but in reality, that rate of increase were representative of resource areas, not herd use areas. Had the inventories been consistent, i.e. time of year and herd use area, the rates of increases would have been reflective of the herd use areas and not the resource areas. Now BLM comes back to the public and states that this information is "relatively unknown" and that future collection is a must.

The NSO Manual was released 11/24/82, your data collection began 7/1/82, so logically one would have assumed any information collected from 7/1/82 until 11/24/82 could have used the techniques in the NSO Manual to analize that information.

There is absolutely no reasonable excuse now for not using the NSO Manual to calculate data collected previously to add to the information that is relatively unknown." One of the excuses for not using the NSO Manual was it required the flight of four times each year of the herd use area. WHOA can find no reference to a requirement of flights four times a year, and request that you reference that Manual number for us. (See attached letter) In fact in reading the Manual WHOA finds methods the District could have used and still can use to increase the data reliability and be consistant from this point forward.

1 2 a, para 6, pg 2
WHOA was a member of the CRMP process which the initial management level was established. It is indeed a negotiated agreement and number.

1 2 b Wild Horse and Burro Use, pg. 3
The census data would have been more meaningful had the plan included the areas of census on each of the dates. There is no way a reader can determine whether each area was totally censused. One of WHOA's criticisms of BLM has been the lack of consistant collection of data that is comparable. It would appear the census of Jan.-Feb., 1985 and the census date of June, 1985 shows seasonal movements.

1 B b, para 9, pg. 4
With BLM's contacts within the educational community, WHOA would wonder why the District would not contact a specialist on genetics to be safe, rather than worry whether you are endangering the unique spotted burro.

1 B b, para 10, pg.4
I disagree, I believe the knowns and the techniques in the NSO make the data more than a generalization.

1 B 2, para 3, pg. 4
According to Map 4, a windmill outside the HMA in Adobe Flat, appears to pull horses off the HMA. Is it seasonal or year round water?

1 B 3, pg 5
If early seral is referred to as poor ecological condition, why would BLM want to maintain that poor condition. Do you mean maintain good and improve poor, if so it should be stated. You need to quantify the area and how you will improve it. What if a poor site was critical winter horse habitat? Would you reduce wild horses further, even if monitoring could not determine the

offender, or would you lessen the intrusion of livestock on the critical winter horse habitat?

1 B 3, para 2, pg. 5
BLM seems quite concerned about the availability of funding, could you please explain how you will know you will have monies for monitoring (or even personnel) but not monies for capture?

1 B 3 c,para 1, pg. 9
PL 92-195 mandated wild horses and burros to be considered as an intregral part of the natural ecosystem. Water, forage, oil, minerals, trees, are part of the ecosystem; cows are not. Livestock is owned by a permittee, who leases land upon which the BLM provides forage, hence forage is the resource, not livestock. Thus WHOA will utilize the data contained as an indication of the AUMs of forage available for that purpose.

In an update of the CRMP it was reported that Wes Cook had been using areas outside his extended area of use, was this a trespass action? Has this been more than once?

Problem-Issue, pg. 13
(1) BLM should approximate, for those who have waited years, a date in time in which this issue will be resolved.

(2) In an attempt to reach an artificial AML, the unique pinto burro could be threatened, which would inspire litigation.

(3) The BLM need only analize existing data and continue to collect comparable data.

(4) BLM needs to identify priorities: The law states protection, management and control, in that order. The District ought to be at least consistant with PL 92-195 in
a. protection
b. management
c. control

(5) WHOA will strenuously object to the interior fencing of the HMA to manage livestock. Had the permittees been less selfish in the cooperative agreement on management of wild horses on checkerboard then wild horse interests may have been more understanding of their management needs.

BLM may use this letter as a specific request to be notified of any such proposal on interior fencing.

(6) WHOA is not sure why the objective is limited to improving only 136,000 acres. WHOA's fear, justified by history, is BLM will reduce wild horses to temporarily improve the range only to replace the wild horses with livstock. Since the agreement is proportionate, we can see the horses allowed to increase one for every five cows.

(7) Unless BLM can guarantee the same person, the same methods, the same conditions will exist the accuracy will always be a question. I believe that WHOA's interest is not the degree of accuracy, but the credibility of the agency. But certainly techniques used over and over can improve the accuracy.

(8) BLM assumes wild horses are the culprits for overgrazing, in the fact that only wild horses have been reduced to any extent.

(ii) by livestock or horses?

(9) There are many reasons why livestock numbers are less, dietary changes in the public consumption of beef and lamb,, market, and competition, and until just recently interest rates. WHOA might counter that wild horses have had to be reduced in many areas because of historical overuse by livestock, and eliminated in others because of selfishness.

II Management Objectives

The District has generalized in terms of the objectives, the public needs those objectives to be quantified.

A. (1) Maintain where, improve where, and when?

(2) Provide water when and where?

B. (1) WHOA was a member of the CRMP and the AML is a part of the negotiated agreement. Unless BLM wants to renegotiate the CRMP agreement or risk litigation the + or - 30-35% was NOT PART OF THAT NEGOTIATED AGREEMENT! Therefore the AML minimum will be 877/143.

There is no evidence, given the recent history and tenacity of vested interests, that management monies will not be available. Again, how do you know managment monies will not be there but assure WHOA that monitoring monies will?

(3) see Problem-Issue d(5) response.

(4) BLM should seek input from specialists in genetics.

(5) See your Index and NSO Manual 4730 for Instructions on compilation of data.

(6) When?

(7) When?

B. Habitat Plan Objectives II A 2

(1) a,b,c,d,e,f,...When?

(2) When?

G. Animal Plan Objectives II B 5

WHOA's amazed you seek this information when we've been arguing with the District in numerous letters about your 11% and 14% rates of increases. The District is to be commended if indeed it has abandoned its' past techniques and instead will use the NSO Manual Instructions 4730 to standardize the techniques in compiling and computing that data.

WHOA obviously supports the collection of monitoring data, what we are curious about is whether it will be collected, and if so, whether it will be used.

As Director for WHOA, and as Commissioner for the State of Nevada's Commission for the Preservation of Wild Horses, I will be looking at those Districts that use consistant techniques in the development and compilation of data to determine funding of projects.

Summary

The Blue Wing/Seven Troughs is deficient in that is does not given answers to when and where and how. It is too general and not specific enough for the reader to ascertain when and where the projects will be undertaken. The reader must trust that BLM will do it sometime in the future, which could mean 2010. Had the Appendix summarized the data collected, it would have been very impressive of the District's intent to use the data collected. The correct technique of analizing the data and then actually applying it would greatly increase the Districts credibility.

Finally, the glitches criticized in the building of your data base are minor in comparison to BLM's attempt to go below the negotiated AML. I believe the State Exectuive Group as well as the Task Force would be interested in the fact that BLM would attempt to usurp and agreement that BLM was a part. Certainly it would taint any further attempt by BLM to get WHOA as a member of CRMP. Nor, as Commissioner would I recommend any District that did not live up to its' agreements. Last, but not least, WHOA would intercede. There is no rationale to cite budget cuts on one hand for management and yet instill confidence that manpower and monies will be available for monitoring.

Most sincerely,

Dawn Y. Lappin

Dawn Y. Lappin (Mrs.)
Director

cc: Mr. E. F. Spang
David A. Hornbeck, Esquire

6/3/86

IN REPLY REFER TO:
4710.3
(NV-027.8)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WINNEMUCCA DISTRICT OFFICE
705 East 4th Street
Winnemucca, Nevada 89445

June 3, 1986

Wild Horse Organized Assistance
Dawn Lappin
P.O. Box 555
Reno, NV 89505

Dear Ms. Lappin:

This is in response to your comments on the Draft Blue Wing/Seven Troughs Herd Management Area Plan (HMAP). I will try to address your concerns in the same order as they were stated in the letter dated April 15, 1986 (which we received April 30, 1986), and combine responses where appropriate.

You made several comments expressing concerns that we are not using the 4730 Manual to calculate data that affects the demographic characteristics of the population. The calculations described in the 4730 Manual for determining the reproductive rate, fecundity, mortality, and rate of increase for a wild horse/burro population are based on age classification surveys which are to be conducted utilizing ground observations twice each year; once in late summer, immediately following the peak foaling period and once in late winter, when the foals are approaching one year of age. During these surveys animals are to be recorded in three classifications: adults, yearlings, and foals. The aerial census data we have collected cannot be used because of the time of year they were conducted: fall 1974, spring 1977, summer 1980, fall 1984, and spring 1985. In addition to not having census data for consecutive years (late summer combined with the following late winter), we are only able to classify the animals as adults and foals, not yearlings. The same problem exists with the capture data we've collected. Gatherings were conducted in the summer and fall of 1981, January-February 1985, and July 1985. Again we don't have consecutive years data for valid calculations. As a result of your comment we will modify the sentence in question to state "Information regarding animal reproduction and mortality (rate of increase), immigration and emigration is relatively unknown for the HMA."

You also stated that we could use the data collected from July 1, 1982 until the release of the Manual November 24, 1982 to analyze the information. There was not any data collected for the Blue Wing/Seven Troughs HMA during this time period.

In our letter to you dated May 10, 1985, where we referenced the need for four flights each year, we were hoping to combine the Lincoln ratio index technique for estimating population numbers during the early summer and the following

2. Random scattering 3
II A 2(b) maximizing

---

3. This is a classical example

How does where factories who would have anything to do with preserving the unique spaces here.

4. Why have you spent the amount of time on this plan, when you could have spent this

late winter (which require two flights for each estimation) while at the same time recording information on mortality and natality rates.

You stated that "The census data would have been more meaningful had the plan included the areas of census on each of the dates." On page 3, section I.B.2.b.(1) paragraph 3 of the draft HMAP states "Refer to Appendix 3 for a detailed breakdown of the census." This Appendix shows a complete synopsis of the census data by herd area and time period each was flown. If for some reason this page was inadvertently left out of your copy of the draft, please contact me and I'll send you a duplication.

As you are well aware the University of Minnesota is conducting a parentage and population genetic study in conjunction with their fertility control study. We're anticipating that the information gained from their findings will be applicable to the spotted burro population in the HMA. If not, we will attempt to contact them for their input and advice.

3. The windmill you referred to on page 2, paragraph 7 of your letter is a seasonal well and is only pumped during the winter months, if at all. Some years there is enough standing water and snow available and pumping is unnecessary. Why not agreement

Your comment concerning the ecological status of the HMA is misplaced. Section I. of the plan Introduction-Background Information is simply that. It is not intended to set management objectives or actions to take to achieve the objectives. The ecological status or habitat objective is discussed in Appendix 27 of the HMAP, which is the monitoring plan. You also questioned why only 136,318 acres were expected to improve from poor and fair ecological status to good. These figures were calculated from the Sonoma-Gerlach EIS. Figures for the Blue Wing and Seven Trough Allotments from Appendix J. (pg. 6-36), Estimated Ecological Range Condition, were subtracted from the corresponding figures in Appendix N. section 4 (pg.6-55) Estimated Ecological Range Condition (2024) to determine how many acres were expected to improve. This seems like a very low estimate considering the number of acres in the planning area. But the type of soils found on the range sites in the HMA combined with the low precipitation the area receives and the existing and planned herbivore use for the area will dictate a very slow response in ecological status.

You also questioned whether horses or livestock or both would be reduced if monitoring indicated a change in grazing use. On page 15 of the draft HMAP, Section III.A.3. states "Changes will be in the form of adjustments in numbers on a proportionate share basis...".

On page 3 of your letter you questioned how we know we will have funding for monitoring but not funding for capture operations. No one here (nor probably anywhere else) knows what funding levels we will have in the future. We didn't state anywhere in the draft HMAP that we were afraid we wouldn't have funding to capture excess wild horses. We did indicate that an intensive monitoring program has been initiated on the planning area. We feel that funding will be available for monitoring because it is currently the number two priority for range funds in the state and has been for several years.

We received two comments concerning the label for Section I.B.2.c. Other Resources. Because of the comments we will change the heading to Other Biotic Components.

The situation you mentioned that was brought out in the minutes of the last CRMP meeting concerning Wes Cook grazing outside his extended area of use, was investigated by this office but not confirmed.

The comments you made on the Problem-Issue Summary section of draft HMAP seem misplaced. All this section was intended to do was give the reader a brief summary of the major issues brought out in the background information section. Your comments give us the impression that you believe these are actions we are going to take on the HMAP, when in reality we are trying to mitigate these problems and issues through Section II. Management Objectives and Section III. Management Methods to Achieve Objectives.

Your comments on the Management Objectives section are of a similar nature as described above. Section II. is intended to be only a statement of the objectives, whereas the management actions and methods are described in Section III. We purposely did not set up time frames for development of the water projects on the HMA. This was done because we cannot forecast how long it will take the State Water Engineer to grant us water rights for the proposed projects. We applied for water rights to these projects over two years ago, and have not received a decision as yet. It will probably take another year or two per project to get them developed if we receive water rights, depending on available funding at that time.

The AML for the HMA has not changed. It will remain at 877 horses and 143 burros, unless data collected from monitoring studies indicates a change in grazing use is warranted. Deviations from the AML is a viable and realistic approach for management of this population of wild horses/burros. This would enable the population to grow to a level of 1184 horses and 193 burros before being reduced to a level of 663 animals. This management method would only require one gathering every seven years, as opposed to yearly gatherings to maintain the AML at a set figure. Conducting a gathering every year will put a great amount of stress on the population and will probably result in a higher death loss in animals by the increased handling. Annual roundups will also create a greater cost to the government by preparing and administering contracts each year. These monies could be better spent establishing and conducting studies on the population. This office has recommended that we initiate this management option, but the final decision has not yet been made.

Thank you for your comments. We will incorporate them, along with other comments, as appropriate, into the final HMAP.

Sincerely Yours,

Gerald P. Brandvold

Gerald P. Brandvold
Area Manager

Dear Mr Brandvold AM

Thank you for the copy of the Blue/Wing/Seven Troughs Monitoring Decision. The letter indicated it was finial as no comments were solicited, but the enclosure says "draft."

I just received and commented on the Draft Blue Wing/Seven Troughs HMAP.

The enclosed document elicits comment from WHOA, whether in draft or finial edition.

I have noted in particular the document states your intention is to "reach and obtain 33,852 AUMs of active preference for livestock grazing." Scenario #2 only states you will "maintain a viable population of wild horses and burros in the planning area. I believe the negotiated agreement (AML) was to be 877/143. That number should be in the Monitoring Decision.

WHOA totally resents the three-strikes attack on wild horses: 1) at the planning level 2) through CRMP (from which livestock have not followed through. 3) the 30-35% below AML.

WHOA will believe monitoring will take place when we see the data. We find it very hard to believe ~~that~~ which you will be have the ability

6000
6240
12240

12 | 6240

12 | 12240
12

to do what you say you will do when WHOA knows positions are being cut Bureau wide in the very segment of personnel that will do the monitoring.

WHOA would assume the 877/143 WH + B numbers are no different than your authorization for current #s of livestock. "You state " The authorized level of graz. will remain in effect <u>until</u> monitoring studies indicate <u>there is a need</u> for adjustment. ~~Therefore.~~ Therefore 877/143 is the authorized level & adjust. would be based on mont.

(Allot) enough info to supp an increase

4/10/86

ANIMAL PROTECTION INSTITUTE OF AMERICA

6130 Freeport Boulevard
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Sacramento, CA 95822
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April 10, 1986

COPY FOR YOUR INFORMATION

Gerald Brandvald
Area Manager
Winnemucca-BLM
705 East Fourth Street
Winnemucca, NV 89445

Dear Mr. Brandvald:

Thank you for granting the Animal Protection Institute this opportunity to comment on the draft Herd Area Management Plan for Blue Wing-Seven Troughs. Speaking on behalf of our 200,000 members nationwide, API has a long-standing interest in the protection and preservation of a viable and healthy population of wild horses in those areas designated Horse Use Areas and the maintainance of their habitat in a thriving ecological condition.

Unfortunately, we have a problem with the way in which this plan is laid out which makes our remarks extensive. We find that putting wild horses, livestock, and wildlife species under a category entitled "Resource Information" results in a confusion between what is a resource and what is a user which confuses management objectives to the point of eroding the intent of the laws governing land management and wild horse and burro protections.

It is our understanding that resources include minerals, timber, gas and oil, forage, water and the like. The plan lists livestock as a resource, when in fact livestock are the personal property of a permit-user; the resource is forage. On the other hand, wild horses and burros are "to be considered as integral components of the natural system" which makes them part of the flora and fauna that is the ecological balance to be protected and preserved.

We have no objections to Section 1 entitled Introduction and Background Information but we do have an objection to B-2 entitled "Resource Information" with the subsection being a "Reference to Land

continued . . . .

Use Plan." It would seem more appropriate to simply list #2 as "Reference to the Land Use Plan." Pages 3 through 13 and the first paragraph on 14 are, in our opinion, misplaced and should be inserted into an improved outline in appropriate places. The plan should go from the LUP reference directly to p. 14, Objectives, and then under each objective the information from pages 3 through 13 will find their rightful places. All data and tables should go in the appendix.

Another stumbling block for us involves the new policy statement in the 1986 regulations which have changed the policy (4700.0-6) from "wild horses and burros and their habitat shall be managed to maintain vigorous populations of healthy animals in balance with the productive capacity of the land" to "wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat." Without a definition of "self-sustaining," the policy is not clear. However, our suggestion for the Plan is to follow LUP by page 14.

Under Habitat Objectives (p. 14) the first objective needed is to know what is the productive capacity of the habitat in order to figure out a balance of uses. If productive capacity is based on a thriving ecological status in which the entire plant community is at PNC, or at least headed toward it, then the objective should be actions to change downward trends to upward trends to achieve PNC.

A second objective should be to identify the cause of the downward trend and why areas are at "early seral" (referred to as "poor condition" in the EIS) instead of PNC. The objective would be to eliminate the cause of damage.

The management plan refers to "ecological sites in the key...use areas." This wording is confusing and without basis in regulations or statute. We urge its deletion. The plan also lists providing water as a habitat objective. We believe providing water should be one of many management options after the cause of decline is determined. It should not be a goal. The management goal should be to end unrestricted exploitation of resources by determining and maintaining sustainable usage levels.

In Section II, subsection B, the plan lists animal objectives. This we believe, should be entitled Forage Usage Management Objectives with subheadings for wild horses and burros usage, livestock usage, and wildlife usage as grazing animals that share the forage. Some of the information from pages 3-13 should find their proper place within these subsections.

Subsection A: Wild Horses would then include what you have listed as B-1 through B-7 (p. 14) with some major changes.

continued . . . .

Section 11 (p. 14), Subsect. A, continued

1. The "thriving ecological balance" should determine "appropriate number of wild horses and burros" (Dahl v Clark) rather than an arbitrary AML which is not a remedy for the declining and deteriorating condition of the plant community and has no basis in statute.

2. To speak of "stocking rates" for wild horses as if they were placed on the land under permit restrictions for number of animals, season of use in the way livestock are controlled by stocking schedules is an inappropriate term that is in the end contradictory to the statutory requirement that "all management activities shall be at the minimal feasible level." This section should be deleted.

3, 4, and 5 should be retained.

6, 7. Determining dietary preference and migratory patterns should not be objectives. The objective is to protect and preserve wild horses and burros "as a self-sustaining healthy population in balance with the productive capacity of their habitat" and to implement management actions including the closing of the area to livestock grazing when needed to keep them healthy and free roaming. The how and when of this (which might include determining diet preference and migratory patterns) should be listed under Section III.

Under Section III (p. 15)

A. As it is stated, it should be deleted. In its place should be the restatement of No. 1 above and method would include determining the productive capacity by monitoring and analyzing similar to what is listed on p. 15 with the exception of #4 which is not a remedy for deteriorating and declining habitat and should not be included as a management option for improving the ecological status.

B. The water provision should be deleted. The objectives should be changed to actions that actually reverse the ecological trend from down to up. Method might include water developments as a dispersion measure. But what is needed are further studies related to determining the reason why there is a loss of moisture penetration and water retention in the soil, why the water table is lowered, what is the condition of streambanks and other factors that affect water availability and quality with steps to remedy the damage to the existing hydrological system.

C. The objective here should be to determine the cause of the downward trend and initiate actions to eliminate the cause of damage. If the cause is wild horses or burros then adjustments to the population levels should be considered under method. Adjustments should be determined on a basis related directly to "maintaining healthy animals in balance with other

continued . . . .

uses and the productive capacity of the habitat" in accordance with regulations.

D. As stated in the proposed plan related to stocking levels this section should be deleted.

E., F., and G should be retained.

H. and I. should be deleted.

The next sections, under Forage Usage, should be related to livestock usage and then wildlife usage. Pages 9, 10, 11, and 12 as they appear in the proposed plan should then be incorporated into these sections.

Problem Issue Summary would follow.

One thing that makes this plan so unusually complicated and confusing is the insertion of data into the body of the outline rather than keeping it in the appendix so that the outline can be followed easily.

We realize that our objections require a total re-writing of the plan, for which we apologize, but we believe the current version is unacceptable and in need of re-writing and rearrangement of material into a more comprehensible outline.

These remarks do not include the Monitoring Plan which we find to be well written and understandable; the format is comprehensible.

It is our opinion, however, that monitoring is the basis for actions outlined in the management plan and are not an end in themselves. The objective as stated on p. 4, Section IV is confusing in this respect.

The objective is to increase 136,318 acres from poor and fair to good, and 3,503 acres from good to excellent. According to the EIS, the range conditions list:

Blue Wing-Lava Beds as containing 976,928 acres with 293,363 (38%) in fair condition, 308,802 (40%) in poor condition and 154,401 (20%) in good condition while only 2% is in excellent condition. The trend lists 78% as stable and 22% as downward.

Seven Troughs-Lava Beds consists of a total of 302,371 acres with 15,118 (5%) in stable condition and 287,253 acres (95%) in a downward trend.

We are not sure why, with these deplorable conditions existing, the objective would be limited to improving only 136,318 acres to good and 3,503 from good to excellent, or why an objective for monitoring would include a statement on reaching 33,852 AUMs for livestock grazing. We urge that a new statement of objectives be included in the final version of this monitoring plan.

continued . . . .

For us, the major issue in need of resolution is the determination of when livestock should be reduced, when grazing should be eliminated, and when wild horses should be removed. Somewhere in the plans this issue should be mentioned.

Again, we thank you for this opportunity to comment. We realize that the input from lay people concerned with the preservation of the land and the protection of wild horses and native species is probably difficult to translate into the technical language of land managers and range specialists, yet we are obliged to make known our own mandate from our members and we do so with the best of intentions.

Most sincerely,

Nancy Whitaker

Nancy Whitaker
Creative Service Assistant

NW/bms

6/5/86

IN REPLY REFER TO:
4710.3
(NV-023.5)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WINNEMUCCA DISTRICT OFFICE
705 East 4th Street
Winnemucca, Nevada 89445

June 5, 1986

Copies to: 6-9-86 [illegible]
DM, SGAM, Wheeler,
Neary, Brown.
Milt Frei- NV-931

Animal Protection Institute of America
630 Freeport Boulevard
P. O. Box 22505
Sacramento, California 95822
Attn: Nancy Whitaker

Dear Ms. Whitaker:

I would like to thank you and your organization for taking the time and effort to comment on the Draft Blue Wing-Seven Troughs Herd Management Area Plan (HMAP). It is quite evident from your suggestions and comments that you were very thorough in your review of the HMAP. Our district is able to produce better products because we receive meaningful public input from organizations such as yours.

It is unfortunate that the structure of the format caused some confusion and misunderstanding. This format is standard for all BLM districts in Nevada. I think you can appreciate what utter confusion would result if the reviewing public had to contend with plans developed using a variety of formats. We are, however, suggesting modifications to the existing format in an effort to clarify our intent. For example, your point about domestic livestock being personal property and not a resource is well taken. Forage is a resource, and domestic livestock can be used to help manage that resource.

Your last sentence of the third paragraph (page 1) is correct and very well expressed.

The comments and concerns you expressed in the fourth paragraph (first page) of your letter are also a matter of format structure. Your suggestions may make the narrative more trackable and easier to follow, but this would require a revision in a format that is standardized for all of Nevada. A revision would have to receive approval from the Nevada State Office. The final Blue Wing-Seven Troughs HMAP will be prepared using the present format. Sometime this fall the Winnemucca District will suggest a revised format for HMAPs, and present the draft to our state office for review and comments. Your suggestions about restructuring the format outline will be incorporated where approrpiate into the proposed revision.

We do not have an official interpretation of "self-sustaining" (43 CFR-4700.0-6). As used in the current (April 2, 1986) regulations, it would seem that a self-sustaining population is one that is self-perpetuating, is able to maintain population diversity, and has about an equal ratio of females to males. It may also mean that the population is neither increasing nor decreasing - it is static.

The productive capacity of the habitat and its trend will be determined by the Blue Wing-Seven Troughs monitoring program. This program was initiated in 1985, and should be completed by 1990.

Regulatory or statute support for "ecological sites in the key . . . use areas." is as follows:

CFR 4703.3 Habitat Reservation and Allocation performed in concert with the needs of livestock, watershed, wildlife, etc. BLM Manuals 4410 and 4400 establish the Ecological Site Inventory as the accepted baseline data gathering technique. Establishment of key areas and monitoring are policy under the Nevada Rangeland Monitoring Handbook. These CFR's, manuals and policies are established to meet the rangeland inventory, monitoring and evaluation requirements of FLPMA.

In reply to your comments expressed in the fifth paragraph of the second page of your letter, we partially agree with you, and the objective will be reworded to state: " . . . where possible to yield a better distribution of animals utilizing the habitat, therefore reducing concentrated or over use of particluar areas."

We think your comment (fourth paragraph - second page) to eliminate the cause of damage is an action rather than an objective.

The suggestions you made in the last paragraph on page two are also manual format considerations. As previously mentioned, the present format will be followed (with minor changes) until, and if the present format is changed.

Your comments/suggestions which appear on page 3 of your letter will be addressed in the order in which you presented them.

Section 11 (page 14), Subsection H, continued

1. The Appropriate Management Level (AML) for individual Herd Areas (HAs) was established only after extensive public input, including API. The AMLs were established to insure that the Winnemucca District would protect, manage, and control over 3,600 wild horses and burros in 16 HAs.

   Until the Blue Wing-Seven Troughs monitoring program is completed, it cannot be determined if there is site-specific deterioration occurring to the vegetative resources.

2. To refer to the forage use made by wild horses and burros as "stocking levels" may indeed be inappropriate. Perhaps better terms might be "forage use levels," "use levels," "optimum populations levels," or a similar term which does not have the connotation of "stocking levels." For management and monitoring purposes, there must be a usable term (either expressed in AUMs or numbers) that reflects population numbers of a given area, or total forage use made of that area. For the present, we will use the term forage use levels.

3, 4, 5. As you suggested, the subsections will be retained.

6, 7. Determining the dietary preference and migration routes of wild horses and burros were included as objectives to gain a better knowledge of the animals and their habitat. Obtaining this kind of information will better allow the BLM to manage and protect the animals. These objectives will be retained.

Section III (page 15)

A. The objective will be reworded to state:

Maintain or improve the rangeland ecological status within the herd use area utilizing the criteria and timeframes established in the Blue Wing-Seven Troughs Monitoring Plan 1985 (Appendix 11).

B. See comments above

C. We disagree with your comment. The monitoring plan is designed to alert management to changes in trend. We will then make proportionate changes in grazing use as necessary.

D. This objective will be retained. The BLM has been directed by law and regulations to determine the habitat requirements for those HAs identified in the land use plan as being suitable for the management of wild horses and burros.

E, F, and G. These objectives will be retained.

H, and I. These objectives will be retained for the reasons previously stated.

A few of your comments on page 4 are again related to the structure of the format. Based upon comments we have received, our district will propose changes in the format to the Nevada State BLM Office. At this time, the district can not unilaterally change a standardized format.

We disagree with your opinion that monitoring is the basis for management actions. Monitoring data is used to insure that management actions meet the established objectives.

The last few paragraphs on page 4 of your letter concern EIS vs. monitoring figures. We should have explained the origins of these figures better. The figures used in the two documents are based upon two different methods, and do not mean the same thing. The EIS figures represent the condition of livestock forage, while the figures used in the monitoring document reflect ecological status.

We would like to thank you again for your constructive comments/suggestions. We will incorporate them, along with other comments, as appropriate, into the final HMAP.

Sincerely yours,

Gerald Brandvold

Gerald P. Brandvold
Area Manager